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Nursing Assistants' Perceptions of Physical Activity and Exercise among Older People -a Phenomenographic Study

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Hemtjänstpersonalens uppfattningar om fysisk aktivitet och träning för äldre - en fenomenografisk studie

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Empirisk studie

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Sammanfattning

Hemtjänstpersonalen är nyckelpersoner inom äldreomsorgen och har, som första linjes vårdgivare, en unik möjlighet att främja fysisk aktivitet och träning för äldre. Mot denna bakgrund är det därför viktigt att undersöka hur hemtjänstpersonalen i sin yrkesutövning uppfattar, och agerar i relation till, fysisk aktivitet och träning för äldre. Studiens syfte var att beskriva hemtjänstpersonalens uppfattningar om fysisk aktivitet och träning för äldre (65 år och äldre) som har hemtjänst och/eller hemsjukvård. Utifrån en fenomenografisk ansats har nitton intervjuer, genom ett strategiskt urval, genomförts med hemtjänstpersonal. Resultaten visar två olika uppfattningar om fysisk aktivitet där den första var: "fysisk aktivitet är att röra sig" och beskrivs som vardagliga rörelser i det dagliga livet och utomhus aktiviteter. Den andra var att: "fysisk aktivitet är att anstränga sig" och beskrivs som aktiviteter äldre gör genom att hantera sitt dagliga liv och utomhus aktiviteter eller genom att kämpa i utförandet av fysisk aktivitet med syfte att bli mindre inaktiv. Tre olika uppfattningar om träning framkom. Den första var att "träning är fysisk aktivitet" som beskrivs som rörelser som utförs baserat på individuella träningsprogram från sjukgymnast/fysioterapeut eller genom vardagliga sysslor, såsom påklädning, städning eller att handla. Den andra var "träning är rehabilitering" och beskrivs som en bestående del av rehabiliteringsprocessen eller som en ordination att följa. Den tredje var att "träning är ett medel" och beskrivs som medel för att förbättra hälsa och välbefinnande hos äldre personer huvudsakligen relaterade till rörlighet eller till sociala aktiviteter. *Slutsats:* Baserat på resultaten blir det tydligt att hemtjänstpersonalen har olika uppfattningar om fysisk aktivitet och träning för äldre, vilket kan vara viktigt att medvetengöra, om hälso- och sjukvårdspersonal ska kunna ge adekvata instruktioner och handledning. Baserat på resultaten framkommer det att hemtjänstpersonalen har ett hälsopromotivt och/eller ett preventivt förhållningssätt gentemot den äldre, vilket är viktigt att medvetengöra, om målet är att prioritera främjande av hälsa och välbefinnande för äldre inom äldreomsorgen.

Nyckelord: hemtjänstpersonal, uppfattningar, fysisk aktivitet, träning, äldre personer (65 år och äldre)

Nursing Assistants' Perceptions of Physical Activity and Exercise among Older People - a Phenomenographic Study

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Empirical study

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Abstract

Nursing assistants', as frontline caregivers in the care of older people, have a unique opportunity to encourage physical activity and exercise in older people. Hence, the perceptions by these care providers of physical activity and exercise among older people are an essential factor. The aim of this study is to describe how nursing assistants perceive physical activity and exercise for older people, over the age of 65, receiving home care and home help. *Method:* Data was collected through interviews with 19 nursing assistants, selected by strategic sampling and analysed using a phenomenographic approach. *Results:* The findings show two different perceptions of physical activity for the older people: "*physical activity is to move*" described as everyday movements i.e. everyday activities and outdoors activities and "*physical activity is to make an effort*", described as older people handling their day-to-day tasks and outdoor activities or struggling to be less inactive and performing healthy activities. Three different perceptions of exercise for the older people emerged: "*exercise as physical activity*", described as movement performed, based on individual exercise programmes from the physiotherapist or through day-to-day tasks such as dressing, cleaning or shopping; "*exercise as rehabilitation*" described as part of the rehabilitation process or as a prescription to follow, and "*exercise as an agent*" described as enhancing the health and well-being of older people, principally related to mobility or enhancing the older people's social activities. *Conclusion:* This study shows that there are a variety of perceptions of physical activity and exercise among nursing assistants which can be important for health professionals to be aware of, in order to provide targeted support. This study also shows two different approaches by nursing assistants towards older people: a health-promotion one and a preventive one; it would seem to be important to be aware of these approaches, if a shift towards promoting health and well-being should be implemented in the care of older people.

Key Words: *nursing assistants, perceptions, physical activity, exercise, older people (65 and over)*

Introduction

In Sweden, as in other countries around the world, the needs of the ageing population create special challenges. To meet the coming demographic changes without reducing welfare levels necessitates new forms of strategy. Research provides extensive evidence of the impact of physical activity on the health of older people; their well-being and rehabilitation [1-5]. At the same time, there is a steady increase in sedentary behaviour and a decrease in physical activity which is worrying because disabilities and diseases such as dementia, cancer, stroke and hip fractures affect those in their 80s particularly strongly [6-8]. The main task in caring for older people in Sweden involves health care, rehabilitation and social services, both in people's own homes and in nursing and care homes. The largest professional group and the key persons as frontline caregivers in the care of the older people are nursing assistants [9]. Previous studies [10-11] show that health and social care staff perceptions and attitudes about activity promotion and independence for older people influence older people's behaviour. How the staff act in their professional capacity may enhance an addictive behaviour or encourage healthier habits in older people such as physical activity [10-11]. Nursing assistants can play a significant role in engaging and supporting older people to remain physically active and increase their physical activity levels.

Physical activity is defined as any bodily movement produced by skeletal muscles that result in energy expenditure beyond a state of resting [12]. Exercise as planned, structured, and repetitive bodily movement, done to improve or maintain one or more components of physical fitness, is a subset of physical activity [12]. Both physical activity, such as walking and exercise on behalf of muscle strength, flexibility, fitness and balance are important and recommended for older people by the World Health Organisation Global Recommendations on Physical Activity for Health [13]. If older people, aged 65 and over, cannot fulfil these recommendations due to illness or disability, they should be as active as their physical condition permits [13].

Research points to the importance of the promotion of physical activity and exercise through health promotion, disease prevention and rehabilitation for the older people [14-17]. Nursing assistants have a large network with both relatively "healthy" and

those older people with multiple chronic diseases whom they meet regularly. There is a general belief that older people have the "right" to be inactive and to receive help from others, and that it is natural for older people to have problems related to inactivity [18]. Little is known of nursing assistants' views on physical activity and exercise among the elderly. To understand how nursing assistants perceive and comprehend physical activity and exercise can elucidate, and give insights into, new strategies for active healthy ageing in care of the elderly. The aim of this study was to describe how nursing assistants, in their professional role, perceive physical activity and exercise for the over-65s receiving home care and /or home help services.

Material and Methods

Design and method description

A qualitative descriptive design with a phenomenographic approach was implemented. Phenomenography [19] is a method often used in health sciences research and is particularly suited to studying such complex social phenomena as physical activity and exercise. The aim of phenomenography is to achieve variations, as rich as possible, of perceptions; identifying and systematizing perceptions in terms of how people interpret, view and understand, phenomena they encounter in their lives [19]. The first-order perspective describes how a phenomenon is as such; the second-order perspective describes how people subjectively perceive or experience the phenomenon [19].

Study context

The study took place in a municipality in southern Sweden with approximately 80 000 inhabitants where home help services are offered by either the municipality or private operators. Those who are eligible for home help services are people in need of care and service and who cannot manage themselves. The personal benefit advisors from the municipality are responsible for assessing the needs of the older people. The municipality also has the responsibility for offering health care and rehabilitation. In the target municipality, approximately 45 physiotherapists and occupational therapists cover three different geographical areas in total. At the time of the investigation, the

municipality had 16 municipal home help services divided into three geographical areas comprising both urban and rural areas. Nursing assistants work during the day, aiding the older people with different tasks, including cleaning and walking, as specified in the Social Services Act [20]. Nursing assistants assist the registered nurse, physiotherapist or occupational therapist by performing nursing and rehabilitation tasks under the direction and supervision of a registered nurse, physiotherapist or occupational therapist as specified in the Health and Medical Services Act [21]. This process is called delegation. The delegation process is regulated and must be compatible with good and safe care [22]. Examples of delegated rehabilitation are daily activities training, and exercise programmes such as strength training and balance training under the professional supervision of a physiotherapist, and/or occupational therapy at the home of the elderly person or in connection with training facilities.

Participants

Nineteen nursing assistants were recruited for the study. They worked with people, aged 65 years and over, living in their own homes and receiving home health care and/or social services. In order to ensure breadth in the selection process, a strategic sample was based on the following criteria: gender, age, work experience and geographical location (Table 1).

Table 1 Characteristics of the interviewed nursing assistants (n=19) in a municipality in southern Sweden

<i>Age (median, range)</i>	51 (32-63)
<i>Years of Work experience (median, range)</i>	18 (5-43)
<i>Gender (n)</i>	
Female	16
Male	3
<i>Geographic localization (n)</i>	
City /urban	12
Rural	7
<i>Education (n)</i>	
High School	18
College/University	1

Data collection

The head of the home help services was contacted with a request to participate in staff meetings in order to provide information about the study and recruit participants. The

data was collected by interview in accordance with the principles of phenomenographic studies [19]. The interview questions were: “What do you perceive is physical activity for the older people?” “If you think about physical activity and older people can you tell me how it manifests itself in your work? Can you give some specific examples?” “What do you perceive is exercise for the older people?” “If you think about exercise and the older people, can you tell me how it manifests itself in your work?”. Two pilot interviews were conducted to practice interview techniques and test and possibly modify the interview guide. The pilot interviews were included in the data analysis, since the interview guide did not require modification. Data collection took place during the day in an undisturbed place, near the workplace and selected by the participant. With the consent of each participant, the interviews were recorded using a digital voice recorder and transcribed verbatim (page total: 152). Each interview lasted approximately thirty minutes.

Analysis

The analysis was performed, first separately and then discussed with the supervisor, who has experience of phenomenographic research, at several meetings to achieve consensus [23].

According to Marton & Pong [24], a perception has two intertwined aspects: the referential and the structural aspect. The referential aspect denotes the sense or meaning i.e. anything delimited that the individual attributes to the phenomenon [24]. The structural aspect describes key aspects of the phenomena as perceived by the participants i.e. the combination of features discerned [24]. These aspects were looked for in the data during the analysis to describe perceptions. The transcripts were analysed following the seven steps of the phenomenographic model of data analysis, described by Dahlgren and Fallsberg [25]. In the first step, the material has been read several times for the reader to become familiarized and gain an overview of the content. In the second step, known as condensation, the most important statements about physical activity and exercise, i.e. short statements that can represent the whole, were selected. In the third step, comparison, the condensed statements was compared , in order to find variations, i.e. similarities and differences. In the fourth step, grouping similar statements were grouped together. In the fifth step, articulating, a first attempt

was made to describe the essence of the similarity of each group for the purpose of categorization. In the sixth step, known as labelling, the various categories were given a suitable title describing the content. In the final step, contrastive, the categories were compared in terms of similarities and differences. The referential aspects were illustrated by citations illuminating their relationship with the structural aspects. All citations have a number that refers to the particular participant.

Ethical considerations

The study followed the ethical principles, concerning medical research involving human subjects, set out in the Declaration of Helsinki [26] and was conducted according to the Codex [27]; the four main requirements consist of the information requirement, the requirement for consent, confidentiality obligations and utilization requirement .

The informants received information about the study both orally and in writing on several occasions during the study. There were also opportunities for the informants to start a dialogue and to ask questions about the study and the given information with the interviewer. Before the interview, the informants gave their written informed consent. The confidentiality requirement was met as informants were informed by the interviewer that the data would be de-identified and stored in a secure location. Furthermore, the informants were informed that all data would only be used for the purposes of this study. In this study, the interviewer has taken into account the fact that the questions asked during the interviews could awaken thoughts and reflections of the informants about their skills and occupation. The questions could make the nursing assistants feel incompetent and thus lead to an uncomfortable situation at work. As the interviews were conducted in the informants' workplace, this could cause feelings of discomfort as any colleague or boss would find out their answers, which could lead to the informants not wanting to talk openly about physical activity and exercise. To reduce this risk, the interviews were conducted in privacy in order to create a peaceful environment. At the same time, it could also feel liberating for informants to talk to someone and share their feelings and thoughts [28] . During the interviews, the interviewer paid attention to the informants' mood and any signs of discomfort. The interviewer was prepared to pause the voice recorder at any sign of discomfort and ask

if the informant wanted to cancel what was just said. None of the informants showed signs of this during the interviews. Further, the author in this study weighed the risks against the benefits and concluded that the benefits of the study's importance outweighed the risks. The knowledge that emerged and the opportunity to improve the care of patients was greater than its risks for the participants [29]. Furthermore, the risk that the questions would arouse discomfort, or the informants suffer psychological consequences, is small. It was considered that no long-term consequences could harm the informant [29]. Ethical clearance was obtained and recorded at Kristianstad University (Doc. no. 2012-232-439).

Results

PHYSICAL ACTIVITY

Two structural aspects of how the nursing assistants perceived the phenomenon 'physical activity' among the older people in their daily work emerged: "*physical activity is to move*", and "*physical activity is to make an effort*" (Table 2).

Table 2 Nursing assistants' perceptions (n = 19) of physical activity among older adults, over 65, receiving home care and/or home help services

<i>Structural aspect</i>	<i>Referential aspect</i>
Physical activity is to move	Doing everyday tasks and outdoor activities
Physical activity is to make an effort	Managing everyday activities and outdoor activities. Struggling to maintain the day-to-day tasks, health and social life.

Physical activity is to move

The nursing assistants described physical activity as everyday movements that the older people can perform independently in daily life. Moving is inherently a physical activity, according to the participants. They described physical activity as movements that the older people perform everyday in looking after themselves, activities to maintain an independent life and outdoor activities according to capacity and mobility. According to

the participants' description, older people achieve well-being by maintaining mobility in everyday activities, which is possible through physical activity; this in turn promotes a feeling of freedom and independence.

Doing everyday tasks and outdoors activities. The participants described physical activity as movement that was measured in terms of what the older people can be expected to be able to do. For those older people with a low physical function level, the nursing assistants expressed the view that physical activity was movement that the older people perform as they take care of themselves e.g. dressing, bathing, using the toilet, eating, walking or getting in and out of bed or a chair: *"physical activity that is ... to take care of himself"* [P6]. Physical activity for the older people with higher levels of mobility was described by the participants as movement that the older people perform beyond self-care activities i.e. daily activities to maintain an independent life such as cooking, shopping, doing the laundry and outdoor activities such as walking and participating in social activities. They exemplified physical activity as movement for the older people with a higher level of mobility in terms of activities to maintain independence in daily life: *"To make one's bed, that's physical activity. Just household tasks can be physical activity"* [P9]. Where the older people can go outside their homes, nursing assistants described physical activity as movement that the elderly perform in connection with activities such as being able to walk and shop, go to the bank and participate in various social activities: *"physical activity ... to make a purchase"* [P11].

According to the nursing assistants, when the older people perform physical activity in terms of movement in their daily life, it leads to well-being for the older people, independently of their functional capacity. For the older people with a high level of mobility, the participants exemplified how they perceived that physical activity resulted in well-being, arguing that gentle walks can produce a sense of freedom and independence: *"it gives them the freedom to get out"* [P7]. For the older people with a low level of mobility, the nursing assistants exemplified how they perceived that physical activity can result in well-being, arguing that physical activity maintains mobility: *"not to be confined to bed and to get up to sit in a wheelchair"* [P5].

Physical activity is to make an effort

The nursing assistants described physical activity as a physical and mental effort the older people make in spite of illness, disabilities and old age. According to the participants' description, physical activity as an effort can be done either by managing their everyday activities and outdoors activities or by struggling to maintain their daily living tasks, health and social life.

Managing everyday activities and outdoor activities. The nursing assistants described physical activity as an effort that the older people perform in their daily lives in order to manage basic needs, household chores and take part in outdoor activities. The older people's effort to handle their personal needs through such physical activities as getting in and out of bed, moving around, dressing, bathing and eating was important and can be physically strenuous for the older people: *"It can be that rise from the bed...it's really hard"* [P4]. The participants also described physical activity as an effort that the older people perform by handling their home and social needs in order to maintain their skills and independence. Such activities include cooking, cleaning and outdoor activities such as shopping. One example given was using the stairs when doing their laundry or going to the shop: *"a bit exhausting that they go on the stairs... and do their shopping by themselves"* [P13].

Struggling to maintain their everyday tasks, health and social life. The nursing assistants described physical activity as an activity that the older people struggle to perform as part of their everyday activities, keeping fit and socialising. They described physical activity as the older people's struggle to do a particular task given their particular capacity. As examples, they gave daily activities at home or going for walks, which provide stimulation and keep the brain active: *"trying to use the buttons though it takes three times longer ...it's quite difficult... they have to struggle really"* [P5]. The participants described it as part of their role to encourage the older people to perform physical activity, helping them to keep healthy so that they can do as much as possible themselves: *"the day that we get him out means he's better all week"* [P3]. The nursing assistants also described physical activity as a struggle to perform social activities, which can break the isolation of the elderly and facilitate social meetings. They

mentioned such activities as going to meeting places or a gym: “to come out and in general to participate in social activities” [P15].

EXERCISE

Three structural aspects of how the nursing assistants perceived exercise among the older people, as a phenomenon in their daily work emerged: “exercise as physical activity”, “exercise as rehabilitation” and “exercise as agent” (Table 3).

Table 3 Nursing assistants’ perceptions (n=19) of exercise among older adults, over 65, receiving home care and/or home help

<i>Structural aspect</i>	<i>Referential aspect</i>
Exercise as physical activity	Carrying out an individualized exercise programme Performing everyday activities and outdoor activities
Exercise as rehabilitation	As a part of a rehabilitation process As a prescription to follow
Exercise as an agent	Enhancing health and well-being Enhancing social activity

Exercise as physical activity

The nursing assistants described exercise as movement the older people perform as a regular part of their normal everyday lives in order to maintain mobility and independence. According to the participants, every movement that the older people are able to perform according to their ability is exercise. Exercise may take the form of individual exercise programmes prescribed by a physiotherapist or everyday activities such as dressing, cleaning or shopping.

Carrying out an individualized exercise programme. The participants described exercise as physical activity through execution of an individual’s training programme, in order to maintain or increase their ability to function. The programme was prescribed by a physiotherapist and can be performed by the individual himself or with the help of the staff at home or in a group with others seniors. “Then we have a physiotherapist who has

provided a training schedule “[P18]. This individual training can involve exercises using equipment such as pulleys, a leg trainer, bikes or gait training.

Performing everyday activities and outdoor activities. The nursing assistants described exercise as physical activity, with the older people’s ability to execute everyday activities on their own terms, such as getting dressed, helping with breakfast, moving around, taking a shower, going to the toilet by themselves or with the help of staff, despite their disabilities: *“exercise can be dressing or helping with the breakfast...”* [P1]. Having the ability to execute household chores and take care of one’s house by moving around is important for the older people according to the participants: *“... exercise... they are doing what they have always done...going to the store ... it is important ... ”* [P17].

Exercise as rehabilitation

The nursing assistants described ‘exercise’ as rehabilitation after an injury or illness. According to the participants, something must have happened to the older person that prompted the need for exercise. Nursing assistants perceived exercise as rehabilitation in two ways: as part of the rehabilitation process and as a prescription to follow from a physiotherapist and/or occupational therapist. The first was based on the older people themselves, on his/her needs and resources and where exercise was perceived as part of the rehabilitation process in order to return to their previous functions and activities after injury or illness. The second was based on what the physiotherapist and/or occupational therapist had prescribed. The participants described exercise as a method, a treatment plan to follow, used in rehabilitation with clear guidelines and structures.

As part of a rehabilitation process. The nursing assistants described exercise as an important part of the rehabilitation process, which should begin as soon as possible after an injury or illness: *“had broken arm... it's training ... thus rehabilitation... important to get started as soon as possible”* [P8]. They also described that exercise was given as an individual programme of activities for daily living (ADL) training and/or functional training by the physiotherapist and/or occupational therapist according to individual needs, resources and goals: *“physiotherapist teaches what to do, what movements just for the patient...”* [P9]. The participants described that exercise as part of a rehabilitation process can also be a tough experience for older people, who experience pain and fear;

the aim, however, was to help them regain their earlier state of health and fitness so that they can take care of themselves and their home: *“exercise... in rehabilitation purposes, but it is still exercise and it's pretty tough for her...the goal is to recover her original capacity”* [P6].

As a prescription to follow. The nursing assistants described exercise as rehabilitation, a structured method and approach to be applied on a regular basis: *“Rehabilitation...looks to me that it should be regular...with a training programme...it's like a method”* [P7]. They also mentioned exercise as rehabilitation, as a treatment plan prescribed by a physiotherapist or/occupational therapist to be followed: *“becomes more like a prescription... usually physiotherapist or occupational therapist involved in this programme and delegates to us”* [P14]. The older people performed through specific targeted programmes with different exercises and with a clear goal: *“...this programme ...delegated to us ... describes how to do it and how many times...to become strong and... so he can walk again”* [P14].

Exercise as an agent

The nursing assistants described exercise as an agent to improve the older people's health and well-being and to break social isolation, thereby promoting harmonious and healthy ageing. In this case, the exercise itself acts as an agent for the older people, allowing them to maintain mobility, health and well-being as well as their social networks. Two kinds of exercise as an agent were identified. The first focuses on exercise as an agent enhancing the health and well-being of the older people, with a special focus on mobility. The other focuses on exercise as an agent enhancing the older people's social activities.

Enhancing health and well-being. The participants described exercise as an agent that can improve an older people person's health and well-being with increased stimulation for the brain and body and reducing sedentary periods. By carrying out everyday activities such as dressing, helping with breakfast and walking, the older people enhance their health, and feel good because they are more autonomous and independent: *“if they can be involved in their daily everyday activities...they will stay there much longer”* [P15] *“and if you get out, I think you stay healthier”* [P3]. They also described exercise as an

important agent in preventing reduction of mobility: *"exercise the one you have to maintain... as much as possible"* [P18]. The nursing assistants also described exercise as an agent whereby the older people can be happier, more self-confident, and more willing to try new things: *"Exercise... and ... they will be healthier, happier and more motivated to try other things that they might not even have imagined...they feel they are not as needy"* [P6].

Enhancing social activity. The nursing assistants described exercise as 'agent-enhancing social activity'. By making exercise into a social activity, the older people can enjoy a richer social life and reduce isolation and loneliness: *"if they come out... they encounter people and move ... people sit too much by themselves ... do not feel good"* [P18]. They described that the older people can meet staff and other older people while taking exercise, giving them an increased sense of social inclusion and participation in society: *"exercise is... socially... important that they have someone that they exercise with... If they are alone maybe it will not happen but when you have someone else so... it will be... like fun"* [P6]. Social interaction was perceived as being very important for the older people and in-group exercising is much appreciated. The participants commented: *"They want to exercise a lot better than they can do at home ... while meeting others... spurring on each other"* [P6].

Discussion

The findings of this study show a wide variety among nursing assistants' perceptions of physical activity and exercise for older people. An explanation for the variations of perceptions of physical activity and exercise in this study can be nursing assistants' own values and previous personal experiences of the studied phenomena. Among the variety of perceptions, two different approaches can be identified: a health promotion approach and a preventive approach. Nursing assistants can work, using a health-promotion approach, helping the older people to be physically active and exercise to maintain or improve their health and well-being. Using a preventive approach, nursing assistants work as health care assistants to health professionals, preventing and rehabilitating injuries or illnesses through physical activity and exercise. How individuals use and apply their knowledge and attitudes affect how they give care [30]. It is likely that the

nursing assistant's attitude to, and performance of, physical activity and exercise has an influence on the assistant's view of older people's physical activity and exercise.

Nursing assistants with a health promotion approach perceive, for example, *physical activity is to move*, which might be an expression of their own experience of physical activity. A person being physically active and exercising frequently is more likely to promote the same behaviour in other persons [31] and might also regard physical activity as a natural part of daily life. The nursing assistant's health-promotion approach promotes health, independence and social activity among the older people; this becomes evident in the structural aspect "physical activity is to move" and "exercise as agent" as movement in daily activities at home and outside. By supporting and encouraging the older people to be physically active by moving as much as possible in their daily activities, the nursing assistant enables the older person to feel more in control of his/her life; this is in line with the WHO's [32] definition of health promotion. It is a challenging task to find the balance between the capacities of older people and the appropriate demand for physical activity. The Lawton and Nahemow [33] Press-Competence model illustrates the relation between the individual's capacity and environmental pressure where the adaptation level is the guideline when trying to find the optimal positive effect. An individual can improve his/her skills, e.g. physical ability, when the pressure is greater than the adaptation level. The adaptation level is the point where the individual's competence is not challenged by the task and it is not necessary for the individual to make any effort, as the individual's competence is sufficient for the task without any strain [33]. It is within the zone above the adaptation level, but still within the individual's ability or competence, that the individual can be challenged and obtain prerequisites to improve his or her physical ability and it is in this zone where health-promotion activities are executed [32]. It is evident in the structural aspect *exercise as an agent* that the nursing assistants are aware of increased stimulation to improve health. Nursing assistants, with a health promotion approach and with the perceptions that *physical activity is to move* and *exercise as an agent*, are likely to encourage and stimulate the older people to leave the adaptation level and move into a phase of maximum performance potential by increasing the requirements. It becomes evident in the structural aspect *physical activity is to move*, that nursing assistants are aware of the individual's competence level, which is a condition for enhancing the

individual's ability. Lawton [34] argues that older people function best, and are most comfortable, when the relation between individual capacity and demands is in balance. The nursing assistant knows the older people best and thus is ideally situated to help the older people find the right balance between environmental pressure and personal competence. If the nursing assistants consider themselves as physically active and keen on exercise it is natural to challenge the older people's competence with pressure in order to increase physical performance [31]. This might counterbalance older people's lack of confidence in their own capability, which is an obstacle to physical activity [35]. Nursing assistants with a health-promotion approach are likely to create opportunities for the older people to be more self-confident, in relation to physical activity and exercise; this is health promotion as long as they do not make too high demands in relation to the older people's competence.

The nursing assistants' preventive approach is made evident in the definitions "physical activity is to make an effort", "exercise as physical activity" and "exercise as rehabilitation" and could be viewed as prevention [13]. The perception of *physical activity is to make an effort* reflects a view of physical activity [12] which might mirror an attitude that older people have the right to be helped [18]. Values concerning older people's mental and physical dependency [36] can influence nursing assistants' behavior in terms of physical activity and exercise for older people by justifying their inactivity. According to the Christensson et al. study [30], nursing assistants have negative views towards older people. These include older people not being able to do everything they would like to do, having to accept pain and not being able to count on receiving help with daily walks. Consequences of these attitudes and perceptions are that the nursing assistants can set the physical activity level of the older people at a lower level, in relation to the individual competence, or to refrain from physical activity. Exercise by definition is to perform movement to maintain or improve physical fitness [12]. *Exercise as physical activity* indicates that the nursing assistants' requirement is too low [13] and, according to Lawton & Nahenow, competence press model performance ought to be above the adaptation level in order to increase the competence level [33]. In the structural aspect *exercise as rehabilitation*, it becomes evident that the need for exercise is based on a disorder or dysfunction. This perception is confirmed in other

studies e.g. the nursing assistant's job is viewed as one to prevent falls, restoring loss of bodily and mental functions and preventing disease [37-39].

The importance of physical activity and exercise in contributing to older people's health and rehabilitation is well-documented [3,5,40]. It is important that the demands are not too low in relation to an individual's competence [34] in order to achieve the level required both in relation to ability to maintain or increase functions in older people's rehabilitation and well-being, according to guidelines and current research [13, 16,5]. It is an evident risk that nursing assistants with a preventive approach set demands too low, that is below the adaptation level [34] in situations when older people decline exercise due to fatigue or low motivation [41] or if the delegated nursing assistant feels insecure [42] with the exercise programme and how hard the older people could practice. One way to strengthen the nursing assistants could be by tutoring, specific guidance and support through encouragement and improvement of skills [43]. Hence, for this strategy to be useful it needs to be implemented as a routine involving contact with the delegating physiotherapist, nurse or occupational therapist and with an increased accessibility and communication facilities with health care professionals for competence development through education and tutoring.

Methodological considerations

In qualitative studies, the reliability can be ensured by means of the concepts of credibility, transferability, dependability and confirmability [44]. A limitation in this study was that the context might have influenced the findings. The study was carried out in a municipality where nursing assistants are very experienced and highly trained. This might be one reason why the findings showed such variation in the participants' perception of physical activity and exercise for the older people. Although phenomenography is an accurate method when examining people's perceptions since its intention is to capture a broad variety of perceptions. A limitation in this study might be that the participants were uncomfortable with being interviewed, were short of time and were concerned about loyalty issues towards their colleagues and patients. However, rich material was collected indicating openness and honest answers in the interview process. The author, with experience of municipality home care as physiotherapist, and the supervisor with experience of the phenomenographic approach

jointly performed the analysis. Even if the perspective of the researcher shapes all research, the risk of influencing the outcome was reduced through the author's recurrent analysis of data and the discussion of prior understanding of studied phenomena with the supervisor during the analysis process. The results were also discussed and audited at a seminar where the seminar participants had different backgrounds and experiences of qualitative research. The author's background as physiotherapist might also be a study limitation because of risks for adaptation of statements from the participants. However, this can also be a strength because the author had knowledge of the context from which the participants come, and was able to ask follow-up questions and ask them to clarify by using a simple and understandable language.

Conclusions

As this study shows, there are a variety of perceptions of physical activity and exercise among nursing assistants and a common language is needed for nursing assistants and health professionals. This study demonstrates that it can be important to assume a definition when talking about physical activity and exercise among older people. By being more aware of the variations in definitions and attitudes, health professionals can give more accurate support to nursing assistants with a common starting point in both communication and approach. Further research can investigate how, and in what way, the conscious work based on the results from this study can be implemented in the care of older people. This study also shows different approaches by nursing assistants towards the older people in terms of health promotion and preventive approaches. It is important to be aware of these approaches, if a shift towards promoting health and well-being in care of older people is to be implemented.

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