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Acceptance of an Internet-based programme to train physical activity counsellors during the development phase and in regular use

Abstract

A post-graduate physical activity counsellor training course was developed consisting of an Internet-based e-learning component and a workshop. During the development phase, the acceptance of the Internet programme was evaluated with 42 study participants from target professions (physiotherapists, physical educators, GPs, nutritionists). Once the course was in regular use, 49 students who had worked through the whole course evaluated it. Nearly all participants of the first evaluation study rated the e-learning programme as user-friendly, easily understandable, interesting and relevant. They further reported having the necessary access to work with the programme and were prepared to pay a reasonable amount for the course. Regular students gave high ratings to all aspects of the workshop, especially the expertise of workshop leaders. They further rated both components, e-learning and the workshop, as useful or very useful. The results show that this course has been adequately designed to meet the needs of the professionals in the target group and that they are willing, ready and able to learn through Internet-based programmes. E-learning is a feasible and appreciated option yet inclusion of face-to-face sessions in an e-learning programme adds to the quality of a course.

Zusammenfassung

Ein Ausbildungskurs für Bewegungsberaterinnen und -berater wurde entwickelt, bei dem Internet-basierte E-Learning-Komponenten mit einem Workshop kombiniert wurden. Während der Entwicklung des Kurses wurde die Akzeptanz des Internetprogramms bei 42 Vertretern der angezielten Berufsgruppen (Physiotherapeuten, Sportlehrerinnen, Ernährungsfachleute und Ärztinnen) evaluiert. Nachdem das Ausbildungsangebot etabliert war, wurde es von 49 Absolventinnen und Absolventen evaluiert. Nahezu alle Teilnehmer der ersten Evaluationsstudie beurteilten das E-Learning-Programm als benutzerfreundlich, leicht verständlich, interessant und relevant. Sie berichteten ausserdem, über den nötigen Internetzugang zu verfügen, um mit dem Programm zu arbeiten, und sie waren bereit, angemessene Geldbeträge für den Kurs zu bezahlen. Die regulären Absolventen der Ausbildung beurteilten alle Aspekte des Workshops gut, besonders die Expertise der Workshop-Leiterinnen. Ausserdem hielten sie beide Teile der Ausbildung, das E-Learning wie den Workshop, für nützlich oder sehr nützlich. Diese Ergebnisse zeigen, dass der Kurs den Bedürfnissen der Fachleute angemessen konzipiert worden ist, die mit ihm erreicht werden sollten, und dass sie interessiert, bereit und fähig sind, Internet-basierte Programme in ihrer Ausbildung zu nutzen. E-Learning ist ein machbarer und geschätzter Ansatz, der aber sinnvollerweise mit direkten Begegnungen in der Ausbildung ergänzt wird.

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Introduction

As evidence for the importance of an active lifestyle to maintain good health is continuously increasing, nations across the globe test various measures to encourage people to increase their physical activity levels. According to the National Health Survey 2002, 64% of the population in Switzerland meet neither the minimal recommendations for health enhancing physical activity of 30 minutes of moderate intensity activity every day nor the recommendations for an endurance-type training (Lamprecht and Stamm, 2006). Inactivity poses a major public health threat with substantial economical consequences. Costs attributed to inactivity in Switzerland have been estimated at 1.6 billion Swiss Francs (1.0 billion Euro) in 2001 and even at 2.4 billion Swiss Francs (1.6 billion Euro) in 2004 (Martin-Diener and Martin, 2009). In order to address the problem of inactivity, the Swiss Federal Office of Sport has taken on the challenge to pilot and evaluate physical activity promotion interventions and programmes.

In studies investigating motivational aspects of behaviour change, inactive people most often stated the advice of the general

practitioner to be the one incentive which would help them become more active (Whitehead, 1995; Stierlin, 1996). Primary care offices are therefore a promising setting for physical activity promotion (Bize et al, 2008). Furthermore, there is a high potential for reaching inactive people, as 80% of the Swiss population consult their physician at least once a year (Bundesamt für Statistik 1998). In a primary-care-based randomised trial in Switzerland, about a third of inactive people who received feedback from their general practitioner (GP) as well as those who received an additional offer of counselling were classified as active two months after the intervention (Jimmy and Martin, 2005). The experience with this trial showed that GPs appreciated being able to refer patients to a physical activity counsellor as they lacked the time to discuss the topic in detail themselves. About 40% of the people decided to take on the offer of a counselling session for which they paid 25 Swiss Francs (17 Euro) to contribute to the cost. Therefore, the Federal Office of Sports proceeded to develop a post-graduate course to train professionals like physiotherapists, psychologists, or physical educators in physical activity counselling. The resulting approach combined the motivational potential of the GP advice with the

specific knowledge and skill of the counsellor in order to help more inactive people become active.

For a notable public health effect, a great number of counsellors offering their service is needed. E-learning courses offer the opportunity to make the training of a substantial number of counsellors affordable. Studies testing the use of e-learning and other Internet-based components to train professionals in the health domain concluded that this medium offers a high potential for improved learning and accessibility (Aitken and Tabakov, 2005; Fotheringham et al, 2000). Initial drawbacks due to unfamiliarity with the Internet were soon overcome by participants (Saeki et al, 2000; Litchfield et al, 2000). In a market survey with 800 health professionals, nearly 90% indicated that they would participate in e-learning courses (Carlson and Olson, 2001). Thus "active upon advice" was developed as an e-learning programme to deliver the basic elements of the course followed by a short workshop to consolidate the knowledge of the participants and enable them to practice their counselling skills through role-plays.

The aim of this article is to describe the structure and rationale of the "active upon advice" course and to present the evaluation results of its acceptance during development as well as in regular use.

Methods

Development of the programme "active upon advice"

The "active upon advice" programme was developed between October 2002 and December 2003 based on behaviour change theories and contributions from professionals as well as inactive individuals. It is available in German at www.ratzurtat.ch. It aims to combine the advantages of modern technology and of established teaching methods. It thus comprises an e-learning component and a workshop.

The e-learning component consists of three parts:

- 1) Theoretical background: Through audio- and video-based presentations accessible directly via Internet, course participants can learn about the theoretical background for physical activity counselling on topics such as "health and physical activity", "transtheoretical model", "weight reduction" and "principles of counselling".
- 2) Counselling software: This component allows professionals to learn how the counselling process works. It starts with a detailed assessment of physical activity patterns, and moves on to deal with the intention for behaviour change, decisional balance, individual goal setting, and strategies for improving self-efficacy.
- 3) Multiple choice examination: When professionals are acquainted with all audio and video presentations of the theoretical background and are able to use the counselling software, they can participate in a multiple choice examination covering these topics. This examination is also taken through the Internet.

After the examination has been passed, the future counsellor has the opportunity to attend a one-day workshop which enables him or her to apply the theoretical background in role-plays and to interact with experienced trainers and other students. After passing further written and practical exams, the participant can obtain the "Physical Activity Counsellor" certificate and will be registered in a database accessible to general practitioners in primary care offices. In this way, the GPs can refer an inactive individual to a certified counsellor. It is estimated that about 15 days of full-time study are required to work through the whole curriculum.

Evaluation of the e-learning component

A study to assess the acceptability and suitability of the "active upon advice" programme was conducted between April and November 2003. The study was approved by the review board of the Institute of Sport Sciences at the Swiss Federal Office of

Sport. Participants were recruited through a number of institutions. Nurses participating as counsellors in a physical activity project were approached at the University of Zurich. Physiotherapists were contacted in collaboration with the Swiss Association of Physiotherapy and asked whether they wanted to participate. General practitioners were contacted through a regional chapter of the Swiss Society of Doctors for the Environment. All these participants enrolled for the study individually after having been informed about the purpose and procedure of the study. In addition, physical educators participated in the study as part of a training course at the Federal Office of Sport. All participants were first introduced to the purpose and concept of "active upon advice" and were then given an hour to work with the counselling programme (part 2 of e-learning). This was followed by a discussion about the programme to reveal difficulties or problems that might have arisen during its use. For the last 15 minutes study participants completed a computer questionnaire where they rated the language, structure, layout and other aspects of the programme.

Evaluation of the workshops

The "active upon advice" course was available on the Internet from the beginning of 2004 on. It was advertised through the Swiss Association of Physiotherapy, through the Swiss Society of Doctors for the Environment, during workshops with physical education students, and through the Swiss Association for Nutrition. Professionals and members from these groups could then visit the programme online and decide whether they were interested in making use of this training opportunity.

Forty-nine people who had worked through the e-learning component and passed the multiple choice examination attended the one-day workshop to complete the training programme. Seven workshops were held between 2004 and 2006. At the end of each workshop day, the participants filled in a one-page questionnaire about the workshop.

Results

E-learning component

Among the 42 study participants were 15 general practitioners, 13 physiotherapists, 11 physical educators and 3 nurses. Eighteen were male and 22 female, two individuals did not state their sex. The age range was 23 to 58 with a mean of 39 years and a standard deviation of 10 years.

The programme was rated as user-friendly by study participants of all professional groups. The overall impression, comprehensibility of the language and the usefulness of the programme were given positive ratings by more than 96% of the participants. Eighty percent of participants rated the layout/design as good or very good (see figure 1).

Concerning the suitability of the programme as a learning tool, it was rated as useful by 60% of the participants and as probably useful by almost 40%. Only one person was unconvinced. Ratings for the suitability of the programme as a counselling tool were exactly the same as above.

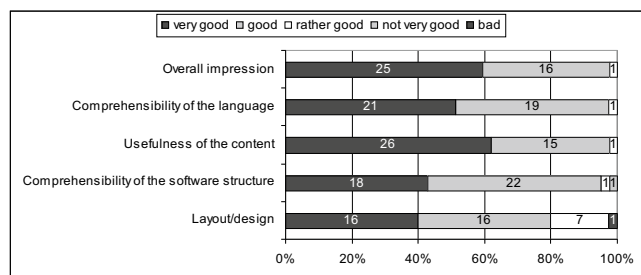


Figure 1: Study participants' rating of several aspects of the e-learning component on a 5-point scale (n=42).

In terms of accessibility of the e-learning programme, 40 participants (95%) indicated that they had ready access to the Internet at home or at work. The remaining two people did not answer this question. 42% of the study group has access to highspeed connections (18 people) and could thus easily navigate through all functions of the programme. 28% of the group (12 people) had only slower connections available. They could still use the whole programme but had to opt for audio rather than video versions of the presentations. Eleven people did not know what type of connection they had and one person did not provide an answer.

Regarding the cost of the programme, study participants were prepared to pay 537 Swiss francs (360 euro) on average for the whole course (minimum 0, maximum 4000 francs, standard deviation 751 Francs). For the software programme (part 2 of e-learning) alone they would have paid 227 Swiss francs (150 euro) (minimum 0, maximum 1000 francs, standard deviation 258 francs). *Table 1* shows the distribution of answers across the six categories.

No differences in answers according to professional group were observed for any of the parameters.

	0 CHF	1 to 99 CHF	100 to 399 CHF	400 to 799 CHF	800 to 3999 CHF	4000+ CHF
for the entire course	10 (24%)	1 (2%)	12 (29%)	10 (24%)	8 (19%)	1 (2%)
for the software programme	9 (23%)	6 (15%)	16 (40%)	7 (18%)	2 (5%)	0 (0%)

Table 1: Amounts participants were prepared to pay in Swiss francs (CHF) for the entire course and for the software programme, according to their declaration

Workshops

The majority of the 49 students who attended the workshops were physiotherapists (29). In addition, there were 8 general practitioners, 3 physical educators, 1 nutritionist and 8 other professionals. Their average age was 43 years (range 26–57, standard deviation 7.6 years), 34 (69%) were women. The evaluation questions were answered by 30 to 44 students depending on the question. As seen in *figure 2*, almost all students gave positive ratings to all aspects of the workshop.

80% of students thought the cost of the workshop was adequate while 17% said it was too expensive and 3% found it too cheap. Thirty nine out of 40 participants felt that they were ready to conduct physical activity counselling sessions upon completion of the programme. However, 21 out of 37 participants (57%) felt that they had already been ready to do so before they started the programme. Overall, participants found both the e-learning component and the workshop very useful (*see figure 3*).

Finally, all but one participant indicated that they would recommend this programme to other people. Again, there were no differences in answers according to professional group for any of the parameters.

Discussion

As various avenues to promote physical activity are being tested by the international research community, general practitioner referral systems have been generating promising results (Elley et al, 2003; Green et al, 2002). As measures are being taken in Switzerland to set up such a referral system, a cost-effective solution to train a sufficient number of counsellors was sought. Therefore, a training programme which was primarily based on e-learning while still integrating a workshop component was developed. It was aimed at professionals with background knowledge in health or physical activity such as physiotherapists, physical educators, nutrition-



Figure 2: Students' rating of several aspects of the workshop on a 5-point scale. Social competence of workshop leaders referred to whether participants perceived workshop leaders as helpful and whether they responded positively to the participants.

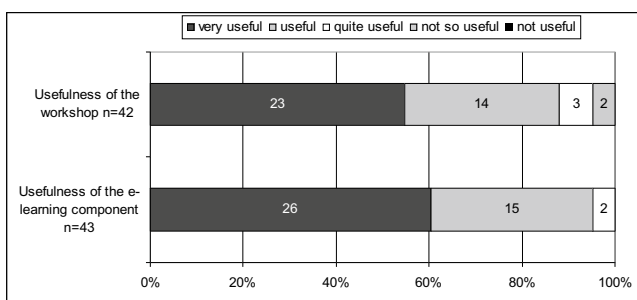


Figure 3: Students' rating of the usefulness of both course components on a 5-point scale.

ists, or general practitioners themselves. As little experience with e-learning modules had been gained so far, this study evaluated the acceptance of such a course. Results confirmed that the quality of both the e-learning programme and the workshop was perceived as being of a high standard. Furthermore, Internet access, cost and time requirements did not present barriers for professionals interested in completing this training programme.

In the evaluation of the e-learning curriculum, all aspects of the counselling software (part 2 of the e-learning component) received very high ratings. Ratings for layout/design were somewhat lower yet still more than satisfactory with 80% of participants giving positive feedback. This result can be attributed to the fact that particular attention was paid to developing a programme with a clear structure running at an adequate speed. Furthermore, the target group was consulted during the development process to ensure that the content would be useful. It is to be noted that somewhat broad terms were used in the questionnaire and more critical feedback could possibly have resulted if the questions had been directly geared towards specific components of the programme. However, direct observation during the study phase when participants worked through the programme on the Internet yielded useful feedback about the user-friendliness of the programme and a number of adjustments to the programme were made accordingly. With e-learning still being a new concept, participants were asked whether they saw this type of programme as adequate for learning. The results were overwhelmingly positive with 98% being either sure or quite sure that this tool was adequate. These figures are especially encouraging when we consider that some of the participants had only basic computer knowledge. A similar result was found in a market survey with 800 occupational health and safety professionals, where 87% of participants declared that they would participate in distance education opportunities for the purposes of continuing education and academic degrees (Carlson and Olson, 2001). This confirms that the right time has come to introduce internet based e-learning methods. Parallel to the professionals' readiness for e-learning, the spread of Internet accessibility was remarkable. In our study, nearly half of the participants reported access to a high speed ADSL connection already in 2003 even though this technology was fairly new. Accessibility issues can present problems

in otherwise highly rated e-learning programmes as was found for example by Wilkinson et al. (2004). Therefore, "active upon advice" was designed to cater also for people with slower internet connections, for example by providing audio versions of the video presentations, which can be accessed at all Internet speeds. The software "active upon advice" is freely available and not being sold. Nevertheless, it was useful to know what value was being attached to it, as it was the most important element of the course. The prices that most participants would have been prepared to pay were comparable to those of commercially available office software packages. These results thus indicate that "active upon advice" was perceived as professional and useful. A minimal amount to cover costs has to be charged for the workshop. Study participants were therefore asked how much they would be prepared to pay for it. Nearly half of the participants were willing to pay at least 400 Swiss Francs (260 Euro), which was the amount later charged for the workshop.

The evaluation of the workshops carried out with the 49 first participants gave further information about the acceptance of the workshop and the curriculum as a whole. It is to be noted however, that the questions posed were somewhat general and results may thus not reveal specific weaknesses that may have existed. All aspects of the workshop were rated very highly with the expertise of the workshop leaders being particularly appreciated. This shows that it is worth paying attention to the professionalism of workshop leaders. As this is one of the aspects contributing to the cost of the workshop, it is pleasing to see that 80% of the participants rated the cost of the workshop as adequate. With costs, time requirements and usefulness being rated positively for both the e-learning component and the workshop, there was no need for fundamental changes in the structure of the training course. The advantages of combining modern e-learning components with a traditional workshop appeared to be a major strength of this course. As evaluations of other e-learning courses in the health profession show, students generally appreciate the advantages of e-learning but prefer it to be combined with face-to-face lectures or workshops (Childs et al, 2005; Gupta et al, 2004).

Overall it can be said that the positive results from study participants during the development phase of the programme were confirmed by the evaluation results of regular students who worked through the course.

All aspects of the "active upon advice" training programme were highly rated by study participants during the development phase of the programme as well as by the students who worked through the post-graduate course once it was in regular use. While minor changes to the design or layout were needed, the structure of the programme, in particular the combination of e-learning with a workshop, has proven to be geared towards the need of the target group. As this programme appears to achieve the aim of preparing professionals to confidently conduct physical activity counselling sessions, the focus of future efforts now needs to be turned on aspects of implementing a counselling referral scheme in co-operation with general practitioner offices.

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