

**ABSTRACTS**

*Takki*

International Conference on Combined Actions and  
Combined Effects of Environmental Factors

[www.takk.fi/ICCEF2011](http://www.takk.fi/ICCEF2011)

**ICCEF 2011**  
Kansainvälinen  
vanhustyökonferenssi

11.-14.9.2011

Tampereella

Pääteemana monimuotoinen työ vanhusten ja  
ikäntyneiden keskuudessa "Work among the elderly"

# BOOK OF ABSTRACTS

Edited by  
Olavi Manninen

## **Work among the Elderly ICCEF 2011**

Thirteenth International ICCEF Conference on  
Combined Actions and Combined Effects of  
Environmental Factors in Tampere, Finland,  
11 - 14 September 2011

Organized by Tampere Adult Education Centre (TAKK) together with the promotion of  
the Work Life Ability Networks under the auspices of The International Society for  
Complex Environmental Studies (ISCES)

**Book of Abstracts**  
ISBN 978-952-93-0333-5 (PDF)

**Printing Company**  
Kopijyvä Tampere 2011

## **PREFACE**

The thirteenth International ICCEF Conference on Combined Actions and Combined Effects of Environmental Factors takes place on 11-14 September 2011 in the City of Tampere, Finland.

The conference is a multidisciplinary and practice orientated meeting focusing on the work and work communities. The special theme of the conference is work among the elderly. Work among the elderly and ageing people is very topical and important both nationally and internationally. The conference is of great social and scientific importance.

The results of the conference can be used, for example, in creating, experimenting with or mobilizing good working models, procedures and conventions for the care of the elderly on regional, municipal and corporate level, reorganizing working communities, care and work among the elderly, and reforming training programs related to this work and cooperation between educational institutions and work life. Results are useful in promoting the management of work and ability and willingness to continue working, in improving the general preconditions of work and achievements and enhancing the overall quality, productivity and appeal of the work among the aged.

This Book of Abstracts consists of 46 accepted and edited abstracts drawn from the same number of presentations. The abstracts are organized in presentation order. The final output of the Conference will be a new kind of practice orientated handbook.

**Olavi Manninen**

Conference Chair  
President of the ISCES - Society  
Work Life Ability Networks  
[olavi.manninen@gmail.com](mailto:olavi.manninen@gmail.com)

# WORK AMONG THE ELDERLY ICCEF 2011 CONFERENCE

## PROGRAM

### Sunday 11.09.2011

- 19.00 GET-TOGETHER PARTY, BUFFET SUPPER**  
Frans Emil Elderly House, FE Sillanpään katu 2  
[Presentation 1]

### Monday 12.09.2011

- 08.00 REGISTRATION**  
Lobby Hall, Tampere Adult Educational Centre (TAKK), Main Building, Tampereen Valtatie 15
- 08.00 MORNING COFFEE**  
Restaurant "Ratamo", 3.Floor, TAKK Main Building
- 09.00 OPENING CEREMONY**  
Lecture Hall (No 460-462), 4.Floor, TAKK Main Building
- WELCOME ADDRESSES**
- 09.30 AGED PEOPLE AT WORK AND THE ELDERLY**  
[Presentations 2-6]
- GROUP PHOTO**
- 13.00 GOOD CASES, MODELS AND PRACTICES**  
[Presentations 7-17]
- 18.00 OFFICIAL RECEPTION**  
Tampere City Hall "Raatihuone", Keskustori 10
- 20.00 FESTIVE BANQUET**  
Hotel Tammer Restaurant, Satakunnankatu 13C  
[Presentation 18]

### Tuesday 13.09.2011

- 08.30 SOUND ELDERLY CARE**  
[Presentations 19-30]
- 13.00 SAFETY MANAGEMENT AND TECHNOLOGY ADVANCEMENTS**  
[Presentations 31-39]
- 17.00 CITY EXCURSION**
- 19.00 BUFFET DINNER**  
Teivo Horse Race Restaurant, Ravitie, Ylöjärvi

### Wednesday 14.09.2011

- 08.30 COMBINATIONS OF PRACTICAL PROCEDURES AND ENVIRONMENTAL ISSUES**  
[Presentations 41- 46]
- 10.45 CLOSING CEREMONY**
- FAREWELL ADDRESSES**
- "A GLIMPSE INTO THE FUTURE"**

## **[1] MODEL OF ACCOMMODATION FOR ELDERLY PEOPLE – KOTOSALLA: TOGETHER TOWARDS TOMORROW**

**Tuija Kanto-Hannula**

YH Länsi Oy Ltd, Kotosalla Foundation, Tampere, Finland

YH Länsi Oy Ltd has four main business sectors of which the Comprehensive Service Model for Senior Citizen Housing is the company's spearhead. It is developed, managed and operated by the Kotosalla Foundation. Kotosalla is a modern and well-designed housing solution for people over 55 years of age.

Kotosalla is designed for people who desire to live safely and independently in their own homes. Kotosalla living is about enjoying the benefits of easily accessible services, being together, and social activities. Kotosalla houses are designed according to the functional needs of senior citizens. Special attention is given to safety and everyday comfort. The houses and apartments are of high quality. The goal of the Kotosalla design is a safe and enjoyable home that supports independent living.

Kotosalla houses form a well-functioning operational environment. Kotosalla equals home, well-functioning surroundings and supportive services. The resident is able to concentrate on living enjoyably in his/her own home. The resident has freedom to choose from the wide scope of services offered and to decide how actively to participate in the Kotosalla social gatherings.

All services are easily obtained from a single service centre. A service councillor is in attendance and helping with everyday situations, such as arrangement of social and health services and preventive rehabilitation. The service centre also offers assistance, for example when a resident requires help with applying for nursing allowances, aid devices and house cleaning.

All services are subjected to competitive bidding. That guarantees reliability and the best price - quality - ratio. A service can be a joint package of services from a private service provider, the third sector parish, voluntary organisation or municipalities. The Director of Services monitors the reliability, availability and quality of the services. The costs are covered with the service availability charge and the internal cost-sharing of the senior concept.

Living is a natural way for individuals to express their identities equally for the elderly. Kotosalla is a convenient, pleasant and a safe way of living - with a minimum of effort and a maximum range of available services. Kotosalla brings quality and functionality to the living of senior citizens. In Kotosalla houses residents do live independently, but not alone. I will be happy to tell more about our projects and operation

## **[2] WORK, SOCIAL INCLUSION AND A LONG LIFE: TOWARD THE PROMISE OF SUSTAINABLE INTERGENERATIONAL RELATIONS**

**Simon Biggs**

Professor of Gerontology and Social Policy, School of Social and Political Science, University of Melbourne, Australia

The question of the purpose and contribution of an ageing population has become an increasing concern among policy makers, both internationally and at national level.

In this paper, the author critically addresses the relationship between work, retirement and social inclusion and asks how far each contributes to an understanding of adult aging in contemporary society. It is argued that tensions have been provoked by the ageing of the 'baby boomer' cohort and are now exemplified in a variety of social policy arenas. The processes by which a dominant understanding of ageing has emerged are examined and it is argued that a radical re-positioning of mature identity is required. This should rely less upon economically determined roles and more upon alternative groundings based upon personal life-course experience. It should rely less, in other words, on means that are simultaneously over-determined and under theorised, and more on ends that harmonise social identities and life priorities. As part of this process the concept of social inclusion should be re-examined to include the role of a long life and the creation of sustainable intergenerational solutions. The relative ability to put oneself in the place of the age-other is seen as a core component combining social and intrapersonal factors in the development in sustainable policy positions for the rest of the 21<sup>st</sup> century. Policy making will be both influenced by and influence the possibility of sustainable relations taking shape.

## **[3] MEDICAL CARE AND THE WORKSITE IN THE NEAR FUTURE**

**Akira Okada**

Kanazawa University, Kanazawa, Japan

In the 21st century, new types of viruses are supposed to emerge, while science technology is expected to develop more rapidly, which is why bioethics will be an important issue. The types of disease might also change in the new circumstances of the near future.

In the field of medicine, the postgenomic era will arrive. Functional, comparative and structural genomics will prevail as one branch of postgenome studies. Similarly cell biology, protein science, brain research, bioinformatics and so on will also develop. In the era of postgenomic medical care, gene therapy, regeneration care, and the development of new medicines based on genome studies will bring big changes and advances. For example, the division between surgery and internal medicine might disappear as the borderless society proceeds.

In the 21<sup>st</sup> century, our society will develop into a highly knowledge based one. As a matter of fact, more and more women are working outside home, and the majority of working population is moving from manufacturing industries to service industries, including information-providing. The birthrate is declining, while the proportion of aged population is increasing. As a result, the ageing work force will play a more important role. As computers and communication technology will develop, many people will stay and work at their homes. In our country today, the idea of occupational health is shifting from that of treatment for occupational diseases to health administration due to the improvement of working conditions. The increase of female workers and the ageing work force will bring new problems. As the so called home offices will increase, we will have to take a comprehensive approach, taking various living conditions into consideration. At a home office you mainly use your eyes and your hands operating the computer. Thus, we will be required to deal with those organs in particular. We will also be required to pay more attention to mental health problems. The development of genome medicine will make it necessary for us to examine disease in terms of individuals, not the mass. But if gene information were to be utilized for employment in some way, it might cause some discrimination. We will have to consider this issue. Anyway, advancement in regeneration medicine is expected to contribute significantly to treatments for various after effects caused by accidents. Generally speaking, many issues in industrial medicine have already been mentioned here and there, and they will be closely examined from different perspectives.

#### **[4] WILLINGNESS AND ABILITY TO KEEP ON WORKING: CARE WORK AND CARING WORKING COMMUNITIES COMPARED WITH 10000 OTHER WORKS AND WORKING COMMUNITIES**

**Olavi Manninen**

Work Life Ability Networks, Tampere, Finland, [www.worklifeability.fi](http://www.worklifeability.fi), [www.takk.fi](http://www.takk.fi),  
Tampere Adult Educational Centre, Tampere, Finland

A major challenge in work life is the command of the big picture. Above all we need to grasp and manage a functional whole consisting of three areas: work, life and know-how. These areas are interconnected and constitute the multidisciplinary field of work life ability. Work life ability is a key factor in the success of enterprises and work organisations in a constantly globalising economy. The level of work life ability reflects the quality of work environment.

A reliable and realistic view of work and work life is based on a holistic approach and a wide range of information. The maintenance of work ability and continued work require a holistic analysis. The theme is urgent due to the prevailing age structure of the population, issues in the availability and retention of labour as well as due to the usage and dimensioning of staff at workplaces.



The presentation is a compilation of statistical analyses and results from several consecutive studies. Its general task is to provide detailed information on how factors related to the performance of work, the working culture at the workplace and the life situation increase or decrease the willingness and ability of employees to cope and to keep on working. The information is analysed by sectors (groups of organisations, branches), work organisations, work tasks and work units in the elderly home under study and in home care. Practical care and nursing for the elderly is compared to children's care and kindergarten teaching, care for people with musculoskeletal disabilities, care for the intellectually and developmentally disabled, and other jobs, such as administration and office services, residential care and construction services, sanitation, cleaning and maintenance services, early education and teaching, catering and food services. The persons working for the care for the elderly are employed by four municipalities in the Tampere region (elderly homes 1-4) and in home care services.

The results reveal that to keep on working employee must have both the willingness and the ability to continue. Willingness or ability alone is not enough. A functional working culture provides the basis that promotes both the willingness and the ability to keep on working. Satisfaction with one's own life, that is, good management of one's own life increases the willingness and ability to continue working even in work communities with a poor working culture. Coping with the work and continuing to work are the outcome of the simultaneous combined effects of factors related to work, the working community, and life outside the workplace (leisure).

Compared to other persons, supervisors, managers and young male workers are more often unwilling to keep working even though they rated themselves to be fit to continue working. By contrast, a majority of the employees are willing to keep working until 63 or longer if the workplaces had been designed and the personnel had been dimensioned correctly.

Regarding the availability of workforce, it is particularly worrying that the unwillingness to keep on working is most prevalent among the young and those with the shortest time in their present job and the shortest work history. A majority of men (93.3 %) and women (84.6 %) under 26 years in poor working cultures are unwilling to continue working until the age of 63 or beyond.

Of the people employed in different industries, 20.4 to 51.1 % estimated that they could keep on working full-time in their present employment until the age of 60 or longer. A few percent of all employees expected to continue working even after 65 years of age. Among those planning premature retirement or moving over to a different job, three fourths of those employed in health care and medical industry and over a half of those employed in children's care expected to continue working full time until the age of 55 to 59 years. Like the other employee groups, a majority of both



those working with children and those working with the elderly were unwilling to continue working until the age of 63 in a poor working culture.

The dimensioning of staff is one of the characteristic indicators of the working culture in a working community. Correct dimensioning of staff indicates that the work activity is based on proper planning and that the right persons are found in the right place at the right time. The dimensioning of staff is an indicator of the quality of management.

In comparison to the reference work organisations (i.e. metal workshops, mail delivery servicing, administration computing servicing, material servicing and aeronautical engineering, care for the physically disabled, care for the intellectually and developmentally disabled, children's care in kindergartens, home care, working in a municipal organization) the human resources of the workplaces for the care for the elderly were the most scarce. 77.9 to 85.2 % of people working with the elderly consider the dimensioning of human resources at their workplace incorrect.

Compared to work in other work organisations, the work done in elderly homes or with the elderly in general is more physically straining. Cooks, housekeepers and employees in catering services also find their jobs physically straining while those working in kindergartens and day-care centres experienced their job as mentally straining.

Incorrect dimensioning of staff increases the workload experienced by the workers. With the increased workload both the unwillingness and the inability of employees to keep on working increased. A poor working culture at the workplace and excessive workload amplify each other's effects in a negative way. A poor or bad working culture and high workload make people feel indisposed and find the continuation of work unpleasant. They are not willing to commit themselves to the work.

Especially in elderly homes, a functional and interactive working culture is of key importance with a view to the utilization of skilled workforce and know-how, coping with the work and continuing to work. The identification of needs related to both well-being and know-how and constant inspiration for the staff are the major tools to achieve this. Well-being and ability spell success.

In the opinion of employees the reduction of the physical and mental workload and provision of meaningful work are the most important concrete ways to promote people's willingness and ability to continue working. A reduced workload and meaningful work can be achieved by dimensioning the staff corresponding to the needs and situations and managing the performance of work as well as possible. Work time arrangements including part-time work are also a desired means to promote people's possibilities to continue working. With the exception of those employed in trade, employees of different ages and working in different sectors were working full-time about 40 hours per week at the time of the research. Employees at

workplaces also wished to receive more information on ageing and its effects on their functional ability.

A dysfunctional working culture, excessive workload and inadequate means to control one's own work combined with the indisposition of the employees and their unwillingness to keep on working constitute a serious problem and threat with a view to both the availability and appropriate use of labour. The situation calls for fast and effective development of work life. The education must be reformed and brought to the workplaces to reach the employees while they are performing their everyday work. The main subject of the reformed education is work life ability. The globalization of work life requires the education to be provided in a proactive, practical, multidisciplinary networked school of work life ability that offers guidance and supports a holistic approach to development.

The studies were participated by several dozens of enterprises and work organisations from the metal and engineering industry, food industry, construction industry, shoe, textile and clothing industry, pulp and paper industry, trade, financial services and restaurant services, state and municipal administration, education, social and care services, information technology and mail services. Overall, the results describe the views of more than 10 000 Finnish workers, managers and executives of their own work, working community and continuation of their work.

Key words: Length of employment, Continuing to work, Work life ability, Work culture, Working community, Work ergonomics, Management of life, Education, Training at workplace, Elderly care

## **[5] AGEISM IN FINLAND**

**Sirkka-Liisa Kivelä**

University of Turku and Turku University Central Hospital, Turku, Finland

The studies performed by professor Bulter in the U.S. during the 60's showed that there exist several kinds of negative attitudes and behaviors towards the aged, and stereotypes about ageing are common. This kind of negativism in the society was called ageism by Bulter. Individuals may behave negatively towards the aged. Negativism may be included in the legislation, and institutions may behave negatively. This later kind of ageism is called institutional ageism (Butler 1969). There are several studies about attitudes towards ageing workers at work places in Finland. They show that negative attitudes are quite common (Vaahtio 2002, Ilmarinen 2006, Ylöstalo 2006). Population-based studies have shown negative attitudes towards the aged to be common in the Finnish adult population. Negativism is more common in men compared to women; more common in the younger population compared to the middle-aged and ageing one; and more common in those with a shorter education compared to educated people (Lipponen 2006). Forty per cent of Finns aged 60 to 70

years considers that the aged are not respected in Finland, and 65 % say that the respect is nowadays poorer than in previous years and decades (Vaapio et al 2010). Several studies report about ageism in long-term institutions and in sheltered houses taking care of the aged 24 hours a day. The use of psychiatric medications in order to restrict behavior and movement of the aged is more common than in other Scandinavian countries or in the U.S. Mechanical restrictions are used even without critical assessments of their usefulness. Even lack of adequate nutrition and impolite behaviors towards the aged are reported (Vaarama et al 1999, Topo et al 2007, Nurminen et al 2009, Saarnio 2009, Kivelä et al 2010).

The aged have poor possibilities to participate in the decision-making and our culture admires young age (Jyrkämä et al 2007). The Non-Discrimination Act forbids inequality caused by age in work and education. Inequality in services is prohibited only when it concerns ethnic groups. There is no mention about the equality of the aged and other age groups in this Act. The report on ensuring the equality of different groups published by the Government of Finland in the late 2009 includes no mention about work done in order to develop equality of the aged. These examples show that there is institutional ageism in our society. Ageism in long-term institutions and sheltered houses taking care of the aged 24 hours a day has been evidenced by the Parliamentary Ombudsman (emerita) and the National Supervisory Authority for Welfare and Health in 2010 and 2011. The Parliamentary Ombudsman proposes the development of legislation in order to forbid ageism. The National Audit Office of Finland has reported negative opinions and behavior towards the aged in home care and proposed the development of home care. In 2010 and 2011, the Ministry of Social Affairs and Health has prepared a proposal for the Act about Long-term Care of the Aged. Thus, there is evidence to conclude that the worst forms of ageism have been noticed and to wait for the development of legislation. In addition, an official system to collect data about ageism and to report the data to the politicians and the population is needed. A vivid discussion about positive aspects in ageing and the economic value of the aged as consumers might change the negative attitudes and opinions of the Finnish population into more positive ones. Studies about the aged as workers, consumers and helpers without getting payment are needed.

## **[6] OLDER PEOPLE FACE SILENT DISCRIMINATION**

**Sirpa Pietikäinen**

European Parliament, European Union

- Older people are often treated as objects on behalf of whom others need to decide what is best for them. Seen as an economical burden older people are often categorized in negative terms, which does not provide a good basis for dignified ageing.
- Older people face silent and non-recognized discrimination in form of non-access to services and non-inclusion to the activities of the rest of society.

Discrimination being invisible does not mean it does not exist. It means that discrimination is built in and thus fundamental and as bad as visible discrimination.

- Silent discrimination needs to be made visible in our society. For this, we need a correctly based approach towards older people. They are not always capable to defend their rights, so society needs to guarantee them. Cases of discrimination need to be made visible, brought under judicial review and penalized.
- In order to make the non-discrimination of older people even a wider strategic issue of society, discrimination cases and activities aimed at ending discrimination need to be reported on a regulatory basis.
- Best practices in the area of guaranteeing older people's rights should be further investigated. France and Belgium, for instance, have introduced legislation that prohibits the "abuse of the weakness" of a person. Something of this kind is needed in the field of legislation to ensure that the rights of older people are also guaranteed in our societies.
- Older people need to be given more power to influence decisions affecting their lives. This also applies to urban planning. Silent discrimination can be tackled by designing infrastructure and services where the needs of older people are taken into consideration from the very first step

## [7] ELDERLY CARE IN SPACE AND PLACE

**Frode F Jacobsen**

Centre for care research – Western Norway, Bergen University College, Bergen, Norway

The present research compares how care work among frail elderly is organized and takes place before and after a major rebuilding of the "interior" physical landscape of a Norwegian somatic nursing home. This research is part of a research project wider in scope, looking more generally at staff organization and staff culture in a nursing home through a period of 20 years. Participant observation and individual semi-structured interviews were done during 18 months of fieldwork in the period of 1988-89 and 4 months of fieldwork in 2004-2005.

The nursing home is part of a larger care center containing, besides the nursing home, a retirement home and apartments for assisted living. A major rebuilding of the nursing home part in 2003 resulted in smaller wards, with a decrease in number of patients in each ward from 29-30 to 8-10, single occupancies instead of a mix of double and single occupancies, shorter corridors, less exclusive territories for the staff, and more heterogeneity in the common ("public") areas for the patients. A similar development has been taking place in most Norwegian nursing homes during

the latter decade, making this research relevant for the Norwegian nursing homes in general.

Continuity, but also important changes, have been documented in this research. Changes observed by researchers and reported by staff relate to changes in work shift organization and work shift reports, in care routines, in staff perceptions of the work environment, and in staff-patient relations.

This research makes probable that the architectural, physical environment play an important role in shaping the work organization, work environment and staff-patient relations in the nursing home.

## **[8] THE PUBLIC WELFARE OF MUSASHINO CITY**

### **Toshihiro Wakabayashi**

Senior Citizens Support Section, Social Welfare and Public Health Department, Musashino City, Tokyo, Japan

The aim of this presentation is to introduce the approach to work among the elderly of Musashino City and the Ten Million House, which is the feature of Musashino City. Musashino City is located in the capital city of Japan. The population is 135,065 people. The area is 10.7km<sup>2</sup> (the 11<sup>th</sup> smallest city among the 786 cities in Japan). The population density is 12,588 persons/km<sup>2</sup> (from the statistical data of April 2010). The feature of Musashino City includes the full of public welfare and greenery environmental improvement.

The history of senior citizens welfare of Musashino City can be divided into five main groups. They are “the Period of Construction” characterized by the pioneer spirit and the power of citizens, “the Period of Influx” done with the progressive approach corresponding to community needs, “the Period of Significant leap forward” that started the challenge of the nation’s first new service, “the Period of Maturity” that developed a two-wheels of the home service and the facility service by the implementation of recreational facilities, and “the Period of Introduction of Elderly care insurance system to the Present”. In the period of significant leap forward, the operation of Musashino City Public Corporation of welfare was started. The feature of “Reverse Mortgage” was used for the fare-paying home-service subject to charge using of own house as security. And in the period of maturity, the Ten Million House was started.

The Ten Million House is subervised up to 10 million yen to citizen groups or non-profit organizations approaching mutual assistance for current condition of the district, and provides service to elderly through the facility operation. The ideal of the Ten Million House is the facility in the user’s neighbourhood, a small facility that can provide service flexibly with a light footwork and a visitable facility with a light heart. The

introduction of the elderly care insurance system was instrumental in opening the Ten Million House. By the introduction of elderly care insurance system, it was expected that 20 to 30% of the citizens in Musashino City could have received services before then had not been able to receive them. Therefore, the Ten Million House is the operation it was thought intended to be provided the same services for them. And then, population aging rate in Musashino City is 20.1 % now. After that, it has increased and expected to be reached 23.7 % after 7 years. In accordance with the aging, it has been foreseen not to cover them only the administrative service. Therefore, the Ten Million House targets the progress of community welfare depending on the approach to the mechanism of mutual assistance supported each other with the power of citizen and community. 7 Ten Million Houses have been placed in Musashino City. Each facility has been supplied the unique service of emergency short-stay, intercommunication between the young and elderly people among mini-day-service, and has been made a place for community residents.

Ten years have passed since Kawajisan-chi was set up on November, of 1999 as the first Ten Million House. Until now, the Ten Million House played the role of preventive care with the objective of enabling visits and motivation in life, and the role of confirmation ensuring the safety of seniors living alone in communities. The Ten Million House heralds an era of thinking about a response to the users of severe certification indication of long-term care need owing to the aging of the population in the future and the role of community welfare stronghold. And new ones also need to set up in the blank area because the system does not yet cover all areas of Musashino City. There are great hopes that the Ten Million House further grows and becomes a familiar sight in the future.

## **[9] ASPECTS CONCERNING MANAGEMENT OF THE ORDERER-PRODUCER PROCESS**

**Reino Kanerva**

Work Life Ability Networks, Tampere, Finland, [www.worklifeability.fi](http://www.worklifeability.fi),  
[reino.kanerva@tpnet.fi](mailto:reino.kanerva@tpnet.fi)

In many work organizations the key strategic business idea has long been to concentrate on their so-called core competencies and to develop their competitive edge. In this model, many of the services needed by the work organization are purchased from external suppliers. This also implies outsourcing many earlier in-house operations. The importance of external services varies in different workplaces.

In terms of quality and safety, services products and performances purchased from external suppliers include a variety of risk factors and may be ill-suited to the organization's own work culture. External suppliers may have their own different working procedures and their compatibility with those used in the organization may still be untested. When the orderer organization acquires various performances from

an external actor, a producer, a prudent and proactive approach is needed already when planning an order.

The operation and contributions of all external parties should be taken into account when planning demanding assignments and projects. The objective should be an operation model shared by all parties that takes the customers' needs into consideration. Procedures should be established and a continuously audited process created for their quality assurance.

In the payer's role the orderer is the king of the entire chain of operations. However, this does not mean that the orderer factually commands the whole chain of operations. Performances by external suppliers are often special assignments or products whose properties or applicability are not fully known to the orderer. Many custom work assignments may fail for the very reason that the producer with its own expertise may specify the properties of the performance in such a way that it contradicts the orderer's goals.

The old cliché – quality does not come cheap – is unfortunately often true. On the other hand, even expensive performance may not always be the most suitable for the orderer and its properties may not necessarily warrant the high price.

The orderer should specify the quality requirements of the performance already in advance with sufficient accuracy. While creating various scoring systems for comparing offers, the orderer should also secure its own interests by considering the safety of the offered performances. Otherwise the result may be disappointing and the orderer may end up paying for various costly damages.

## **[10] IMPROVEMENT OF THE HEALTH OF SENIOR CITIZENS BY A PROGRAM ORGANIZED BY THE KINJO UNIVERSITY IN COOPERATION WITH THE HAKUSAN-CITY**

**Akio Kamiya<sup>1</sup>, Tsutomu Kibayashi<sup>1</sup>, Masahiro Noguchi<sup>1</sup>, Takuya Yamamoto<sup>1</sup>, Tsuyoshi Kimura<sup>1</sup>, Keiko Okayama<sup>1</sup>, Tsutomu Moribe<sup>2</sup> and Hajime Matsuda<sup>3</sup>**

<sup>1</sup>Kasamamachi, Hakusan-city, Ishikawa, <sup>2</sup>Kuramitsu, Hakusan-city, Ishikawa,

<sup>3</sup>Kuramitsu, Hakusan-city, Ishikawa, Japan

In 2007, a study by the Japanese Ministry of Internal Affairs and Communications Statistics Bureau revealed that 21.5 % of the Japanese population was aged 65 years or more, and that only 1 of 4 people reached the age of 65. Owing to the decrease in birth rate and increase in mortality rate, the overall population will continue to decrease, such that, by 2030, the proportion of elderly people is estimated to reach 31.9 % of the overall population, and by 2055, it is estimated to grow to 40.5 %. Thus, it is imperative to maintain health and productivity among the elderly in Japan. Since 2009, Hakusan-city, with a population of 110,000 people, has been collaborating with



the Kinjo University cosponsor "Yuu-yuu Kenkou circle (hereon referred to as circle)" for the maintenance and promotion of health amongst community-dwelling senior citizens. Students studying medical care and welfare at the Kinjo University implement maintenance and promotion of health primarily by training the subjects in machine exercises. The purpose of this study was to investigate effects of the health-promoting activity of this circle on both physical functions and health-related quality of life. In addition, we outline the approach used in this endeavor.

In this study, 64 community-dwelling elderly subjects, who were prone to experiencing anxiety even during a walk, participated after providing their informed consent. The Hakusan-city recruited the participants and provided the exercise institution after the circle activity end. The health program was held 10 times in all—i.e., one 2-h session was held each week for 10 weeks. A total of 142 students of the Kinjo University managed the circle activity. The subjects performed physical function tests (flexibility, muscle strength, walking ability, etc) and SF -36 ver. 2 Japanese (to measure health-related quality of life) on the first and last days of the health-promotion activity. The circle activity program run by the students included the following: vital signs check, warm-up exercises, lectures regarding maintenance of general health, machine exercises (leg press, knee extension, chest press, etc, instructions to practice the program at home, and cooling-down exercises. Students dealt with almost all the participants on a one-on-one basis.

The sit-and-reach and spinal hyperextension tests showed that the flexibility of the subjects significantly increased from 26.8 cm/18.7 cm to 27.9 cm/20.5 cm, respectively. In terms of muscle strength, knee flexion was significantly increased from 48.9 Nm to 53.4 Nm. In terms of walking ability, the time taken to walk 10 m improved from 5.1 s to 4.8 s. In the SF-36, "the general health perception" was significantly improved.

After 10 weeks of the program, physical functions and health-related quality of life were significantly improved, and the effect of the circle activity was evident. Thus, the circle activity of Kinjo University in cooperation with Hakusan-city contributed to the maintenance and promotion of health among community-dwelling senior citizens.

## **[11] WHO WILL CARE FOR THE ELDERLY: AGEING SOCIETIES AND ITS IMPACT ON THE LABOR FORCE**

**Esther Iecovich**

Department of Sociology of Health and Gerontology, Ben Gurion University, Beer Sheva, Israel

Israel is a rapidly aging society with an elderly population composing 10% of its total population. Among them, about 17% are frail and need help with activities of daily living (ADL) and instrumental activities of daily living (IADL). The policies in Israel, like

in many other western countries favor aging in place over institutional care. Yet, due to permanent increase in life expectancy on the one hand, and concurrent changes in family structures and roles on the other hand, family members are less available and able to provide traditional long-term care at home. Due to local severe shortage in manpower a significant proportion of frail older adult employ migrant live-in homecare workers who for the most part come from developing countries in Asia. These workers are available and provide care around the clock and are considered to be an ultimate alternative to institutional care, especially for working family caregivers. However, this global phenomenon that relates to many Western and aging countries is a multifaceted issue. The paper will discuss some findings from recent studies on migrant homecare workers and address various aspects and dilemmas that relate to policy and practice such as: The interface between formal and informal care, quality of care, governmental policies regarding migrant workers, abuse and exploitation of care recipients by their carers and of carers by their employers, training and accreditation of migrant homecare workers, and the economic and social implications of employment of migrant workers on the local labor force.

Key words: Frail elderly, migrant workers, homecare services, policies, practice.

## **[12] BROADENING THE TARGET GROUP FOR HIGHER EDUCATION IN GERMANY: A CASE STUDY ON DIVERSITY MANAGEMENT**

**Katrin Hansen and Marcus Kottmann**

Gelsenkirchen University of Applied Sciences, Gelsenkirchen, Germany

In some industrialized German areas, as in the Ruhr-Area, the percentage of students with migrant background in primary education has overcome the 50 percentage limit with an increasing share in future, the overwhelming part of them with a family from Turkey. A large share of those students attains the admission qualification to higher education from “Berufskollegs”, schools which focus on the combination of vocational skills and theoretical education. This migrant potential can primarily be tapped for additional students by universities of applied sciences which are embedded into their regions and dedicated to teaching.

First, we show the approach to conceptualize the culture and cultural specifics of migrants with a Turkish background that this project is based on. Second, we give an overview on the main actions of the project, systematically presented as a process leading students through the institution (“input, throughput, output”). Third, we frame the project by referring to principles of diversity management in general.

Key words: Demographic change, Diversity, Intercultural Classroom

## **[13] WORKING WITH THE ELDERLY POPULATION IN ARGENTINE AND BRAZILIAN UNIVERSITIES (1)**

**Federico Susbielles and Silvana Gieco**

National Institute of Social Services for the Retired and Pensioners (INSSJP), Piso, Buenos Aires, Argentina

The main goal of the National Institute of Social Services for the Retired and Pensioners (INSSJP), created in 1971 in Argentina, is to provide health care and social care to the elderly and the retired, as well as their primary family groups. The goal is also to provide any and all sanitary, social, comprehensive, integrated, and fair benefits aimed at health promotion, prevention, protection, recovery, and rehabilitation. It provides its members with comprehensive health and social care, and so it is a strategic tool for the implementation of sustainable policies for the elderly.

Social policies reflect different realities for each moment and place. Today, in Argentina, social and communal prevention is a social policy for the elderly. The state has undertaken a leading role in social security, and this has been through agencies such as INSSJP.

Prevention is the only useful tool to stop the aging of masses turning into a paradoxical "failure of success," in which overwhelmed societies must devote increasingly more resources to the care of chronic diseases and disabilities; while the younger people, also coming of age, will be forced to care for the elderly without being able to enjoy life because of that burden.

In the INSSJP, our assumption is that education does not belong exclusively to any age group; it is necessary for people to have a better quality of life and personal growth. This is why it is the intention of the university program driven by the INSSJP to favor greater personal accomplishment and a better performance of older adults in their community. This can be achieved by the acquisition of skills and abilities, and the recovery and validation of personal and social knowledge, as well as cultural and social values in communication, thinking, and social participation to face new challenges.

The insertion of older adults in the university context favors both personal and communal growth and ensures inter-generational exchange, which contributes to society. This is why the INSSJP has signed agreements with more than 80 universities all over the country, so that more older adults take part in this program, which already is 40,000-strong.

Some of the classes are: IT, languages, Native Argentine languages, history, literature, home economics, decision making on money during old age, myths and prejudices about love, sexuality and eroticism in old age, memory training, human rights, journalism, radio, video, history of art, theater, cinema, and so on.

Direct targeted population comprised members of the institute who can cater for themselves, or semi-dependent, or those who can be assisted by external help, without a specific level of knowledge, and conditioned to understanding the specific instructions of each subject. Indirect targeted population comprised relatives of members with inclusion of up to 20 %, or people who are related by virtue of an emotional bond, so that family links can be strengthened and so, gradually, do away with the prejudice relative to the social image of old age. Results: The insertion of the elderly in facilities for education and social leadership.

## **[14] WORKING WITH THE ELDERLY POPULATION IN ARGENTINE AND BRAZILIAN UNIVERSITIES (2)**

**Liliana Gastron, Claudia Menseguez and Silvana Stabile**

National University of Lujan, Luján, Argentina

In our exposure we will speak about an unusual experience we develop in Argentina, in the Seminar Ageing in society today (an elective course) of the School of Social Work.

As people live longer, a larger portion of post-retirement years can be devoted to volunteer service. A few elderly women as volunteers are organized in local teams all along our country, helped by the National Institute of Social Services for the Retired and Pensioners (INSSJP) in what is called the Grandparent Reading Stories Program. Volunteers visit children in elementary schools with books, with a previous authorization by teachers who allow them to have access to the classrooms. The main goal of the program is to promote reading matter suitable for children from books; copies are not allowed there. Older volunteers are becoming a significant force behind combating illiteracy.

We agree with the idea that young people need to understand and have meaningful relationships with the elderly as special social work students. As our School of Social Work prepares social work practitioners, students will learn to appreciate the differences and similarities they possess in relation to the older people they seek to serve and twith whom they work. We seek to prepare practitioners who understand how diversity and strengths complement one another in the ageing process.

Traditionally students get in touch with Programs by means of papers, books, lessons, professional and expert conferences, and so on, but in this case, calling volunteers to speak and to be in touch with students, we've made a change. We believe in education to prevent courses of action which may lead to difficulties in social workers' professional life with elderly people.

We invite volunteers from Grandparent Reading Stories Program in our classroom

with the aim of creating awareness in the young about the potential of the elderly person and the sense of care and appreciation towards them.

In our course we apply group dynamics in learning situations. By taking the time to focus on the needs of individual students and to provide them with support and encouragement, older adults can have a great impact on the lives they touch. And the participation of older volunteers is not only good for the students, but it can provide the volunteers themselves with tangible benefits by keeping them active and engaged in addressing real social needs. We think that it is an effective learning experience.

New experiences to all people: For students it is a way to counteract age stereotypes against elderly women, and to encourage emerging self-awareness about their own ageing process. For older women it is also a way to counteract age stereotypes against the youth and to stimulate their self-esteem and self-worth. Finally, we believe that motivation for learning about ageing comes from within the youth and it has to be promoted and cultivated by professors and the reinforcement, guidance and example of old people.

## **[15] WORKING WITH THE ELDERLY POPULATION IN ARGENTINE AND BRAZILIAN UNIVERSITIES (3)**

**Renato P Veras and Celia P Caldas**

The Open University for Studies on the Elderly, Universidade Aberta da Terceira Idade (UnATI), Rio de Janeiro, Brazil

The Open University for Studies on the Elderly – Universidade Aberta da Terceira Idade (UnATI) –, aims to contribute to the improvement of physical, mental and social health levels of the elderly, using the existing capabilities in the university, so as to become a center of public health, psychotherapy, delivery of community services, ergotherapy, research and gerontological action within the institution. These broad aims are being implemented in the State University of Rio de Janeiro – Universidade do Estado do Rio de Janeiro (UERJ) – due to the present availability in the university of both personnel whose interests focus on the theme and the activities of servicing and research in the field. This is further stressed by the fact that the state of Rio de Janeiro and the city of Rio de Janeiro in particular harbor the largest share of elderly people in Brazil.

In contrast with the successful French project “Les Universités du Troisième Age” (University of the Third Age), the specialized day-center at UnATI is a more ambitious project. UnATI includes health care and other services related to the university’s academic and scientific perspective. Its main purpose is, therefore, to develop cultural and intellectual activities within a holistic approach, integrating, teaching with physical and health care, social contact and participation in the learning process. The idea of a thematic micro-university – that is, one that includes associate teaching,

research and extension activities – aimed at the elderly favors the creation of innovative alternatives with synergetic interactions between the production of knowledge; formation and improvement of human resources; and servicing. Those who take part in UnATI – both users and professionals – are also sharing a creative experience where new alternatives for the elderly are constantly being sought.

The close contact between the elderly with younger people is particularly important as an attempt to reduce the discrepancy of values and ideas, which is often a source of tension, and could contribute to the reversal of the social process of “ageism” in our culture. There is a multidisciplinary sector of health care for the elderly at the University Hospital, which was the embryo of UnATI since the very beginning.

At present UnATI occupies a 800-square-meter area inside the university campus. UnATI now develops activities both in the campus and at the out-patient department in the hospital. The support given by the university to the program was made clear with the unanimous approval, by UERJ’s higher collegiate, of the transformation of UnATI from a special program to a regular unit. The structure is based on three areas – Teaching, Extension and Research – which comprehend all activities of the project. Over 110 extension courses are being offered each semester by the teaching department, in many different areas, designed to provide personnel qualification for those who work with the third age. This area also delivers nutritional orientation, social and juridical services. UnATI supports and stimulates professionals who work there to develop research projects with the aim of investigating a number of aspects of the third age in Brazilian society. After 18 years as a regular unit, more than 4000 people have already enrolled at UnATI’s courses, and more than 2000 were assisted by the outpatient service. These numbers attest the success of the project with the target population.

## **[16] CHALLENGES IN MANAGEMENT OF CROSS-SECTORIAL COLLABORATION**

**Daniela Grudinschi, Timo Hokkanen, Leena Kaljunen, Jukka Hallikas and Antti Puustinen**

Lappeenranta University of Technology, School of Business, Lappeenranta, Finland

The purpose of the research is to create new knowledge on collaboration management between organizations and actors of the public, private and third sector in welfare service production for elderly. The development towards effective collaboration between public, private and third sector requires new ways of thinking, leading and acting. Furthermore, new skills and forms of co-operation between partners are needed. The main issue is to investigate what kind of challenges are encountered in collaborative organizations and what are the dynamics and attributes that are needed to be emphasized when the orientation is towards combined actions between different actors.

Interviews with representatives of services suppliers from public, private and third sectors are carried out in order to map the current state of cross-sectorial collaboration. The Delphi method is exploited to find out drivers that affect the development of the service system structure and management models for providing customer-oriented services. In the Delphi method experts from the public and private sector are involved, first to answer questionnaires in two rounds and later to contribute to an evaluation in workshops.

As a result of this study new knowledge on management of collaboration between the public, private and third sectors will be carried out. Furthermore, drivers that will have an effect on the network management style are identified.

Managing the public, private and third sector networks appropriately is a huge challenge. As a result, non-hierarchical relationships and collaborative forms of interaction between diverse parties should be developed if the aim is to improve the service system in the future.

## **[17] NORTH KARELIA - THE REGION OF AGEING KNOWLEDGE**

**Arja Jämsén<sup>1</sup>, Teija Nuutinen<sup>2</sup> and Marjut Arola<sup>1</sup>**

<sup>1</sup>Eastern Finland Center of Social and Welfare Expertise, <sup>2</sup>Centre for Social Services and Health Care, North Karelia University of Applied Sciences, Joensuu, Finland

North Karelia is a laboratory of ageing. In North Karelia, Finland the population ages faster than in the rest of the country. We are living the reality that the rest of Finland and Europe are only approaching. Sparsely inhabited areas that are typical in North Karelia also create their challenges. New competences, fresh solutions, and unprejudiced co-operation are called for in these areas.

The ageing of the population is strongly present in regional and local strategies. In regional development work we rely on multi-sectoral co-operation. The East Finland Social and Welfare Centre of Expertise strengthens the regional networking and co-operation. A wide selection of education is available. North Karelia University of Applied Sciences (NKUAS), Centre for Social Services and Health Care, is highly dedicated to research and development work dealing with ageing knowledge and services for old people. There is a willingness to support the autonomous and meaningful everyday life of the elderly. Therefore the development of the ageing knowledge is one of the main targets in our regional welfare policy.

The purpose of the poster is to make the regional ageing work and research competence visible and to describe some of the gems of the development work. We have started creating new, positive prospects in our ageing society. The elderly are sincerely seen as a societal and communal resource - even as an attraction factor.

In the poster we present various innovative models and good practices of ageing



knowledge used in North Karelia, e.g. preventive home calls, senior counseling, group housing, socio-cultural inspiration, educational programs and developmental work. A network approach to multi-sectoral co-operation gives good results.

The regional ageing work, research competence and innovations also draw international attention. The experts and developers in elderly care in the region have participated in several projects and international exchange programs. The international arenas of co-operation provide the regional actors a significant opportunity for developing, learning and exchanging good practices.

We believe that active, humane and dignified ageing is possible by strengthening the regional multi-sectoral ageing work, research competence, and extensive co-operation – it is good to age in North Karelia!



## [18] ASSISTIVE SMART TECHNOLOGY

### **Harri Airaksinen**

Services and Logistics, Real Estates and Construction, VTT Technical Research Centre of Finland, Tampere, Finland

During the last decades, both the public and private sectors have started adopting ICT not only for back office service management, but also for end-user services access. ICT supported digitally enhanced services can provide benefits both for service providers in the form of more efficient service delivery and management and for the customers in the form of better service access and availability. Likewise, the efficiency of the service processes can be improved. The opportunities to improve the independent living of the elderly are significant.

VTT is an active participant, for example, in the EU Joint Programme AAL (Ambient Assisted Living). The main goal of the programme is fostering the emergence of innovative ICT based products, services and systems for ageing well at home, in the community and at work, thus improving the quality of life, autonomy, participation in social life, skills and employability of older people and reducing the costs of health and social care.

The main instruments are the innovative utilisation of ICT, new ways of customer interaction, new types of value chains for independent living services, integrated elderly care processes and technology solutions, and new business models.

VTT actively develops new solutions for independent and assisted living, health telematics and diagnostics. All the projects are executed in collaboration with

companies and public sector health care providers. VTT also works on solutions for preventing diseases and ageing and maintaining employability. In addition, the service concepts are an essential part of the research and development agenda.

In my presentation I will introduce some of the technical applications and service concepts developed as part of the joint research projects at VTT. The case examples will consist of The Tampere Telecardiology Centre, Social Media for All Elderly People and Virtual Coach.

## **[19] AGEING-WORKFORCES IN HEALTH CARE DELIVERY: PROSPECTS, PROBLEMS, SOLUTIONS**

**Josef Hilbert**

Institut Arbeit und Technik (IAT), Gelsenkirchen, Germany

Health care is Germany's Business Sector No. 1. In the recent decades health care created more than 1 million new jobs and today it gives work for more than 5 million women and men. Moreover: all labor market experts expect health to stay on the growth track for the coming decades. The ageing of society, innovations in prevention, healing and care and the increasing interest of more and more people in healthy living are the driving forces behind such growth scenarios.

However: There are significantly more concerns that the German health care delivery system will have growing problems to attract enough people to work on this issue in healing and caring jobs. Reasons for these doubts are manifold. The most relevant seems to be that working conditions in such jobs have become worse. Nurses, for example, do not only complain about their relatively bad salaries but also criticize that their time to personally address and communicate with patients has been minimized close to zero. As a result, young people show less and less interest in starting a career in health care occupations, and those who are already working in such jobs are increasingly interested in leaving them and instead go for jobs in other sectors and branches, for temporary unemployment or early retirement or – what is even worse – for informal resignation.

For many years responsible people in government and management tried their very best to ignore this hidden erosion of the attractiveness of jobs and occupations in health care. However, since a couple of years the increasing problems with labor shortages can no longer be overlooked. Consequently, policy makers as well as management are furiously and desperately looking for solutions. Since the turn of the millennium the occupational sciences have been aware of the rising problems outlined above and are busy in R&D activities to design more attractive, safe and healthy work places. This holds particularly true for the design of work places which meet the needs and capabilities of people above the age of 45.

Meanwhile, some advanced and adequate concepts solutions are available and were successfully piloted. However, the overwhelming majority of hospitals, in- and outpatient care providers etc. do ignore these innovative approaches and continue to bypass the problems and shortcomings of their inadequate work design by improvisation and by pressing their workforce to work harder. To sum up: with respect to health care, innovative work design has a massive diffusion problem.

To overcome the diffusion problem many experts argue for developing more sophisticated dissemination strategies. The author of this contribution will add that there is another reason for innovation and diffusion hurdles: the very weak and disorganized system of industrial relations which hinders the health care branch to develop innovation friendly skeleton agreements and frameworks.

## **[20] INTRODUCTION OF “LIFELONG REHABILITATION” BY PHYSIOTHERAPIST IN THE NURSING HOME – INDIVIDUAL REHABILITATION BUILT IN ELDERLY’S OWN LIFE**

**Shinichi Daikuya<sup>1</sup>, Satoko Kuki<sup>1</sup> and Kohei Asai<sup>2</sup>**

<sup>1</sup>Kishiwada Eishinkai Hospital, <sup>2</sup>Watami Co., Ltd., Kishiwada-City, Osaka, Japan

In the ICCEF 2009 Conference, we reported on the direct physiotherapy and indirect physiotherapy for elderly living in a nursing home. In this study, we introduce the details of indirect physiotherapy, especially lifelong rehabilitation based on staff education.

We involved about 1750 frail elders among more than 4,000 residents since January 2007, and the number of homes is gradually increased. Current subjects are a total of 3943 residents in 59 private nursing homes. The average number of individual physiotherapy sessions for residents was 3 (range 1–5 times).

Firstly, functional problems of residents in a nursing home, which include body functions and structures, disabilities, limitation of participation, clinical findings, mental function, underlying disease and complication, are ascertained by a physiotherapist. Special function training for residents is not performed as a rule except for the case that physiotherapy is necessary in all respects. Moreover, we instruct the method of operation and life style that overcomes the problem to care-workers and nurses. The typical contents of our guidance are as follows; 1) Instruction for the appropriate assistance to improve life function, 2) Room developments, 3) Exercise instruction, 4) Residential development for the prevention of falls, 5) Description of the selection and use of aids and wheelchairs, 6) Instruction for functional training and evaluation of impairment due to prolonged hospitalization, 7) Selection and use of equipment such as operating instructions and that needed for the prevention of pain, 8) Assessment of preventive care to a high degree of independence (Physical Fitness Test), 9) Construction of the system to improve motor function and exercise, 10) Use of the

training equipment, 11) Lecture and practical training for care workers and 12) Assessment of accidents.

From the beginning to the present intervention, 87 persons have stopped using a wheelchair for locomotion, 433 persons have become able to walk independently, and 129 residents have improved their posture in daily life.

Our interventions are clearly available to improve the physical function of the elderly. The reason for their effectiveness is that they are based on physiotherapy evaluation. So it is important to incorporate our instruction based on physiotherapy evaluation into the residents' lifestyle and the care-workers' manual. However, such intervention could also increase the risk of falling. Consequently, in the future, comparative studies will also need a control group with no intervention.

## **[21] EFFECT OF DIRECT AND INDIRECT PHYSIOTHERAPY FOR ELDERLY PEOPLE IN PRIVATE NURSING HOMES**

**Satoko Kuki<sup>1</sup>, Kyoko Kazumi<sup>2</sup>, Kohei Asai<sup>2</sup> and Shinichi Daikuya<sup>1</sup>**

<sup>1</sup>Kishiwada Eishinkai Hospital, <sup>2</sup>Watami Co, Ltd, Kishiwada-City, Osaka, Japan

We performed physiotherapy for elderly people to improve the locomotion ability of residents in a private nursing home. While life functions represented by locomotion ability have been improved, the risk of falling may have increased. Therefore, we have to pay attention to the risk factor produced by physiotherapeutic intervention and an improvement of locomotion ability, and a longitudinal follow-up survey of the outcome of our intervention. In this study, we investigated the number of falls of residents with improved locomotion ability due to the physiotherapeutic intervention, and we considered the effect and the method of our intervention.

In this study, we took the 140 persons who became able to walk after fulltime wheelchair use, and the 33 persons who stopped using a wheelchair for locomotion anytime with the staff's guidance, as the limited subjects for a 18 months (9.2009-2.2011) intervention. Furthermore, we researched the number of falls as an outcome and the underlying factors.

Of the 140 persons with walking ability, 5 persons experienced a fall with a fracture. And of the 33 persons who stopped using a wheelchair, 2 persons also encountered a fall with a fracture. Their falling factors were thought as follows: a characteristic and their own risk in a single room, fatigue, daily physical condition, hall and corridor spaces, the inexperience of the staff in guiding, the lack of knowledge of proper guidance procedures between staffs, and so on.

For risk management, while we urge staffs to improve the resident's locomotion ability, we suggest guidance, assistance and creation of a practical living environment based on a prospect of recovery and risk in the first intervention. The result of this

study reveal that we have to consider the following events in our intervention and staff education: to be conscious of the residents' behavior pattern at the beginning of removing the wheel chair, to understand the history of falls and/or incidents and how to guide by clinical records, to have an accurate daily clinical record, and to take care the environmental risk factors.

## **[22] RELATIONSHIP BETWEEN BODY COMPOSITION AND MOTOR FUNCTION IN COMMUNITY-DWELLING ELDERLY INDIVIDUALS**

**Masahiro Noguchi<sup>1</sup>, Tsutomu Kibayashi<sup>1</sup>, Akio Kamiya<sup>1</sup>, Takuya Yamamoto<sup>1</sup>, Tsuyoshi Kimura<sup>1</sup>, Tsutomu Moribe<sup>2</sup> and Hajime Matsuda<sup>3</sup>**

<sup>1</sup>Kasamamachi, Hakusan-city, Ishikawa, <sup>2</sup>Kuramitsu, Hakusan-city, Ishikawa, <sup>3</sup>Kuramitsu, Hakusan-city, Ishikawa, Japan

The purpose of this study was to determine the relationship between body composition, as measured by commercially available body composition analyzers, and motor function in community-dwelling elderly individuals.

The subjects were 93 community-dwelling elderly people from Japan, aged over 65 years (42 men and 51 women; age range 65 - 83 years) who participated in a health promotion project. The participants volunteered for the project recruitment that was advertised by public information of Hakusan-shi. Body composition (percent of body fat (%BF) and percent of skeletal muscle (%SM)) were measured by bioelectrical impedance analysis (BIA) using the HBF-362 (Omron Healthcare Co., Japan). Motor functions were measured by sway path, one-leg standing time, timed-up-and-go test (TUG), and functional reach test (FRT) for balance; 10-m gait speed for gait function; trunk flexion angle on long sitting position for flexibility; and flexion and extension of the knee joint and grip strength for muscle power. Spearman's rank correlation coefficient was calculated to determine the relationship among BMI, %BF, %SM, and motor function outcomes. All analyses were performed separately for men and women. We used SPSS ver. 17.0 for statistical analysis.

The mean (SD) value of body mass index (BMI) was 23.1 (2.8) in men and 23.1 (2.8) in women, and that of %BF was 26.4 (4.6) % in men and 34.3 (4.3)% in women. In men, significant correlations were found between BMI and trunk flexion angle ( $r = 0.403$ ,  $p < 0.01$ ), %BF and one-leg standing time ( $r = -0.372$ ,  $p < 0.05$ ), %BF and extension strength of the knee joint ( $r = -0.417$ ,  $p < 0.01$ ), %BF and flexion strength of the knee joint ( $r = -0.350$ ,  $p < 0.05$ ), %SM and FRT ( $r = 0.539$ ,  $p < 0.01$ ), %SM and TUG ( $r = -0.547$ ,  $p < 0.01$ ), %SM and 10-m gait speed ( $r = 0.517$ ,  $p < 0.01$ ), %SM and extension strength of the knee joint ( $r = 0.579$ ,  $p < 0.01$ ), and %SM and flexion strength of the knee joint ( $r = 0.50$ ,  $p < 0.01$ ). In women, significant correlations were found between %SM and TUG ( $r = -0.410$ ,  $p < 0.01$ ), %SM and 10-m gait speed ( $r = -0.354$ ,  $p < 0.05$ ), %SM and extension strength of the knee joint ( $r = 0.513$ ,  $p < 0.01$ ),

%SM and flexion strength of the knee joint ( $r = 0.428$ ,  $p < 0.01$ ), but not among BMI, %BF, and motor function outcomes.

In conclusion, the results of this study suggest that overweight elderly men have higher flexibility, obese elderly men have lower leg strength and balance ability, and elderly women with a high %SM have high leg strength but lower balance ability.

## **[23] SUPPORTING THE FUNCTIONAL CAPACITY OF OLDER PEOPLE WITH SKILL AND QUALITY**

**Pia Koistinen and Leena Lähdesmäki-Mäkinen**

Oulainen Vocational College, Oulainen, Finland

In the care of older people the supporting of the functional capacity is still in its infancy. The increasing number of older people requires effective procedures in Europe: in structures, in promoting healthy aging and in the methods of care and supporting the functional capacity of older people.

The main goal in the care of older people is to support the wellbeing and quality of life and increase their coping and security. The goal is to create means for meaningful actions and possibilities to act as an equal citizen. It is important that the resources and independent initiative of older people are stressed. The carers can support these if they have a deep knowledge of functional capacity and the understanding of the supporting process. If the functional capacity of older people is supported at the right time and in the right place, it is preventive, cost-effective and productive. Quality in care is possible when the carers document the concrete methods of supporting in the care plans. The problem is that the methods and activities for supporting are scattered in various resources and it is difficult and time-consuming to find them.

The SUFUCA project's aim was to create a new "supporting tools package" for supporting the functional capacity of older people.

The Sufucaproject was a two-year Transfer of Innovation LdV- project, which ended in September 2010. In the Sufucaproject the partners together collected, tested and developed creative and innovative methods and activities for supporting the physical, psychosocial and spiritual functional capacity of older people. The partners were from Estonia, Germany and Finland. The Oulainen Vocational College, Social and Health Unit was the co-ordinator.

The result of the project was the website [www.sufuca.fi](http://www.sufuca.fi). It describes the supporting process of the functional capacity and the living environment related to the process and also links to other useful websites. The main content is concrete methods and activities for supporting physical, psychosocial and spiritual functional capacity. The

method's aims are presented as client-oriented, there are concrete instructions and photos for the carer on how to guide the elderly and the tools needed for the method. The methods can be printed and added to the care plan.

These websites for carers to support the functional capacity of older people are easy and quick to use. The sites are continuously developed, new methods are added and the quality is evaluated because constant feedback is possible from the carers in training and from students. By using the sites the carers realise what kind of knowledge they need in holistic supporting of older people. In different care settings the carers can evaluate what kind of further knowledge of supporting is needed in the work place, and responsible areas in qualitative elderly care can be divided and further training can be offered. References: [www.sufuca.fi](http://www.sufuca.fi), [www.kam.fi/vato](http://www.kam.fi/vato)

## **[24] PHYSIOLOGICAL BACKGROUNDS FOR SAVING AND IMPROVING PHYSICAL AND MENTAL ABILITIES BY CONTINUOUS TRAINING IN ELDERLY**

**Enrique T Segura and Claudia T Marro**

IBYME-CONICET Vuelta de Obligado, Buenos Aires, Argentina

Our main interest and purpose is to search for new approaches to produce advances in the diagnosis and eventually treatment of natural physical and mental deficits appearing in the course of human ageing. For this to be accomplished, we think that the best understanding of both normal and abnormal body and mind functioning in aged people is needed.

In the report we will refer to different mechanisms related to the origin, development and maintenance of the biopsychosocial homeostasis and its progressive decay along the years during human senescence. Some evolutionary comments about the causal factors of these changes will also be advanced.

The role of the gravitational force in muscular functioning:

- 1) The muscular proprioceptive functioning concerning segmental movements, posture, righting, upright position, walking, leap and swimming were studied in different terrestrial tetrapods. The dynamic organization of different fixed action patterns of behavior was also studied. The evolution and functions of muscle spindles and the stretch reflexes were also tested.
- 2) The effect of forced immobilization was studied in rats. Adult animals were submitted to complete movement restraint in an *ad-hoc* container for ten minutes a day in a quiet and isolated environment, during a period of one week.

Repeated isolation and movement restriction induced significant variations on MAO and BDZ binding inhibitory activity of different tissues (Segura et al 1990)<sup>1</sup>



Our own results and a review of current literature give support to the following conclusions and suggestions:

- 1) The proprioceptive mechanisms depending on muscle spindles make its first appearance in terrestrial amphibians when leaving water environment and arriving to terrestrial life. This fact suggests that gravity functioned as an evolutionary stress which allowed the earth colonization by amphibians
- 2) The well established fact that a lack of gravity in space flights and bed immobilization induces osteoporosis and bone atrophy, is an excellent argument for suggesting continued muscular training against gravity, and voluntary, motivated and upright position to prevent their appearance in aged people.
- 3) Finally, with respect to mental functions decay, its prevention and possible recovery, our proposal is based on numerous and authoritative references that clearly show the significant increase in neural connections observed in newborns and aged animals, when submitted to enriched environments. Complementary suggestion must be that mental training should be original, motivated and creative.
- 4) So, obsessive and much competitive activity must be discarded.

<sup>1</sup>Segura E, Lemoine A, Armando I and Barontini M (1990) Stressor dependent changes on MAO inhibitory activity in brain and heart of rats. *Environmental Stress*, edited by O Manninen ISBN 951-44-2508-1 pp.495-509

## **[25] INFLUENCE OF HEALTH INFORMATION ON THE QUANTITY OF PHYSICAL ACTIVITY AND VENOUS BLOOD FLOW REACTION TIME IN ELDERLY WORKERS**

**Akira Kimura<sup>1</sup> and Masahiro Noguchi<sup>2</sup>**

<sup>1</sup>Gunma PAZ college, Takasaki Gunma, Japan, <sup>2</sup>Kinjo University, Hakusan, Ishikawa, Japan

To continue working, is important for maintaining the ability of elderly persons. It is necessary to evaluate their health condition to maintain their ability. We focus on the prevention of physical inactivity. We can examine the effect of the revelation of physical inactivity by using the value of venous blood flow reaction time (VRT) within the exercise load test.

The first purpose of this study was to illustrate a system for educating elderly workers in health information. The second purpose of this study was to clarify the influence that the information to change the ratio of rest and non-rest time for the elderly person who performed a field work had on the quantity of physical activity and venous blood flow (VRT).

The research period was from January, 2009 to February, 2010. We requested the cooperation of a local self-governing body and local participants for the research. It was decided to use a local community center for the education. The participants were the inhabitants gathered by a poster from a local area in mid-north Japan. The subjects of the study were a private university in the district and a representative of the inhabitants. There were 31 participants, who were  $59\pm 7$  years old (mean  $\pm$ SD), 21 were men and 10 women. The study design was crossover type RCT. Interventions were carried out each three months. The participants were separated at random into three groups for intervention (IG), control (CG) and placebo (PG). The IG and CG learned the structure of physical activity. In addition, the IG learned how to read health information and practice. The talks of the experienced person were explained to the PG. The index of outcomes were measured from the quantity of physical activity by the posture and intensity of activity coefficient (PA), VRT after foot ankle movements repeated 5 times, and the ratio of non-rest time in 24 hours (RAR).

This experiment was accomplished without problems. Influence on the results for PA: In Risk Estimation, the intervention effect on placebo was had an odds Ratio of 16.0 (95% Confidence Interval 2.654-96.469). The influence on the ratio of rest time vs. activity time (RAR): In Risk Estimation, the intervention effect on placebo was had an odds Ratio of 18.750 (95% Confidence Interval 2.871-122.452). The relations of having a number of people and health information or not the VRT were normalized: In Risk Estimation, the intervention effect on placebo was had an odds Ratio of 8.4 (95% Confidence Interval 1.600-44.104).

As for the elderly workers educated in health information, the VRT values of all members showed an abnormality of less than 1700 kcal. In the placebo group, the VRT was not normalized.

## **[26] VOLUNTEERING AND SOCIAL CAPITAL IN ELDERLY CARE**

**Ulla-Maija Koivula**

Social and Health Care Services, Tampere University of Applied Sciences, Tampere, Finland

The changing age structure in most affluent countries demands restructuring elderly care services in order to be able to meet the challenge of increasing care needs in a cost-effective way. Volunteer work and informal care given by next of kin and relatives have been sources to support formally organized social and health care services, whether provided by the public, private or third sector. Sometimes volunteers are seen as a threat, sometimes as a resource from the point of view of professionals in elderly care settings. Volunteering in elderly care needs management as well. How can volunteering be a well-managed resource and enhance social capital?

The article analyses the roles and relationship models between professional workers and volunteers in elderly care services. In the article an analytical model of the possible relationship is described and discussed and the model is then used in an empirical study using case examples from service housing for the elderly. The empirical material is two-fold: One part of the material is collected via a self-evaluation tool developed by the project "Intellectual capital" which was funded by the Slot Machine Association of Finland and lead by Jalmari Jylli Foundation. Part of the self-evaluative tool was volunteering and management of volunteering. This data is used as a baseline data to analyse the scope and level of volunteering used by those 40 elderly care service providers who used the self-evaluative tool. The second set of data consists of qualitative case studies of service houses / residential care services representing different organizational and management forms of volunteering in care.

The main research questions are: a. what kind of management models are used with volunteers in elderly care, especially in service houses, b. what are the challenges in the management of volunteers, and c. how volunteering is best managed and organized to enhance social capital within the service housing and with the surrounding community/locality.

The results show that volunteering can be an asset in both enhancing social capital within a work organization and within the community but only if it is managed, clear roles are set and the volunteer management is based on a collaborative approach. Social capital is something which can be enhanced in elderly care and ought to be promoted in elderly care services. Putting more focus on the promotion of social capital in elderly care can be a development tool for not only better quality of care but also wellbeing of personnel.

Key words: Social capital, volunteer work, service housing for elderly, management of volunteer

## **[27] SOCIO-PEDAGOGICAL HORSE ACTIVITY WITH DEMENTED PEOPLE: A CASE STUDY**

**Elina Lukumies**

Old people's house, Nummi-Pusula, Finland

This paper is a report of the effects of socio-pedagogical horse activity on persons with serious dementia and their professional caregivers. The main idea was to create equal interaction between patients and their professional caregivers.

The study was carried out with two seriously demented men aged 66 and 82 with diagnoses of frontotemporal dementia and Alzheimer disease, respectively. The caregivers activated the patients 1) by giving them caps and t-shirts decorated with pictures of horses to wear and horse magazines to leaf 2) by a visit of a therapy horse to their institution 3) by visiting a horse farm and driving a horse carriage there 4) by

memorizing the new experiences with horses afterwards by photographs. These activities were observed, photographed, and the caregivers were interviewed.

The patients' self-confidence increased, learned helplessness diminished and emotional memory was stimulated.

Socio-pedagogical horse activity also opens up a new alternative for demented people. Horse activity can both stimulate the patients' previous life experiences and also give them new experiences. The combination of the ideas of socio-pedagogical horse activity and care farming (green care) could offer a more motivating and rehabilitative environment for the patients and inspiration for the staff than conventional institutions.

Key words: Socio-pedagogical horse activity, dementia, elderly care, care farming, learned helplessness.

## **[28] THE EMOTIONAL CONNECTION AND THE DESIRE TO FEEL IT IN A MARRIAGE IN LATER LIFE WHEN A PARTNER HAS A MENTAL HEALTH PROBLEM**

**Mari Helin-Tuominen**

Tampere, Finland

I focus on my doctoral studies to the contents of the marriages in later life when a partner has a mental health problem. The research questions: what kind of are the elderly spouse's stories about their marriage, and about the mental health problems their partners suffer from and about the way they deal with it in the marriage.

By using narrative questions I interviewed nine spouses, years 60 to 80 years. I used narrative approach (Lieblich etc 1998). Results show that the emotional connection is an important in a marriage. In "The emotional connection stories" spouses feel happy, and that they have mutual attention and respect. In "The desire to feel emotional connection stories" spouses speak about the desire to feel emotional connection without feeling it. They feel dissatisfied and lonely.

Conclusion: Service providers should give time for the spouses to talk about the emotional things in their marriages e.g. by using family education.

## **[29] DIALOGUE BETWEEN SUBSTANCE ABUSE SERVICES AND ELDERLY CARE**

**Maria Viljanen**

Finnish Blue Ribbon, Sininauhaliitto ry, Helsinki, Finland

The reasons for starting a project focusing on substance abuse problems among the elderly, that is, among Finns over the age of 60, were threefold: 1) the share of the

elderly in the Finnish population is increasing rapidly; 2) the consumption of alcohol in Finland has increased in all age groups; 3) there are no substance abuse services targeted at those over the age of 60, and, on the other hand, professionals working in the field of elderly care do not have expertise in substance abuse issues.

The four key organisations of the project: The Finnish Blue Ribbon (2005-11), Helsinki Deaconess Institute (HDI) (2005-11), Church Resources Agency (2005-11), and Blue Ribbon Foundation (2005-08) operate in the field of addiction issues, and one of them has also extensive experience in elderly care (HDI). The fifth key partner, Age Institute Kuntokallio Foundation (2005-08) has focused on the research and development of services for the elderly. In addition to these organisations, municipalities in the metropolitan area (Espoo, Helsinki, Vantaa) and in the more sparsely populated Eastern Finland (Kainuu, Kuopio, Pieksämäki, Savonlinna) have also taken part in the development work.

The client work undertaken during the project involved 129 clients over the age of 60 who have a recognised drinking problem. With the help of these clients, new ways of carrying out addiction work in the homes as well as peer group activities have been developed.

Changes in the clients' situation have been assessed and evaluated comprehensively in co-operation with the client and professionals in the service network, using process descriptions. The processes and quality of peer group activities have also been examined with the help of process descriptions and discussed in the project steering group.

Our project workers have managed to make small but long-lasting changes that help the clients to get back to a more normal daily life. Thus the main result of the project is that it is important to put the life of the elderly problem drinkers in order before changes in alcohol use can occur. When the client has, for instance, found new social contacts, a change in alcohol use is possible.

The project is supported by the Finnish Slot Machine Association (RAY).

## **[30] SURVEY OF COMPETENCE - PHARMACOTHERAPY SKILLS OF NURSES AND PRACTICAL NURSES**

**Auli Bister**

Jyväskylä Institute of Adult Education, Jyväskylä, Finland

The national handbook for safe pharmacotherapy in public and private social and health care units was published in 2006 by the Finnish Ministry of Social Affairs and Health. In the handbook several requirements for social and health care units were announced concerning guidelines for the provision of pharmacotherapy, division of

responsibilities, license practices, induction of staff and ensuring and maintaining their knowledge and skills in pharmacotherapy.

In the TOOL project in 2007-2009 the Jyväskylä Institute of Adult Education in cooperation with the Municipality of Jyväskylä and a group of private service providers clarified the competence requirements in pharmacotherapy for practical nurses. Based on these requirements a model for a survey of competence in pharmacotherapy was created and piloted.

After the TOOL project roughly 1500 nurses and practical nurses have participated in web-based pharmacotherapy competence surveys in Central Finland in 2009-2011. Each work unit selects 80-100 multiple-choice questions that best reflect their daily work in pharmacotherapy out of 500 alternatives created in cooperation with hospital wards and homes for the aged. The overall aim is not to classify employees but to find out what kind of further education in pharmacotherapy is required to ensure safe pharmacotherapy for the patient. The summaries of the survey reports reveal the issues where education is most urgently needed. Tailored education in pharmacotherapy is arranged at the work places or at the Jyväskylä Institute of Adult Education.

### **[31] WORKPLACE HARASSMENT/VIOLENCE AND WORKERS' EMOTIONAL AND PHYSICAL HEALTH IN HOME CARE**

**Isik U Zeytinoglu<sup>1</sup>, Margaret Denton<sup>2,3</sup> and Jennifer Millen Plenderleith<sup>2</sup>**

<sup>1</sup>Human Resources and Management Area, DeGroote School of Business, McMaster University, <sup>2</sup>Gilbrea Centre for Studies in Aging, McMaster University,

<sup>3</sup>Department of Health, Aging & Society, McMaster University, Canada

The purposes of this paper are to examine 1) the workplace harassment/violence experienced by workers in home care, and 2) the association between the harassment/violence at work and home care workers' emotional and physical health. By workplace harassment/violence we refer to verbal threats, spitting, biting, scratching or pinching, restraining, sexual assault, sexual harassment, and attacks using objects or weapons. For workers' emotional health we focus on work and life stress, and for physical health we examine musculoskeletal disorders and workers' reporting of their health in general. Home care has grown significantly in the last 25 years in Canada. It employs a large percentage of women and an ethnically diverse workforce particularly among the personal support workers. Our earlier research showed high levels of stress and musculoskeletal disorders among home care workers (Denton et al 1999a; 2002a,b; 2003). Compared to the general population of women in paid employment in Canada, participants in our studies reported higher levels of physical health problems. Stress and musculoskeletal disorders were associated with home care restructuring, heavy workload, work intensity, repetitiveness of the job, perceived job insecurity and labour market insecurity

(Aronson et al 2004, Denton et al 2002a,b; Zeytinoglu et al 2000, Zeytinoglu et al 2006, 2009a). Our studies also showed positive effects of organizational and peer support at work in improving the work environment (Zeytinoglu et al 2009b). In this paper we turn the attention on harassment and violence issues in home care, providing an update to our 1996 study (Denton et al 2000) and conducting a further analysis of the effect of harassment/violence on home care workers' emotional and physical health.

The data are from our survey of 991 visiting home care workers (visiting nurses, therapists and home support workers) in a medium-sized city in Southern Ontario, Canada. Descriptive statistics will be provided. Bivariate correlations and hierarchical regression analyses will be conducted. The results show that workplace harassment/violence is an occupational health problem for home care workers. About one in ten respondents experienced violence or the threat of violence in the workplace during the past year. Of those respondents, a large majority experienced violence two or more times. Their aggressors were in most cases clients, relatives or visitors of clients, and in some cases coworkers and strangers. These respondents were victims of primarily verbal threats. Other experiences were: pushing, scratching or pinching, slapping or hitting, sexual harassment, kicking, spitting, biting, punching, use of objects or weapons, restraining, and sexual assault. Multivariate analyses will be conducted to examine the association between the harassment/violence at work and home care workers' work and life stress and musculoskeletal disorders. Workplace harassment and violence is a serious health and safety problem that must be addressed. At most workplaces, even one case of harassment or violence is considered to be too many, and home care workers are experiencing many. Conclusions based on the multivariate analyses will be discussed. We will conclude by discussing how healthy work environments can be created in home care.

## **[32] TRIAL FOR SERVICE QUALITY MANAGEMENT IN HEALTH PROMOTION FACILITY FOR THE MIDDLE AGED PEOPLE**

**Daisuke Kumazaki and Shinichi Daikuya**

Kishidada Eishinkai Hospital, Kishiwada City, Osaka, Japan

We have managed a health promotion facility attached hospital. We are always making an effort to improve the service quality. In this study, we extracted the strong and weak points of our facility by measurement of the service quality of our facility, and the result of efforts to improve them.

First, we extracted our service items and identified present problems of our service quality by a SWOT analysis based on a questionnaire survey to facility members. The questionnaire survey was conducted for facility members to measure service quality. The quality of services was measured using ten elements (20 items, two for each element): medical security, program, staff, room condition, facilities and equipment,



sociability with members and/or staff, physical effect, emotion, information, and user manners. Both the importance level and performance level of each element were ranked into seven levels in the first research. The difference of the mean value between the importance level and performance level of each element was verified using the Student's t-test. As the second step, based on the above results, we performed an improvement of the service quality for two months with a focus on the exercise program and cleaning of the plant and equipment.

Finally, we also investigated the performance level by the same questionnaire as in the previous survey to evaluate the effect of our activity in the second step. In this step, only performance was ranked into seven levels. We determined the valid response by answers to both first and final survey (N=68). The service quality was measured by comparing the performance levels between the first and final researches.

In the first research, the performance levels of room conditions, facilities and equipment, and physical effect were low compared with their importance level. We performed the activity for service quality improvement based on the result of the first research. In the final research after our effort to improve the service quality, the performance level of the exercise program was slightly decreased, while room condition had improved. Moreover, an improvement of the performance level was shown in six of the ten elements of service.

The service quality was improved by executing the activity for service quality improvement, and views on the staff's service were improved in the health promotion facility. In the light of the results of this study, objective measurement of the service quality is necessary in a health promotion facility. Activity for service quality improvement based on the objective findings is effective for health promotion facilities. Moreover, such efforts themselves may change the staff's way of thinking and lead to service improvement activity.

### **[33] WILL EXPOSURE TO COMPETITION IMPROVE THE QUALITY OF CARE IN THE NURSING HOME INDUSTRY? – THE NORWEGIAN CASE**

**Astri Drange Hole**

Bergen University College, Rådøl, Norway

The paper examines if exposure to competition is a means to achieve increased focus on quality in the public care sector in Norway. Exposing public care to competition means that the responsibility for providing care services is divided between the public authorities and private actors; the public authorities are responsible for the allocation efficiency while the private actors are responsible for the cost efficiency. Due to

certain values materialised and institutionalised in the Norwegian welfare state, the privatisation of the public care sector is not an issue in Norway. Also, due to certain serious market failures that characterise the market for public care services, economists will never recommend that this market should be completely privatised. In Norway exposure to competition means tender competition. The suppliers bid for a contract issued by the Norwegian authorities for a limited number of years. Moreover, and more importantly, quality requirements are cautiously specified in the contract, and quality of care is the major and also most crucial competitive factor. Hence, quality criteria must be defined, and measurable quality requirements must be established accordingly.

The paper focuses on the market for elderly care. In Norway it is the 430 municipalities which are responsible for the provision of this care. There are four categories of providers of elderly care: care exposed to competition, care carried out by private families, care carried out by private religious or idealistic institutions, and public care. The respective proportions are 1.8 %, 1.3 %, 3.2 % and 93.7 %. The analysis is twofold. Firstly, we run a regression: quality is regressed on competition and certain control variables. The choice of variables has been restricted by the availability of data. Nurse-to-patient ratios (NPRs) are used as a proxy for quality. The independent variables are on two levels: institution and municipality. The Herfindahl index (HI) – the sum of the squares of the market shares of each institution within the market – is used as a proxy for competition; municipality is used as a proxy for market, and the number of beds in an institution divided by the total number of beds in the municipality is used as a proxy for the market share. Next, we test if the four categories of providers differ significantly on various variables like size, workload ratio, location, and financial situation.

## **[34] PROMOTION OF FIRE AND ACCIDENT SAFETY OF DISABLED PEOPLE**

**Kristiina Juvas**

The Finnish National Rescue Association (SPEK), Helsinki, Finland

The promotion of fire accident safety of disabled people is a part of a national Internal Security Program. The aim of the program is to create co-operation between actors of different levels and sectors and to establish practices for the promotion of safety. The project for fire and accident safety of disabled people is an example of good co-operation that resulted in useful tools for rescue and home care personnel in municipalities.

## [35] TELEHEALTHCARE SUPPORTING INDEPENDENT LIVING

**Christoffer Segercrantz**

Tunstall Oy Ltd, Vantaa, Finland

Tunstall is the leading provider of telehealthcare solutions, with over 2,5 million users globally. Tunstall's solutions support older people and those with long-term needs, to live independently, by effectively managing their health and well-being. Tunstall provides technology, experience and advice to millions of people and thus enabling them to lead independent, fulfilling lives.

Tunstall's market leading telehealthcare solutions play a pivotal role in supporting elderly people and those with long term needs to live independently, by effectively managing their health and wellbeing.

Telehealth is the management of long term conditions via remote monitoring of vital signs, using equipment in the patient's home. Telehealth offers organisations the opportunity to deliver integrated, patient-centred care for people with long term conditions. It benefits all stakeholders in the care environment; carers, healthcare professionals, healthcare organisations, and most importantly: patients. Telehealth delivers these benefits by providing extensive care and security in the environment where it is needed the most: the patient's own home.

Telecare has been defined as "The continuous, automatic and remote monitoring of real time emergencies and life style changes over time in order to manage the risks associated with independent living". Telecare offers a non-intrusive platform of support for both users and carers. Telecare provides peace of mind and help in restoring independence, both for the carer and the person they are caring for!

Today the tailored and flexible Telecare/Telehealth solutions are being used to develop new models of care, which in turn are transforming the lives of carers and people they care for, by supporting and enhancing their health, independence and well-being.

The Telehealthcare solutions are benefitting individuals and healthcare providers the world over.

## **[36] SAFETY MANAGEMENT IN ELDERLY CARE; USER-ORIENTED CONCEPTUAL DESIGN FOR ELDERLY AND PATIENT CARE**

**Susanne Mulbah**

Korpinen Oy Ltd, Helsinki, Finland

In this age of high-tech we sometimes forget the importance of low-tech design decisions.

Hospital and nursing home bathrooms and toilets have been a saga of inadequacy, often directed by building codes and regulations based on myths rather than research. Visits to bathroom and to toilet can be a hassle and cause stress both for the staff and for the patients. Dignity, privacy, safety and quality of life deserve more consideration. The care givers also benefit greatly from functional solutions by improved ergonomics and safety in one of the most laborious tasks. Helping patients to maintain personal hygiene is a fundamental aspect of care. Design plays a role in preventing disability in elders and improving the quality of life.

Korpinen Oy Ltd has participated in several research and user-oriented projects. As a market leader in Finland with one of the fastest ageing populations in the world we would like to share our knowledge, experience and best practices in conceptual design.

## **[37] COOKING SAFETY AND INDEPENDENT LIVING**

**Sampo Rantakokko**

Safera Oy Ltd, Finland

Key points of presentation:

- Cooking fires, statistics, reasons, risk especially for elderly people
- Cooking and independent living: cooking is important everyday routine for many people
- Routines increase the feeling of safety and independency
- Requirements for cooking safety solutions for elderly people
- Benefits for the end users and the care staff: results of surveys
- Solution: SAFERA cooking safety, automatic safety which does not affect cooking routines

## **[38] SENSORY AND PERCEPTUAL CONSIDERATIONS IN OPTIMIZING ENVIRONMENTS FOR THE ELDERLY**

**Outi Mäki<sup>1,2</sup> and Mikko Leino<sup>1</sup>**

SmartCare Group<sup>1</sup> and Tampere University of Applied Sciences<sup>2</sup>, Tampere, Finland

Most presentations concerning elderly people begin with serious tables and diagrams about the increasing number of the elderly and their emerging memory problems. A normal way how the society still nowadays tries to solve these challenges, is to gather people having difficulties to express themselves and difficulties to tell their own life stories into sterile reservations without any supportive elements for their memory, senses or social skills. It leads to their mental and physical state spiralling downward. We should provide inspiring measures instead, such as suitable sensory and perceptual stimulations. It means cognitive hooks aiming at engaging people in conversations and interaction in general, figurative and voice based pieces of life stories, which can function as a “cognitive prosthesis” (Alm). If we succeed really to optimize the living environment of some individuals, then we can multiply the solution for thousands of others.

The most common pastime zone in every home is the surroundings of the TV. TV already has its own place and there is no need to refurnish the room. SmartCare TV is a solution, which looks and feels like just an ordinary TV set (because it is also that) but comes with a host of services and activities behind it. It is operated by a conventional-looking remote control with SmartCare TV buttons. The most frequently used services such as video calls, community news, live broadcasts and recordings are shown on the main screen. It is crucial that the user feels he or she is coping better and also feels better. In this presentation, we are going to tell experiences from the living labs (own homes, senior centers, nursing homes) where people of 75+ years of age have used a screensaver, multimedia games, picture gramophones, video calls, audio books and other contents of the SmartCare Concept.

Key words: Elderly TV, Pastime zones, Picture gramophone, Living lab

### **[39] CHANGING NURSING VIA GERONTECHNOLOGY – ELSI SMART FLOOR’S INFLUENCES ON NURSING, AS DESCRIBED BY NURSES USING IT IN AN ELDERLY CARE HOME IN FINLAND**

**Rina Oksanen<sup>1</sup>, Ulla Mattila<sup>2</sup>, Eija Segerholm<sup>2</sup>, Harriet Finne-Soveri<sup>3</sup> and Leena Pohjola<sup>2</sup>**

<sup>1</sup>Marimils Ltd., <sup>2</sup>Helsinki City Social Department, <sup>3</sup>National Institute for Health and Welfare, Vantaa, Finland

The ELSI smart floor (previously ELSI Safety Floor) is an intelligent monitoring system installed in elderly care homes to improve self empowerment and the safety of the residents and to ease nurses’ work load in addition to improving nursing quality. ELSI, invented by the Helsinki University of Technology and commercialized by MariMils Ltd, has been further improved by a gerontechnology programme (Innokusti, project SafeSteps, 2006-2010) and the nursing staff in collaboration with MariMils. ELSI consists of metallic sensor foils with electronic units which can be installed under any floor material. The system is based on capacitive measurement which can pinpoint changes caused by the presence of an individual in a low-intensity electric field.

Converting electronic impulses into computer data, the software then tracks the movement and position of residents in the rooms. Individual alarm settings (six alarms) are set to the system through a user-interface and transmitted to the nurses' alarm phones.

After 2.5 years of experience in using ELSI, while the project had already moved from active support into a follow-up phase, the nurses were asked to write freely in response to one open question: "Describe in your own words how nursing has been changed after ELSI". The answers are parallel to the previous surveys, executed during project SafeSteps. The response rate of this survey was 52 %. A total of 135 positive and 11 negative descriptions were given.

The nurses' written positive answers were divided into three main categories: 1) residents/clients care and life in nursing facilities (n=51, 35%), 2) nursing and working (n=82, 56%) and 3) system qualities (n=13, 9%). Especially the first two main categories were found to have several different subcategories, which in the residents' care and life were a) individuality, b) quality of care, c) safety and prevention d) getting help fast e) getting help at the right time and place and f) being able to use bathroom when needed. Answers describing the nurses' work with ELSI were found in these seven subcategories: a) no unnecessary checking, disturbing or waking up, b) preventing dangers and risks of injuries and falls and fast help if accidents happen, c) being better informed and having more information, d) ELSI as a tool for nursing e) changed working environment and good practices, f) saving time and steps and g) monitoring residents' need for care and guidance.

Most of the negatively categorized answers were found in category "nursing and working" (6), the system qualities had four (4) and residents care and living was given only one (1) negative comment. The negative comments could also be divided into three categories of their own: a) false alarms (7), b) unnecessary alarms due to resident's own activity (1) and c) extra work in the form of increased documentation. This differs from previous surveys, where an alarm phone was the main concern in addition to the false alarms caused by technological failures or user misinterpretations. The alarm phone model was changed once during this project.

As seen from the survey results, ELSI has an enormous effect in elderly care nursing when installed and implemented properly and used actively by the nursing staff. It will save nurses' time and can positively influence the working environment. It creates a feeling of safety among nurses. It helps prevent accidents and enhance the quality of care, keeping nurses more active, informed and up-to-date of the residents' condition and abilities. ELSI enables preventive nursing, allowing proactive reactions to close calls and quick actions if accidents happen.

## **[40] MEASUREMENT OF THE FUNCTIONAL CHANGE OF THE VARIANT TIME WITH THE ASSISTIVE DEVICE**

**Masashi Uchikune**

Department of Precision Machinery Engineering, College of Science and Technology, Nihon University, Chiba, Japan

The purpose of this study is to make clear the physiological and psychological effects of the persons with the assistive device for the elderly and grown-up persons in the application of the welfare work, facilities, support and hospital facilities. Physiological effects were examined by investigating the effects on the cardiovascular system, respiratory movement and salivation, to confirm the effects on the autonomic nervous system. The subjects experienced the health effects in seated position with the variant time and the work of sitting considered the workload, and the interaction in the health effects between the sitting time, sitting condition (tilt of wheelchair) were measured, and the assistive device was used to record the physiological indicators of the sitting persons. As mentioned above, the physiological effects were examined by investigating the effects on skin temperature, heart rate, respiratory motion, brain waves, saliva secretion, EMG system and blood flow, among others. Muscular load during the sitting posture is measured by surface electromyogram from the trapezius muscle and the latissimus dorsi muscle. The evaluation of muscle load was based on the intramuscular electrode ratio of the trapezius muscle and latissimus dorsi muscle at 60 min. The devices used for the experiment included a Cds sensor for measuring heart rate, a thermistor sensor for respiratory movement, a sensor for foot blood flow, an indicator for skin temp., an EMG meter for the EMG voltage and frequency, sitting pressure amp. for the sitting pressure, brain monitor for brain wave and an adapted measuring method for seated subjects. The subjects were male university students and elderly subjects in good health, and the seated time of the subjects was 60 min. The experiment of sitting condition resulted in changes in the autonomic nervous system.

The amplitude of the heart wave and the respiratory ratio remained at baseline with a cushion, air-charger and warmer (assistive device) until an hour. However, the blood flow at the cushion decreased and that at the dorsum of foot increased more from the baseline until an hour, while the blood flow of the index finger changed in the cushion after 27 min – 60 min.

The subject had been sitting for 60 minutes the foot-blood flow of the standing position was measured instantaneously. The variant time has an effect on the seating and was considered the workload. The standing after the sitting increased the blood flow of dorsum of foot about 8.5 times and compared to the control, tilt of the assistive device. The blood flow display showed a 4.2 times higher blood flow from the sitting and the indicator had an effect on the subjects. When it was at a tilt during 39-60 minutes, the human brain waves emitted by elderly subjects were alpha waves. The visual analog scale (VAS) of the introspective method showed differences in values

which were "adaptable: 1.1 times, unpleasant: 1.3 times, hard: 1.6 times, tired: 1.9 times" in the case of values from 30 to 60 minutes without the cushion and with the cushion it indicated a difference of about 1.2 times concerning the rating of "tired". For the elderly subjects, in the difference of values that these ratings were shown "unpleasant, tired, hard, adaptable" at 5, 10-degree (tilt) by the VAS method. These ratings are applicable to the evaluation words at the instrument and the technology of the seating. This result is a significant indicator for the user, support, and the design of the assistive device. Furthermore, the assistive devices which can be used for the elderly person and the healthy person were evaluated.

## **[41] HEAT SHOCK PROTEINS IN RESPONSE TO COKE OVEN EMISSIONS AND DISEASES**

**Huan Guo, Xiaomin Zhang, Xiaobo Yang and Tangchun Wu**  
Tongji School of Public Health, HUST, Wuhan, Hubei, PR China

Highly conserved proteins called heat shock proteins (HSPs) can be induced by a lot of environmental stresses such as physiological, physical, chemical factors, many of which are very common in the working and living environments and can induce many diseases including lung cancer and cardiovascular diseases. Intracellular HSPs have been shown to protect cells, organs such as heart and brain, and whole organisms against damages caused by these abnormal environmental factors and act as molecular chaperones, participating in the proper folding of nascent proteins and their transport to cell compartments, in refolding and solubilization of misfolded or damaged proteins, and in protecting cells against protein aggregation. However, extracellular HSPs act as a danger biomarker. Polycyclic aromatic hydrocarbons (PAHs) are the main products of coke-oven emissions produced during incomplete combustion of natural or synthetic fuels. Long-term exposure to PAHs by air and food had been reported to be associated with high DNA damage, high incidence of lung cancer, and heart diseases, which are a serious threat to all, especially to elder workers. Here, we firstly present many results from our previous studies showing that there are individual differences in plasma, lymphocyte Hsp70 levels, although Hsp70 levels decrease with age after the age of forty years and that the levels of Hsp70 in lymphocytes are negatively correlated with the level of genotoxic damage in workers exposed to coke oven emissions, which suggest that the difference in the Hsp70 levels may contribute to the susceptibility for DNA damage in the workers exposed to similar concentrations of polycyclic aromatic hydrocarbons by external and internal exposures. Secondly, we present new results about the possible role of genetic variations in heat shock protein genes, circulating Hsp60, Hsp70 and their corresponding antibodies in patients with lung cancer and coronary heart diseases and discuss the possible mechanism. Finally, we will present data about newly established elder cohort for the prevention and control of many chronic diseases and for future cooperation



This research was supported by research funds from NSFC (30525031 and 30872092).

## **[42] RELEVANCE OF PERSONAL INFLUENCING VARIABLES IN LOAD TECHNIQUES**

**Thomas Kunze and Birgit Spanner-Ulmer**

Human Factors and Ergonomics, Chemnitz University of Technology, Chemnitz, Germany

Competence, engagement and health of the employees are valid success factors in order to remain competitive on a long-term basis. However, the demographic evolution presents a challenge to enterprises, to realize economic and future-oriented aims with aging labor. In this context, an increase in musculoskeletal disorders can be observed due to the increasing old age of employees. Reasons for that can be found in constrained posture, action forces, manual materials handling and upper limb load in repetitive task. Through an objective evaluation, these loads should be identified first of all to be able to derive effective ergonomic design measures. Because of this there exist numerous standards and techniques in literature. On one hand there are techniques which use activity-specific influence criteria for the assessment of activity. On the other hand there are also further techniques which consider personal influencing variables such as age, sex and fitness. During an exact consideration of these techniques it is becoming clear that these techniques achieve different factors as well as different evaluation results.

For this reason further control criteria such as the measuring sensitivity must also be considered in the integrated selection and evaluation of load techniques. By sensitivity analysis of different collapse material handling (NIOSH, Burandt, BOSCH, REFA and Siemens) and collapse force (Schultetus, VDI and Bullinger) techniques a different sensitivity can be maintained with a view to the evaluation results.

Personal factors show only a low to medium measuring sensitivity. By contrast, the organizational and activity-specific factors show a high measuring sensitivity. Thus, in the context of demographics age, sex and fitness are of less importance than the evaluation of musculoskeletal disorders. Sensitivity analysis represents only one control criterion for the evaluation of suitable load techniques.

For this reason, further control criteria such as objectivity, reliability, validity, diagnostic significance as well as usability of available load techniques should be examined as justifiable expenditure for workplace engineering.

## **[43] EVALUATING INTELLECTUAL CAPITAL IN THE CARE OF THE ELDERLY**

**Niina Koskela<sup>1</sup> and Pirjo Berg<sup>2</sup>**

<sup>1</sup>Jalmari Jylli Foundation, Jyllin Kodit, Ikaalinen, Finland, <sup>2</sup>NHG Audit Oy Ltd, Finland

The significance of intellectual capital in the care of the elderly was the research object of the Jalmari Jylli foundation's three-year demonstration project. In this project a self-evaluation tool for elderly care organizations had been developed. The Project is funded by the Slot Machine Association, and other co-operation partners are the NHG Audit Oy, Tampere University of Applied Sciences, Tampere University of Technology measurement team, Rehabilitation Centre Apila and the Helsinki Mission.

The evaluation method developed is based on the frame of reference of the holistic management system, including influences from the ISO 9000 quality system, the EFQM frame of reference and Balanced Scorecard thinking. The evaluation can be implemented electronically and takes into account the special features of the field of the elderly care. The results of an organization can be viewed separately in the fields of strategic and operative management and in the main service processes. In these the evaluation takes systematic note of the perspectives of intellectual capital. Findings can also be compared with the averages of other actors. In 2010 the appropriateness and usefulness of the evaluation was tested in 40 elderly care organizations in Finland. In this article we describe the background to the evaluation method, the process of its preparation and the findings in connection with its testing.

According to the experiment the evaluation method can be considered useable for management's self-evaluation and also as a tool for strategy work and management in elderly care. Due to its frame of reference based on international models, the self-evaluation model can serve as part of existing management and quality systems supporting planning, development and reporting to interest groups. The results of the evaluation revealed the concrete strengths and areas for development by which the management of intellectual capital and qualitative performance ability could be taken account in elderly care. It is a subject for further research to test and develop the method further by expanding its use.

Key words: Elderly care management, intellectual capital, evaluation, qualitative performance ability

## **[44] TYPOLOGY OF WORKERS AT THE END OF THEIR CAREER IN GERMANY**

**Michael Brusch<sup>1</sup>, Victoria Büsch<sup>1</sup> and Dennis Alexis Valin Dittrich<sup>2</sup>**

<sup>1</sup>SRH University of Applied Sciences Berlin, Berlin, Germany, <sup>2</sup>Jacobs University Bremen, Jacobs Center, Bremen, Germany

In this paper, we identify identical groups of elderly workers to develop a typology of older workers for the German labour market as an example for a developed country. Due to demographic change, especially in Germany, the labour market has to face new challenges, such as lowered replacement fertility, raised life expectancy and increased average age of workers. While this group of elderly workers increases, their sustainment will become more important (e.g. Höhn et al 2008; Dittrich et al 2011). This problem is relevant to societies and companies. Societies have to think about the opportunities to reverse this trend by demographic “instruments” (e.g. higher fertility and higher amounts of migration flows) in the long run. Companies should identify powerful instruments for motivating elderly workers to stay longer in the labour market in general (or in the company in special). According to studies of Ilmarinen (2005) we know that age is not a good proxy for workability. To develop appropriate tools to prolong working age we need a better typology of older workers. Here the question to be answered is whether similar groups of workers at the end of their career exist and how they can be identified, described and motivated.

The underlying analyses are based on a representative data set of the Federal Institute for Population Research of Germany from 2008. Here, 1,500 employees (blue collar workers, white collar workers and civil servants) aged between 55 and 64 years were asked about their job situation, motivation and demographic background etc. (e.g. Büsch et al 2010). For the identification of homogenous groups of elderly workers the cluster analysis is used (e.g. Cormack 1971, Hair et al 2006). These groups will be identified using company related variables (e.g. job position, leadership) and worker related variables (e.g. family background, motivation).

With the description of the identified groups and their comparisons, a powerful list of recommendations for motivating elderly workers for longer periods of employment can be derived. Based on the data of the German labour market, companies in industrialized countries will be enabled to develop a motivating business environment. At the same time they are able to identify (and assist) long staying workers far earlier.

## **[45] STATE OF THE ART – PROBLEM OF AGING WORKERS IN RUSSIA**

**Nikolai Izmerov**

RAMS Institute of Occupational Health, Moscow, Russian Federation

There are several population forecasts for 2026 with regard to the number of workforce and age in the Russian Federation. According to all three forecasts of the

State Statistics Service it is expected that the active working population and its share in the general population will have decreased and the number of pensioners will have grown by 2026. The share of aging workers (aged 60 or more) will reach almost 30 %.

Therefore a progressing insufficiency of manpower was stressed in the **Strategy of National Safety of the Russian Federation till 2020** as one of the main long-term strategic risks and threats to the national safety as a factor impeding economic growth of the country.

The most urgent present day problem is how to organize the work of aging people and make it highly efficient and beneficial for the national economy. However working pensioners make up less than a quarter of the general contingent of pensioners today. Involvement of pensioners into the active working life will help to reduce manpower deficiency and to effectively use their experience and long record accumulated during their working life.

One of the main restrictions in the employment of pensioners is their health which is one of the major factors for employers considering whether to employ an aging worker or not. Research performed in Russia shows that the number of employed is three times higher among pensioners who describe their health as satisfactory than among those who think their condition is poor.

The latter was confirmed by an in-depth epidemiological study carried out in the RAMS Institute of Occupational Health which studied causes restricting continuous working life in former chemical fiber workers. It turned out that the main factors are self-evaluation of health, poor material incentives and lack of favorable work conditions.

Thus, effective employment of aging population depends on conformity to a number of requirements such as the availability of a particular type of work, physiological and psychological aspects of work, education and training, work experience, etc. Accordingly, studies on the qualitative and quantitative parameters of manpower have become an indispensable condition for its growing output and ensured decision-making for serious social and economic problems. RAMS Institute of Occupational Health performs a lot of research of workforce including studies on aging workers of pre-pension age and pensioners. Working capacity is the ability of a person to perform a certain type of labor successfully according to existing quantitative and qualitative standards of work. It is one of the main indicators of population which allows us to define working conditions and types of work appropriate for an aging worker.

The objective evaluation of working capacity should be based on a number of indicators:

- Epidemiological (health state evaluation)

- Physiological
- Social and psychological
- Economical

Techniques of integrated estimation of working capacity based on studies on qualitative and quantitative parameters of workers help use the human resources of an enterprise more reasonably.

The developed methodical approaches can be applied to studying working capacity of people of different ages and work capacity. The obtained results can thus be used to decide on problems of occupational suitability and vocational guidance. The estimation of working capacity in working staffs and individuals can serve as evidence not only to take medical and social actions at enterprises, but also as a general directive for the social and economic policy of the state in the area of beneficial use of manpower.

The most powerful factor regulating employment in older age is the human health condition. Worsening of health can lead to restrictions for full day employment. Due to this, the most popular type of employment is work in home environment or part day work.

Advantages of home environment employment are obvious:

- It allows to work at home
- The schedule of work is flexible
- It allows to combine work and family chores, for example, to take care of grandchildren or sick members of the family.

Thus, demographic ageing, i.e. growth of the number and share of aging workers in the general population structure, makes social, economic, legal, political and cultural institutes of our society to react in accordance with the changing situation. The society adapts to population ageing, reconsidering traditional norms connected with ageing people, defining their place in the social structure and their role in the system of public relations.

Meeting the requirements for aging workers should be one of the key problems of social policy for promoting the realization of active and safe aging. At the same time, the working competencies of aging workers should be defined taking into account their working capacity, condition and their psycho-physiological potential.

## **[46] EVALUATION PROCESS AT HOME – MAXIMUM INDEPENDENCE**

**Kimmo Aalto**

Motivox, Sastamala ,Finland

How to sustain your independence, self-esteem and self-confidence are important for all of us. For how long one is able to live on her / his own is one of the key questions how you feel about your life.

ELOAPU is an evaluation process, developed to be carried out in person's home-environment. It is a service-pack and made as a tool to evaluate how elderly people are able to manage their personal ADL-skills at home.

It is based on observation in everyday life of aged person, questionnaire form, face - to - face conversation – also with a close relative or some other close person. The whole process is made by an occupational therapist.

The next level after evaluation is to make a report and suggestions what kind of changes should be done to help everyday life, make it safer and less strained.

**SAFE, MOTIVATED, ACTIVE LIFE AT HOME AS LONG AS POSSIBLE**

## **THE INTERNATIONAL SOCIETY FOR COMPLEX ENVIRONMENTAL STUDIES (ISCES)**

The Society was established on September 25th, 1984 in Tampere, Finland. The setting for the foundation of the organization was the First International Conference on The Combined Effects of Environmental Factors ICCEF 84 Conference. The subsequent conferences were held in 1986 in Kanazawa (Japan), in 1988 in Tampere (Finland), in 1990 in Baltimore (USA), in 1992 in Saariselkä (Finnish Lapland), in 1994 in Toyama (Japan), in 1996 in Tampere (Finland), in 1998 in Baden (Austria), in 2000 in Savonlinna (Finland), in 2002 in Takatsuki, Osaka (Japan), in 2007 in Tampere (Finland) and in 2009 in Hakusan (Japan).

### **Members of the Board of Directors of the ISCES Society**

Members of The Board of Directors of the International Society for Complex Environmental Studies (ISCES) are internationally well known experts in the field and represent different countries and continents. The Board of Directors has been formed by the following members:

Dr. Olavi Manninen (President), Tampere, Finland  
Dr. Akira Okada (Emeritus Member), Kanazawa, Japan  
Dr. Douglas Dawson, Ashland, USA  
Dr. Enrique Segura, Buenos Aires, Argentina  
Dr. Minoru Kasuya, Toyama, Japan  
Dr. Manfred Rentzsch, Karlsruhe, Germany  
Dr. Gerald Pöch, Graz, Austria (†)  
Dr. German Suvorov, Moscow, Russia (†)  
Dr. Makoto Ariizumi, Okinawa, Japan  
Dr. Nikolai Izmerov, Moscow, Russia  
Dr. Baoqi Gang, Harbin, PR China  
Dr. Ronnie Lundström, Umeå, Sweden  
Dr. Christian Streffer, Essen, Germany  
Dr. Helmut Strasser, Siegen, Germany  
Dr. Volker Mersch-Sundermann, Mannheim, Germany  
Dr. Hiroyuki Nakamura, Kanazawa, Japan  
Dr. Manfred Haider (Emeritus Member), Vienna, Austria (†)  
Dr. Elisabeth Groll-Knapp, Vienna, Austria  
Dr. Koichi Kono, Takatsuki, Osaka, Japan  
Dr. Akira Kimura, Tokyo, Japan  
Dr. Katrin Hansen, Gelsenkirchen, Germany

### **Archives of Complex Environmental Studies (ACES)**

The Members of the Board of Directors of the ISCES Society as well as the Editorial Board assist in editing the scientific periodical Archives of Complex Environmental Studies.

# ORGANIZATION AND ARRANGEMENTS

The conference is organized by Tampere Adult Educational Centre (TAKK) together with the extensive promotion of the Work Life Ability Networks under the auspices of The International Society for Complex Environmental Studies (ISCES) in cooperation with esteemed national and international partners.

## **Tampere Adult Education Centre (TAKK)**

Tampere Adult Education Centre TAKK (<http://www.takk.fi>) offers various possibilities for international cooperation. TAKK is one of the leading adult education centres in Finland. Yearly more than 15,000 adult students are taking the path to success. TAKK is known as a dynamic and developing institution which provides know-how and development services for enterprises and communities, as well as international cooperation.

## **Promotion of Work Life Ability Networks**

These interactively working interdisciplinary networks concentrate on the improvement of work life ability in work organizations. The networks connect various parties and partners representing skills and expertise of working life in a new way. There has never been corresponding cooperation between the actors. As a result of a networked operation (<http://www.worklifeability.fi>, <http://www.tyoelama.fi>) a stable and both nationally and internationally networked organization for coordination is being built up.

## **Local Organizing Committee**

The committee has held altogether eleven preparatory meetings for the Conference. The members of the organizing committee are Mr Martti Santasalo, Mr Reino Kanerva, Mrs Outi Mäki, Mr Harri Airaksinen, Mrs Eeva-Kaisa Mäkinen, Mrs Anna-Kaisa Ikonen, Mrs Sirkka Merikoski, Mrs Tuija Kanto-Hannula, Mrs Merja Mattila, Mrs Anne-Maj Lahtinen, Mrs Johanna Lassy-Mäntyvaara, Mr Seppo Siuro and Mr Olavi Manninen (chair).

## **Acknowledgements**

The Finnish Work Environment Fund (Työsuojelurahasto) supports the Conference financially. The organizers wish to express their gratitude to Mr Seppo Siuro for proofreading the texts.