ONESELF – www.oneself.ch

Using Online Strategies to Enhance Information and Social Support for Self-Management of Chronic Rheumatic Diseases

12th November 2009

Institute of Communication and Health
University of Lugano
Oneself is a website developed by the Institute of Communication and Health in collaboration with the Lega Ticinese per la Lotta Contro il Reumatismo, funded by the Swiss National Science Foundation.

Oneself is an online interactive and informative application aimed at enhancing self-management in patients suffering from rheumatic diseases.

Oneself is a research project focused on the potential and the effect of new media in the field of health communication.

CLBP and MSd → **chronic pain**: impact on life, importance to cope, importance of active therapy, loss of confidence and self-esteem (Charmaz 1983; Smith et al. 1999;)

Development of **beliefs about pain** (Walsh 2002) → related to physical disfunction (Arnstein et al. 1999; Turner et al. 2000)

Online interventions: accessibility, interactivity, multimedia, personalisation, "for-free" (Lorig et al. 2002; Wantland et al. 2004; Kirsch et al. 2004; Bhutman et al. 2004; Schulz 2007; Anderson & Klemm 2008)
Theoretical Framework

- There is a **lack of quality** of health-related online information (Li et al. 2001; Butler & Foster 2003) and health sites are **mainly informative**

- “**Information gap**” between knowledge and its practical application (Weissenberg et al. 2004; Payne & Kiel 2005; Gremeaux et al. 2007)

- “**health literacy**” leads to appropriate “informed” decision but a high level of HL does not necessarily entails behaviors consistent with knowledge (Schulz & Nakamoto 2005) → it is important to acquire specific knowledge and skills **relevant for the self**
Construction of ONESELF

- Construction of a network of patients and health professionals: interaction mediated by a **content manager**

- Patients are part of an online **community** where they can get and share information and be involved in self management behaviors supervised by experts

- Website upgraded after **real requests** of users

- **Quality** of health information provided by health professionals (compliant with HON international quality criteria)
Advantages of ONESELF as an online intervention

- Online information is **available** in any moment, from home or from work.

- **Multimedia** formats allow a faster comprehension and a more rigorous execution of exercises.

- **Interactivity**: possibility to ask for clarifications and shortly receive answers.

- **Personalisation**: patients can get the most relevant information for their specific situation.
A brief demonstration
Design and implementation of a web-based tailored Gymnasium to Enhance Self-management of Fibromyalgia

- **Tailoring:** a process for creating individualized communication by gathering and assessing personal data related to a given outcome, in order to determine the most appropriate information or strategies to meet a person’s unique needs (Rimer & Kreuter 2006)

- **“Classical” aim:** to persuade an intended audience to change or reinforce behavior. Usually designed on a set of behavioral theories

- **Our aim:** to maximize the appropriateness of the treatment exercises to users’ specific situation
Assessment module

Users are asked to answer a series of questions leading to the evaluation of the 8 determinants.

The system receives:

- a **self-reported** set of data obtained from the online **questionnaire** (some questions are optional)
- data about previous uses of the tool, retrieved from the application **database**

Each time that a new session is started, the assessment should be repeated.
The feedback module shows:

- 5 standard (non-tailored) warming up exercises

- Personalized exercises, one at a time (video, textual description) – exercises can be rated and users can leave comments

- Recapitulation of performed exercises
General tailoring framework

Tailored application: 2 main modules
- Assessment component
- Feedback component

Tailored Gymnasium

Assessment

Algorithms

Feedback

Tracking
Developing the tailored gymnasium

Elements needed for the tailored gymnasium:

- A corpus of exercises suited for patients with fibromyalgia
- Relevant variables (determinants) that can make an exercise fit for a specific fibromyalgic user
- Rules to combine these variables and extract relevant exercises

Methodology:

- Knowledge acquisition technique: semi-structured interviews with 5 FMS experts and 5 FMS patients
- Interviews were repeated during the development of the tool
Results:

**rules and determinants**

8 **determinants** were included in the final algorithm

- Available time
- Pain
- Time of the day
- Available tools
- Localization
- Level of difficulty
- Experience
- User Judgement

**Rules** were implemented in the form of algorithms

- Ranking of exercises according to the suitability for the patient
- Selection of exercises’ categories according to level of pain and moment of the day
Mobilizzazione delle spalle e del tronco

1. In piedi, a partire da una postura ben dritta, rivolto verso il muro, afferrare il pallone con entrambe le mani.
2. Poggia il pallone contro il muro, di fronte al proprio collo, con entrambe le mani, in modo che le braccia risultino semi-distese.
3. Far rotolare lentamente il pallone contro il muro verso l’alto fino a distendere completamente le braccia. Mantenendo entrambe le mani poggiate sul pallone inclinare il busto in avanti verso il muro per poi riportarlo in posizione eretta.
4. Far rotolare lentamente il pallone contro il muro fino alla posizione originale di fronte al collo.

Questo esercizio può essere svolto anche senza pallone, poggiando le mani direttamente contro il muro e svolgendo gli stessi movimenti.

Esecuzioni consigliate: 3-5 volte
Previous studies on ONESELF

- **Quantitative pilot study 2004/2005**
  - Improved level of knowledge and decreased intensity of back pain in treatment group

- **Qualitative study 2007/2008**
  - **Patterns of use**: selective, enthusiastic, magic, wait-and-see
  - **Positive effects**: self-comprehension, improvement of argumentative abilities, orientation, development of self-confidence, maintenance of a high level of motivation and adherence of self-management
  - **Negative effects**: discouragement, confusion
Some data on ONESELF*

- Total registered users: 1961 (1403 LBP, 458 FM)
- Visits to the website: 48018 (22816 from registered users)
- Forum discussions: 439 (2240 messages)
- 90 articles
- 64 videos of exercises

*10 November 2009
... use of the website in the last Month

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<td>Forum</td>
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<td>Second section for page views</td>
<td>Chat</td>
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<tr>
<td>Messages in the Forum</td>
<td>17 new topics 99 answers</td>
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## Use of the website in the last year

Data from 1.11.2008 to 31.10.2009

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<td>Chat messages</td>
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Comparing October 2008 / October 2009

- Visits +250% (2008: 658, 2009: 2420)
- Page views +200% (2008: 4700, 2009: 14000)
- Best growth rate: Forum and Chat
Some data about satisfaction 1

From a sample of 209 users in the fibromyalgia thematic area (July 2009)

**In general, how much satisfied are you with the ONESELF website?**
Some data about satisfaction 2

Mean = 4.52
Std. Dev. = 0.78
N = 209
…thank you for your attention.

www.oneself.ch