Human and technological resources for nutritional support

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Conference: Eating, wellbing & nutrition in ageing societies
Nordic & Chinese perspectives. Shanghai, Nordic centre, Fudan University, April 16, 2018

The discipline of vocational education in the field of social and health care

At SOSU Nord we strive to not only teach the discipline of caretaking as a functional skill, but also to understand and develop skills in the matter of culture and the rapid change of future perspectives.

The necessary contribution to the natural sciences

As we measure the "hard core" facts as for example the exact intake of food, bodyweight status and blood sugar level. We really get a good picture of the nutrition status. Still the appetite and motivation to eat is a crucial issue and it has a lot to do with emotions and well being.

Proportion of people at risk of undernutrition in Denmark
Why does inadequate food intake occur?

Deficient eating environment

- Unpleasant visual impressions
- Disturbing noises
- Poor seating
- Lack of help to eat
- Incompatible tablemate
- Lack of time to eat

Inability to consume food

Motoric eating difficulties do to:
- Tremors
- Weakness in arms, fingers or shoulders
- Low handgrip

Resulting in:
- Insufficient intake of food
- Social withdrawal
Proper food and meal behaviour

- Eating is not only about a sufficient intake of energy – it is also a social performance with certain norms.
- Independence is important in relation to the intake of food.
- When the body no longer functions according to perceived norms the elderly adjust their food and meal behaviour to maintain a façade.
- Feelings of shame and guilt are connected with the inability to eat ‘properly’.
- Isolation and loneliness.

(Fromberg et al., 2018)

Implementation of Welfare Technologies

- As engineering skills and digital knowledge has developed, a wide range of Welfare Technologies flows into the market.
- In the Northern part of Europe both political, financial and cultural issues play and important role in implementation of Welfare technologies.

Empirically experience from Danish elderly and handicap workcultures

- Working with individual Welfare Technologies over the past decade, it is my experience, that implementation can be seriously challenging.
- The challenge seems to get increasingly complicated when the Technology addresses human functions of a certain intimacy.

Welfare Technologies in dining situations

- Compensatory dining technologies for more than 25 years.
What do we know?

- The evidence on the effect of compensatory dining technologies is rather poor
- Here is a short summary...

- The dining-machine contributes to create a more equal relationship between staff and user
  - Gaedt, L., 2012

- The user values to set his own pace when dining, not to wait on the next mouthful and to be able to choose the food in a self-chosen order.
  - Gaedt, L., 2012

- The adjustment and programing of the dining-machine is experienced by the staff as resource demanding, both in time and knowledge.
  - Gaedt, L., 2012
Some users find it energy-demanding to get to know the technology and to get familiar with it.

Gaedt, L., 2012

In a trial with users with intellectual disabilities, the findings on the functions of the dining machines were mainly negative. Only positive effect were in the first part of the trial, as users were more happy and motivated for eating.


Using the dining-machine is so time-demanding that warm food often gets cold early in the dining process.

Riiser, S., 2014

Users discover a positive social element from using dining-machines together with others, and furthermore a feeling of equality.

Riiser, S., 2014