

TÄYTTÄ ELÄMÄÄ KAIKILLE
FULL LIFE FOR ALL

YLEMPI AMK -SYMPOSIUM III
UAS MASTER SYMPOSIUM III

PROCEEDINGS

ANDREW SIRKKA (ED.)

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Editor Andrew Sirkka

Satakunta University of Applied Sciences
Pori
2015



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FULL LIFE FOR ALL

Welcome to the 3rd UAS Master Symposium on 8 May 2015 organised by Satakunta University of Applied Sciences (SAMK), Tiilimäki Campus.

The theme this year is “Full Life for All” with the intention to take up issues related to each individual’s possibilities to participate and have a voice, experience life and be in charge of one’s own life despite of possible mental, physical or social limitations. Most often it is the social (including professional) environment that makes people handicapped or disabled rather than any of one’s own personal characteristics. This Symposium offers again a great vantage point to observe and discuss these multifaceted issues from various aspects and points of view. The same theme headlined the overall international week programme with several other expert sessions and lectures at Tiilimäki Campus in 4–8 May 2015.

Master degree programmes at SAMK approach Full Life for All theme in multifaceted ways. Master degree programmes on Health Promotion, Rehabilitation, Social Sector and Welfare Technology all have the same focus, although from different angles, on providing new capabilities for professionals to develop working methods, deploy new tools and practices or processes to develop services that would better provide quality of life for the population of all ages and various needs.

The Proceedings consist of expert articles, full papers, abstracts and posters presented in the 3rd UAS Master Symposium on 8 May 2015. It is very encouraging to notice that our Symposium has once again caught also international attention with several expert presentations from overseas. Couple of presentations are only in Finnish.

As the editor of the Proceedings and main organiser of the Symposium, I would like to express my very great appreciation to all international experts and attendees for your great contribution to the Symposium and the International Week in Tiilimäki Campus. I also wish to thank all the master students and their supervisors for excellent presentations in this Symposium.

Dr. Andrew Sirkka

Dr.Ed., Principal Lecturer
Editor

A1 BENEFITS AND BARRIERS – A LITERATURE REVIEW ON THE USE OF ICT-BASED SERVICES AND DEVICES AMONG OLDER ADULTS

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PhD, Senior Lecturer

Introduction

In Finland 25% of the population will be in the age group 65+ and the amount of people over 85 years will double by year 2030 in comparison to current situation (Statistics Finland 2015). The rehabilitation interventions in these age groups aim at supporting physical and social functioning and improving safety as well as at enhancing independent living. Technological devices, solutions and systems could be used to serve all these purposes as part of rehabilitation. However, the use of information and communication technology (ICT) or ICT-based assistive technologies (ICT-AT) among older adults is not unproblematic.

The purpose of this paper is to summarize the core findings from 18 peer-reviewed scientific articles (published 2003–2014) concerning the use of ICT and ICT-AT among the older adults (60+), living independently or with the help of home care staff at home or in supported housing environment. The original articles approached the use of ICT/ICT-AT from many different aspects: usefulness and usability of technology, quality of life, timing of implementation, ethical concerns and teaching and learning to use ICT/ICT-AT. Articles addressing technological solutions as such were not included in this review.

Usability and Usefulness of Technology

Several articles (Hernandez-Encuentra et al., 2009; Agree & Freedman, 2011; Greenhalgh et al., 2013; Harrefors et al., 2010) point out that the technologies and services have to be based on the experienced needs of the older adults. If the older adults expect to benefit from the devices or solutions, they are likely to have more positive attitude and thereby a higher motivation to learn to use the technology in question. When an older adult does not see a need for technology, it is unlikely that she/he will be inclined to use it (Peek et al. 2014).

However, the usability of the technology is crucial; the simpler the better. Devices or solutions that were perceived as complex or difficult to learn were easily abandoned soon, whereas devices that were simple were used more often and even after several months after implementation. (Cahill et al. 2007; Schikhof, Mulder & Choenni 2010.) As fear of institutionalization is one strong motive for using ICT-AT-systems, the demands for the usability and reliability of the technology are high. One needs to be able to trust that the devices work the way they are supposed to work. Especially alarm systems and monitoring devices are expected to be reliable. Better technical support was found necessary, and it was also emphasized that the home care staff should be able to respond to basic questions concerning the devices and systems (van Hoof et al. 2011).

Technology and Quality of Life

From the Quality of Life aspect, technology may serve several purposes among older adults. The elderly wish to maintain independence and autonomy, to have social contacts with family and

friends, to ensure security and safety and more importantly to maintain dignity to the end of life. If technological solutions can help to achieve these goals they are more easily accepted by the elderly users. However, Greenhalgh et al. (2013) noticed that many technologies served the health care or social service providers but did not actually improve the lived experience of impairment of the older adults. Sallinen et al. (2013) had similar results; the technologies seem to support the active agency of the older adults only partially. The technology appeared to benefit the organization rather than to help the elderly resident to maintain her/his independence. The participants (aged 80+) of this study expressed that the main goal in the “sunset of life” was to maintain one’s dignity and integrity. This included the idea of not wanting to be a burden to the family or homecare staff and technology was seen as a way of relieving that burden.

Technology-based services and solutions may support participation and social lives in many ways. Lancioni et al (2010) conducted try-outs of verbal instruction technologies among persons with Alzheimer’s disease. They noticed that prolonging the participant’s engagement in various daily activities may be critical not only for the overall functioning but also for their dignity and social image and mood. In a study by Bradley and Poppen (2003) it was noticed that even when there were no changes in mobility or need for assistance among home-bound disabled older adults during or after a ICT- implementation project, the willingness to leave the house more often increased and the communication with friends and authorities increased significantly and thus the quality of life improved.

Timing of Implementation of Technology

Timing of the implementation of ICT/ ICT-AT was discussed in four papers. Greenhalgh et al. (2013) pointed out that at the time when the device needs to be used the individual’s physical and cognitive capacity has to align with its material property and functionality. The timeline between the implementation of the technology and the actual use is perceived as critical. Harrefors et al. (2010) emphasized that among the elderly learning to use the devices later may be difficult: you should learn to use the devices before you actually need them. Also Peek et al. (2014) state that it is necessary to introduce the technological possibilities and their benefits early enough to reduce undue concerns and fears. Wilson et al. (2009) noticed that the timing was even more crucial among older adults with physical disabilities. In their case the functional decline may occur earlier and proceed more rapidly than among individuals without disability and therefore the need for technology has to be anticipated.

Ethical Concerns about the Use of ICT/ICT-AT

Ethical concerns described in the articles were linked to privacy issues, autonomy and social interaction. According to Boström et al. (2013), the older adults seem to have ambivalent feelings about the use of monitoring technologies. On the one hand they valued highly their independence and privacy and were critical about the possible intrusiveness of the monitoring technologies. On the other hand the monitoring technologies provided a feeling of safety and security and thus supported independent/ semi-independent living and enhanced the acceptance of technology. The older adults seem to balance constantly between the fear of institutionalisation and privacy issues. The researchers remind that often technology is introduced to the old persons in a sensitive time, for example during or after fall incident or illness, when the need for help or supervision increases suddenly. Furthermore, being linked to a surveillance system evoked a feeling of being analyzed as numbers and statistics, rather than being met as a person with individual needs. All in all, fear of negative impacts on human contacts was discussed in some studies (Chan et al.

2009; Hamilton 2011; Peek 2014; Sallinen et al. 2013). The older adults emphasize the value of 'real human contacts', but also appreciate the possibility to have additional ways to communicate with nursing staff or family members through ICT/ ICT-AT (Harrefors et al. 2010; Hamilton 2011; Sallinen et al. 2013).

Learning and Teaching the Use of ICT

In regard to learning to use ICT (including basic use of a computer, introduction to internet etc.), older adults seem to have different learning styles and strategies than the younger generations. They seem to relate their education processes with their desire to participate to society, to controlling their own finances, and to representing themselves as persons. (Gonzales et al. 2012.) In the initial stage of ICT-courses the elderly show a greater need for direct personal interaction compared to younger people. The response times (especially sensorial response), motivations and needs of older people differ from those of younger learners and therefore the teaching methods need to be rethought both in regard to the design of teaching materials and in running on-line activities. (Trentin 2009.) According to Hamilton (2011), learning was experienced as particularly difficult when based on only sporadic use of ICT or when it was prompted by a crisis in one's health or social environment. Moreover, the support provided by the peers and proxies or other caretakers is found essential for the older adults in their learning process (Greenhalgh et al. 2013; Cahill et al. 2007).

Furthermore, Mann et al. (2005) point out that elderly user might benefit from simple adaptations in their computer work station, such as wider screens, bigger keys of the keyboard, easy-to use functions and voice activation, to reduce the experienced discomfort. Among the older adults, the barriers of not using computers or ICT-based services seems to be linked to not having a computer at home, to lack of knowledge of services available via internet and or to lack of self-confidence especially when dealing with money, e.g. paying bills or e-shopping via internet (Gonzales et al. 2012; Mann et al. 2005).

Concluding Remarks

Five wishes to technology providers and designers were presented in the KÄKÄTE-project's¹ final seminar in 2014 (Alastalo 2014). These principles should be applied when planning rehabilitation and technology interventions for the older adults. Even though I am getting old...

I want to experience the joy of success.

My home is my castle – but the castle must not be my prison.

I want to resolve my daily problems by myself.

Human contact is a resource of power.

Making the right choice is not getting easier – force-fed sweets are hard to swallow.

.....
¹ KÄKÄTE = KÄKÄTE Project (User Centred Technology for Elderly People and Care Givers)

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A2 HEALTH IMPACT ASSESSMENT (HIA) COLLABORATION BETWEEN FINNISH AND SCOTTISH HIGHER EDUCATION INSTITUTIONS

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Introduction to HIA

Health impact assessment (HIA) is relatively new and a rapidly evolving field in many health and social environments globally. HIA emerged in several different forms as it has been applied to a wide range of issues in diverse social, health and policy plans, projects or programs in different settings for example in fields like urban planning and local government projects. It also informs decision-making which deal with conflicts within an ever changing political climate taking into account the stakeholders views.

Usually HIA means any combination of procedures or methods by which proposed policies or programs may look at the effects on the health of populations. Its two main purposes are: firstly, to predict the likely health effects of a proposal on a specific population group or groups and secondly to inform policy-makers to improve evidence-based recommendations in the decisions-making process. In so doing minimizes the adverse effects and maximizes the good impact that follows from different plans, projects and programs. This enables predictions of potential consequences of a decision before it has been implemented (Kemmer, Parry & Palmer 2008).

Two Erasmus partners in their higher education programmes looked to cultivate closer teaching ties by exploring the benefits sharing teaching around HIA in their curriculum. It is anticipated that such joint working will facilitate sharing of resources across courses in public health for Master's level students.

HIA in Finland and Scotland

Many countries are actively developing impact assessment methodology and building capacity for its implementation. In Finland the Ministry of Social Affairs and Health is developing and implementing different types of Impact Assessment, for example Human Impact Assessment (HuIA) which is focusing on prospective assessment and classifies the effects of different options and alternative solutions. Another impact assessment often used is Social Impact Assessment (SIA). The aims of SIA are to identify and assess social consequences caused by projects, plans or programmes. In Finland it is very common to use Child Impact Assessment (CIA) and Gender Impact Assessment (GIA), with the aim of generating ways of identifying impact on different groups that other types of assessments partly fail to do (National Institute for Health and Welfare 2015). The Environment Impact Assessment (EIA) is also widely used in Finland. Today HIA, GIA and EIA are based on Finnish laws this impact assessment is part of the Finnish legislative drafting process.

In Scotland, HIA was proposed in 1998 green paper 'Working Together for a Healthier Scotland' this was to enable the consideration of health in 'policy formulation across the spectrum of Scottish Office responsibilities' (Scottish Office 1998). The 1999 white paper 'Towards a Healthier Scotland' made a commitment to health impact assessment which reinforced the Governments' commitment to placing health at the centre of planning and decision making at national and local level (Scottish Executive 2003). HIA was seen as vital consideration when formulating policy at both levels.

The Medical Research Council's Social and Public Health Sciences Unit at Glasgow University undertook a systematic literature review to identify existing health impact assessments as well as papers looking at the way HIA should be carried out in Scotland. The Scottish Needs Assessment Programme (SNAP), which was a national network with well-developed links of service and academic strands of medical and non-medical Public Health, was commissioned by the Scottish Executive to pilot the HIA process within Scottish settings. In October 1998, SNAP hosted a seminar to discuss HIA and bring together stakeholders and other interested parties for discussions which led to the establishment of two groups to consider the development of HIA for two key policy areas with major implications for health – urban regeneration and transport.

Given the overview of Finnish and Scottish implementation of HIA, it can be seen to have followed similar trends in its origins and forward planning.

Framework for HIA in HEI in Finland and Scotland

Given the similarities identified above, Higher Education Institutions (HEI) have evolved over many years, and there is greater collaboration between European Union countries through mainly Erasmus programmes. Teacher exchange has shown that there are similarities in curriculum; however, there are also areas where the different institutions can learn from each other. One such example is a distant learning public health course shared by the two institutions where many of the topics covered are similar for example health promotion/education and factors that affect the populations' health and welfare. Inclusion of HIA would be beneficial to students to share and exchange ideas about the approaches used HIA in their respective roles in Public Health. Drawing on expertise from academics in the two countries would require strategic planning to ensure that the strengths of academics are fully utilized to facilitate effective student engagement and learning. To this end the HIA framework by Pollack et al. 2014 will be used to develop a joint working across the two institutions in Finland and Scotland. Although the study by the aforementioned authors was pulling together institutions with the United States, the proposed collaboration will provide different challenges as it will be across two distinct countries with its own cultures, languages and legislation.

In conclusion, it is evident that HIA can be used within courses taught across the two educational institutions; the proposed project will first assess the feasibility of such a project and the practicalities of its implementation. This will not only provide a clear template for joint working but identify potential challenges that need to be managed for this collaboration to be a success.

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A3 POETRY THERAPY WITH ELDERLY – BENEFIT FOR LIFE QUALITY

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Introduction

Well-being of individuals and societies has a wide range of contexts, including health care, human rights, freedom, employment and social belonging. Old age in one's 80s and 90s brings daily difficulties and promotes reevaluation of full life (Erikson 1998). Brown and Lowis (2003) discuss the ninth stage of human psychosocial development and emphasize on elderly spiritual growth, and actualize Bartlett and Burnip finding: a lack of medical staff awareness of elderly people psychosocial needs. Contacting elderly, nurses can interpret appeared, increased introspection and withdrawal as unhappiness or dementia, and can try to force elderly activity (Brown & Lowis 2003). It is a challenge to learn to be sensitive to elderly inner needs, to honor their spiritual journey across lifespan and beyond death to new insight into life's meaning. By Tornstam's (1996) theory, shift from materialistic and rational point of view to more cosmic and transcendental is typical in old age, so it is possible to notice an old age person's increased need for quite reflection.

Old age person's withdrawal from real life can be negative, depended on reduced social contacts, and can be understood as ego integrity problems, as person's despair facing his (her) life failure in the past. Elderly people life satisfaction is related to successful resolution of psychological crises stages (Brown & Lowis 2003). Adults improve their ability to regulate their emotions with increasing age, improve ability to emphasize positive well-being. Their recalled past negative episodes decreases in emotional intensity over time making it more difficult to recall (Boals, Hayslip & Banks 2014). Agreen (1998) believes in personal growth of elderly despite a decline in level of functioning, author discusses reduced elderly life perspective and their emphasis, centered on present day, as a source of growth, but Agreen confirms change in both negative and positive directions at age 92. Old age person often deals with pain, loses trust to maintain independence, the tension between difficult reality and the need to keep trust, by words of Erikson, could be 'headway on the path toward gero-transcendence' (Erikson 1998, 196); old person can accept inevitable death without fear and to look over his (her) past life with satisfaction.

Erikson (1967) wrote that normal development is possible when positive resolution of psychosocial health persistently outweighs the negative resolutions of ill health. Often medical staff faces ill health and operates in accordance with biomedical terms. Biopsychosocial model of health meet requirements of qualified help. Our empirical data showed, that elderly people need self-centeredness in present day, on the other hand we noticed a decrease in old age people self-centeredness, anxiety, symptoms of depression and quit turning into inner life during poetry therapy program. In medical context discussing dementia, Alzheimer disease, we are often far from full understanding of human being. Persons in their 80s and 90s again face stages of their life, and we assume that strong anxiety in the beginning of Alzheimer disease can be connected with unsuccessful resolutions of past psychological stages of life. By our opinion, some episodes of disorientation can be viewed as a sign of Post traumatic disorder, occurred when person reevaluates his (her) past life.

Our assumptions lead us to understanding about necessity to give elderly emotional support, and to confirm personality having a goal to strengthen ego integrity. Our empirical data let us to say that some survivors from serious psychological trauma have learned to look at their life in more positive way. They didn't put their negative event into central part of their life and they focussed on creative power on

personality, on collaboration between people for better well being, based on the truth, love and freedom. When they were 85 years old and older, and their health became worse, they became more depressed and put negative event of the past into central place of their life. Moreover, increased frequencies of involuntary memories were reported as well as their lost power to manage their emotions. Harvey and Miller (2000) wrote that older adults may be especially vulnerable in their ability to deal with events they cannot predict and/or control. It is known that painful memories affect both mental and physical health (Boals 2010; Rubin, Boals & Berntsen 2008), and here is a challenge to liberate old adult from negative memory. Educational gerontology has critical liberation role in educating adults, older people should emancipate themselves from all forms of domination and free their own possibilities for the last stage of life (Battersby 1987; Moody 1993 Maderer & Skiba 2006). Elderly are motivated to learn for reasons of self-fulfilment (Boulton-Lewis, Kuys & Lowie Kitchin 2006). We created educational poetry therapy program for elderly having purpose to guide them to spiritual wholeness, to strengthen integrity of their personality and social communication skills, to enrich their life with positive emotions and aesthetic wisdom of poetry.

Study Design

Purpose of the study was to explore benefit of poetry therapy program for elderly.

Method: qualitative research. Phenomenological observation, case study, interview was used for data collection. Content analysis and strategy of grounded theory was used for generalisation.

Poetry therapy program. Length: 6 months, 1 session of 1 hour in a week. Activities: poetry reading, discussion, writing exercises. Professional poetry therapist guided participants to spiritual wholeness. Sucylaite (2015) methods were applied. 3 participants were 85 – 90 years old, 6 participants we 65 – 75 years old.

Results

Phenomenological observation. Women were sensitive listeners, but they felt uneasiness when they were invited to share memories aroused by the poetry reading. They spoke about their favorite place, favorite tree or bird, but spoke very silently, so sometimes facilitator asked them to speak loudly. Women expressed their philosophical view, emphasized on positive thinking, on personal meanings of favorite places. It was a lack of spontaneity in their speaking in first 3 sessions, later spontaneity grew up. One woman became able to find poetical comparisons and to speak more openly about painful things of the past life only in the end of the program (self-irony was noticed in her speech). Two women (88 and 90 years) were depressed: for 1 month they tried to emphasize on negative events of nowadays and focused on negative emotions during discussion. One woman confronting with emotional state and positive thinking of the other people waited for centered attention and emphasized on her traumatic life. Successful way to summarize ideas of discussion is method of guiding to enlargement of consciousness, poetic improvisation (poetic answering to everyone) is good method for this purpose. In conclusion, emotions loose intensity at the age of 65–75, but intensity of emotions becomes more actual again, when old women (88 and 90 years) re-evaluate past life. Old age people could become despaired facing unsuccessful past period of life.

Case analyse. The woman was 90 years old, had experience of repressed person. She was sentenced to death after Second World War, and 11 years spent in Soviet Gulag. In the beginning of poetry therapy program severe symptoms of depression were noticed, orientation in time was damaged, orientation in space was disturbed, short term memory was lost. Negative thinking was typical for her, but she was able to listen to poetry and other people, to say something. One session she confronted with group, waiting for maximum attention and the acceptance of her negative emotions. Later she focussed on positive things, shared her cultural work experience, evaluated possibility to be together and to feel warmth in the group, advocated for humanities. In conclusion, she overcame severe depression and

achieved better life quality, despite the fact that she was ill with Alzheimer disease. Social emotional support in the group and guiding to wholeness is a way to facilitate resolution of psychological crises stage. It is possible to assume that Alzheimer disease strengthens PTSD.

Content analysis

Senior people evaluated the benefit of poetry therapy. The best rating has sub-category Inner life: it means that clients like the focus on inner life in poetry therapy. Clients confirmed that poetry therapy has a power to revitalize life (positive emotions, emotional contacts with other people). Sub-categories: Inner life, meaning, revitalisation, communications and beauty are qualities useful to describe poetry therapy's impact on the integrity of personality (table 1).

Table 1. Benefit of poetry therapy

No	Sub- category	Example of excerption	No of excerptions
1	Inner life	Underground rivers symbolise human life. You know how inner life is important for us. Here is place where it is possible to speak about spiritual values	8
2	Meaning	Life is much easier when we have purpose. I have purpose to come here.	3
3	Revitalisation	I am like march. Here I open myself, I get fresh weather , and new flow appears inside and moves to other people	5
4	Communication	Here I find life, I am so tired from loneliness	4
5	Beauty	Here we find beauty, I can read, but I can't find beauty without help	3

Conclusions

Emotions loose intensity at the age of 65–75. This helps to deal with negative experiences of past life, but impoverishes emotional sphere of life. Poetry therapy with focus on the inner world liberates inhibited negative emotions, lets to experience catharsis, enriches positive emotions, and strengthens integrity of the Self. Social emotional support in the group and guiding to wholeness is a way to facilitate resolution of psychological crises stage. Unsuccessful resolutions of past psychological stages of life or PTSD may be accompanied with Alzheimer disease; poetry therapy can ease psychosocial development and perhaps slow down the course of Alzheimer disease. Senior people evaluated the focus on inner life and poetry therapy power to revitalize them as human beings. Poetry therapy is a good method to increase old people life quality.

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A4 **HYVÄKSI – INNOVATION NETWORK ON WELFARE TECHNOLOGY: WELL-BEING ENHANCEMENT BY PERSONALISED AND SERVICE DESIGNED CLIENT TECHNOLOGY**

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Aim

The aim of HYVÄKSI (Commonweal) -project is to enhance quality of life of citizens in Satakunta region by developing user-driven and customer-friendly technology that enhances well-being. The project is implemented by Satakunta University of Applied Sciences and a regional development agency, Prizztech Ltd. during 1.11.2014–30.9.2017.

The welfare technology products and services developed in the project are targeted to facilitate and support the daily living of people with special needs, like older adults, people with memory disorders or impairments, people with learning disabilities, people with physical limitations, family carers and other relatives but also health care professionals. Welfare technology solutions can focus on enhancing physical, cognitive and social abilities of the users as well as facilitating nursing practice of health care professionals.

The project aims at establishing a regional innovation network on welfare technology over the project period (Figure 1). The members of the network will participate in developing the new technology innovations. The network brings together a wide range of different parties such as technology suppliers, users, municipalities, enterprises, third sector actors and experts, universities, regional development organisations as well as regional, national and international networks to design and produce more valuable technology solutions. The innovation network enables also flexible and efficient sharing of information related to the possibilities created by personalised and user-friendly technologies.

HYVÄKSI – Innovation Network on Welfare Technology



Figure 1. HYVÄKSI – Innovation Network on Welfare Technology

The project focuses on recognising present and future needs of technology suppliers as well as social and health care sector and tends to respond by generating new products and service innovations. The project provides a forum for numerous technology demonstrations, tests and research that could assist and support for example in procurement decisions. Multidimensional co-operation, expertise and concrete development ideas enhance the creation of new, re-defined or re-designed technology solutions and increase the business opportunities and competitiveness of welfare technology companies.

The users have an active, important and highly valued role in the development of the welfare technology solutions. Inclusion and empowerment of users throughout the product development processes expedites cost-efficiently achievement of personalised, reliable, easy to use and safe welfare technology production and deployment.

Description

HYVÄKSI-project is implemented in Satakunta region, Finland, during 1.11.2014–30.9.2017 by Satakunta University of Applied Sciences and Prizztech Ltd. The project is funded by the Regional Council of Satakunta (ERDF), municipalities of Pori region (Pori, Ulvila, Harjavalta, Kokemäki and Pomarkku) as well as Satakunta University of Applied Sciences. The project and Innovation Network on welfare technology enhances multidimensional co-operation between various parties. In this project, SAMK implements technology demonstrations and research based on recognised needs of technology companies as well as social and health care sector organisations (Figure 2). The project is also closely linked to higher education (e.g. Welfare Technology master's programme at SAMK).

Prizztech Ltd. provides an opportunity for welfare technology enterprises to test their prototypes and products in Living Lab environments. The Living Lab methodology emphasises the real-life user participation in product development. Welfare technology products and services are tested in real life contexts in collaboration with public, private and third sector organisations for three to six months per service or product. During testing processes, welfare technology suppliers receive valuable feedback, expertise and concrete development ideas from users and health care professionals to support their product development.

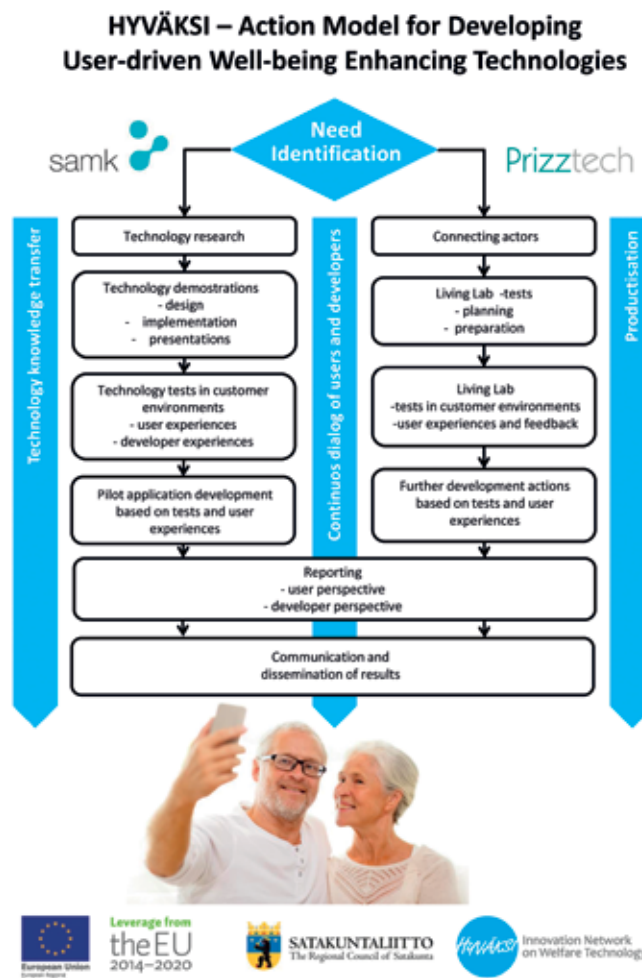


Figure 1. HYVÄKSI – Innovation Network on Welfare Technology

Conclusions

The project carries out regional and national strategies and programmes in a concrete way emphasising the productivity of social and health care sectors as well as multidimensional co-operation and users' active participation on product development and innovation activities. The project enhances co-operation between public and business sectors. It gathers together a wide network of local social and health care organisations that provide a product development platform for businesses to enhance the development of client-friendly technology innovations. At the same time, knowledge and possibilities of new technologies and good practices will be shared among the social and health care providers. The experiences about welfare technologies in real life contexts give valuable information regarding usability, suitability and reliability of the technologies.

The project increases social interaction between the target groups but also the users' possibilities to have an impact on technology products and services designed for them. The multifaceted project activities aim at mutual enhancement and utilisation of prevailing expertise among users, health care professionals and technology suppliers in regard with welfare technology. By involving users to product development processes, welfare technology suppliers receive accurate information of the users' technology requirements. Multidimensional co-operation, share of knowledge and experience enable new welfare technology products to be launched quickly on the market. The Innovation Network on welfare technology is also expected to attract new companies into Satakunta region, to increase the employment in the field of welfare technology and to support the internationalisation of the local welfare technology companies.

The multidimensional co-operation brings added value to all parties involved (users, enterprises as well as public, private and third sector actors) in the Innovation Network. Multifaceted co-operation improves dissemination of knowledge and experience related to new technology innovations between different parties.

The research-based knowledge and pilot studies conducted by means of technology demonstrations, prototyping and service designing clarify new possibilities to produce well-being enhancing services and support in procurement processes. The project improves business opportunities and competitiveness of welfare technology enterprises when their products and services meet the users' requirements and wishes.

A5 FLIPPED CLASSROOM-PEDAGOGY IN SECONDARY SCHOOL

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Introduction

Technology can be a great tool in education. Teacher needs effective pedagogy to bring technology successfully into classroom. The flipped classroom-pedagogy can provide a solution to the use of education technology in a classroom environment.

The flipped classroom-pedagogy experiment took place in European School IV Brussels, Belgium. The students were from different language sections (French, Italian, Dutch, German sections) and they were learning English as a second language. There were four different classes, secondary one class (S1), two secondary two classes (S2) and one secondary three class (S3). Each class had two lessons a week and the experiment lasted approximately two months.

More and more lessons are held in English in the secondary school, and therefore students' language skills need to be strong and efficient to keep up with different subjects. The students needed support with building up English vocabulary and grammar and with their abilities to express themselves in English language. Some of them just needed a little bit more help and time to catch up with the others but for some students it was more demanding. With the help of technology and the pedagogy there was a positive working atmosphere in the classroom.

Teaching and Learning Videos

Given the divergence of educational needs it was decided to try online videos and flipped classroom-pedagogy to be able to meet the students' individual needs in learning. The flipped classroom-pedagogy means that the lecture and homework change places. However, the videos were not given as homework, but they were watched at the beginning of lessons. Maximising time spent helping students with the given tasks rather than teaching new topics in the front of the class was possible by using the videos. Less lecturing and more interaction during the lesson is the main point in the pedagogy with the help of technology and videos. (Khan 2012.)

Salman Khan (2011) discusses about technology in the classroom in his TED talk. Students can have a self-paced lecture at home (pause, rewind, play again) without feeling shy or embarrassed to ask the teacher explain the topic again. There is more interaction in the classroom, because the topic has already been introduced and the lesson can start with peer or group work, making sure that the students understand the new concept and deepen their knowledge with project work and group tasks.

According to Toivola (2014), flipped classroom-pedagogy means a change in teaching where the learning technology has an essential role. Good and informative short videos (approximately 3–5 minutes) having audio, subtitles and clear images were found from British council website. All of these had fun and

interesting storyline, young actors and nice illustrations, which helped to get students focused and learn for instance grammar in an enjoyable way. Other internet videos and websites were also used to teach different topics.

Individualised Learning Skills and Teacher as a Facilitator

The videos were played on the big screen which enabled the teacher focus on working as a facilitator next to the students rather than providing new topic and content in front of the class (Sams & Bergmann 2014). The videos provided the introduction to the lesson and gave more time to help individual students with their work. They also supported students' individualised learning, since the students who felt confident enough to begin with the practises, could do that whilst the video was playing. Then again the students who needed more time to learn the new content, could watch the video again, pause it if needed, and rewind to the difficult points and play them again. For instance, sometimes some students watched the video 5–6 times before they felt ready to begin with their tasks.

Overmyer (2014, 78, 84–85, 92) emphasizes the teacher's role as a facilitator in the flipped classroom model. In his research it was noticed that if a teacher had not received any guidance for flipped classroom-pedagogy, or the teacher taught both traditional and a flipped classes, the students mostly were just given their tasks and the teacher disappeared behind the teacher's desk to do his/her own work. The students did not receive adequate assistance and help in their tasks. In this case both classes, the traditional and the flipped class, received very identical results in their learning.

Observation and Classroom Management

Flipped classroom-pedagogy allowed experiments offered a good vantage point to observe the students how well they managed with given tasks, or if they needed more exercise with certain topics. It also allowed more possibilities for one to one attention with those students who seemed to need help, encouragement or just positive feedback to be able to continue with difficult and demanding topics. In Pearson's (2013) case study 95 percent of the students stated that they preferred flipped classroom-pedagogy to traditional one. Study also showed improvement in their results in mathematics when flipped classroom-method was used.

At the end of the class, the right answers were projected on the big screen, allowing students to mark their own answers and correct them if needed. This way the students could get instant feedback of what went right or wrong. They also learned to take responsibility for their own learning and how to learn from their own mistakes. Teacher's time for marking the assignments was reduced and more time could be spent to plan and prepare for the next lessons.

Classroom management was easier to maintain through direct and positive interaction. More students could receive assistance over the lessons when using videos and other teaching technology. According to Dill (2012, 9) need to deal with problematic behaviour exists more frequently during traditional lessons than in flipped classroom-pedagogy. Also the learning results improved in flipped classrooms compared to those in traditional way of teaching.

Further Research

Due to this positive Belgian experiment another experiment will take place in Finland in order to find out how the flipped classroom-pedagogy works with the first year students in the Finnish primary school.

Technology can be an effective tool for teachers and learners. To be most effective in and outside the classroom, it needs creative teachers and new pedagogical models. Flipped classroom-pedagogy can create new learning environments, where both individual and collaborative learning could be used at its best.

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A6 LEADERSHIP AND WELL-BEING AT WORK

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This study was conducted as Master Thesis study with the focus on the following elements of well-being at work: equity, power and responsibility, giving feedback, interaction and transparency, mental load, and setting goals, visions and strategies.

The target organisation was an international technology enterprise which has activities in four locations in Finland and elsewhere in Europe, too. This study was a part of a wider development project in this organisation. The approach in this study was leadership and well-being at work examined especially from superiors and personnel in technical maintenance department.

The purpose of this study was to obtain knowledge base to establish a development plan for the target organisation. The study aimed at: 1) mapping the current state in well-being at work as experienced by superiors and the personnel; 2) to assess developmental needs in well-being at work from the superiors' point of view; 3) to draft a development plan to be used as a tool in management.

Methodology

Delphoi (also named as dephi) method was used that enabled triangulation of qualitative and quantitative data. The data was gathered by e-questionnaires and thematic interviews and the data was analysed in autumn 2014. The first Delphoi circle was quantitative using questionnaire with total number of 18 superiors (n=18/21) and 55 personnel (n=55/95) as respondents.

The second circle was qualitative with thematic interviews on themes that resulted from the first circle. Total amount of 10 superiors participated in the second circle (n=10/21). The third circle was carried out by using thematic interview with additional questions that based on the second circle findings. Respondents of the third circle were 9 (n=9/21). The data gathered in the second and third circle was analysed by inductive contents analysis method.

Results

In this presentation, only the results related to giving feedback are discussed. The results are divided into three themes: current situation, future visions, and development plan (Figure1).

As to current situation analysis, the findings emphasise the difficulties the superiors face in giving of feedback to their employees. The grounds for feedback need to be carefully reasoned; negative feedback even more than positive. Giving feedback requires of superiors lots of mental preparation and reasoning. It seems to be easier to give and receive feedback based on measured findings. In general, feedback is given too rarely and mostly only verbally in private. The moment for feedback giving should be optimal both for the superior and the employee, and the superior is required to control his/her emotions well. Most of the superiors regard feedback as normal part of daily communication at work.

Future visions consist of visions on making daily reporting more informatics that would increase transparency, quality and individual aspects in the working community. Another need would be increased sharing of experiences and best practices among the working community. Additional training on giving

feedback, more working hours to communicate with employees, and organisational guideline on how to give feedback were requested.

The key content for the entire development plan was divided into six main categories presented in the attached table 1.

Table 1. Development plan for improving well-being at work

Development plan of Well-being at Work				
V0: Development target	Development process	Responsibility	Schedule	V1: Most important benefits
GIVING FEEDBACK				
Planning of the content				
The visibility of the feedback in practice	Detailed reporting tool with resource planning	Team / organization leader	open	Giving feedback is facilitated Transparency, quality and individuality
Peer support for feedback design	Collection and distribution of good experiences to the peer group (eg. 3-8 person, every 4th month)	Head of the organization	open	The group allows participants to share good practice with confidence to each other, making Tacit knowledge transfer, expert - novice confirmation of your practice
Preparing feedback				
The feedback is felt difficult	Targeted training for providing feedback	Head of the organization	open	Feedback planning easier
No guidelines for company	The company's recommendations when giving feedback	Head of the organization	open	Managers operate in a consistent The employee receive feedback on the principle of equality
Lack of experience	Exercises to feedback to the eg., Bringing up Training	Head of the organization	open	Training brings the superior confidence to feedback design
No time to prepare design and feedback	Time required for the feedback preparation	Head of the organization	open	Time spent brings the future planning and consideration of the presentation Avoid misunderstandings, the feedback given understandably
Feedback arguments	Facts orientation	Team Leader	open	Avoid misunderstandings and wrongly argued feedback Employee rely on feedback to content
Giving feedback				
Strengthening own self-awareness	Identification of own behavior	Team Leader	open	Own personality can be controlled through the knowledge of how the feedback moment is planned Anticipation of own behavior (preparation)
Feedback Policy is not natural	Part of the normal interaction between the development from the perspective of the team	Team / organization leader	open	The feedback provided by and getting a normal practice, does not affect the personal level Feedback practical routine of trust and openness
Negotiation skills	Interaction training	Team Leader	open	Interaction between natural and smooth Reduces tension
The employee responsible for feedback only output	Targeted training-> subordinate	Team Leader	open	Two-way interaction helps to be returned in an instant More confidence and reduce fears of the situation in each of the parties
Workers' lack of knowledge of	Time to explore workers	Team Leader	open	People's knowledge will help managers giving feedback The organization advantage that feedback to develop positions occurring things forward

ESIMIESTYÖ JA TYÖHYVINVOINTI

Tausta

Monica Löfgren-Kortelan opinäytetyössä on keskitytty seuraaviin työhyvinvoinnin osa-alueisiin: oikeudenmukaisuus, vastuu ja valta, palautteen antaminen, vuorovaikutus ja avoimuus, psyykinen kuorma, tavoitteet, visiot ja strategia. Keskitymme tässä tarkastelemaan yhtä työhyvinvoinnin osa-aluetta: palautteen antamista.

Kohdeyritys on kansainvälinen neljällä paikkakunnalla toimiva teknologiayritys, jonka toiminta on alkanut Suomessa vuosikymmeniä sitten. Toimintaa yrityksellä on Suomessa ja muualla Euroopassa. Opinäytetyö oli osa isompaa yrityksessä tapahtuvaa kehittämishanketta, joten opinäytetyönä tehdyille kehittämistyölle oli tilaus kohdeyrityksessä. Työssä keskityttiin teknisen huollon asiantuntijaorganisaation esimiehiin ja toimihenkilöihin. Tarkastelun näkökulmana oli esimiestyö ja työhyvinvointi. Kohdeyrityksessä on säännöllisesti toteutettu ilmapiirikyselyjä ja joitakin toimenpiteitä on tehty yhteistyössä työterveyshuollon kanssa. Viimeisimmän, vuoden 2013, ilmapiirikartoituksen tulokset kertoivat, että suurimpina ongelmina olivat työssä jaksaminen, töiden organisointi, palkitseminen, avoin keskustelu sekä palautteen antaminen.

Opinäytetyön tarkoituksena oli luoda työhyvinvoinnin kehittämissuunnitelma sekä luoda siten työvälineitä esimiehille työhyvinvoinnin edistämiseksi. Kehittämistyön tavoitteena oli siten:

1. kartoittaa kohdeorganisaation työyhteisön työhyvinvoinnin nykytilaa esimiesten ja toimihenkilöiden kokemana
2. arvioida työhyvinvoinnin kehittämiskohteita esimiesten näkökulmista
3. laatia työhyvinvoinnin kehittämissuunnitelma työvälineeksi esimiesten käyttöön.

Toteutus

Tulevaisuuden tutkimusmenetelmänä opinäytetyössä on käytetty Delfoi-menetelmää (delphi method), joka toteutettiin käyttäen menetelmätriangulaatiota eri aineistonkeruumenetelmien avulla. Menetelmän periaatteisiin kuuluu, että osallistujien anonymiteetti säilytetään ja saadaan aikaiseksi konsensus eli yksimielisyys käsiteltävästä aihealueesta. Nämä on mahdollista saavuttaa, mikäli kierroksia on riittävästi. (Metsämuuronen 2006, 32–34.)

Delfoi-menetelmä soveltuu hyvin sellaisten taite- ja käännepeisteiden löytämiseen aja aloittamiseen, jotka olisivat vaikeasti pääteltävissä matemaattisesti. Lisäksi on mahdollisuus havaita heikot signaalit, joita voi kuulla, ymmärtää ne ja hyödyntää niitä, jolloin toiminnasta tulee ennakoivaa. Menetelmässä on myös helppo yhdistää kvantitatiivinen ja kvalitatiivinen tutkimusote esimerkiksi niin, että ensimmäisellä Delfoi-kierroksella saadut mielipiteet arvotetaan Likert-asteikolla. Tällöin saadaan kvantitatiivista tietoa, joka toimii lähtökohdaksi muille Delfoi-kierroksille. (Metsämuuronen 2006, 34–35.)

Opinäytetyössä ensimmäinen Delfoi-kierros oli kvantitatiivinen ja toteutettiin e-kyselynä. Siihen osallistui sekä esimiehet (n=18/21) että toimihenkilöt (n=55/95). E-kysely toteutettiin professori Mankan strukturoidulla tikkataulu-kyselylomakkeella sekä analysoitiin käyttäen täsmennettyjä ja laskennallisia tilastomenetelmiä, joista mitattiin laskennallisesti tulokset numeroina ja prosentteina käyttäen Likert-asteikkoa (0–3). Ensimmäisen Delfoi-kierroksen tuloksena nousivat esiin ne työhyvinvoinnin osa-alueet, joita käytettiin toisen Delfoi-kierroksen teemahaastattelussa.

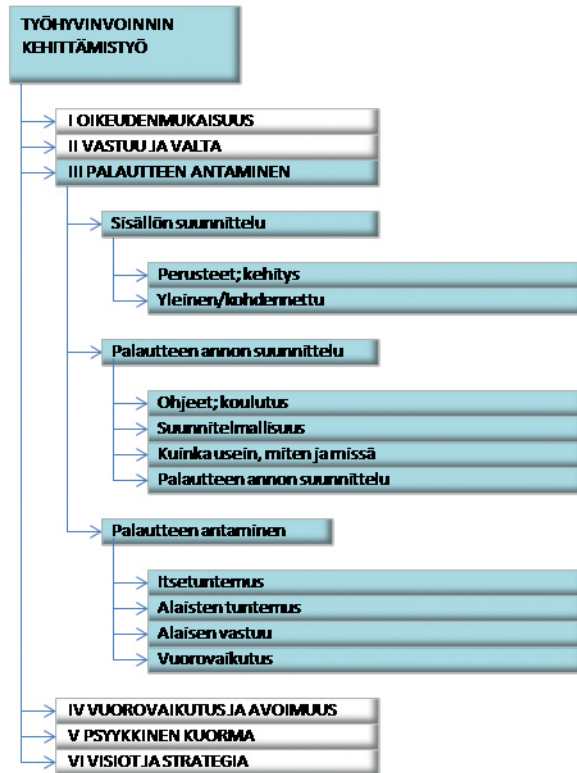
Toinen, kvalitatiivinen, Delfoi-kierros toteutettiin teemahaastatteluna etukäteen määritellyillä työhyvinvoinnin osa-alueisiin jaetuilla teemahaastattelukysymyksillä esimiehille (n=10/21). Kolmas Delfoi-kierros toteutettiin teemahaastattelun lisäkysymyksillä (n=9/21), jotka pohjautuivat toisen kierroksen tuloksiin. Toisen ja kolmannen Delfoi-kierroksen jälkeen saatu työhyvinvoinnin nykytilan aineisto litteroitiin ja analysoitiin induktiivisen sisällönanalyysin avulla. Saatujen tutkimustulosten ja kehittämiskohteiden arvioinnin jälkeen laadittiin työhyvinvoinnin kehittämissuunnitelma, jota käsiteltiin edelleen Learning Cafessa, johon osallistuivat esimiehet pohtien kehittämissuunnitelman aiheita ryhmissä. Learning Cafe ei enää liittynyt opinäytetyöhön.

Aineiston keruu, e-kysely ja teemahaastattelut sekä tulosten analysointi suoritettiin syksyllä 2014.

Tulokset palautteen antamisen osalta

Nykytilan kuvaus

Enemmistö vastanneista näki esimiehillä olevan vaikeuksia analysoida ja valita perusteita palautteelle. Kielteisen palautteen koettiin vaativan tarkemmat perustelut, koska se tulisi antaa rakentavasti sekä perustellusti. Myönteinen palaute on koettu helpommaksi antaa kuin kielteinen. Samoin mitattavat palautteet on helpompaa antaa. Palautetta annetaan liian harvoin. Useimmiten se annetaan suullisesti kahden kesken.



Kuusi työhyvinvoinnin osa-aluetta jaettuna ylä- ja alaluokkiin perustuen haastateltavien lausumiin

Kuvio 1. Päätulokset kategorioina

Yksittäisten esimiesten huomiona oli se, että palautteen antamisessa tulee tarkastella faktoja tarkoin. Myös esimiehellä voi syntyä väärä käsitys asioiden kulusta. Valtaosa esimiehistä totesi, että keskusteleva kaksisuuntainen palaute olisi tavoiteltavaa. Yksi esimiehistä totesi, että taidottomasti annettu rakentava palaute voi vaikuttaa koko työyhteisöä vahingoittavasti pitkälläkin aikavälillä.

Muutamassa vastauksessa ilmeni, että palautteen sisällön suunnittelussa tulisi tarkastella palautteen antamista eri näkökulmista myös ammatillisen kehittymisen kannalta. Enemmistön mielestä esimiehen antamassa palautteessa tulisi ilmetä mistä palaute annetaan ja miten se näkyy tehdyissä töissä.

Palautteen antamisessa enemmistön mielestä tulee olla suunnitelmallinen ja miettiä palautteen antaminen tarkoin siten, että se tulee annetuksi ymmärrettävästi eikä väärinymmärryksiä synny. Muutamien esimiesten mielestä oma henkinen valmistautuminen koetaan tärkeänä.

Palautteen antohetki pitää olla sekä esimiehelle että alaiselle sopiva ja esimiehen tulee hallita oma tunnetila vuorovaikutuksessa. Useimpien esimiesten mielestä palautteen antamisessa ihmistuntemus ja vuorovaikutuksellisuus ovat eduksi ja vaikuttavat oleellisesti palautetilanteessa. Muutamien mielestä palautteen saajalla on myös oma rooli ja vastuu palautteen vastaanottamisessa, jotta palautteen antaminen onnistuu. Useamman mielestä palautteen antamisen pitäisi olla osana normaalia vuorovaikutusta kaksisuuntaisesti.

Tulevaisuuden näkökulma

Enemmistön mielestä palautteen antaminen helpottusi, jos nykyisten tehtyjen töiden raporttien sisältö olisi informatiivisempi, jolloin toteutuisivat muunmuassa läpinäkyvyys, laatu ja yksilöllisyys työyhteisössä. Muutama esimies koki, että hyvien kokemusten koonti ja jakaminen edelleen hyvinä käytöntöinä kollegoille olisi tärkeä kehityskohde. Useimmat esimiehet toivoivat samoin aikaa palautteen antamisen suunnitteluun ja valmistautumiseen sekä työntekijöihin tutustumiseen.

Tulevaisuudessa osa esimiehistä toivoi koulutusta palautteen antamisesta. Siinä tulisi käsitellä ihmistuntemusta ja neuvottelutaitoa. Palautteen antamista tulisi myös harjoitella. Eräs haastattelusta halusi kehittämiskohteeksi oman itsetuntemuksen vahvistamisen. Muutama toivoi myös palautteen antamisen ohjeistusta yritykseltä.

Kehityssuunnitelma

Seuraavassa esitetään tämän opinnäytetyön kehittämissuunnitelmassa käytettyjen vaihtoehtojen muodostaminen ja kuvaaminen. Suppeassa ennakoarvioinnissa ollaan vaiheessa, jossa saadun tiedon ja aineiston pohjalta tarkastellaan vaikutuksia ja vaihtoehtoja vertaillen niitä toisiinsa.

Ennakoarviointi näkyy työhyvinvoinnin kehittämissuunnitelman taulukossa (Taulukko 1) siten, että nykyinen tilanne on ensimmäisellä sarakkeella V0, jossa ei tapahdu kehittävästä toiminnasta kehittämissuunnitelman mukaisesti. V1 kuvastaa niitä hyötyjä, joita syntyy, kun kehitystoimenpiteet toteutetaan.

Kehittämissuunnitelman perusta on saadun työhyvinvoinnin nykytilan aineiston tuloksissa sekä teoriatiedossa. Suunnitelmassa on käytetty siten kuutta osa-aluetta, joista tässä esityksessä keskitytään palautteen antamiseen.

Taulukko 1. Työhyvinvoinnin kehittämissuunnitelman osat

Työhyvinvoinnin kehittämissuunnitelma				
V0: Kehittämissuunnitelma	Kehittämissuunnitelma	Vastuu	Aikataulu	V1: Tärkeimmät välittömät hyödyt
III. PALAUTTEEN ANTAMINEN				
Sisällön suunnittelu				
Näkyvyttä mistä palaute on tullut, käytäntöön kiinnitettyä	Yksityiskohtainen raportointityökalu resurssin- ja työn suunnittelusta	Tiimin/organisaation vetäjä	avoin	- palautteen antaminen helpottuu - läpinäkyvyys, laatu ja yksilöllisyys
Vertaiskoki palautteen suunnittelussa	Hyvien kokemusten koonti ja jakaminen »vertaiskierryhmä (esim. 3-8 hlö, 4x1kk välein)	Organisaation vetäjä	avoin	- ryhmään osallistujat voivat jakaa hyviä käytäntöjä luottamuksella toisilleen, saaden vahvistusta omaan käytäntönsä - väljään tiedon siirtäminen, konkari - novia
Antamissuunnittelu				
Palautteen purkamisen koetaan haasteena	Kohdistettua koulutusta palautteen antamisesta	Organisaation vetäjä	avoin	- palautteen antamisen suunnittelemisen helpottuu
Ei ohjeistuksia yritykseltä	Työryhmän suositukset palautteen antamisesta	Organisaation vetäjä	avoin	- esimiehet toimivat yhdenmukaisesti - työntekijän saaman palaute annettu luottamuksen periaatteella
Harjaamisen puute	Palautteen antamisen harjoitella esim. Puhellessotokoulutus	Organisaation vetäjä	avoin	- harjoittelu tuo esimiehelle varmuutta palautteen suunnitteluun
Ei aikaa palautteen suunnitteluun ja antamisen valmistautumiseen	Työajankäyttöä huomioida palautteen antamiseen vaadittava aika	Organisaation vetäjä	avoin	- käytetty aika tuo jatkossa suunnitelmallisuutta ja harkintaa esitystapaan - vähentää väärinymmärryksiä, kun palaute annettu ymmärrettävästi
Palautteen perusteet	Faktoihin perehtyminen	Tiimin vetäjä	avoin	- vähentää väärinkäsityksiä ja väärin perustein annettua palautteesta - työntekijä luottaa palautteen sisältöön
Palautteen antaminen				
Oman itsetuntemuksen vahvistaminen	Oman käyttäytymisen tunnistaminen	Tiimin vetäjä	avoin	- oma persoonan tuntemisen kautta voi säädellä miten palautehaki suunnitellaan - ennakointi oma käyttäytymisen suhteen (valmistautuminen)
Palautekäytäntö ei luontevaa	Osaksi normaalia vuorovaikutusta »kehityskäytäntö/masta tiimille	Tiimin/organisaation vetäjä	avoin	- palautteen antamisen ja saamisen normaali käytäntö, ei vaikuta henkilökohtaisella tasolla - palutekäytännön rutini lisää luottamusta ja avoimuutta
Neuvottelutaidot	Vuorovaikutuksen harjoittelu	Tiimin vetäjä	avoin	- karsakäyttöön luontevaa ja sujuvaa - vähentää kiinnittelyä
Työntekijän vastuu palautteen vastaanotossa	Kohdennettu koulutus » alustaidot	Tiimin vetäjä	avoin	- kaksisuuntainen vuorovaikutus auttaa palautehaki - lisää luottamusta ja vähentää pelkoja tilanteesta kummallakin osapuolella
Työntekijöiden tuntemisen puutteellisuus	Aikaa tutustua työntekijöihin	Tiimin vetäjä	avoin	- ihmisten tunteminen auttaa esimiestä palautteen antamisessa - organisaation etu, että palaute kehittää tehtävissä esiintyviä asioita eteenpäin

B1 CARE AT A DISTANCE IN THE NETHERLANDS – OBSERVATIONS IN VIEW OF AN APPLIED RESEARCH AND DEVELOPMENT PERSPECTIVE

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Introduction

The Netherlands is a western European country with a high population density. It has a care system that is rewarded by clients, participants and even business analysts. Is the present healthcare system sustainable? Is there room for improvement? If so, what could be a role of technology in the optimization of care support.

The author has gathered personal experience in the development and introduction of technology into Home Care provision. Experiences gathered in the introduction of video communication in care, monitoring activities in the house and the development of care protocols supported by modern communication techniques are presented. Consequences for the R&D strategy will be discussed.

Results

The onset of the application of technology in care has been largely dominated by a “technology push” approach. Care organizations gladly tried new developments in pilot experiments mostly to stay tuned towards new developments. As a consequence experimentation does not outgrow a stage of pilots. Larger scale implementation was seldom seen. Gradually, in the period between 2002 and now a shift can be recognized. It was recognized that implementation of technology in the care process requires a change in the care provision procedures, as well as in the roles of care provider and client. Some care organizations express an ambition to take the lead in these developments. They want to become more involved in planning and implementation of R&D process. Strategic partnerships need to be developed as a logical consequence. This implies a change also to the research organization. Especially a university of applied science should become a prominent partner in the development and implementation of this kind of applied research.

Conclusion

Implementation of technology as a means to support care provision may contribute to the needed quality improvements in care provisions. The use of user centred design and development strategies with principles of co-creation will be an important driver to enable the required progress.

B2 MOBILE APP DEVELOPMENT FOR WELL-BEING ENHANCEMENT: WHAT THE TECHNOLOGY HAS TO OFFER

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Field of expertise: Computer Science, Mobile App development for well-being enhancement, Mobile development using android

The past number of years has witnessed a rapid expansion in the market for mobile devices and a similar expansion in application software and systems that support and leverage the mobile context. Smartphones and tablets now incorporate a wide range of communication and sensor technologies. Improvements in telecommunications infrastructure and in particular data speeds continue to increase the potential for the development of innovative products and services, such as, the emergence of 4G and the penetration of Bluetooth and NFC for payment systems.

This presentation will chart the evolution of mobile devices and systems and examine the emergence of such innovative applications across a range of user scenarios. It will explore the main mobile development platforms available and in particular focus on the architecture, frameworks and facilities provided by the Android system. Amongst these facilities are: Android Wear, currently incarnated in the form of various manufacturers' wristwatch offerings; Android Auto, integrating location and map services; and Android TV, bringing sophisticated content rich experiences to users and employing recommendation services.

Features provided by mobile devices such as sensors, location and communication offer great potential for developing cost-effective systems in the well-being enhancement area, for example, caring for the old. No longer will developers have to overcome the obstacle of developing custom-made hardware devices for specific applications, as mobile devices now have a wide range of capabilities inbuilt and ready to be exploited by the innovative engineer or developer.

A range of these features will be examined along with current developments in the area. The presentation will culminate by posing a series of questions of particular importance across a range of disciplines from within the field, such as; how best to develop engineering processes to support such systems, how best to incorporate best-practice healthcare principles into the development of well-being systems, and how to develop business models that will facilitate the funding and delivery of these systems.

B3 MOBILE APP DEVELOPMENT FOR WELL-BEING ENHANCEMENT: KEY LESSONS FROM SPECIFIC USER EXPERIENCE

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This presentation builds on the issues raised in relation to the significant potential offered by mobile technologies and app development discussed by my colleague Mr. Dermot Logue. It considers more closely some of the key observations made and lessons learned from attempting to develop and deploy such mobile devices, apps and games within specific well-being enhancing and care settings.

According to leading usability researcher, Dr. Donald Norman, adoption of any new technology encompasses two distinct user groupings. Early Adopters (or innovators) are normally sophisticated and technologically literate but make up the smallest percentage of potential users. It is the second grouping, the so-called Late Adopters (comprising three further sub-groupings of pragmatists, conservatives and sceptics) where the majority of users and usability issues actually reside. By considering some of the specific needs and concerns emanating from within these different groups, in particular in relation to more specialist well-being enhancing and care settings, technologists and business entrepreneurs can better understand the important user-centric issues effecting the successful adoption (or not) of commercial technologies.

Keeping with the broad theme of this Symposium, "full life for all", this presentation will further consider the elements vital to creating and employing successful solutions within a number of more inclusive and representative user scenarios. These scenarios require: accurate user profiles, adequate task models and expert experience from within the area of application.

Building on the experience gained within SAMK's WET-RG, a number of examples will be presented which highlight some of the capabilities, potential and innovation possible as well as some of the limitations, pitfalls and issues related to appropriateness of what was being attempted. These examples range from the simple mobile games, apps and devices to more sophisticated game applications and peripherals.

B4 REHABILITATION CASE MANAGEMENT IN OCCUPATIONAL HEALTH CARE – DEVELOPMENT OF A PROCESS MODEL

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PT, rehabilitation counsellor, Master student in Rehabilitation

Merja Sallinen

PT, PhD, Senior Lecturer

The responsibility of providing rehabilitation counselling for the working aged population has increased in occupational health care in Finland during the recent years. The new laws and legislations set demands on earlier and more efficient interventions in occupational health care in order to prevent disability at work, to find possibilities to continue working despite impairments and thus to lengthen work careers. These aims are also emphasized in the political agenda of the current and previous governments. The demographic changes, economic globalization and development of technology are expected to change the fields of social security and challenge old working models. This requires also further development of occupational health care, rehabilitation, health promotion as well as development of the working life in general.

The purpose of this development project was to create a process model of rehabilitation case management for the occupational health care of Terveystalo Pulssi. This model will be a part of the quality system of Terveystalo Pulssi and will provide the clients a service experience that is in line with her/ his individual needs, aims and values. For the employers and enterprises the model will provide more cost-effective services.

A descriptive literature review was conducted to evaluate Finnish projects in which the focus was in case management and where the occupational health care was involved throughout the project. The literature review did not aim at finding new information. Rather than that, the purpose was to explore the argumentation of the projects, to find good practices and development ideas and to analyze them from the perspective of developing a process model. The model was developed using service-design -approach. The methods used in service-design focus on planning, describing and visualizing the service experience. The idea of the given methods is to make it easier to understand complex service entities. At the same time the methods that were used supported data collection for the process model.

As a result of multiprofessional team work by the occupational health care professionals of Terveystalo Pulssi, a rehabilitation case management model was completed. It was described both as a visual flow chart model and as text that explains how the case management process of an individual client proceeds in the occupational health care, and what are the roles and responsibilities of each professional in each stage of the process. Furthermore, the services were described in detail both from the perspective of an individual client and of the enterprises that buy the occupational health care services for their employees.

The results of this pilot process can not be evaluated immediately but after few months experiences. The evaluation of usability and usefulness on the process model for rehabilitation case management will take place in the fall 2015. If the results are positive in regard to quality of the services, client satisfaction, cost-effectiveness, use of human resources and to co-operation with various stakeholders, the model will be included in the quality assurance system of Terveystalo Pulssi and expanded later to other services.

Key words: Occupational health care, rehabilitation, case management, service-design

B5 **MOBILE APPLICATION FOR SAFER POSTOPERATIVE PATIENT CARE**

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Andrew Sirkka

Dr. Ed., Principal Lecturer

The purpose of this R&D project is to develop a prototype of a mobile application for making nursing practice smoother and safer in a Postoperative Intensive Care Unit. Intensive care nursing is often hectic by nature filled with numerous of tasks, treatments, working methods and therefore many things to remember. In today's health care work, the methods used are not only supposed to be based in but also constantly produce more data that could be used as research and follow-up data. Actually, it is a national goal to deploy evidence-based methods in all Finnish patient care and treatment.

With this technology application, newest evidence-based methods are integrated into the every day nursing making at the same time working easier and safer with automated checklists and reminding functions. The basic goal is to improve patient safety helping the nurse to focus on patient-specific postoperative problems. At the same time, the application would work as a kind of data bank for nurses making evidence based information more accessible.

R & D project started last fall with an idea of generating some kind of reminder tool application into intensive care nursing. In this kind of projects, the good idea is followed by determination of the need in everyday use. This particular application is designed for the needs of orthopedic postoperative intensive care unit at Turku University Hospital. The development team working on this project includes nursing experts from Turku University Hospital and experts from private healthcare technology company.

The planning phase started with research of the basic concepts such as evidence-based treatment methods and practicalities in developing mobile applications. One of the bigger issues in planning was to delimit the contents of the application. There are few topical themes, requested by the target ward, which are taken into account like pain and medication.

The planning phase also included collecting suitable material for the application including evidence based recommendations for postoperative care, pain and medication treatments.

After collecting the material for the application, the practical implementation phase started. Technical implementation was assisted by Wellbeing Enhancing Technology (WET) research team professionals at Satakunta University of applied sciences (SAMK). In practice the process started with a simple design of functions required of this application. The whole function will be made and displayed in a paper interface diagram before the real implementation. Prototype will be ready during the end of spring 2015.

The prototype testing will be done in a target ward at the end of 2015. After testing phase the technical, functional and usability issues will be carefully assessed and the results reported. From this point, there are basically two options to continue: to close the whole project focused on reporting the generation and testing the application as a master's thesis or continue the project with developing the application further towards commercial product.

B6 QR-CODE MEDICINE CARD IN AUTOMATED DOSE DISPENSING

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Andrew Sirkka

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Nowadays about 30 000 Finnish people are using automated services for daily medicine dispensing. Many of those using the service are public healthcare clients. The automated dispensing services have been available in Finland since 2002. Automated multi-dose dispensing refers to a service in which the customer receives daily medication administered in dosage pouches for two weeks at a time. The pouches contain the following printed information: customer's name, date and time when medication should be taken, name and the number of the medicine administered in the pouch, and the name of the supplying pharmacy. An updated medication card is provided in each dosage package, too. There is a constantly increasing demand of automated medication services.

Based on previous studies, one of the benefits in the automated dispensation is decrease in nurses' working time used in routine administration of medication. On the other hand, reduced involvement in drug administration and missing to deal with medicine descriptions and user information provided in medicine packages have caused decrease of nurses' knowledge level and increased insecurity regarding medication.

QR code readable medicine card could increase safety in medication. Customers often want detailed information about their medicine. QR code facilitates that information in electric and quickly accessed form. Pharmac Finland Ltd. has developed a system utilising QR codes are square shape two-dimensional barcodes, which allow adding in much more information compared to a regular barcode. QR code linked to the dosage card to enable reading the dosage bag contents by mobilephone or tablet PC. To read the code requires only a camera and particular software for reading the bar code. QR code opens the information directly as a script of the customer's current medication or directs to the particular web page where the information is available. The QR code used in this project, displays the medication list on the screen with a profile picture of the medicine seen from above and from side. The name of the medicine contains a link to a brief description text maintained by Lääketietokeskus. QR code was selected to be used in Pharmac Ltd's dispensing services because it is well known, and is easy to use; easy to print, transform, and the reader software is downloadable free from the Internet.

The main reason to deploy QR code in Pharmac Ltd.'s dispensing services was to improve patient safety especially in home care. At the moment this service is a new initiative in the organisation, which is why the knowledge about the use of automated dispensing system is important. The purpose for this use research project is to obtain knowledge in regard with quality and quantity of additional information the users search through QR code, and the user's assessment on how useful that information has been. What are the advantages and disadvantages of using QR code automated dispensing system experienced by users that require interventions? This study is conducted as a quantitative study focusing on gathering user experiences (nursing staff) on automated QR code dispensing services.

B7 IDENTIFICATION OF BIPOLAR DISORDER MOODS BY MEASURING PHYSICAL ACTIVITY WITH MOBILE APPLICATION

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Bipolar disorder is a mental disorder characterized by periods of elevated mood and periods of depression. The elevated mood is significant and known as mania or hypomania. During mania an individual feels or acts abnormally happy, energetic or irritable. They often provoke poorly thought out decisions with little regard to the consequences. The need for sleep is usually reduced. During periods of depression there may be crying, poor eye contact with others, and a negative outlook on life. The risks of suicide, disability to work and divorces are high. Recurrence of periods varies between individuals. Periods can be significantly reduced following appropriate medical and psychiatric therapy and management of lifestyle. Bipolar disorder patients often respond negatively to medical treatment. This occurs especially between the episodes, when there are no significant symptoms.

Manic and depressive episodes are easier to manage if a bipolar patient learns to identify prodromes that are typical to each episode. Prodromes are like variations in virility, ability to concentrate and mood changes. Identification of prodromes helps patients to seek treatment and prevents development and prolonging of the episodes. For this reason many individuals are learning to keep the mood diary.

The aim of this study is to inspect correlation between individual's physical activity measured with mobile application and bipolar moods. Physical activity is evaluated by mobile phone's acceleration sensor and application. There is a correlation according to literature, but this study focuses to find out whether this kind of correlation is identifiable and measurable with mobile sensor applications. If possible correlation could be identified by sensor technology it would help people with bipolar disorder to get earliest possible indications related to mood changes and thereby achieve better control over their lifestyle and self-care management.

The sample of this study is 20 persons diagnosed with bipolar disorder and 10 without diagnosis. The data acquisition takes place with a browser based mobile application which saves data from mobile phone's acceleration sensor to the server four times in an hour in 5-minute periods. People also fulfill the browser based mood diary on daily basis. From the acceleration data it is possible to calculate the numerical index to describe the physical activity of a person. Numeric data offers a possibility to analyse and inspect on daily basis the correlation between mood estimation given by an individual and measured by physical activity data.

This study tends to obtain knowledge whether it is possible by mobile sensor technology to recognize mood changes related to bipolar disorder, and whether the sensor data one could be used to improve self-care abilities of a person with mental and psychological symptoms.

B8 DEVELOPMENT OF A COMPETENCE MAP FOR THE NURSES IN THE LONG-STAY WARDS OF THE HEALTH CARE CENTRE IN UUSIKAUPUNKI

Tuire Rastio

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Anne-Maria Kanerva

PhD, Senior Lecturer, team leader

The purpose of this thesis work was to create a competence chart for the nurses in the long-stay wards of the health care centre of Uusikaupunki. The competence chart is intended for the self-assessment of present and future professional competence. Another purpose was to create a functional model, which could be used in developing a competence chart for other units of health care. The aim was to create tools for ward managers for the assessment and development of competences. A competence chart is a good tool of management for ward managers, because it enables the assessment of competences in a versatile way and makes it easier to give feedback in development discussions. In addition, it can be used as a tool in developing nursing care.

The development task was conducted by action research, which proceeded through six cycles. The work methods consisted of a competence chart, Learning Café, an expert panel and piloting. The first phase included the definition of major concepts and a thinking model. The second cycle focused on the description of the most important competences and the nurse's present and future professional competences. The competence levels were described in cycle three and an expert panel assessed the competence chart in cycle four. In the final phase the competence chart was pre-tested and the chart was then adapted to its final form on the basis of the feedback.

In this thesis, competence refers to those skills, knowledge, experiences, values and personal traits which a nurse needs when working in the long-stay ward of the health care centre. The major competences included quality, professional, cooperation, expertise, development and multicultural nursing competences. In total, the competence chart consisted of 188 competence areas. The scale describes the worker's development from the initiative phase to the phase of expertise.

The results of the thesis work can be used in a versatile way. It can be used to evaluate the competences of the already employed nurses but also in recruiting and initiating new employers. The functional model created for the development of a competence chart can also be used by other units of health care in Uusikaupunki.



OSAAMISKARTAN LAATIMINEN UUDENKAUPUNGIN YHTEISTOIMINTA-ALUEEN VUODEOSASTOJEN SAIRAANHOITAJILLE

Uudenkaupungin kaupungin yhtenä strategisena tavoitteena on henkilöstön hyvinvoinnin ja osaamisen edistäminen. Terveyspalveluiden tulosalueen työhyvinvoinnin kehittämissuunnitelmassa tavoitteena on henkilöstön osaamisen säännöllinen arviointi. Yhä enemmän ollaan kiinnostuneita osaamisesta ja siitä, minkälaista osaamista organisaatiossa edellytetään ja minkälaista osaamista niissä on tällä hetkellä. Osaaminen on yksi tärkeimmistä kilpailutekijöistä työelämässä ja samalla tärkeä osa ihmisen työssä jaksamista ja työuralla pysymistä sekä organisaation menestymistä. Osaaminen lisää yksilöiden työnhallintaa, työhyvinvointia ja työniloa. Osaavat, terveet ja innostuneet työntekijät tuottavat myös hyvää tulosta organisaatiolle.

Kehittämistyön tarkoituksena oli kehittää osaamiskartta sairaanhoitajan nykyisen ja tulevaisuuden ammatillisen osaamisen itsearviointiin Uudenkaupungin terveyskeskuksen vuodeosastoille. Tarkoituksena oli myös luoda toimintamalli, jota voidaan käyttää osaamiskartan laatimisessa terveyspalveluiden muissa yksiköissä. Kehittämistyön tavoitteena on luoda osastonhoitajille väline osaamisen arviointiin ja kehittämiseen. Osastonhoitajalle osaamiskartoitus on menetelmänä hyvä johtamisen väline, sillä se mahdollistaa osaamisen arvioinnin monipuolisesti ja helpottaa palautteen antoa kehityskeskusteluissa. Lisäksi se toimii työvälineenä hoitotyön kehittämisessä.

Kehittämistyön menetelmänä käytettiin toimintatutkimusta, joka eteni kuuden kehän kautta tapahtuvana kehittämisenä. Työskentelymenetelminä eri vaiheissa käytettiin Hätösen osaamiskartoitusmallia, Learning Cafe -menetelmää, asiantuntijapaneelia sekä pilotointia. Ensimmäisessä vaiheessa muodostettiin yhteinen käsitys osaamiskartan laatimisessa tarvittavista keskeisistä käsitteistä. Toisessa vaiheessa kuvattiin pääosaamisalueet ja sairaanhoitajan nykyinen ja tulevaisuuden ammatillinen osaaminen. Kolmannessa vaiheessa kuvattiin osaamistasot ja neljännessä vaiheessa asiantuntijapaneeli arvioi osaamiskarttaa. Viimeisessä vaiheessa osaamiskartta esiteltiin ja muokattiin siitä saadun palautteen perusteella lopulliseen muotoonsa.

Kehittämistyössä osaamisella tarkoitettiin niitä tietoja, taitoja, kokemuksia, arvoja sekä persoonallisia ominaisuuksia, joita sairaanhoitaja tarvitsee työskennellessään terveyskeskuksen vuodeosastolla. Osaamiskartan pääosaamisalueiksi muodostuivat laatuosaaminen, sairaanhoitajan ammatillinen osaaminen, yhteistyöosaaminen, erityisosaaminen, kehittymisosaaminen ja monikulttuurisen hoitotyön osaaminen. Sairaanhoitajan ammatillisen osaamisen osaamisalueiksi muodostuivat erikoisalojen hoitotyön hallinta, hoitotoimenpiteiden hallinta, peruselintoimintojen tarkkailun ja ylläpidon hallinta, teknologiaosaamisen hallinta, atk-osaamisen hallinta, ohjaus- ja opetusosaamisen hallinta ja eettisen osaamisen hallinta. Yhteensä osaamisalueita osaamiskartassa on 188. Osaamiskartan arviointiasteikkona päädyttiin käyttämään asteikkoa, mikä kuvaa työntekijän kehittymistä perehtyjästä asiantuntijaksi (perehtyjä (1) – suoriutuja (2) – pätevä (3) – taitaja (4) – asiantuntija (5). Lisäksi oli vaihtoehto, ettei hallitse perusteita (0).

Kehittämistyön tuloksia voidaan hyödyntää monipuolisesti. Osaamiskarttaa voidaan käyttää jo työsuhteessa olevien sairaanhoitajien osaamisen arvioinnin lisäksi uuden työntekijän rekrytoinnissa ja perehdytyksessä. Kehittämistyössä luotua toimintamallia osaamiskartan luomiseen voivat hyödyntää myös Uudenkaupungin terveyspalveluiden muut yksiköt.

C1 REDUCING FALLS IN OUTPATIENTS: EVALUATION OF FALL RISK ASSESSMENT AND IDENTIFICATION OF FALLERS

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Purpose

Injurious falls are problematic in the outpatient clinics at a Tennessee medical center as well as at the regional, national, and international levels. Falls are a priority among the safety goals listed by the Joint Commission and other accreditation organizations. The purpose of this project focuses on evaluation of the utilization of the Connecticut Collaboration for Fall Prevention Tool for patients age 65 and above in the internal medicine outpatient clinic of a Tennessee medical center and determine if the tool is beneficial in identifying patients who are at risk for falls. The nursing staff working in the above mentioned clinic was the pilot group to study this problem.

Description

A questionnaire was distributed to the nursing staff of the internal medicine outpatient clinic of a Tennessee medical center which included questions identifying patients at risk for falling, problems with the screening tool and evaluation of the screening tool. The project was evaluated based on outcomes associated with the issues in utilization identified by nursing staff and the identification of patients who have fallen and if the tool helped change behaviors and prevent falls.

Conclusions

The Connecticut Collaboration for Fall Prevention Screening Tool needs to be completed by a registered nurse. Nursing staff need to be educated regarding the proper use of the screening tool. A workplace design may be useful in determining if the nursing staff is collecting information associated with the screening tool correctly. Addition of a malnutrition screening tool needs to be incorporated into patient assessment. Creation and distribution of a patient education pamphlet for increasing fall awareness, needs to be implemented. Post signage related to fall prevention in clinic areas. Information gathering associated with screening tools does not mitigate falls; patient education needs to be the focus for prevention of injurious falls.

Summary

Survey aimed at nursing staff in an internal medicine outpatient clinic to evaluate the utilization of the Connecticut Collaboration for Fall Prevention Screening Tool for patients age 65 and above. Use of the tool is considered to be too time consuming for the nursing staff. The screening tool does nothing for patient education or prevention of falls for patients under the age of 65. The questions utilized in the tool are not individually targeted.

Reducing Falls in Outpatients: Evaluation of Fall Risk Assessment And Identification of Fallers

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FRAMEWORK

Rosswurm and Larrabee Model



BACKGROUND

- One in Three Adults Age 65 or Older Fall Each Year
- 2 Million Adults age 65 or Older are Treated in Emergency Room Each Year Related to Falls
- Falls are the Leading Cause of Injury Related Deaths in Older Adults
- Falls are Problematic at Regional, National and International Levels

PROBLEM

- Injurious Falls Problematic in the Outpatient Clinics in a Tennessee Medical Center

SIGNIFICANCE OF PROBLEM

- Falls Are Priority Among Joint Commission Safety Goals
- Falls Are a Safety Issue Impacting Patient Care and Nursing Practice
- Etiology of Falls and Fall Prevention Significant to Practicing Nurses and Nurse Educators
- Staff Education Key to Identification of Patients at Risk for Falls and Fall Prevention in Any Setting

PURPOSE

- Survey Nursing Staff in an Internal Medicine Outpatient Clinic to Evaluate the Utilization of the Connecticut Collaboration for Fall Prevention Tool for Patients 65 and Above

GOALS

- Determine if the Connecticut Collaboration for Fall Prevention Screening Tool is Beneficial in Identifying Patients at Risk for Falls

- Determine Utilization of Screening Tool by Nursing Staff in Designated Clinic
- Determine Strength of the Tool in Identification of Patients Who Have Fallen
- Determine if the Tool Helped Change Behaviors of Patients or Nursing Staff and Prevent Falls

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Methodology

- Sampling Procedure: Questionnaire to Nursing Staff

Implementation

- Identification of Patients at Risk for Falling
- Problems Associated with Identification of Patients at Risk for Falling
- Problems Associated with the Screening Tool
- Environmental Conditions in the Outpatient Clinic Contributing to Falls
- Does the Age of the Patients Screened Need to be Lower than Age 65?

Results

- Screening Tool Too Time Consuming
- Tool Does Nothing for Education or Prevention for Patients Under Age 65
- Questions Not Individually Targeted

Limitations

- Survey Group Represented 1 Out of 120 Clinics
- 5 out of 8 Respondents to Survey had Actually Used the Screening Tool
- Only 2 Respondents Were RNs and Had Not Used the Tool
- Unknown if the Nursing Staff Utilizes the Screening Tool Correctly and Consistently
- Inability to Access a Larger Pool of Survey Participants

CONCLUSIONS

- Screening Tool Needs to be Completed by an RN
- Staff Education Related to Etiology of the Screening Tool
- Workplace Design
- Addition of a Malnutrition Screening Tool
- Creation of a Patient Education Pamphlet
- Post Signage Related to Fall Prevention in Clinic Areas

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C2 EVOLUTION OF AN INTERDISCIPLINARY CARE TEAM IN A PEDIATRIC SIMULATION EXPERIENCE

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Purpose

Tennessee Technological University nursing students attend pediatric inpatient clinical experiences throughout the semester. Our Fall 2012 faculty indicated decreased effectiveness of the first clinical day due to lack of confidence and competence by our nursing students in obtaining then recording their pediatric patient's vital signs, height, weight, intake, output and physical exam information. Student feedback echoed similar themes adding the desire to have greater ease interacting with families and other care providers within the pediatric hospital system. An existing simulation experience was redesigned to address these needs.

Description

Peer reviewed articles of interest, the QSEN website, and feedback from faculty and students influenced the creation of a pediatric inpatient interdisciplinary simulation design. A Quality Enhancement Plan grant of \$3000 covered start-up costs during the spring 2013 semester. Four pediatric medical cases were simulated utilizing Sim-Baby, Sim-Newby, and two low fidelity simulators. Students viewed the patient scenarios and preplanned prior to entering the simulation experience. Students joined team members (MD, RN, CRT, Child Life Therapist and actors playing family members) in actively working together to care for the simulated patients. The RN resource at each bedside initiated educational variations associated with the patients which required students to critically think. Post simulation care team members accepted questions from and gave feedback to the nursing students. This interdisciplinary simulation design continues to be utilized currently in spring 2015.

Conclusion

Students documented care given, submitted a self-evaluation, and answered a questionnaire about the experience using a Likert scale. Faculty feedback for the spring 2013 and each successive simulation experience since have showed the areas of student weakness for the first inpatient clinical day have become more effective as evidenced by higher student scores on the clinical evaluation tool.

Summary

The pediatric simulation continues to evolve and grow with continued success in preparing nursing students for their first pediatric inpatient clinical experience. The interdisciplinary care team approach of the simulation has become a learning experience for other baccalaureate disciplines at our university such as Child Life and Nutrition. Professional relationship with our local hospital has been strengthened as well. Future additions to this simulation based on student and faculty feedback will be Social Work and Interpretive Services.



Evolution of an Interdisciplinary Care Team in a Pediatric Simulation Experience

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Objectives:

Our clinical faculty indicated decreased effectiveness of the first simulated clinical day due to lack of confidence and competence by our nursing students in collating then recording their pediatric patient's vital signs, height, weight, intake, output and physical exam information. Student feedback advised similar themes adding the desire to have greater ease interacting and communicating with families and other care providers within the pediatric hospital system. The interdisciplinary care team experience in the simulated pediatric hospital setting should help the first actual clinical day in hospital be more effective and meaningful.

Study Rationale:

Through an interdisciplinary simulation prior to students' inpatient experience the following areas will be enhanced leading to a more productive clinical experience.

- Decreased anxiety in communicating with pediatric patients/fam
- Greater proficiency in physical examination, taking vital signs & intake/output
- Effective communication with various pediatric care team members

Study Process/Method:

A faculty enhancement grant year of 2013 covered start up costs during the Spring 2013 semester. Four pediatric medical cases were simulated utilizing Sim-Baby, Sim-Henley, a 10 two low fidelity simulators. Students viewed patient scenarios and prepared prior to entering the simulation experience. Students joined team members (MD, RN, CRT, Child Life Therapist and actors playing family members) in actively working together to care for the simulated patients. The RNs received at each bedside related educational vignettes associated with the patients which required subjects to critically think. Post simulation care team members accepted questions from and gave feedback to the nursing students. Students documented care given during the two hour simulation, submitted a self-evaluation, and answered a questionnaire about the experience using a Likert scale.

Evolution of an Interdisciplinary Care Team in a Pediatric Simulation Experience

NLN Competencies Addressed:

- Competency 1 – Facilitate Learning
- Competency 2 – Facilitate Learner Development and Socialization
- Competency 5 – Function as a Change Agent and Leader

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Findings:



1. The clinical simulation was helpful in reinforcing Classroom content?
2. The clinical simulation was helpful in reinforcing skills to be used during pediatric clinical portions assigned this semester?
3. The clinical simulation allowed you to use your critical thinking skills?
4. The time allowed for clinical simulation was sufficient for learning?
5. The information presented in your simulation was pertinent to practice?
6. The clinical simulation increased your confidence level in your ability to provide nursing care to pediatric patients?
7. The clinical simulation decreased your anxiety about your first inpatient clinical day?

Faculty feedback since Spring 2013 semester has showed the areas of student weakness for the first inpatient clinical day had become more effective as evidenced by higher student scores on the clinical evaluation tool. Students echoed this in their end of semester reflections.

Conclusions:

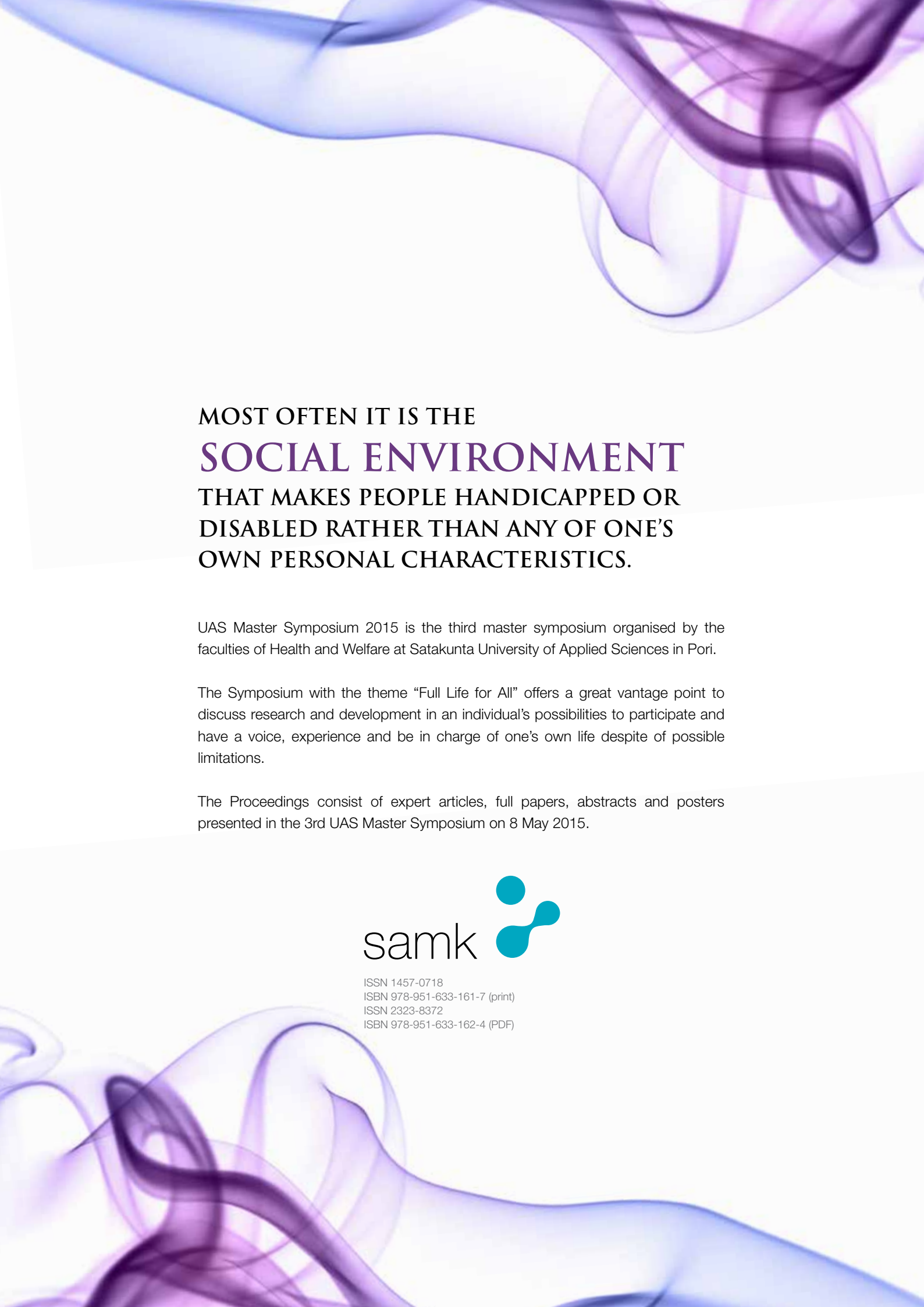
- The interdisciplinary care team simulated experience has resulted.
- Decreased levels of anxiety about the first inpatient clinical day.
- Pre clinical evaluation tool and instructor feedback the first inpatient clinical day is more effective than prior to the interdisciplinary simulated experience.
- Faculty and students reflection agree that interdisciplinary communication is less anxiety producing and more effective for the nursing students.

Future Research/Recommendations:

Due to clinical faculty and student feedback our program is now planning a separate interdisciplinary simulation utilizing cultural variations helping inter-people service. We are planning to collaborate with the Foreign Language department and professional interpreters from our local hospital.







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SOCIAL ENVIRONMENT
THAT MAKES PEOPLE HANDICAPPED OR
DISABLED RATHER THAN ANY OF ONE'S
OWN PERSONAL CHARACTERISTICS.**

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