

Interdisciplinary Center for Aging Research (ICA)

Speaker

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Aims and structure

Since its foundation in 2003, the Interdisciplinary Center for Aging Research (ICA) has been active in the fields of biological, medical, psychiatric, psychological, behavioral, humanistic, economic, and technological aging research. ICA initiates and supports interdisciplinary collaboration on aging research at the FAU. ICA is also actively collaborating with communal institutions of medical care and with nursing homes of the region. Currently ICA has 29 members from four different faculties and five associated institutions.

Research

Research of the members of ICA focuses predominantly on health promoting intervention and prevention in the domains of nutrition, physical activity, and social environment. Each area of research addresses social, institutional, technological, and environmental conditions and their effects on physical health, autonomy, and personal responsibility.

Nutrition

Quantity and quality of our daily diet are of major importance for health, functionality, and wellbeing until very old age. At an advanced age, adequate nutrition is, however, often impaired by numerous age-related changes of the health and living situation. In addition, physical activity, psychological, and social factors play important roles. These relations are investigated within the framework of the Professorship of Clinical Nutrition in the Elderly at the Institute for Biomedicine of Aging (IBA) in national and international projects in interdisciplinary cooperation. Within the Bavarian nutrition competence cluster "enable", for example, electronic gadgets were developed in cooperation with the Institute for Psychogerontology (IPG) with the aim to improve drinking behavior of nursing home residents. These gadgets are also intended to document the amount of fluid consumed and thus to reduce caregiver burden. Newly developed products are tested in pilot studies with residents and nursing staff and adapted according to the feedback received. Recruitment and comprehensive phenotyping of an enable cohort of older people

at the IBA will allow future comparisons with younger age-groups that were assessed in Freising using identical methods. Within the European joint project MaNuEL (Malnutrition in the Elderly), modifiable determinants of malnutrition in older persons were examined by systematic literature reviews and secondary data analysis of longitudinal cohort studies. As a result, a better understanding of the etiology and complex network of determinants of malnutrition is expected, which is important for effective prevention and treatment of malnutrition. Analyses of the worldwide "nutrition Day" project focused on the topic of dysphagia in nursing homes and the nutritional situation of affected residents.

Physical activity

Targeted interventions to improve physical functioning, capacity, and performance as well as measures to promote physical activity can significantly improve and support (functional) mobility, the maintenance of independence, and social participation in life. In addition to controlling bodily functions, the aim of appropriate interventions is to increase adherence to lifelong physical activity and to expand the possibilities of physical activity in the respective settings. Behavioral exercise therapy leads to improved functional capacity, improved pain management, and improved workability in pain patients in rehabilitation. The participation of older people in exercise programs leads to increased physical functional (such as strength and balance), improves cognitive functions, reduces the risk of falling and the risk of dementia. Important aspects for sustained changes in physical activity behavior concern e.g. the affective attitude to physical activity and furthermore fundamental questions about the structural and process quality of exercise therapy. Physical activity promotion and even exercise therapy interventions can - for various indications - also be carried out successfully by the use of new media and the internet. A further research focus is motor control in persons with neurological diseases (e.g. Parkinson's disease), in movement or gait disorders after surgical interventions or after (sports) injuries. Beyond the individual level, the organizational or political level plays a central role in promoting physical activity of older people. The aim is, among other things, to create capacities (e.g. personnel development, distribution of resources, environmental conditions) and to improve the cross-organizational and cross-sector networking of organizations from the fields of sport, health, and social affairs in order to be able to expand and optimize the opportunities for physical ability to older people. Structured planning processes and a better networking of science, practice, and politics are important means for this. The recently published „National Recommendations for Physical Activity and Physical Activity Promotion“ have an impor-

tant influence on health and sports policy. Of particular interest for research into ageing are opportunities and obstacles in integrating evidence-based, structured exercise programs for the prevention of dementia into the practice of prevention providers, with particular attention being paid to target groups that are difficult to reach (e.g. socially disadvantaged older people and physically inactive people).

Social relations

Beyond dispute, the quality of an efficient social network plays a major role in maintaining health and a prolonged time of independent living in old age. For example, positive social relationships substantively contribute to improved health and longevity as well as to reduced risks of dementia and frailty. There is also some preliminary evidence suggesting that the association of physical activity and nutrition partly depends on the quality of social and family resources. The situation of care-giving relatives with its resulting burdens, challenges, and risks is also of great importance. Additional projects analyze the situation of family caregivers, particularly with respect to the potentials of psychoeducation of family caregivers. Another focus of research is directed on the living conditions and quality of life of seniors living in institutions of residential care, concentrating mainly on aspects of social interaction between residents, relatives, and staff. Interdisciplinary and comprehensive research approaches focus on questions of prevention and interventions strategies with regard to dementia and age-related frailty. Additional nonclinical research is centered on the possibilities of assistive technology for supporting mobility and independent living in later life.

Teaching

The majority of the ICA-members is engaged in the interdisciplinary course offerings of the master's degree program in gerontology. Some courses are realized in close cooperation with the associated ICA-members, especially those related to gerontological practice. A series of lectures (Q7- medical science of aging) focusing on geriatric and ethical topics are organized by numerous ICA-members at the Faculty of Medicine. Furthermore, ICA operates a collective graduate program "gerontology", which provides structured lecturing and special workshops for doctoral students in gerontology as well as in psychology, psychiatry, and sport sciences.

