

It´s never too late

Health-promotion and disease-prevention for very old persons

Akademisk avhandling

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av Lina Behm
Leg. Sjuksköterska

Fakultetsopponent: Professor Albert Westergren,
Högskolan Kristianstad

The thesis is based on the following papers:

- I. Behm, L., Wilhelmson, K., Falk, K., Eklund, K., Ziden, L. & Dahlin-Ivanoff, S. (2014). Positive health outcomes following health-promoting and disease-preventive interventions for independent very old persons: Long-term results of the three-armed RCT Elderly Persons in the Risk Zone. *Archives of Gerontology and Geriatrics*.
- II. Behm, L., Eklund, K., Wilhelmson, K., Zidén, L., Gustafsson, S., Falk, K. & Dahlin-Ivanoff, S. Health-promoting interventions can postpone subjective frailty in very old persons: long term results from the RCT Elderly Persons in the Risk zone. *Submitted*.
- III. Behm, L., Dahlin-Ivanoff, S. & Zidén, L. (2013). Preventive home visit and health – experiences among very old people. *BMC Public Health*, 13:378.
- IV. Behm, L., Ziden, L., Dunér, A., Falk, K. & Dahlin-Ivanoff, S. (2013). Multi-professional and multi-dimensional group education - a key to action in elderly persons. *Disability and Rehabilitation*, 35(5):427-435.



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Lina Behm, Institute of Neuroscience and Physiology, Sahlgrenska Academy at University of Gothenburg

ABSTRACT

The overall aim of this thesis was to evaluate the effects of health-promoting and disease-preventive interventions on health and frailty in very old community-dwelling persons, and to explore the participants' experiences in relation to these interventions.

Studies I and II were evaluations of the three-armed randomised, single-blind and controlled trial *Elderly Persons in the Risk Zone*, which consisted of the two health-promoting and disease-preventive interventions preventive home visits (PHV) and multi-professional senior group meetings (senior meetings). A total of 459 persons aged 80 years or older and still living at home were included in the study. Participants were independent in ADL and without overt cognitive impairment. They were assessed at baseline and followed up at one and two years after intervention. An intention-to-treat analysis was performed using the outcome variables; morbidity, symptoms, self-rated health, satisfaction with health (**study I**), frailty measured as tiredness in daily activities and frailty measured with eight frailty indicators (**study II**). In **study III**, seventeen participants in the intervention preventive home visits were interviewed in their own homes. The interviews were analysed using a phenomenographic method. In **study IV** focus group methodology was used to interview a total of 20 participants who had participated in the intervention senior meetings. The interviews were analysed according to the focus group method described by Kreuger.

The results of **studies I and II** showed that both interventions postponed morbidity and delayed deterioration in satisfaction with physical and psychological health for up to two years compared to the control group. Both interventions also showed favourable effects in postponing the progression of frailty measured as tiredness in daily activities for up to one year. The intervention senior meetings had an advantage over preventive home visits since it prevented a decline in general self-rated health for up to one year. However, neither of the interventions was effective in postponing the progression of symptoms or frailty as measured with the sum of frailty indicators. The participants that were defined as frail according to frailty indicators (≥ 3 indicators) increased in all three study arms during the two-year study period. The interviews with the participants involved in the intervention preventive home visits (**study III**) revealed four categories which explained how they experienced the visit and its consequences for health: the PHV made them visible and proved their human value, it brought a feeling of security and gave the participants an incentive to action. A few of the participants experienced that the PHV was of no value. The focus group interviews with the participants who had received the senior meetings (**study IV**) revealed that the participants lived in the present. However, the supportive environment together with learning a preventive approach contributed to the participants' experiencing the senior meetings as a key to action.

In conclusion, the studies in this thesis show that it is possible to postpone a decline in health outcomes measured as morbidity, self-rated health, satisfaction with health and frailty measured as tiredness in daily activities in older persons at risk of frailty. Both interventions might have functioned as a trigger to motivate the participants to engage in a health-promoting behaviour. The contributing factors were the holistic information, the fact that participants were strengthened in their role as older persons, that someone cared about their health, and the fact that the interventions focused on personal needs. The senior meetings were the most beneficial intervention, which may be due to the group setting where the participants could learn from each other, gain role models and share their problems. Altogether this could have increased participants' understanding and ability to use their own resources and may have motivated them to take measures and engage in health-promoting activities.

Keywords: aged, 80 and over, health-promotion, disease-prevention, health, frailty, preventive home visits, group education

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