Occupational adaptation in diverse contexts with focus on persons in vulnerable life situations

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Abstract

This thesis focuses on occupational adaptation in the contexts of vulnerable populations relative to ageing (Studies II, III), disability (Studies I, II) and poverty (Study IV), and in a theoretical context (Study V).

Aim: The overall aim of the thesis was to explore and describe occupational adaptation in diverse contexts with a focus on persons in vulnerable life situations.

Methods: The thesis was conducted with a mixed design, embracing quantitative and qualitative methods and a literature review. The data collection methods comprised questionnaires (Studies I-III), individual interviews (Study II, IV), group interviews (Study III) and database searches (Study V). Altogether 115 persons participated in the studies, and 50 articles were included in the literature review. Qualitative content analysis was used to analyse the interviews (Study I-IV) and the literature review (Study V). Parametric and non-parametric statistics were applied when analysing the quantitative data (Study II, III).

Results: The results showed that women, in St Petersburg, Russia, who have had a minor stroke reported more dependence in everyday occupations than the stroke symptoms indicated. They also overemphasized their disability and dysfunction. The environmental press did not meet the person’s competence, which had a negative impact and caused maladaptive behaviour (Study I). In home rehabilitation for older persons with disabilities, interventions based on the occupational adaptation model were compared with interventions based on well-tried professional experience. The results indicated that intervention based on the occupational adaptation model increased experienced health and helped the participants acquire adaptive strategies useful in everyday occupations (Study II). A four-month occupation-based health-promoting programme for older, community-dwelling persons was compared with a control group without interventions. The intervention group showed statistically significant improvement in general health variables like vitality and mental health, but there were no statistically significant differences between the groups. A qualitative evaluation in the intervention group showed
that participation in meaningful, challenging occupations and in different environments stimulated the occupational adaptation process (Study III). Occupational adaptation among vulnerable EU citizens begging in Sweden was explored through interviews. The results showed that the participants experienced several occupational challenges when begging abroad. The results show a variety of adaptive responses, but whether they are experienced as positive or negative is a matter of perspective and can only be determined by the participants themselves (Study IV). The results from the literature review (Study V) showed that research on occupational adaptation is mainly based on Schkade and Schultz’s and Kielhofner’s theoretical approaches. Occupational adaptation has also been used without further explanation or theoretical argument, or in an entirely different way, than the above-mentioned approaches (Study V).

Conclusions: The empirical context was shown to play an important role in the participants’ occupational adaptation. While there were no general occupational challenges or adaptive responses common to the various vulnerable life situations, there were some common features in adaptive responses in the groups. For example, if the environment put too great a demand on the person and social support was lacking, there was a risk of maladaptation. Moreover, on the one hand, persons with low functional capacity were vulnerable to environmental demands and dependent on a supportive environment for their adaptive response. On the other hand, persons living in supportive environments developed adaptive responses by themselves. Further, personal factors needed to be strengthened to meet the demands of the environment. Upholding occupational roles was a driving force in finding ways to adapt and perform occupations. The results also showed the opposite: if important occupational roles were lost due to disability or social conditions, it was difficult to adapt to new situations. Considering the theoretical context, the occupational adaptation theoretical approaches need to be further developed in relation to negative adaptation and to support use within community-based and health-promotive areas.
Original papers

This thesis is based on the following studies, which are referred to by their Roman numerals in the text:

**Study I**

**Study II**

**Study III**

**Study IV**

**Study V**

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Preface

During our lifetime, we are exposed to events that change our activities, roles and self-perception. Some of these events are expected and are part of the natural development in life, such as moving away from our parents’ home, becoming a parent, starting to work, or retiring. Other events are unexpected and undesired, such as injury, illness, or other stressful circumstances that can lead to a vulnerable life situation. In my profession as an occupational therapist, working at a stroke unit, I met people who had been exposed to unexpected and undesired events. These events might change a person’s whole life situation, their roles, and their ability to perform everyday occupations – undoubtedly a vulnerable life situation. At the time, the traditional approach in occupational therapy/stroke rehabilitation focused on improving the client’s functions. I experienced a lack of an occupation-based programme to follow, or any explicit theoretical frame, as a problem.

My personal and professional experience from stroke rehabilitation was that the clients who could quickly accept what had happened and find adaptive strategies for their lives were more satisfied with and successful in their rehabilitation. I also experienced that clients who could change or adapt their former roles and had social support were more satisfied with their situation. I searched for an occupational therapy model that was occupation-based, a theoretical frame or practice model that could guide and support the rehabilitation of stroke clients based on my aforementioned experiences. When I had the opportunity to gain further knowledge in occupational therapy, I applied the occupational adaptation frame of reference (OA) as practice model in a pilot study with two clients who had had a stroke. The results showed that the model gave structure to the stroke rehabilitation, with a clear occupational focus. But for the benefit of the model to be evaluated, it had to be compared with another model; and to avoid bias, other occupational therapists needed to be involved. Thus, the next step was to test OA and compare it with another approach; I did this as a master’s thesis, focusing on home-based rehabilitation (primary care) (II).

After I had tried the model in practice, I wanted to test whether it was applicable as a theoretical frame. Therefore, I used the theory in evaluating an occupation-based health-promoting programme (III), and in an interview
study amongst a vulnerable group that experienced extreme occupational challenges (IV).

My interest in and experience from occupational adaptation started empirically, but continued theoretically. The more I studied the literature and the concepts of adaptation and occupational adaptation, the more confused I became. I also grew increasingly critical of the OA in the light of contemporary occupational therapy and occupational science research. The concepts were used in different ways by different scholars, either with or without definition. The OA was first labelled by its originators as a frame and a model, and later as a theory, without any further explanation. Hence, I became curious about how occupational adaptation had been used in research, and in which populations. When I had the chance to deepen my understanding of occupational adaptation through doctoral studies, the overall aim of my studies was rather self-evident: to explore and describe occupational adaptation in diverse contexts with a focus on persons in vulnerable life situations.
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Definitions

Adaptive capacity

The capability a person possesses to perceive the need for adaptation. The strength of this capacity is the cumulative result of experience in responding adaptively and masterfully to occupational challenges over one’s lifetime.

Adaptive response

A person’s internal response in meeting an occupational challenge

Context

This thesis includes the empirical and theoretical context for occupational adaptation.

Mastery

Proficiency in successfully dealing with the challenges of living that occur at any point of time

Occupation

Everyday activities people do as individuals, in families, and with communities to occupy time and bring meaning and purpose to life. Occupations include things people need to, want to, and are expected to do.

Occupational adaptation process

The process through which a person and the occupational environment interact when the person is faced with an occupational challenge
**Occupational challenge**

A discrepancy between a person’s capacity, the occupational demands, and the environmental resources and constraints

**Occupational environment**

The physical, social and cultural context in which work, play/leisure and self-care occur. The physical factor consists of the actual setting where the occupation takes place. The social factor consists of the participants in the occupational environment, and the cultural factor includes the habits, customs and traditions that exist within the occupational environment.

**Occupational role**

Occupations that are central to a person’s role

**Occupational response**

The outcome – the observable by-product of the adaptive response

**Occupational performance**

The complex interactions between persons and the environments in which they carry out activities, tasks and roles that are meaningful to or required of them

**Person**

Made up of the sensorimotor, cognitive and psychosocial systems, which are influenced by genetics, biology and phenomenology (previous experiences)

**The occupational adaptation theoretical frame (OA)**

The occupational adaptation theoretical frame, by Schkade & Schultz and Schultz
Introduction

My research interest is occupational adaptation (Schultz, 2014) in the theoretical context, i.e. as a frame explaining how persons adapt their occupations to maintain their occupational performance, especially in vulnerable life situations, like ageing (Sarvimäki and Stenbock-Hult, 2016), disability (Sparf, 2016) and poverty (Damas & Rayan, 2004). These life situations constitute the empirical context (Studies I-IV) for occupational adaptation in this thesis, while research articles on occupational adaptation constitute the theoretical context (Study V).

“Occupational adaptation” is a concept of relevance within occupational therapy practice and research (Kielhofner, 2008; Nelson, 1997; Schultz, 2014), at least from an English-speaking, Western perspective. Even if the concept is usually mentioned in the context of occupational therapy, there is no consensus on its definition or application. Occupational adaptation is derived from, and integrates, two fundamental concepts – occupation and adaptation (Hocking, 2009; Wilcock & Hocking, 2015) – both of which have had numerous definitions over time (Reed, 2015). Occupational adaptation occurs when people meet environmental demands for mastering their occupational performance, and can therefore also be seen as a process (Schultz, 2014). Occupational performance refers to “the complex interactions between the persons and the environments in which they carry out activities, tasks and roles that are meaningful to or required of them” (Christiansen, Baum, & Bass, 2011, p. 94). Satisfying occupational performance is achieved through engagement in personally meaningful and relevant occupations (Schultz, 2014). In vulnerable life situations (such as, ageing disability, or poverty), adaptations are required to enable or maintain occupational performance (Kielhofner, 2008; Schultz, 2014). The link between occupational engagement and health and well-being is well known (Moll, Gewurtz, Krupa & Law, 2013; Moll et al., 2015; Stav, Hallenen, Lane & Arbesman, 2012), and through adaptation, occupational performance can be maintained and health and well-being promoted. One’s personal attraction to an occupation is a driving force to adapt, and engagement in an occupation may lead to health and well-being.
Vulnerability has been shown to have an impact on, and is a challenge to, a person’s health, well-being and occupational performance (Christiansen, Baum, & Bass, 2015). Certain populations are more vulnerable to, and at greater risk of, poor health (physically, psychologically and socially) than the general population (Chesney, 2016; Liamputtong, 2007). Groups with low socio-economic status tend to be affected more by stress and incidents than those with higher status. Predictors for vulnerability can be both personal and environmental factors such as social status, age, gender and ethnicity, but also level of social support, and additionally depend on the situation. A person who is vulnerable in one environment may not be in another (Rogers, 1997). In vulnerable life situations, there is more stress and more hindrances to adaptation than in the average life situation (Schultz, 2014). In this thesis, I have chosen to focus on vulnerability in regard to ageing, disability and poverty.

Consequently, a person’s adaptive capacity can be challenged by disabilities or stressful life situations. The greater the dysfunction or other limitations are, the greater the demand for changes in the person’s adaptive processes (Schultz, 2014). However, this has been sparsely explored in previous research. There is a need for greater knowledge about what influences occupational adaptation and its consequences on health, and to design interventions to uphold people’s occupation, health and well-being. Therefore, the overall aim of this thesis was to explore and describe occupational adaptation in diverse contexts with a focus on persons in vulnerable life situations.
Background

In this background section I will give an outline of the current knowledge on occupational adaptation as a theoretical frame. Moreover, I define occupational performance, as well as the environmental and personal factors that have an impact on it. Thereafter, I outline an occupational perspective on health as well as vulnerability in relation to ageing, disability and poverty. But first, I will give a short presentation and some definitions of the concepts of occupation and adaptation.

Theoretical framework

Occupation

Occupation is a core concept in occupational therapy and is also a basic concept related to occupational adaptation, and thus also in this thesis. Schkade and Schultz (2003) define occupation as something that “actively involve the person, is meaningful to that person and involve a process with a product, whether that product is tangible or intangible” (p. 185). Occupation is also described as a basic human need, and is linked to health and well-being (Hocking, 2009; Laliberte Rudman & Dennhardt, 2008). Further, Wilcock and Hocking (2015) explain occupation as “the combination of everything that people do throughout their lives – that health and life itself is dependent upon (p. 117). Another commonly used definition of occupation is from the World Federation of Occupational Therapy (WFOT) (2010):

Everyday activities people do as individuals, in families, and with communities to occupy time and bring meaning and purpose to life. Occupations include things people need to, want to, and are expected to do.

In recent years, this definition by WFOT has been criticized, with the arguments that people cannot always choose what they want to do, that doing the “right” thing depends on the socio-environmental or political context, and that occupations are culturally situated (Wilcock & Hocking, 2015).
Adaptation
The general meaning of the concept of adaptation originally involves evolution and an organism’s ability to change in function to promote survival. In the literature, however, the concept has been given many different meanings and has accordingly changed over time (Occupational Terminology, 2006), which makes the meaning and use of adaptation difficult to follow (Christiansen, Baum & Bass, 2015). It was defined by the American Occupational Therapy Association (AOTA, 1979, p. 785) as a normative process that occurs continually over the lifespan of the individual, and was further elaborated by Spencer, Davidson and White (1996), who stressed that adaptation allows individuals to meet the demands of the environment, cope with the problems of everyday life, and fulfil age-specific roles. It allows the individual to appraise new situations by looking at former ways of doing things and finding the best match to develop new ways to perform an occupation. Ikiugu (2007) concludes that adaptation is related to a personal mission statement concerning personally satisfying family and social relationships, work, and community participation. He defines adaptation as “constituting living a life that is consistent with such a personal mission, and therefore in that sense, living a meaningful life” (Ikiugu, 2007, p. 126).

Occupational adaptation
Schkade and Schultz (1992) seem to have minted the term “occupational adaptation”. According to Schultz (1997), occupational adaptation is the individual’s response in meeting an occupational challenge. This adaptation is required when the individual’s ordinary response is insufficient for mastering his/her occupations (Schultz, 1997). Mastery is defined as “proficiency in dealing successfully with the challenges of living that occur at any point of time” (Christiansen & Townsend, 2004, p. 277).

Occupational challenges take place when there is a discrepancy between the person’s capacity, the occupational demands (for example, how difficult the occupation is to perform), and the environmental resources and constraints (Law et al., 1996). If the challenge is too great, or too small, the person may engage less and less in the occupation. A “just-right challenge” is a challenge that places some level of strain on a person to manage a desired occupation without overwhelming him/her (Townsend & Polotajko, 2013).
The occupational adaptation theoretical frame (OA) (Schkade & Schultz, 1992) and its practice model (Schultz & Schkade, 1992) were first published in 1992, but it was recently revised and developed by Schultz (2014). A common assumption in occupational therapy, according to Schkade & Schultz (2003), is that enhancing occupational performance will lead to an ability to adapt. The main assumption in OA is the opposite: the ability to adapt leads to enhanced occupational performance.

Other important assumptions in OA are:

- Competence in occupation is a lifelong process of adaptation to internal and external demands to perform.
- Demands to perform occur naturally as part of the person’s occupational roles and the context (person-occupational environment) in which they occur.
- Dysfunction occurs because the person’s ability to adapt has been challenged to the point that the demands for performance are not met satisfactorily.
- The person’s adaptive capacity can be overwhelmed by impairment, physical or emotional disabilities, and stressful life events.
- The greater the level of dysfunction, the greater the demand for changes in the person’s adaptive processes.
- Success in occupational performance is a direct result of the person’s ability to adapt with sufficient mastery to satisfy him/herself or others (Schultz, 2014, p. 528).

In line with Schultz (2014), it is human nature to be motivated to master the activities that are personally meaningful; therefore, “the individual’s attraction to the activity fuels the desire to adapt” and the “adaptive capacity is triggered by meaning” (p. 534).

The occupational adaptation process (Schultz, 2014) is dependent upon three main components – the person, the occupational environment, and the interaction between them – all seen as aspects that continuously influence each other: The occupational adaptation process begins with the perception of an occupational challenge. Both the person and the occupational environment

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1 In the remainder of the text, the occupational adaptation theoretical frame referred to by Schkade & Schultz (1992, 2003) and Schultz (1997, 2014) will be called OA.
contribute to this challenge (Schkade & Schultz, 2003). The person is made up of the unique sensorimotor, cognitive and psychosocial systems which are influenced by genetics, biology and phenomenology (previous experiences). The person’s desire for mastery and seeking mastery over the environment is seen as an innate characteristic of each person (Schultz, 2014), and is ever-present.

The external factor, the environment’s demand for mastery, affect the person. The concept of occupational environment was created by Schkade and Schultz (1992) to capture the complexity of the external factors’ impact on the person in the occupational adaptation process. Occupational environment is defined as the physical, social and cultural context in which work, play/leisure and self-care occur (Schultz, 2014). The physical factor consists of the actual setting where the occupation takes place. The social factor consists of the participants in the occupational environment, and the cultural factor includes the habits, customs and traditions that exist within the occupational environment.

The internal and external factors are constantly interacting with each other, and create the press for mastery which contributes to the occupational challenge. The challenge is dependent upon the occupational role expectations. Within each role there are internal and external role expectations, which will differ depending on the role expectations of a particular occupational environment (Schkade & Schultz, 2003). Role expectations differ from culture to culture as well as throughout life, and can be restrained by personal or environmental limitations or barriers, such as illness or social conditions (Cristiansen, Baum & Bass, 2015).

The occupational challenge, along with the occupational role expectation of the person and the occupational environment demand for mastery, results in a need for adaptation. If successful, the person makes an internal adaptive response in relation to the occupational challenge and produces an occupational response, which is the observable action or behaviour (Schultz (2014). The concept “adaptive response” has been used in Studies III-IV as there were no observable actions but rather something internal that happened that was explained by the participants during the interviews.

Regarding the concept of press for mastery, it seems as if Schkade and Schultz
(1992) were inspired by Lawton and Nahemow (1973) and their Environmental Press Model in the Ecological Theory of Adaptation and Aging. Lawton and Nahemow (1973) described how stress and adaptation are dependent on the relationship between environmental demands and the person’s competence to meet these demands, and claimed that this theory is applicable regardless of age. Press can be negative, positive or neutral, and the person does best when the environmental press is just enough (positive or neutral). If the environmental press does not meet the person’s competence it has a negative effect, and can cause maladaptive behaviour. The ecological model has been criticized for being too environmentally deterministic and placing the person in a passive-receptive mode (Scheidt & Norris-Baker, 2004). In contrast, OA emphasizes the constant interaction between person and environment.

Below is a fictitious example of the occupational adaptation process:

Carol, an 82-year-old woman, lives in a flat in an urban area. Since she had a minor stroke, she has difficulty walking and shopping (occupational challenges). She has a strong will to master her everyday occupations, and this is important to her (desire for mastery). She also has an expected role as a mother, grandmother and cook. She has valued housework, and it has been important to her to manage it well. Both she herself and those in her environment have expectations on her abilities (occupational role expectations). She wants to go shopping herself but is not sure she is able to manage the stairs down from her flat and the walk to the shop, or to handle the shopping herself (press for mastery). After having tried this she came home with tears in her eyes, since it had been too tiring and she had forgotten to buy many of the ingredients she needed. When she had calmed down, she reflected over the situation. How could I manage it better next time? Maybe I need home help services? Next time I’ll do the shopping when I’m well rested and use a shopping list, or maybe I’ll try a walking frame (adaptive response/occupational response).

Schultz (2014) is presenting a modified version of the original model from 1992 (Schkade & Schultz, 1992). The modified version was used, in this thesis, because it was more appropriate to apply in a theoretical discussion. The original version contains several adaptive response sub-processes, which are only necessary when the model is used in practice, and was too detailed for the aim of this thesis. The modified version (Schultz, 2014) is used in this thesis, except for Study II, in which the Adaptive Response Evaluation Subprocess and the Relative Mastery instruments were used. Relative mastery is
a subjective self-rating assessment and is therefore relative to the person. The assumption is that this personal evaluation changes and increases the person’s adaptation process (Schultz, 2014). If the person’s evaluation of the occupational response is positive, there is likely little need for adaptation. If it is negative, dysadaptive, it reflects a need for a modified or changed adaptive response. Different scholars have defined the negative adaptation in somewhat different ways. Nelson and Jepson-Thomas (2003) argue that adaptation does not always have a healthy effect. Restricted capacity in occupational performance can lead to a so-called “learned sense of helplessness” when a person meets new occupational challenges, also defined as maladaptation. Ikiugu (2007), on the other hand, relates maladaptation to “daily occupational routine that is not consistent with a vision of one’s mission in life, therefore leading to a possible feeling of a lack of the sense that one’s life has coherence, purpose and meaning” (p. 126). To conclude, the phenomenon of negative adaptation is meagrely developed in research, and more knowledge is needed.

The studies’ (I-IV) relation to the different parts of the occupational adaptation process

Different concepts within the occupational adaptation process have been in focus in the different studies of this thesis. In Study I, occupational adaptation was merely used for interpreting the results, and this interpretation is presented in the discussion part of this thesis. Study II was an intervention study based on the occupational adaptation model, and the participants evaluated their occupational adaptation using the Adaptive Response Evaluation Sub process and Relative Mastery instruments (Schultz & Schkade, 1992). In Studies III and IV, concepts from occupational adaptation were used as a frame for the deductive analyses.
Occupational performance

In line with Schultz (2014), a satisfying, occupational performance, for oneself and society, is a result of the person’s ability to adapt. The first section in this part starts with some definitions of occupational performance. In the next section I will elaborate on a number of concepts from the theoretical frame of occupational adaptation – that is, personal factors and environmental factors – which are sparsely explained and not well defined within the framework.

Many scholars have defined the concept of occupational performance, and often in somewhat different ways. In OA (Schultz, 2014), the concept of occupational performance is not defined but is nonetheless used as a central concept in explaining the outcome of occupational adaptation: “Success in occupational performance is a direct result of the person’s ability to adapt with sufficient mastery to satisfy self or others” (p. 528). From a more general perspective, Nelson (1988) argues that the terms occupational performance and occupational form cannot be understood without being related to each other. “Occupation involves the doing (occupational performance) of something (occupational form)” (p. 113). Further developing the definition, Kielhofner (2008) stresses that occupational performance is strongly affected by the environment. In this thesis, the definition by Christiansen, Baum, and Bass (2011) was selected as it corresponds well with OA:

The complex interactions between the persons and the environments in which they carry out activities, tasks and roles that are meaningful to or required of them (Christiansen, Baum, & Bass, 2011, p. 94).

Personal factors that have an impact on occupational performance

In this section, discussing how personal factors have an impact on occupational performance, I have chosen to keep the text close to Schultz’s (2014) explanation of personal factors: sensorimotor, cognitive and psychosocial systems. These systems are influenced by the person’s genetics, biology and phenomenology (previous experiences) (Schultz, 2014).

Personal factors work in a complex synergy and with several individual
characteristics (Kielhofner, 2008). Body structure and body function have several individual variations, and also depend on a person’s age, gender, ethnicity, values, family and socio-economic status, etc. All these characteristics may have an impact on a person’s occupational performance, depending on individual experiences of challenges and demands in life (Boyt Schell, Gillen, Scaffa, & Cohn, 2014). Personal factors can be considered in an objective way, and can be observed – e.g. stress – but there is also a subjective experience by the person (Kielhofner, 2008). Consequently, it must be considered which personal factors support occupational performance and which limit it; but it is also necessary to understand how the person interprets and experiences the actual performance (Boyt Schell, Gillen, Scaffa, & Cohn, 2014).

In a study on homelessness, OA was used to describe the phenomenon (Johnson, 2006). An assessment of personal factors, e.g. sensorimotor and cognitive functioning, was found to be useful for viewing the person holistically. Through evaluating the personal factors, it could be determined what kind of factors could be strengthened to enable a successful occupational performance. Furthermore, personal factors were found to be a highly-overlooked area in the intervention process for homeless people.

**Environmental factors, and their contexts, that have an impact on occupational performance**

In OA the environmental factors are explained as the physical, social and cultural context in which work, play/leisure and self-care occur (Schultz, 2014). The physical context of the environment consists of the built environment, the natural environment, products and technology (Bass, Baum, Christensen & Haugen, 2015), which can have a facilitating or restricting impact on the occupational performance. The social context, as mentioned, consists of the participants in the occupational environment, while the cultural context is the habits, customs and traditions that exist within the occupational environment (Schultz, 2014) which can all support or limit the occupational performance.

Physical environments, at home and in society, that are accessible to all people irrespective of age or disability are vital for enabling occupational performance, but not all environments fulfil this standard (Pettersson, Slaug,
Granbom, Kylberg & Iwarsson, 2017). In Sweden, and other affluent countries, there is a policy that older people should age in place (Chippendale & Bear-Lehman, 2010); i.e., older people should be able to stay in their homes, where care will also be provided, rather than in a hospital and long-term care setting (Nordin, Sunnerhagen & Axelsson, 2015). This places a high demand on the environment, but traditional houses and urban environments do not always match the needs of people as they age or acquire a disability (Wretstrand, Svensson, Fristedt & Falkmer, 2009). Moreover, supportive environments are crucial for continued occupational performance outside the home in later life. Public places constitute important physical contexts, and occupations in public places are meaningful prerequisites for occupational performance (Soares, Jacobs, K., de Oliveira Cunha, Costa, & da costa Ireland, 2012; WHO, 2017a). Physical environmental factors that have an impact on outdoor mobility include, for example, weather conditions, pedestrian infrastructure (Annear, Keeling, Wilkinson, Cushman, Gidlow & Hopkins, 2014), and access to public transport (Risser, Iwarsson & Ståhl, 2012). Persons with low functional capacity are more vulnerable to environmental demands. With lower environmental demands, occupational performance may increase (Hovbrandt, Fridlund & Carlsson, 2007).

However, the social environment is also important for occupational performance. Previous research shows that the social environment, e.g. the behaviour of bus drivers and other passengers, made it stressful for older people to board even physically accessible buses. Consequently, some of these people ceased to use the bus (Wretstrand, Svensson, Fristedt & Falkmer, 2009). Pertaining to the social environment, a spousal caregiver’s support in the home could play a significant role in the stroke survivor’s daily life, increase his/her perception of independence, and have a positive impact on occupational performance (Schulz et al. 2012). Further, poor social support and decreased social network had a clear association with depression following stroke (Northcott, Moss, Haffison & Hilari, 2016; Salter, Foley & Teasell, 2010) and among the elderly (Cao, Li, Zhou, & Zhou, 2015), with a potential negative impact on occupational performance in turn.

Culture has a significant impact on which occupations we choose and how we perform them. Ethnicity, age, religion, language, social class and health status are all examples of things that influence how, when and where a person engages in occupations and societal life. There can be a risk of
overemphasizing the importance of culture in relation to behaviour and health outcomes. It is important to remember that no culture is homogenous, and that groups of people can share certain parts of a culture but not others (Al-Bannay, Jarus, Jongbloed, Yazigi, & Dean, 2013).

In the section above, occupational performance was defined and personal and environmental factors that have an impact on occupational performance were described. It was stated that meaningful occupation is central for occupational performance (Christiansen, Baum and Bass, 2011). In the next section, the relationship between occupation and health and well-being will be elaborated on.

An occupational perspective on health

The relationship between occupation and health and well-being is merely implied in OA (Schkade & Schultz, 2003). It is mentioned as one of seven principles for intervention: “Intervention is focused on enhancing health” (p. 209) and “it (OA) requires a therapist who believes in the power of occupation to promote health and well-being” (p. 218). In this thesis, health is defined in relation to the WHO constitution (1948): “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”. The definition is further developed in later WHO documents as “a resource for everyday life, not the objective of living” and as “a positive concept emphasizing social and personal resources, as well as physical capacities” (WHO, 1986, p. 1). Well-being is also defined by WHO (2001) as “a general term encompassing the total universe of human life domains, including physical, mental and social aspects, that make up what can be called a ‘good life’” (p. 211).

There is growing empirical evidence both within and outside occupational science describing the relationship between meaningful occupations and health and well-being. It has also been argued that continued engagement in social, economic, cultural, spiritual, and civic affairs as people age can enhance their health and well-being (WHO, 2015). In a systematic review, Stav, Hallenen, Lane and Arbesman (2012) found evidence of the relationship between occupational engagement and health and well-being in community-dwelling persons over 60 years old; i.e., more active persons experienced greater health and well-being.
Other findings support the importance of active engagement in occupations as a way of reducing physical and mental health decline and increasing well-being (Clark, et al., 2012). Moreover, in a general population, Moll et al. (2015) found a relationship between what people do every day and their health and well-being. They conclude their findings by embracing different dimensions of experience and occupational patterns that had an impact on health and well-being. However, engagement in occupation is not always healthy but can also have negative effects (Stewart, Fischer, Hirji & Davis 2016; Twinley, 2013). Health and well-being can be negatively affected by unhealthy lifestyle factors that relate to not only occupation (e.g. lack of physical occupations, smoking, eating disorders, lack of sleep) but also lack of occupation (e.g. occupational deprivation or occupational imbalance).

Considering health promotion, Scaffa, Reitz, and Pizzi (2010) discuss OA. They suggest that mastering one’s health and well-being can be facilitated by occupational adaptation. Further, developing one’s adaptive response could be one way to promote healthy habits and well-being. Thus, what people do every day has a relation to health and well-being, but the picture is even more complex than this. In the next section vulnerable life situations, in which people are at risk of health problems, will be outlined.
Vulnerable life situations

This section will outline how vulnerability may be a challenge to health and well-being. In this thesis, I have chosen to focus on vulnerable populations with regard to ageing (Studies II, III), disability (Studies I, II) and poverty (Study IV).

Vulnerability due to ageing, disability and poverty

Vulnerability is explained as “susceptibility” that can be translated to being “at risk for health problems” (Chesney, 2016, p. 4). Similarly, Flaskerud and Winslow (1998) defined vulnerable groups as “social groups who have an increased relative risk or susceptibility to adverse health outcomes” (p. 69).

A population can be vulnerable because of their marginalized socio-economic status (including ethnic minorities) (Chesney, 2016) or personal characteristics like gender or age. Individuals with few personal resources (i.e. effects of disability, motivation, coping skills and general attitude to life) in combination with a hard and stressful environment run the highest risk of vulnerability. The experience of being vulnerable might lead to physiological problems such as anxiety and stress, and psychological problems such as a feeling of less power to control one’s life and a feeling of hopelessness, which taken together may have an impact on health (Rogers, 1997).

Sarvimäki and Stenbock-Hult (2016) demonstrated that age itself might be a determinant of vulnerability. There is a risk that older persons will become vulnerable when their physical abilities deteriorate at the same time as their economic resources decrease. The level of social support is an important indicator of the degree of vulnerability, whereby a low level of social support indicates a high level of vulnerability (Rogers, 1997). Becoming an old person may mean becoming dependent on others, relatives as well as care staff (Sarvimäki and Stenbock-Hult, 2016). Older persons are sometimes treated as a collective rather than individuals with their own resources and abilities in society. Findings from previous studies show that some older persons experienced that they were perceived as incompetent due to their age (Sarvimäki and Stenbock-Hult, 2016). This kind of societal attitude can increase the feeling of vulnerability. However, to reduce vulnerability, some of the physical and psychological challenges older people may face can be
modified. The focus should be on stimulating people to acquire a reserve capacity through, for example, maintaining a healthy lifestyle, coping skills and active interests, as well as reducing challenges (Grundy, 2006). It deserves to be noted that many older people in Sweden live an independent and healthy life without experiencing vulnerability, but the differences in health status among socio-economic groups are currently increasing (Public Health Agency of Sweden, 2016).

Disability can be described as an umbrella term, covering impairments, activity limitations, and participation restrictions, in line with the World Health Organization (WHO, 2017b). Disability is the interaction between a person with a health condition on the one hand and personal and environmental factors on the other, e.g. negative attitudes, limited social support, and inaccessible transportation (WHO, 2017b). In a recent study by Sparf (2016), including persons with physical disabilities, it was shown that vulnerability not only appeared in very difficult situations but also had an impact on occupational performance in everyday life and everyday decisions. O’Connell et al. (2001) stressed that stroke survivors were a vulnerable group when suffering from physical and emotional problems and a lack of psychosocial and rehabilitative support.

Poverty is often defined in absolute terms of low income, but it also exists on a relative scale. Poverty is not only a problem of lacking financial resources, but may also include social exclusion with limited access to housing, education, and employment (Pollard, Sakellariou & Kronenberg, 2009). Denmark and Sweden have the lowest proportion of poor people among the European countries, and Latvia, Bulgaria and Romania the highest (European Union, 2014). The links between poverty and health problems are well known. On the one hand, people in poverty are more vulnerable to health problems than other people. On the other hand, illness, disease and loss of income may have a significant impact on poverty (Damas & Rayan, 2004; Sfetcu, Pauna, & Ioradan, 2011). Due to vulnerability caused by social, political and economic factors, occupational rights, defined as “the right of all people to engage in meaningful occupations that contribute positively to their own well-being and the well-being of their communities” (Hammell, 2008, p. 62), can also be restricted. The occupational choices people make are dependent on the opportunities they have, and these opportunities are limited for poor people.
Rationale for the thesis

The concept of occupational adaptation has been discussed in occupational therapy literature over the last 25 years. Still, there is no overview of how occupational adaptation has been used in practice or research since it first was introduced by Schkade and Schultz in 1992. It is also quite unknown how occupational adaptation manifests itself within diverse contexts and vulnerable groups in society.

Previous studies have mostly focused on occupational adaptation in relation to persons with disabilities. Studies concerning older people in community dwellings and persons in poverty are other examples of life situations that place a great demand on adaptive responses, but these are less common areas in research. There is a need to problematize the theoretical frame of occupational adaptation from the perspective of vulnerability in relation to ageing, disability and poverty, and shed light on different barriers related to occupational adaptation. Further, there is a need of more knowledge about what influences occupational adaptation and the consequences of adaptations on occupational performance, health and well-being.

Occupation and adaptation are embedded within the cultural context, meaning that people sometimes do necessary things, from their perspective, but use strategies that others at first glance regard as dysadaptive. Nevertheless, studies focusing on a negative occupational adaptation are lacking and further research is needed.

Due to societal changes, occupational therapists and other health professionals must deal with a diverse range of persons in new contexts, with or without disabilities, but with occupational problems and needs of occupational adaptation. Research focusing on these areas is sparse. Since adaptation has been found to be the mediator between occupation/participation and health and well-being (Moll, Gewurtz, Krupa & Law, 2013; Moll et al., 2015; Stav, Hallenen, Lane & Arbesman, 2012), it is important to study how different groups, e.g. vulnerable populations in relation to ageing, disability and poverty, adapt to occupational challenges and what adaptive strategies they use. This knowledge-building can be used to find ways to support and strengthen the person’s present strategies for adaptation and devise...
appropriate alternatives if needed. The knowledge about occupational challenges, and how persons in vulnerable life situations adapt to these challenges, can also be used for those involved in supporting these groups; e.g., various health professionals or volunteer organizations. This thesis could also serve as a building block to strengthen the use of theory in practice when it comes to OA.
Aim of the thesis

The overall aim of this thesis was to explore and describe occupational adaptation in diverse contexts with a focus on persons in vulnerable life situations.

Specific aims of each study:

Study I    To determine how women living in St. Petersburg, Russia, who have had a mild stroke, describe their performance in ADL, and to discover possible causes of their occupational dysfunction.

Study II    To examine whether the use of the occupational adaptation model increases independence and experienced health for disabled elderly in home rehabilitation in primary care.

Study III    To investigate whether a four-month occupation-based health-promoting programme for older persons living in community dwellings could maintain/improve their general health and well-being. Further, the aim was to explore whether the programme facilitated the older persons’ occupational adaptation.

Study IV    To identify and describe occupational challenges and adaptive responses in vulnerable EU citizens begging in Sweden.

Study V    To identify and describe how occupational adaptation is used in research articles from 1992-2015.
Material and methods

Design

To capture different aspects and perspectives of OA and of occupational adaptation in general, different methods were used in the five included studies. An overview of the methods can be seen in Tables 1 and 2. The focus has been on the research problem, and the methods considered most appropriate for understanding the problem at hand have been used.

In Studies I-III, quantitative and qualitative methods were combined (Morse, 2003). The quantitative parts of Studies II and III were conducted using a quasi-experimental design (Kazdin, 2003) with an intervention group and a control group. The quasi-experimental design was used instead of a randomized controlled study for convenience and practical reasons, such as limited access to participants and economic restrictions.

In Studies II-IV a qualitative design (Silverman, 2016) was implemented to get participants’ views on how they adapt their occupations to master their occupational performance.

In the scoping review (Arksey & O’Malley, 2005), the concept of occupational adaptation was explored and current research was described. This design was suitable for deepening the knowledge about the concept and sorting out how it has been used in research.
### Table 1. Overview of studies including design, sample and study context

<table>
<thead>
<tr>
<th>Study</th>
<th>Design</th>
<th>Study context</th>
<th>Participants</th>
<th>Sex (f/m)</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study I</td>
<td>Combined quantitative and qualitative design</td>
<td>Home environment and hospital setting</td>
<td>n=36 with minor stroke</td>
<td>36/0</td>
<td>48 (30-55)</td>
</tr>
<tr>
<td>Study II</td>
<td>Quasi-experimental combined with qualitative design</td>
<td>Home environment</td>
<td>n=19 need of home rehabilitation after discharge from hospital</td>
<td>15/4</td>
<td>82 (60-92)</td>
</tr>
<tr>
<td>Study III</td>
<td>Quasi-experimental combined with qualitative design</td>
<td>Community setting</td>
<td>n=40 community dwelling without home help</td>
<td>38/2</td>
<td>82 (72-92)</td>
</tr>
<tr>
<td>Study IV</td>
<td>Qualitative design</td>
<td>Community setting</td>
<td>n=20 vulnerable EU citizen with experience of begging</td>
<td>8/12</td>
<td>33 (19-64)</td>
</tr>
<tr>
<td>Study V</td>
<td>Literature review</td>
<td></td>
<td>50 articles</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: f=female, m=male.*

### Setting and participants

#### Study I
The setting for this study was a rehabilitation department in a hospital population in St. Petersburg, Russia, and the participants’ home environment. The participants had been discharged from an acute neurological department after a mild/minor stroke, and were referred to a rehabilitation department where they were placed on a waiting list. The recruitment was conducted by the second and third authors, who were physicians at the rehabilitation department and who conducted this study as part of a thesis for their bachelor’s degree in occupational therapy. The inclusion criteria were women who lived with their families, aged 55 years or younger. The participants were to have been discharged from the acute neurological department for at least four weeks, and have some experience of self-care and domestic activities. The second and third authors phoned persons on the waiting list who met the inclusion criteria, informed them about the study, and asked them for their
consent to participate. Forty-two women were asked to participate, and all agreed. After the recruitment, the severity of the stroke was assessed using the Scandinavian Stroke Scale (SSoS) (Scandinavian Stroke Study Group, 1985). This assessment was done after admission to the rehabilitation department or at home. Individuals scoring below 44 (maximum 58) were excluded. Thirty-six women met the inclusion criteria and were accordingly included in the study. The women’s mean age was 48.2 years (range 30–55 years) and their SSSS score was 55.7 (range 47–58).

**Study II**

The study was conducted at a primary care unit in a Swedish city\(^2\). The participants, in both the intervention group and the control group, were over 60 years of age, and in need of home rehabilitation in primary care after a period at the hospital. Persons diagnosed with dementia were excluded. Participants were recruited from a coherent geographic housing area, comprising apartments in an urban environment with mostly older inhabitants. The participants were subject to both home-help services and extensive rehabilitation interventions from primary care. Three occupational therapists were involved in the study: one in the intervention group and two in the control group. The occupational therapist in the intervention group had theoretical experience using the Occupational adaptation model (Schkade & Schultz, 1992; Schultz & Schkade, 1992).

The presumptive participants were verbally asked to participate through their occupational therapist, and the voluntariness of participation was emphasized. The intervention group consisted of eight participants (mean age 81 years), and the control group consisted of 11 participants (mean age 83 years). The participants in both the intervention group and the control group were mostly women living alone, suffering from different chronic conditions but with a predominance of orthopaedic problems.

The external participant dropout was extensive (n=12). In the intervention

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group 12 persons were asked to participate and four dropped out, and in the control group 19 were asked to participate and eight dropped out. The reason for the dropouts was that two persons declined to participate, two moved to other housing, four deteriorated in health, and four died. Convenience sampling was used for the semi-structured interviews (Depoy & Gitlin, 2005) in the intervention group, and the occupational therapists estimated that five of eight had the ability to become presumptive interview participants. One of the persons declined participation, and one died. The group thus comprised three participants: one man aged 60 years, and two women aged 78 and 92.

**Study III**
Before starting this study, a pilot study was performed to develop and test the health-promoting programme, and a manual was created. The inclusion criteria for the pilot were: community-dwelling persons, over the age of 65, receiving home help including cleaning, cocking and shopping. The pilot group comprised nine persons with a mean age of 83 years, and the programme was conducted for two hours/week for a four-month period (Johansson, 2009). When the main study began, the inclusion criteria were changed to include only persons with no home help, in order to reach a somewhat younger and healthier group.

The main study was conducted in cooperation with a primary care unit in a Swedish city in southern Sweden. The participants, in both the intervention group and the control group, were over 65 year, were community-dwelling, and had no home help. They were recruited from an urban area, comprising apartment buildings. The recruitment process is shown in Figure 1.

The intervention group consisted of 22 participants (mean age 82 years), and the control group 18 participants (mean age 81 years). The participants in the intervention group were mostly women living alone, with various chronic conditions but a predominance of orthopaedic problems and heart and vessel disorders. The intervention group had a larger share of previous blue-collar workers than the control group.

The participants in the intervention group were interviewed in smaller groups of two to four participants each. Due to summer trips, there were four external dropouts, so that the final group comprised 18 participants.
INTERVENTION GROUP
2010
Invited to participate, n=14
Accepted, n=11
Sample = 9
Not interested, n=3
Withdraw due to health problems and lack of interest, n=2
CONTROL GROUP
2010
Invited to participate, n=10
Accepted, n=5
Not interested, n=5

2011
Invited to participate, n=12
Accepted, n=8
Sample = 7
Not interested, n=4
Withdraw due to health problems and lack of interest, n=1

2012
Invited to participate, n=10
Accepted, n=7
Sample = 6
Not interested, n=3
Withdraw due to health problems and lack of interest, n=1

2011
Invited to participate, n=15
Accepted, n=11
Not interested, n=4

2012
Invited to participate, n=6
Accepted, n=2
Not interested, n=4

Figure 1. Flow chart of participants throughout recruitment process. STUDY III.
**Study IV**

This study was part of the project “Perception of everyday life, health and future in vulnerable EU citizens” with the overall aim of exploring and describing everyday life abroad and health in EU citizens with experience of begging. The setting was a Swedish city, and the inclusion criteria were: EU citizen, aged 18 years or older, with experience of begging. The study was conducted in collaboration with an ecumenical non-governmental organization (NGO) supporting vulnerable EU citizens by offering breakfast and evening meals certain days of the week, clothing, and the possibility to shower. During the winter, the NGO was also a mediator for shelter opportunities in small cottages. A purposive sampling was used whereby representatives of the NGO asked EU citizens to participate. These representatives also acted as interviewers and interpreters. The participants had to be able to speak Swedish, Romanian or English. The participants comprised 12 men and eight women, with a mean age of 33 (19-64). Their length of education ranged from 0 to 13 years, with a mean of six years.

**Procedure (only Studies II and III)**

**Study II**

*Intervention group*

*Intervention process based on the Occupational adaptation model*

The goal of the intervention was to stimulate the client to reach a higher level of internal adaptive response (Schkade & Schultz, 1992) to achieve a subjectively satisfying occupational performance. Before the intervention started, an interview was conducted by the occupational therapist involved in the study. An interview guide based on the occupational adaptation theoretical frame of reference was used, whereby occupational environment, roles and personal meaningful occupations were identified (Schkade & Schultz, 1992). The client chose three occupations that he/she wanted to perform. Thereafter, the client was engaged in goalsetting and treatment planning related to these occupations. The interventions were then directed to the goals, self-chosen occupations, environments and roles. Early in the intervention process, and continuously, the client evaluated relative mastery, on a five-point scale, corresponding to self-reported occupational performance on the following: Efficiency: How were time and energy used in performing the occupation?
Effectiveness: Did the occupation turn out the way it was supposed to? Satisfaction of self and others: Am I, as well as those around me, satisfied with the performance of the occupation?

Control group

Intervention process based on well-tried experience

The occupational therapists described their way of working as “well-tried, professional experience” as their experience guided them in choosing the approach and in mixing approaches from different occupational therapy models in relation to the actual problem. The occupational therapists referred to models such as the Model of Human Occupation (MoHO) (Kielhofner, 2002), the Occupational Therapy Intervention Process Model (OTIPM) (Fisher, 1998), and the Biomechanical Model (Kielhofner, 1997). The clinical assessment was accomplished by asking questions based on the occupational therapists’ experience with the problems these patients usually have. The occupational therapists often formulated the goals in relation to the observed problems. The treatment concerned both problems described by the patients and problems assumed by the occupational therapists. The evaluation of intervention did not necessarily connect to the treatment goals.

Study III

During 2010-2012 three groups of older people were given health-promoting interventions for two hours per week for four months, as well as a maximum of four hours of individual interventions. The groups were facilitated by two occupational therapists from a primary care unit. Before the programme started the facilitators were provided with training by the thesis author. The thesis author also continuously supervised the facilitators in conducting the group intervention sessions. Each participant was paid a home visit by the occupational therapist at which time an interview was conducted, with the aim of developing the programme based on each participant’s need of meaningful and challenging occupations. A manual containing themes and topics had been created in the pilot study, and each group selected the themes and topics they found meaningful and challenging. Examples of themes are: “occupation, health and ageing”, “occupation, time and energy”, “occupation and security at home and in society”. Each session started with information on “today’s theme”, followed by a group discussion and an exchange of experiences, and ended with a suitable occupation related to “today’s theme”, sometimes in the
community. At a follow-up home visit, the occupational therapist supported the participants in exploring and adapting the knowledge gained in the group sessions into their daily life.

The control group received irregular occupational therapy interventions from an occupational therapist at their primary care district based on their current needs. The interventions often involved the prescription of assistive devices; the participants did not take part in any group interventions.

Data collection and instruments

*Study I*
The data collection was accomplished over a period of four months. Since the participants were found on the waiting list for the rehabilitation department at the hospital, not all participants could be assessed in the hospital; therefore, some were assessed in their homes before admission to the rehabilitation department.

Data collection using the ADL Staircase was done through interviews and self-assessment using the modified Frenchay Activities Index (both instruments described below). The interviews were conducted by the second and third authors, one to three days after admission to the hospital, for 27 of the 36 participants. Team meetings and informal discussions with staff members contributed information about the participants’ ADL dependence. The data collection for the other nine women was done through interviews with them and their relatives during home visits, and these participants also conducted the self-assessment at home.

*ADL Staircase*
The ADL Staircase (Hulter Åsberg, 1990; Sonn & Svensson, 1997) was used to assess the women’s level of dependence. The ADL Staircase consists of the five personal ADL activities (P-ADL) (dressing, transfer, feeding, toileting, and bathing) and four instrumental ADL activities (I-ADL) (cleaning, shopping, transportation, and cooking). Independence was scored from 0 to 10, where 0 means total independence and 10 means dependence in all ADL.
Modified Frenchay Activities Index for Stroke Patients

Possible causes of occupational dysfunction were studied using a self-assessment questionnaire modified for this study from the Frenchay Activities Index for Stroke Patients (Wade et al., 1985). The original Frenchay Activities Index consists of 15 instrumental ADL activities and no personal ADL activity. The adapted questionnaire comprised causes of the limitations in one P-ADL activity (bathing) and nine I-ADL activities. The most common activities for middle-aged women living in a Russian city were chosen (based on pre-knowledge), e.g. preparing meals, bathing, washing clothes, local shopping, walking outdoors, travelling by bus. Each question consisted of two sections: the first included dependence in activities (I did or I did not) and the second reflected the patient’s views on possible reasons for their actual ADL dependence (I don’t feel secure; I don’t think I can do it; A relative stopped me).

Study II

The data collection was done using both quantitative and qualitative methods and the measurements were chosen in relation to the aim. The quantitative perspective was represented by the measurements the Functional Independence Measure (FIM) (Grimby, 1993), the Instrumental Activity Measure (IAM) (Daving, Andrén & Grimby, 2000) and the Short Form Health Survey (SF-36) (Sullivan, Karlsson & Ware, 1994). The IAM and SF-36 were conducted at baseline and three-month follow-up, and the FIM was conducted at baseline and four-week follow-up, for both the control group and intervention group. The qualitative perspective was represented by semi-structured interviews. All instruments were carried out in the participant’s home. The FIM, IAM and SF-36 were carried out by the occupational therapist, in both the intervention group and the control group. The interviews were conducted by the first author.

Functional Independence Measure (FIM)

The FIM was carried out through observation to measure functional independence on a seven-point scale: self-care, sphincter control, transfers, communication, social and cognitive function (Grimby, 1993). The instrument’s validity and reliability have been tested in many studies, with sufficient results for use in research (Dodds, Martin, Stolov & Deyo, 1993).
**Instrumental Activity Measure (IAM)**

The IAM was carried out through an interview, and describes what people do in their own lives regarding their everyday occupations, e.g. locomotion outdoors, simple meal preparation, cooking, public transportation, small-scale shopping, large-scale shopping, cleaning, and washing. The IAM was assessed using the standardized eight-point scale. The instrument has shown sufficient reliability in two studies (Daving, Andrén & Grimby, 2000; Grimby et al., 1996).

**Short Form 36 (SF-36)**

The SF-36 (Sullivan, Karlsson & Ware, 1994) includes self-ratings of health, and consists of a standardized questionnaire including 36 questions in eight dimensions: physical functioning, role-physical, bodily pain, general health, vitality, social functioning, role-emotional, and mental health. The SF-36 is a well-documented instrument with sufficient validity and reliability (Sullivan, Karlsson & Ware, 1995). For use with older participants who have difficulty seeing and writing, it is suggested that an instrument with larger text be used, or that it be conducted as an interview (Hayes, Morris, Wolfe & Morgan, 1995; Sullivan, Karlsson & Ware, 1995). As these problems were present in this study, most of the SF-36 was conducted as in interview form.

**Semi-structured interview**

The individual semi-structured interview with three participants from the intervention group was based on an interview guide in order to capture subjective perspectives on “ability to perform activities in daily life independently, experienced health,” and adaptive strategies. The interviews were recorded, and lasted approximately one hour each.

**Study III**

The data collection was done using both quantitative and qualitative methods, and the measurement was chosen in relation to the aim. Outcomes related to general health were measured using the Short Form Health Survey 36 (SF-36), and psychological well-being using the Life Satisfaction Index-Z (LSI-Z) and the Meaningful Activity Participation Assessment (MAPA) at baseline and four-month follow-up. For the control group, data were collected at baseline and after a period of four months. The qualitative perspective was represented by a semi-structured interview. All the measurements in the
intervention group were accomplished in the participant’s home by occupational therapists, and in the control group by the thesis author. The interviews were carried out by the first author at the venue where the intervention took place.

Short Form 36 (SF-36)
See Study II. The second edition of the manual and interpretation was used (Sullivan, Karlsson & Ware, 1994).

Life Satisfaction Index-Z (LSI-Z)
The LSI-Z (Wood, Wylie & Sheafor, 1969) was based on 13 questions ranked on a three-point scale. For this study, a five-point scale was used, as suggested in Berg et al. (Berg, Hassin, McClearn, & Johansson, 2006), with a total score ranging from 13 to 65, whereby a higher score indicated higher perceived life satisfaction. The LSI-Z can be used for self-assessment, but in this study, it was conducted as an interview strictly following the questionnaire. The instrument reflects zest for life, resolution and fortitude, congruence between desired and achieved goals, positive self-concept, and optimistic mood.

The SF-36 and LSI-Z were used because of their strength as outcome measures in the Well Elderly Studies I and II (Clark et al., 1997; Clark et al., 2012), and for their confirmed reliability and validity.

Meaningful Activity Participation Assessment (MAPA)
The MAPA (Eakman, 2007) is a 28-item tool for measuring meaningfulness of activity, and has been tested with elderly persons (Eakman, Carlsson, & Clark, 2010). Subjects indicate frequency of participation and the degree of meaningfulness for each activity. The possible score range is 0–672, with a higher score indicating greater meaningful activity participation. The MAPA was used because it is a reliable and valid measurement of meaningful activity, and as shown in Eakman, Carlsson and Clark (2010), it has a strong association to psychological well-being. With permission from the author of the instrument, it was translated into Swedish: in line with accepted strategies for instrument development (Streiner & Norman, 2008), the instrument was translated into Swedish, back into English, and then back into Swedish again. The translation into Swedish was performed by the thesis author, but the translation back into English was done by a person who had English as her
native language and was not involved in the research. In the last step, the original instrument and the back-translated document were compared by the researchers and discrepancies were solved.

_Semi-structured interview_
After the intervention period, a semi-structured interview was conducted with the participants from the intervention group. The aim was to listen to their experiences of the programme and identify whether they had applied any strategies to adapt their occupations. The final group comprised a total of 18 participants.

_Study IV_
Individual semi-structured interviews were conducted by two representatives of the NGO with a third, a native Romanian speaker, acting as an interpreter. All three have university degrees in socially related areas and experience of interviewing, and were well known to the participants. An interview guide was developed within the research team, focusing on the participants’ everyday life in Sweden and at home, as well as on their health and thoughts about the future. The interview guide was piloted without changes, and was designed to fit the overall project “Perception of everyday life, health and future in vulnerable EU citizens” rather than being specifically designed for the present study. Follow-up questions were commonly used. The recorded interviews varied from an hour and 15 minutes to two hours and 30 minutes, and all participants were Romanian-speaking, which was also the interview language. After the interview, the participants were given a small gift voucher for a second-hand shop.

_Study V_
The search process was conducted using electronic databases (Academic Search Elite, Age Line, AMED, CINAHL, Medline, PsycInfo) with the search term “occupational adaptation” in the title or abstract or as a keyword. Articles published 1992-2015 in English peer-reviewed journals were used. The search process ended 1 December 2015, and gave 260 hits. The same references were found in many of the databases, and after doublets were excluded 135 hits were left. As the databases did not always offer the possibility to include the search terms for title, abstract and keywords, manual scanning was necessary. Fifty-nine articles had to be excluded as they did not include “occupational
adaptation” in their title, abstract or keywords; thus 76 were retained. When
the articles had been read in full text, 26 were excluded for reasons such as
lack of primary data, lack of relevance to the research question, or not having
been peer-reviewed. After the aim and search criteria had been reconsidered,
50 articles ultimately remained (Figure 2).

Figure 2: Search strategy and selection of articles for the scoping review
Data analysis

Study I
Each participant’s assessment was analysed in relation to the different causes of limitation in personal occupations in daily living, and thereafter patterns of the causes from all participants’ assessments were identified. If one alternative of the causes for their occupational dysfunction was in the majority in their answers, participants were sorted into this group; e.g., “A relative stopped me”. To understand the causes in a new light and help the reader connect to experiences, metaphors were used (Carpenter, 2008): “Overprotection” (I don’t feel secure); “Anxiety and insecurity” (I don’t think I can do it); and “Overemphasizing” (A relative stopped me). The field notes and the information from the team members and relatives were aggregated to the data from the assessment to get a supplementary picture. In half of the cases, no clear pattern was found for the different causes of their occupational dysfunction; in these cases, they were simply labelled “Mixed causes”.

Study II
Quantitative Analysis
Data analysis was accomplished using the statistical data program SPSS (Statistical Package for Social Sciences, version 11.0). Data from FIM and IAM were analysed as ordinal data, and the statistical significance between measurements before and after interventions was estimated using Wilcoxon’s signed-rank test. The SF-36 consists of eight scaled scores, which are the weighted sums of the respective questions. Each scale is directly transformed into a 0-100 scale on the assumption that all questions carry equal weight. The lower the score the more disability, and the higher the score the less disability; i.e., a score of zero is equivalent to maximum disability and a score of 100 is equivalent to no disability.

Data from SF-36 were analysed as interval data using Student’s paired t-test and Student’s two-sample t-test. In line with Wright & Linacre (1989), the SF-36 data are analysed as parametric even if the questions are of ordinal type. The Mann-Whitney U-test and Student’s t-test were used to determine statistical significance for the measurements between the control and intervention groups. The limit for rejection of the zero hypotheses was p <0.05. The difference between the control and intervention groups in the SF-36 was
Since the FIM and IAM are measurements on an ordinal scale level, the differences could not be estimated. Instead the changes were transformed to a new ordinal scale with three scale steps, whereby +1 represented a higher value for the intervention group, 0 equal value between groups, and -1 a higher value for the control group.

Qualitative Analysis
The interviews with the three participants in the intervention group were transcribed verbatim, and were analysed using qualitative content analysis with a deductive approach. The analysis started with repeated reading of the material and coding of contents (Graneheim & Lundman, 2004; Svensson & Starrin, 1996) in relation to the two central concepts of “independence” and “experienced health”. The idea was to look for trends and patterns showing whether the participants had begun an internal adaptation process, which could support the results of the quantitative study.

Study III
Quantitative analysis
Student’s paired t-test was used for the SF-36 to test differences pre- and post-intervention, and Student’s two-sample t-test was used to identify possible differences between the intervention and control groups. In line with Wright and Linacre (1989), the SF-36 data were analysed parametrically, even if the questions are of ordinal type. In accordance with the LSI-Z and MAPA, the Wilcoxon signed-ranks test was used to test differences pre- and post-intervention, and the Mann-Whitney U-test was used to test differences between the intervention and control groups. The level of significance was set to p <0.05.

Qualitative analysis
Qualitative content analysis (Graneheim & Lundman, 2004) with a deductive approach (Hsieh & Shannon, 2005) was used for the analysis of the data from the semi-structured group interviews. Concepts within occupational adaptation (Schkade & Schultz 1992; Schultz & Schkade, 1992; Schultz & Schkade, 1997) – desire for mastery, occupational environmental demand for mastery and adaptive response – were used as “content areas”. The analysis
was performed in six steps: 1) Text belonging to the content areas were collected into one text with separate sections. Meaning units from the content areas were underlined, and irrelevant text deleted; 2) The meaning units were condensed into shorter sentences with meaning kept close to the original text; 3) The condensed meaning units in each content area were further abstracted into codes; 4) Codes were compared based on similarities and divergences, and were then grouped into subcategories based on similarities; 5) The subcategories from each content area were compared with each other and based on similarities compiled into categories. Each category was named according to its content: “independence”, “belonging to a group”, “self-esteem”, “change in occupational behaviour” and “change in occupational approach”; and 6) The five categories were further abstracted to a theme called “maintaining activities of daily living”.

**Study IV**
The interviews were transcribed verbatim. Throughout the process, the data analysis was shared and discussed continuously between all the authors. The data were analysed using qualitative content analysis in two distinct phases – deductive and inductive – as described by Elo and Kyngäs (2008).

The preparation phase started with the selection of the unit of analysis, which was the whole interview, except for data on the participant’s home country and on travelling to Sweden. To make sense of the data and the whole, the interviews were read through several times. In the organizing phase the first step was to develop an analysis matrix, whereby the content areas of occupational challenge and adaptive response were chosen, as relating to the theoretical frame of occupational adaptation (Schultz, 2014). The next step was to gather data by content, i.e. belonging to either the content area occupational challenge or adaptive response. Thereafter the two groups of data were matched to each other; i.e., an occupational challenge was matched with a corresponding adaptive response and the data in the two groups were condensed. Finally, categories were created through abstraction, representing the condensing of the two content areas.
**Study V**

The methodology by Arksey and O’Malley (2005) was used in this scoping review, supplemented with the recommendations by Levac et al. (2010) as proposed by O’Brien et al. (2016). Articles were identified using a broad search term and with no limitation in study design. The following five steps were used, as recommended by Arksey and O’Malley (2005): 1) identifying the research question and relevant articles; 2) selecting the studies; 3) charting the data; 4) collating; and 5) summarizing and reporting the results. The 50 articles were read through in full and entered into a “data charting form” (Arksey & O’Malley, 2005). Information on the authors, publication year, nationality of the study participants, aim, study design, sample, how occupational adaptation was used, and the theoretical approach was charted. The data were first analysed in a descriptive numerical way to give an overview of the identified presumptive research gaps. Secondly, themes were identified according to different theoretical approaches and fields of application. Data were extracted from each article and entered into the data charting form. The identified themes according to how occupational adaptation was used were: “comparison with other model/approaches”; “guide to treatment process”; “instrument development”; and “presenting and/or discussing the results”.


<table>
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<td>Qualitative content analysis (manifest)</td>
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<td>Study IV</td>
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Table 2. Description of data collection and instruments
Ethical considerations

In all kinds of research, it is important to consider ethical principles. In this thesis, the participants consist of vulnerable persons: persons with disabilities, older persons, and persons who live in poverty. According to the Swedish law (SFS 2003:460) and ethical principles (World Medical Association, 2013), persons in vulnerable groups should be offered special protection in research. The ethical principle to protect the vulnerable can be seen as the principle of respect for autonomy, the principle of non-maleficence, or the principle of justice (Belmont Report, 1979). Persons in vulnerable groups should not be used as subjects of research if the information can be obtained in another way, which was not the case for the participants in the studies included in this thesis.

Studies II, III and IV were approved by the Regional Ethical Review Board in Linköping (Dnr 2000/00-248fhk, 2007/166-07 and 2015/207-31). In study I the data collection was carried out in St. Petersburg, Russia, by local physicians, as part of their continued education. There was no formal ethical approval, but the study was approved by the authorities at the local hospital. The participants gave their informed consent, and were informed that participation was voluntary and that they had the right to withdraw at any time without giving a reason. It was estimated that the study was carried out with no risk, with protection of the participants’ health, dignity and integrity in compliance with the Declaration of Helsinki (World Medical Association, 2013).

In Studies II-IV the participants were informed verbally and/or in writing, and informed consent was obtained according to Swedish Research Council ethical guidelines (Gustavsson, Hermeren & Petersson, 2011). The participants in Study II were older persons with disabilities who were receiving home rehabilitation. Even though clear information was provided about the voluntariness of participation, it could be difficult for persons in these situations to evaluate the situation and decide not to participate, or to withdraw. As the data collection in Studies II and III was conducted by the occupational therapists, there is a risk that participants may have felt obliged to answer the assessments in a specific way. Therefore, it was of utmost importance to stress the voluntary nature of participation in the study and the
possibility to withdraw without consequences. In Study IV the information and consent form were translated into the participants’ native language. The participants belonged to a low-educated, marginalized group, and were supported by a local non-governmental organization (NGO). It was the representatives from this NGO who asked the persons to participate and conducted the interviews, and as the participants were dependent on the NGO there is a risk that they may have felt obliged to participate. Therefore, it was seen as a challenge and a great need that the informed consent be designed in a very clear and simple way so that the participants did not feel forced to participate. The interviewer and interpreter were also given information, both verbally and in writing, that it was of great importance not to put pressure on the persons to participate and to instead emphasize the voluntariness.

All data in Studies I-IV were handled with confidentiality; the results were presented on a group level, and individuals could not be identified in publications or presentations. In Study IV, specific precaution was taken to ensure confidentiality. The interviewer and interpreter were present at all the interviews, and were therefore privy to a great deal of information; to further ensure confidentiality they were asked to sign a document, created by the research group leader, in which they swore to handle all information confidentially.

Studies II and III had a quasi-experimental design, with an intervention group and a control group; thus, it was essential to consider risk and harm. The participants in the intervention group received different treatment than those in the control group, but with no risk of harm. The participants in the control group were treated in line with well-tried professional experience. There was a certain risk involved in starting a group that could encourage a spirit of community and then simply disbanding it after the intervention period, as was seen in Study III. However, the expected advantages – that the participants would improve their health and obtain tools for managing an active life – were considered to outweigh the disadvantages. In Study IV it was representatives of a NGO who conducted the interviews and the interpretation. Because of their relationship with the NGO, there is a risk that the participants may have felt they were not free to speak frankly, or that they were forced to participate. On the other hand, the persons from the NGO, including the interpreter, were known to the participants and they had a good relationship. Both the interviewers and the interpreter had an academic education as well as
experience with development work or research. Taken together, it was estimated that the benefits compensated for the risks.

As the participants in Study IV, EU citizens with experience of begging, make up an extremely exposed and vulnerable group, there was a risk of a power imbalance in conducting this kind of research (Hughes, Hunter, Sheehan, Wilkinson, & Wirgley, 2010). Research on this group’s everyday occupations is limited, and their own descriptions of their experiences are lacking. Giving a voice to this group in research could also involve a strive for justice (Belmont Report, 1979) and non-discrimination (The United Nations, 2016); for this reason, the benefits were considered to balance out the risks.

Regarding ethical considerations for Study V, the literature review was conducted in an unbiased and well-considered manner, and required no formal ethical approval.
Results

The results are summarized and presented in relation to each study.

Summary Study I

The middle-aged women in this study have had a minor/mild stroke, and have few remaining disabilities. However, the participants’ subjective experiences of their disability and their ability in everyday activities were not in parity with the objectively observed assessments. Most of the women were dependent in ADL activities such as transportation, cleaning and shopping, which caused them to experience low self-efficacy, frustration and a loss of their roles as independent persons and housewives. They lived in unmodern flats with no adjustments, which had a negative impact on their ability to conduct everyday occupations, among which bathing was the most difficult.

Several reasons for dependence were found: overprotection, anxiety and insecurity, and overemphasizing their disability. Their relatives had not been given information about stroke and the importance of rehabilitation and its approach, and the participants showed signs of being overprotected. The participants were worried and insecure in relation to performing daily occupations, and thought it was dangerous to perform them. They had insufficient knowledge of their capacity, and showed signs of depression. The physical environment in the Russian city was not accessible to persons with disabilities, and neither was the public transport. This made them anxious and insecure, which negatively affected their community mobility.

The women showed more independence than their symptoms indicated, and there were limited signs of occupational adaptation. The environmental demands did not meet the women’s competences, and had a negative effect and caused maladaptive behaviour. One of the women had had a conflict with her husband, and was trying to hold on to the marriage by making her condition worse. Some other women had problems with their employers and wanted to obtain invalidity status, and were therefore afraid of recovering fully. Further, they did not heed the recommendations they received from the specialists at the hospital, and missed some treatment sessions.
Summary Study II

The quantitative part of the study was conducted with an intervention group and a control group. The groups were comparable with respect to age, gender, social situation and, to certain extent, physical problem areas, but the control group showed statistically significant better baseline values than the intervention group concerning FIM and IAM. At four-week and three-month follow-up, respectively, in the control group, high values remained with no significant change for FIM and most IAM activities, and there had been significant improvement in IAM cleaning \( (p = 0.025) \). In the intervention group, seven FIM activities showed significant improvement: bathing \( (p = 0.011) \), lower body dressing \( (p = 0.027) \), bed-to-chair transfer \( (p = 0.042) \), shower transfer \( (p = 0.016) \), cognitive comprehension \( (p = 0.034) \), expression \( (p = 0.034) \) and problem-solving \( (p = 0.014) \). In the intervention group, IAM activities showed significant improvement: locomotion outdoors \( (p = 0.011) \), simple meal preparation \( (p = 0.017) \), cooking \( (p = 0.017) \), small-scale shopping \( (p = 0.027) \), large-scale shopping \( (p = 0.039) \) and cleaning \( (p = 0.034) \). At three-month follow-up in the control group, one of eight SF-36 subscales, vitality \( (p = 0.033) \), showed a positive significant change. In the intervention group, four of eight SF-36 subscales showed a positive significant change: physical functioning \( (p = 0.010) \), role-physical \( (p = 0.006) \), vitality \( (p = 0.011) \) and mental health \( (p = 0.020) \).

The qualitative part of the study was conducted with persons from the intervention group. The results showed that it was important to the participants to manage their daily occupations themselves, and that they also found it vital to live at home. They felt happy and proud to manage everyday activities themselves, and showed satisfaction at their performance. Their adaptive responses were mostly applied in their homes, and included changing strategy when washing the dishes: putting the dish brush in the affected hand and holding on with the other, sitting a while before standing up, and using an assistive device like a wheelchair, walking frame or magnifying lamp. There was also a need to manage occupations in society, using adaptive behaviour when shopping or asking for help in a shop.
Summary Study III

The quantitative part of the study was conducted with an intervention group and a control group. The intervention group showed statistically significant improvements in general health variables such as vitality \((p=0.01)\) and mental health \((p=0.03)\), and positive trends for psychological well-being (but without reaching statistical significance). The control group did not show statistically significant improvements in either general health variables or psychological well-being. There were no statistically significant differences between the intervention group and the control group, but the groups were not fully matched.

The qualitative part of the study was conducted with the intervention group. The health-promotion group meetings, and the other group members, gave the participants important social meaning. It put social pressure on them to get out, to be on time, and to participate and share in solving practical problems in their everyday life. The use of humour in the group conversation, and a tacit agreement to not talk about illnesses, had a positive impact on the group atmosphere. Getting advice and tips for solutions to practical problems from a peer was valuable, and may have an impact on adaptation in occupations in everyday life. The group leaders also had a positive impact on the participants’ perception of their own importance and competence. The group leader respected the participants, listened to them, and upgraded their life experience. They supported the participants’ self-esteem as active persons who were able to do, be and become; i.e., develop.

There were several examples of occupational adaptation and changed adaptive behaviour. Concerning safety at home and fall prevention, the participants used anti-skid protection under rugs, avoided standing on chairs, and adapted the kitchen environment to make it safer, by not placing things they used often too high up in the cupboard. The importance of everyday occupations like shopping, cooking and cleaning was upgraded; i.e., the participants realized the importance of and the connection between what one does and one’s health. They became aware of the importance of exercising and keeping fit to have the strength to manage everyday occupations. Some participants called attention to the needs of older persons; i.e., telling the bus driver to take it easy. They changed their approach to and thoughts about themselves, seeing themselves as active persons, and able to speak up for themselves.
Summary Study IV

The results showed that the participants experienced several difficult occupational challenges, which they responded to with different adaptive responses. They lived their lives with a constant occupational challenge to find ways to adapt occupations for their survival. Further, the results showed that the begging situation itself was an occupational challenge that implied a risk of harm from passers-by and a feeling of shame and anxiety. To manage this situation, the persons often prayed, cried or adapted their behaviour, made themselves “smaller” or “invisible”, or pretended not to see people who were insulting them. But there were also examples of the persons forcing themselves not to think about the hard part of their life and using laughter and joking to feel better. The begging situation was boring and sedentary, but was also physically demanding. To manage this situation, the place for begging was adapted with something to sit on, made from a bag or box or their clothes. They also used adaptive strategies of standing up now and then and taking a walk. One person described exercising to keep fit. To endure the boring situation, as a beggar, the persons thought of their children, their former life, happy things, or the loans they had. Another occupational challenge was that the begging gave too little money and the participants had to find alternative strategies for getting money, such as collecting empty cans or selling a street paper. For part of the year they had no shelter and had to sleep in cars or tents, outside in the forest, or in a pillbox, which was a difficult occupational challenge. To manage this situation and not be detected, the participants used different adaptive strategies such as making themselves “invisible”, behaving in the “right” way without laughter or loud sounds. They also avoided building a windbreaker or making a fire, and were careful to keep the area clean in order to not annoy people in the surrounding society. To keep warm, they slept very close to each other. They lacked possibilities to cook, and had to adapt by eating cold meals sitting somewhere outside, for example, in a park. But their adaptive response in this situation also involved strategies like not eating at all, only eating cookies, or just having a drink. The last occupational challenge found being away from one’s family, especially the children. To manage this situation, many participants described the importance of their mobile phone for keeping in touch with their children. The possibility to stay in contact with their children was a way to stay in their role as parent and, hence, strive to partly keep control over their home situation.
Summary Study V

Two distinct theoretical approaches related to occupational adaptation were found: one based on Schkade and Schultz, and the other on Kielhofner. There were also a distinct group of articles with a mix of theoretical approaches or no theoretical approach at all. The occupational adaptation by Schkade and Schultz was used for purposes of comparison with other frames of reference, such as the biomechanical or well-tried professional approach. Schkade and Schultz do not emphasize formal assessment as an important part of intervention. However, one article described an assessment tool based on the Schkade and Schulz models, i.e. the Relative Mastery Measurement Scale (RMMS). Concepts such as adaptive response behaviours, occupational challenges, adaptation to change, relative mastery, press for mastery, and adaptation as an ongoing process were used for presenting and/or discussing the results in the articles. The theoretical approach based on the Model of Human Occupation by Kielhofner was used as a guide to the different parts in the treatment process, except the intervention. Three instruments assessing occupational adaptation were used in the research articles: The Occupational Performance History Interview (OPHI), the Occupational Case Analysis Interview and Rating Scale (OCAIRS) and the Occupational Self-Assessment (OSA). Relationships between concepts like motivation, roles, habits and performance capacities, and the environment, occupational transitions and adaptation strategies were used for presenting and/or discussing the results in the articles. Only one article discussed negative adaptation, explaining it as restriction in developing new occupations or the limitation of occupational engagement, and one article used the theoretical frame in relation to health promotion. Several articles also mixed different kinds of theoretical approaches, and some used the term occupational adaptation with no theoretical explanation at all. Apart from its use in occupational therapy, the concept is found in the context of work with patients with schizophrenia and bipolar disorders. The category “good occupational adaptation” was used when the patients worked at a good or acceptable level, and “low occupational adaptation” when they worked with difficulty or did not work at all.
Discussion of results

I have chosen to focus this discussion on occupational adaptation (OA) in relation to three new research questions with the ambition of synthesizing how the phenomenon of occupational adaptation manifests itself in the five studies in this thesis.

The results from the five studies will be discussed with support from previous research and the theoretical framework chosen for this thesis. The quantitative results from Studies II and III will not be discussed further.

The three new research questions are:

- What influences adaptive response among persons in vulnerable life situations? (Studies I, II, III, IV)

- What occupational challenges and adaptive responses are shown among persons in vulnerable life situations? (Studies I, II, III, IV)

- How is occupational adaptation (OA) described and applied in a theoretical context? (Study V)

The discussion begins with personal and occupational environmental factors that have an impact on adaptive response, followed by a discussion of occupational challenges and adaptive responses in vulnerable life situations. In the last section, the application of occupational adaptation (OA) as a theoretical frame will be discussed.
Factors influencing adaptive response among persons in vulnerable life situations

Personal factors that influence adaptive response

The theoretical frame of occupational adaptation assumes that the ability to adapt leads to enhanced occupational performance. The results in this thesis (I, II, IV) show that a person can be so restricted by disabilities or stressful life situations that personal factors (and the relation to environmental factors) must sometimes be strengthened before the person has the ability to adapt.

The older persons sought balance amid their occupational challenges, decreasing functional ability (desire for mastery), and the occupational environment’s demand for mastery (II-III). In the occupation-based health-promoting programme (III), the participants developed adaptive strategies to manage everyday life at home and in society. Managing the occupations, they wanted, gave them a feeling of control, which led to positive feelings of independence, mental health, and vitality. They also, to some degree, achieved a healthier lifestyle by exercising and considering safety at home including fall prevention, and in doing so acquired a reserve capacity by reducing challenges. These findings are in line with Grundy’s (2006) suggestion that some of the physical and psychological challenges older people may face can be modified.

Personal factors can be observed from an objective perspective, but there is also a subjective perspective, from “inside”, which must also be considered if adaptation is to be supported (Kielhofner, 2008). The women in Study I experienced that they were more dependent in everyday activities than the stroke evaluation indicated, and seemed to be unsure of their own capacity. This discrepancy between objective ability and subjective experience of ability can have several explanations. It could be a question of gender, lack of social support, or economy. When the women were asked about views regarding the causes of limitations in their occupational performance, they discussed their subjective experiences. Only the women themselves knew about their experiences from “inside”, and if this perspective had been considered in the rehabilitation process it might have offered a broader understanding of their performance. These reflections are supported by Prigatano (2011), who found that by identifying a stroke survivor’s subjective
experience or phenomenological state, it was possible to better understand what their major frustrations were in life, which better benefits the rehabilitation process. If a person loses an occupational role, they may lose their need for adaptation. The results indicated that the women had lost an important role in the family, and were unable to adapt to their new life situation (I). This result can be compared with the conclusion by Fallahpour, Jonsson, Joghataei, Nasrabadi, & Tham (2013) that participants in Iran experienced difficulty when losing competence and an important role in the family after stroke. They accordingly had difficulty adapting to these circumstances, and the consequences were that they experienced that they were not “living their lives”.

In a study by Johnson (2006) in which OA was used to describe homelessness, it was discovered that personal factors were an important but overlooked area to address. When one’s personal factors were strengthened, it was easier to meet the demands of the environment. The vulnerable EU citizens who beg in Sweden may not be homeless in their home country, but could be seen as “temporarily” homeless while in Sweden. For this reason, comparisons with people in homelessness are relevant. Personal factors were not in focus in Study IV, but a recent study has shown that the vulnerable EU citizens who beg in Sweden showed bodily pain and stress symptoms (Wagman, Björklund, Johansson & Fristedt, 2017), and likely symptoms that need to be treated. The participants in Study IV described temporarily worsened health, for example due to not eating or sitting still for long hours in cold and windy weather, in their attempt to improve their situation, including their own and their relatives’ health, from a longer perspective. To address the problems of deteriorated health while these persons are begging in Sweden, a health-promoting programme could be addressed (Wagman, Björklund, Johansson & Fristedt, 2017). Interventions could focus on strengthening the personal factors, such as strengthening the body or managing stress, or developing more healthy habits such as eating nourishing food. This is unlikely to help their primary problem of poverty and social exclusion in their home country, but will hopefully lead to less deteriorating health while in Sweden.

It can be added that the personal and environmental factors, at both the individual and the societal level, are so interwoven that it is difficult to discuss one without including the other. In the next section, occupational environmental factors are further elaborated on.
Occupational environmental factors that influence adaptive response

Physical environments, at home and in society, that are accessible to all people irrespective of age or disability are vital for enabling occupational performance. A physical environment that is not accessible places a higher demand on the person and makes occupational adaptation more difficult. The women in Russia (I) lived in a demanding physical environment, both at home and in the community. If they had lived in an adapted home environment and had access to technical devices, they could probably have independently managed their daily occupations such as bathing, cooking, cleaning and washing. Hovbrandt, Fridlund and Carlsson (2007) showed that if the physical environment is too demanding, with barriers that are difficult to overcome, it can hinder or even stop persons from performing occupations.

The physical environment at home, and access to technical devices, supported the older persons’ occupational adaptation (II, III). Even if most of the surroundings were accessible, there were also obstacles. The use of public transport (I, III) and the weather during the winter (III) were stressful factors that decreased the possibility for social participation (Annear, Keeling, Wilkinson, Cushman, Gidlow & Hopkins, 2014; Wretstrand, Svensson, Fristedt and Falkmer, 2009). These are important factors that need to be addressed in order to not constrain the older person’s independence in societal life. To conclude, persons with low functional capacity are more vulnerable to environmental demands. If the environmental demands decrease, the potential for an adaptive response and occupational performance increases (Hovbrandt, Fridlund & Carlsson, 2007).

The women’s spouses (I) overprotected them, and did not support their adaptation or occupational performance. These findings are in line with Thompson, Galbraith, Thomas, Swan and Vrungo (2002), who found that a feeling of overprotection was associated with dependency. The spouses in our study (I) would most likely have benefitted from information about stroke and its consequences in daily occupations, and professional support would likely have been useful for their spouses as well. This would have been an easy and relatively cheap intervention that could have supported both the stroke survivors and their relatives. Poor social support and a decreased network have been shown to be connected to depression (Northcott, Moss, Haffison & Hilari, 2016), which was also the case for the women (I). This may also
explain some of the results and the women’s lack of adaptation.

The results also showed that professional support was very important (III). The occupational therapists who were the facilitators for the health-promotion group (III) used their competence regarding the relationship between occupation and health to promote “the process of enabling people to increase control over and improve their health” (WHO, 1986). The peer group and the facilitator developed into a strong community, supporting each other and sharing experiences from their own lives, which benefited their occupational adaptation successful. Similar results were found by Mountain (2010), who found that a combination of individual and peer support, offered through a health-promotion intervention, was beneficial for translating skills, learned in safe settings within the group, into real-life experiences. Altogether, health-promoting group interventions, led by a professional and stimulating peer support, seem to be a successful way to promote vulnerable persons’ occupational adaptation.

Occupational environment is defined as the physical, social and cultural context in which work, play/leisure and self-care occur (Schultz, 2014). It can be questioned whether occupation can be categorized into only three categories. Hammel (2009) argued that this kind of categorization is overly simple, value-laden, individualized, and taken out of context, since many meaningful occupations do not fit this categorization. Taking an example from Study IV, how could the category of work and play/leisure be understood and used in people who have begging as their way of earning a living and who beg seven days a week with no leisure time? There is a need for other kinds of occupation categorizations for these types of groups.

The occupational environment is explained as the demand for mastery, but the question is whether there are any facilitating factors in the environment to consider. However, Schultz (2014) argues that a strength of the occupational adaptation theoretical frame is its compatibility with terminology from the ICF (International Classification of Functioning, Disability and Health, WHO, 2001). Does this mean that Schultz (2014) claims that the ICF concepts could support the occupational adaptation frame and offer a deeper understanding of the theoretical constructions? This is not obvious in the literature, but may be something to consider in developing occupational adaptation as a theoretical frame in the future.
As explained earlier, the environmental factors in the theoretical frame of occupational adaptation are explained as the physical, social and cultural context (Schultz, 2014). This is not sufficient for understanding and interpreting the results of this thesis, however. The vulnerable life situations elaborated on in the thesis are so complex that the individual level of the environment only partly explains them. There is a lack of definition and explanation of the social, economic and political levels of the environment in OA. We live in an unequal world with unequal access to opportunities, power and resources for people in different social positions, as especially seen in Study IV in this thesis. Hammel (2015) suggests that, when occupational therapy addresses the needs of people who are socially excluded or vulnerable, there is a need for theoretical explanations that go beyond the individual level. The occupational adaptation theoretical frame is not sufficient to guide occupational therapy with vulnerable persons whose lives are influenced by social and structural conditions beyond their individual control. Taking an example from Study IV: when analysing the occupational challenge-adaptive response, the OA fails to attend to how being poor is determined by broader socio-economic and political factors. These factors, such as the lack of employment or being socially excluded, are largely beyond the individual’s control.

The use of a socio-ecological perspective (McLeroy, Bibeau, Steckler & Glans, 1988; National Institutes of Health, 2005), which considers not only the individual characteristics but also the context in which the person lives, could be a tool for applying a holistic overview of a vulnerable life situation and improving an occupational perspective on health. Using a socio-ecological perspective means taking into account the community level for identifying health problems/situations, i.e.: What formal or informal social norms exist that have an impact on health behaviours? What rules and regulations constrain or promote health behaviours? What state policies and laws regulate health action and practices? There are many social factors, for instance social determinants of health, that have an influence on occupational performance and thus need to be considered as the complex, integrated, and overlapping social structures and economic systems that are responsible for most health inequities (Commission on Social Determinants of Health, 2008). As health and health inequalities are primarily determined by broader structures within society, occupational therapists and other health professionals should pay more attention to the contexts in which health is
created and take into consideration the social determinants (Hocking, 2013). Theoretical and empirical studies on inequality in health (Gerlach, 2015; Hocking, 2013) and the occupational perspective in public health (Moll, Gewurtz, Krupa & Law, 2013) are largely lacking in occupational science and occupational therapy.

**Occupational challenges and adaptive responses among persons in vulnerable life situations**

The occupational challenge for the Russian women who had suffered a mild stroke was to manage everyday activities, at home and in society, despite their disability, societal attitudes, and limited rehabilitation resources (I). A person’s response to an occupational challenge might not always be adaptive, positive or healthy. The women in Study I seemed to overemphasize their dysfunctions, and showed limited signs of adaptation. In this case, the women’s competences could not meet the environmental press and had a negative effect, causing so-called maladaptive behaviour (I).

The occupational challenge for the older persons was to manage everyday occupations, at home and in society, independently despite ageing and disability (II, III). The findings revealed that the older persons could identify and create adaptive strategies themselves (II, III), consistent with findings by Bontje, Kinébanian, Josephsson and Tamura (2004). But the findings also showed that they appreciated receiving inspiration for strategies and hearing about experiences of adaptation from their peers and the facilitator in the health-promotion group (III) in order to help change their approach and thoughts about themselves as competent persons. Personal meaningful and challenging occupations were in focus in the interventions (II, III). Some of the results showed that the participants became aware of the relationship between occupation and health, and that the importance of everyday activities was more acknowledged (III). Still, the meaning dimensions were not in focus in the results as a drive for the older persons’ adaptation to seek effective strategies to manage problematic situations and to be prepared for change in everyday life. A reason for this could be that the deductive analysis did not have this focus. The results also indicated that the development of an adaptive response is a positive way to develop healthy habits. The participants became aware of the importance of exercising and keeping fit in order to have the
strength to manage everyday occupations (III). Lifestyle factors are important, and exercising the body at high ages is vital for managing everyday life demands. Still, it is important to keep in mind that social determinants are a strong force, and the socio-economic factors in a person’s living conditions continue after retirement (Lennartsson & Heimerson, 2012). Poor health, pain, and mobility problems are more frequent among older persons with a blue-collar background than in those with a white-collar background. These disparities were found between the intervention group and the control group in Study III.

The occupational challenges for the participants (IV) was to manage everyday activities abroad, despite highly limited resources, societal attitudes, and being away from their family. First, the results demonstrated that being homeless and a person who begs entails living in a demanding environment in the extreme. If the basic prerequisites are not in place, for example possibilities to perform one’s personal hygiene, cook and sleep, it is demanding to manage everyday occupations and to adapt. One’s obligation as a parent and family member was the strongest force making the participants travel abroad and beg as a source of income. Even if they were away from home for quite long periods, they tried to maintain some level of control over the home situation and keep up their occupational role as a parent, despite the long distance and people around them seeing them only as “beggars”.

The results showed that the participants (IV) adapted their behaviour to manage their hard everyday life while in Sweden. One strategy in difficult situations was to “reduce” themselves and make themselves as “invisible” as possible. One can wonder, what happens with a person’s self-image and self-esteem when using such strategies? Homeless people in the UK described feeling dehumanized and reduced to a forsaken physical object on the street (Hodgetts, Radley, Chamberlain & Hodgetts, 2007). Persons begging in Sweden had similar experiences, feeling invisible to the thousands of people passing by every day without paying them any attention (Gaga, 2015).

There were other examples of the participants changing their thoughts to endure the hard situation, i.e. thinking of positive things and using laughter and jokes. This behaviour as a way to deal with stress was also found by Gaga (2015). Another often used adaptive strategy for saving money was to reduce one’s eating or to not eat at all. It can be questioned whether this is a positive
or negative adaptation. On the one hand, the participants could save more money if they reduced what they ate, and the money could have health benefits for their children. On the other hand, by reducing their food intake the participants risked their own health. The risk for dietary insufficiency is a known problem amongst homeless people, and is also associated with health problems (Sprake, Russell, Barker, 2014).

Religiosity was manifested in the participants’ daily lives (IV) and they often prayed. This was a source of consolation and hope, and had a positive impact on their adaptation. However, religion “may also serve to sustain the status quo and preserve order in society by encouraging people to accept and bear suffering without complaining, as a necessary condition of their lot” (Ikiugu & Pollard, 2015, p. 18). From the participants’ reasoning, we can interpret that they were extremely unsatisfied with their situation. Whether they experience their adaptive responses as positive or negative is solely up to them; in the interviews, we did not ask this. However, occupational adaptation in poor and socially excluded populations is an unexplored area in research and something that needs to be developed.

**Occupational adaptation applied as a theoretical frame**

In this thesis, the modified and simplified version (Schultz, 2014) of the original theoretical frame from 1992 has been used (Schkade & Schultz, 1992). Since 2003 it has been called a theory by its original authors (Schkade & Schultz, 2003), but why and how this shift took place from a frame of reference to a theory is unclear and is not fully supported by research. The theory offers a complicated explanation of occupational adaptation at different levels and can be hard to understand, and has been criticized from this perspective (Bouteloup & Beltran, 2007). There is also a lack of definitions, or vague definitions, of core concepts – such as personal factors, occupational challenge, occupational role expectations, and mastery. Further, occupational adaptation is not defined or explained clearly, and the definition of occupation has not been developed since the original article from 1992. The meaning component and the importance of personal meaningful occupations are obvious in the practice model, but are not clear in the theoretical frame or the occupational adaptation process. To sum up, the shortage of definitions of concepts makes it difficult to understand what the theoretical frame stands for, and it is necessary to supplement it with definitions from other
models/theories, in line with Walker and Avant’s (2011) suggestions for theory development. OA would benefit from a thorough definition of core concepts, an updated definition of occupation, and a categorization of occupations; the definition of occupational environment, including societal levels, should also be developed.

In many of the articles (V), Schkade and Schultz’s theoretical approach was used to guide treatment, probably because it is a practice-based model related to the theoretical approach. However, only one associated instrument is described (George, Schkade & Ishee, 2004), and this is likely seldom used because it was not referred to in other articles. Schultz (2014) asserts that practice seems to be driven by instruments rather than theory. Her opinion is that theory should instead guide practitioners’ thinking; therefore, there is no instrument developed with an occupational adaptation theoretical approach. Even if her argument has a point, an instrument operationalizes the concepts and would make the theoretical approach less abstract and easier to understand.

It is surprising that only one of the articles included in Study V illustrated negative adaptation, similar to previous literature describing adaptation that led to a feeling of lack of coherence, purpose, meaning or unhealth as maladaptation (Ikiugu 2007). Schultz (2014) defines the negative feeling of relative mastery as dysadaptive, but does not develop the concept further. Consequently, the research on negative adaptation and its implications is sparse, implying a research gap. This can perhaps be compared with the lack of research on occupations that negatively influence health and well-being. This was not elucidated in research for many years, but is now under development (Stewart, Fischer, Hirji & Davis 2016; Twinley, 2013). Hopefully, the same development will take place when it comes to the concept of maladaptation.

Scafia, Reitz, and Pizzi (2010) recommend occupational adaptation as a suitable occupational therapy conceptual model for health-promotion practice. It is thus also surprising that only one article was found in the scoping review (V) that was connected to health promotion (actually Study III from the present thesis). The results from Study III imply that occupational adaptation is a suitable approach to promoting health and well-being and optimizing an occupational life in older age. Further research is needed, though, to provide
more scientific knowledge on the link between OA and health promotion.

Most of the studies were conducted in the US, and the others in the English-speaking Western world. This means that we have no idea whether the occupational adaptation theoretical frame is applicable in different parts of the world. Thus, further research related to other cultures or ethnical settings is warranted.

Occupational adaptation is mostly used in research within traditional areas such as healthcare settings, even if exceptions can be noted in recent years. According to Schultz (2014), the overall goal is to fully participate in society, and personally meaningful and relevant occupations play an important role as facilitators for participation. It can be questioned whether this is applicable for people living in poverty and exclusion. People’s socio-economic status and political context set the boundaries for their possibilities to perform meaningful and wanted occupations and participate in society (Madsen, Kanstrup & Josephsson, 2016; Wilcock & Hocking, 2015), which implies the need for another theoretical approach than OA for those who are socially excluded.

Many critical reflections on, and shortages of, the OA have been elucidated. With this in mind, it can be questioned why this theoretical frame was used in this thesis; it was used as it has a strong and unique focus on occupational adaptation and its impact on occupational performance. No other occupational therapy model has this clear focus. Even if the theory is complicated, recent articles (Beagan & Hattie, 2015; Connell, 2015; Luck & Beagan, 2015; Nastasi, 2015; Nayar & Stanley, 2015) imply that it is still in use and is useful, at least from a Western perspective. Thus, it is also relevant to build a foundation for its further development through research, as in the present thesis.

The results indicate the importance of applying existing theoretical frames/models in new areas, which has been done systematically in this thesis. Like most theoretical frames/models, OA has both pros and cons that the user/therapist must be aware of. Criticism has been raised regarding OA in relation to socially excluded groups, but it can be used with confidence in more traditional rehabilitation areas.
The methodological considerations for this thesis will be discussed in relation to each study. Before turning to each of the studies, however, I will discuss some general issues.

A quasi-experimental design (Kazdin, 2003) was applied in Studies II and III, with an intervention group and a control group. History effect, maturation and selection biases are common threats to internal validity in this method, and consequently for Studies II and III. History effect relates to any events in the participant’s everyday life that may be regarded as results but are outside the intervention. Maturation relates to processes changing over time within the subject, such as growing older or becoming more tired. Selection biases relate to systematic differences between the groups before the manipulation or intervention (Kazdin, 2003).

In recent years, statements from the Consolidated Standards of Reporting Trials (CONSORT) have been used to improve the quality of conducting RCTs (Moher, Schulz & Altman, 2001). The Transparent Reporting of Evaluation with Non-Randomized Designs (TREND) checklist (Des Jarlais, Lyles & Crepaz, 2004), consistent with CONSORT but suitable for nonrandomized designs, could have been a possibility for improving the quality of the quasi-experimental studies in this thesis. These studies were conducted in a systematic way, but if a protocol had been used this may have improved their structure, made every step in the research process more transparent, and improved their overall quality.

Three of the studies (I-III) were conducted using combined methods (Morse, 2003). In these studies, quantitative and qualitative data were collected and analysed separately, making up two parts of the findings. These findings were then combined (Moran-Ellis et al., 2006), triangulated, for a more supplementary picture (O’Cathain & Murphy, 2010).

Studies I-III had mostly female participants, which is in parity with several group intervention studies (Mountain, Mozley, Craig & Ball, 2008; Clark et al., 2012; Zingmark, Fisher, Rocklöv, & Nilsson, 2014). The inclusion criteria for participants in Studies II and III were people over 60 and 65 years
of age, respectively. An explanation for the skewed recruitment is that women in Sweden live 4.6 years longer, and visit healthcare more often, than men (National Board of Health and Welfare, 2004). This means that there are more women available for recruitment via primary care contexts. More men would likely be found by advertising in other contexts (Anderson, Seff, Batra, Bhatt & Palmer, 2016), such as places where men tend to congregate like local sport clubs, or in a local paper; therefore, it can be questioned whether primary care was the best context for recruitment. This is an aspect to consider in future health-promotion studies.

The qualitative part of the studies (II and III) and the qualitative study (IV) were conducted using a deductive approach (Elo & Kyngäs, 2007). This was a given choice of method considering the aims, and as the studies were based on a specific theoretical frame. Study IV was one of three studies in the overall project “Perceptions of everyday life, health and future in vulnerable EU citizens”. The other studies in the project were analysed with an inductive approach, but in Study IV the focus was on capturing the occupational challenges EU citizens were exposed to and what adaptive responses they used; therefore, a deductive approach was applied. A weakness of the deductive approach is that the theory informing the analysis could be biased; it might be easier to find data that support the theory than data that do not. One way to prevent this potential bias is to involve more than one researcher in the analysis process. Further, there may be a risk of missing important data and of the data being shallow. A way to prevent this weakness could be to also choose data that do not fit into the theoretical categorization frame.

**Study I**
The recruitment and data collection were conducted by two physicians who were also occupational therapy students and staff at the rehabilitation department. This could be a threat to the study’s validity, since the participants may have felt obliged to respond in a certain way. The data collection was also conducted in two different contexts – in the participants’ home environment and at the hospital – which may also be a threat to the study’s validity. The reliability and validity of the ADL Staircase (Sonn & Svensson, 1997) have been tested in an outpatient sample by Jakobsson (2008), who conducted a validation of the scale and found an acceptable construct validity and reliability, but that it was most suitable for older people. In this study, the instrument was used in interview form and was
not translated into the Russian language or culture. This could be a threat to the study’s cultural validity, which concerns how the instrument addresses socio-cultural influences and how the participants make sense of the items and can respond to them (Solano-Flores, 2011). However, this might have been counteracted by the fact that the interviewers were Russian. The Frenchay Activities Index (Wade et al., 1985) is an old instrument, but is still common in stroke rehabilitation (Norlander et al. 2016). For this study, the index was adapted to be able to identify the most common occupations of middle-aged women living in a Russian city, and in order to reach the aim. When adapting an instrument, there is a risk that the validity and reliability (Kazdin, 2003) will be lost. Informal observations, field notes, conversations with relatives, and discussions at team meetings gave additional information about the participants’ ability and dependence. This information was collected without systematics and in no specific format, but was useful in the analysis of the results. It can be questioned how the data were analysed, since there were 19 participants in a mixed-cause group. This group could have been analysed further to capture several causes of the women’s perception of independence. The total sample was small and limited to women in St. Petersburg, and thus cannot be generalized to other groups and societies. Taken together, this study had several limitations and potential threats to its validity. However, it gives an idea of the difficulties women in Russia experience after a mild stroke. This is an unexplored area in research and there are no other studies, written in English, to be found on activities in daily living among women in Russia after stroke.

**Study II**

In this study, the external dropout of presumptive participants was extensive, which may have affected the results and the possibility to generalize them (Kazdin, 2003). The cause of the dropout was that the persons were old, and in some cases very old (80+), with several and serious diseases. The issue of recruitment and retention is a known problem in the older population (McHenry et al., 2015; Ridda, MacIntyre, Lindley, & Tan, 2010).

The Functional Independence Measure (FIM) (Granger, Hamilton, Keith, Zielezny, & Sherwin, 1986) was used because it is a well-known instrument and its validity and reliability have been tested in many studies with sufficient results (Dodds, Martin, Stolov & Deyo, 1993; Pollak, Wendy
Rheault, & Stoecker, 1996). However, the instrument was not sufficiently sensitive for the control group, as there was a ceiling effect (Kazdin, 2003) already in the pre-assessment; this may be a threat to the study’s internal validity. The Instrumental Activity Measure (IAM) (Grimby et al., 1996) was used because it was a natural complement to the FIM. The instrument has shown sufficient reliability in a couple of studies (Daving, Andrén & Grimby, 2000; Grimby et al., 1996). The SF-36 (Sullivan, Karlsson & Ware, 1994) is also a well-documented instrument and has sufficient validity and reliability (Sullivan, Karlsson & Ware, 1995), and has been tested with good results in the older population (Brazier, Walter, Nicholl & Kohler, 1996; Lyons, Perry & Littlepage, 1994; Walters, Munro & Brazier, 2001).

The occupational therapists who treated the participants as patients were also the ones who performed the data collection, in both the intervention group and the control group. It can be questioned whether this is a form of bias and could have been conducted differently. However, the FIM was accomplished through observation in everyday occupations and it would have been unnatural for someone else to do it. The IAM and SF-36 were accomplished through interviews, and could have been done by others. However, the study had limited resources and was designed this way for practical reasons. To strengthen interrater reliability, the first author and the included occupational therapists together went through all the instruments in relation to content, manual, and scoring.

The study had a small sample, which implies low statistical power and a higher risk for type-II error (Kazdin, 2003). One way to compensate for this was to supplement the quantitative data with interviews with participants from the intervention group. Due to the participants’ health condition, the occupational therapists estimated that five of eight participants would be able to accomplish an interview. Out of these five, one declined and one died, meaning that only three participants were left. This was a small sample, and the interviews were rather short. To strengthen the study’s credibility (Kazdin, 2003), participants from both the intervention group and the control group could have been interviewed, and rich data could have been obtained by using a narrative approach (Creswell, 2013). Instead of letting the occupational therapist decide which of the participants were suitable for interviews, the researcher could have done the sampling and invited all the participants to be interviewed.
**Study III**

The SF-36 (Sullivan, Karlsson & Ware, 1994) and Life Satisfaction Index-Z (LSI-Z) (Wood, Wylie & Sheafor, 1969) were used because of their strength as outcome measures in the Well Elderly Studies I and II (Clark et al., 1997; Clark et al., 2012), and for their confirmed reliability and validity. Unfortunately, the results of the LSI-Z were not comparable with those from former studies (Clark et al., 1997; Clark et al., 2012), as they used a three-point scale and this study used a five-point one. The Meaningful Activity Participation Measure was chosen because it is a reliable and valid measure (Eakman, 2007) of meaningful activity, and as shown in Eakman, Carlsson and Clark (2010), it has a strong relation to psychological well-being. The instrument was translated from English into Swedish, and it was difficult to find concepts that had the same meaning and values across the cultures (Streiner & Norman, 2008). Some concepts were difficult for the participants to understand, and it was also difficult for them to score the importance of some of the occupations, which may have impacted the internal validity. The instrument was piloted with two persons, but could have been tested on a larger scale before being used in the study. The SF-36 was analysed parametrically even though the scale is on an ordinal level, as previously suggested (Wright & Linacre, 1989).

The occupational therapists who served as the group leaders were also the ones who performed the data collection. For the control group, the data collection was conducted by the thesis author. However, the study had limited resources and was designed in this way for practical reasons. To strengthen the interrater reliability, the thesis author and the occupational therapists who served as the group leaders went through all the instruments in relation to content and manual, and in order to enable consensus in scoring.

The sample size of the study was small; the 50 participants called for based on the power calculation were not possible to recruit, indicating a possible threat to the study’s statistical validity (Kazdin, 2003). However, some of the quantitative results showed significance, which could imply that the sample was sufficient. Further, the quantitative data were supplemented by interviews to catch other aspects of the overall results and to strengthen the study’s overall validity.
The groups were matched by age and gender, but not socio-economic situation. The sample for the control group was an urban area with flats, and was chosen because of its similarity with the geographical area of the intervention group. More participants in the control group lived with a spouse and had had a white-collar profession than in the intervention group. It is known that socio-economic factors in living conditions continue after retirement, and blue-collar workers have, for example, higher poor self-rated health and problems with pain and psychological distress than white-collar workers do (Lennartsson & Heimerson, 2012). The consequences of this was that the groups were not equal and were difficult to fully compare.

The interviews were held in focus groups (Krueger & Casey, 2015) to get the participants’ view on the health-promoting programme they had participated in. Focus groups were a suitable method, as the group was homogenous and the participants knew each other. On the one hand, the participants could express their thoughts and behaviour freely because they felt safe with each other. On the other hand, this could have a hampering effect depending on the atmosphere in the groups. The group situation reduced the moderators’ power and empowered the participants to become the “experts” instead (Dahlin Ivanoff Hultberg, 2006; Jayasekara, 2012). With reference to Coenen, Stamm, Stucki and Cieza (2012), a focus group is preferable to individual interviews if the purpose is to explore comprehensive data on the participants’ perspectives. Using an interview guide with clear questions, and audiotaping and transcribing it, strengthens the study’s credibility (Krueger & Casey, 2015).

Study IV
The main trustworthiness issues for this qualitative study concerned the sampling strategy and data collection (Elo, Kääriäinen, Kanste, Pölkki, Utrianen & Kyngäs, 2014). The participants were sampled through an ecumenical NGO that supported them with some meals, showering possibilities, clothing, shelter, and a spirit of community. The piloted interview guide was semi-structured, but follow-up questions were often used. Representatives from the NGO conducted the interviews and interpretation, and had experience from development work or research. The interviewers knew the participants, which may have had both positive and negative effects. On the one hand, the interviewers could create a relaxing atmosphere and help the participants to open up; on the other, they might have been too familiar
with the participants’ everyday life that they missed important details and attendant questions, which may have been a threat to the study’s trustworthiness. The interpreter was a native Romanian NGO member and was not a formally educated interpreter, which may have affected the translation. There is a risk that the participants may not have felt free to talk frankly because of their position of dependence on the NGO. On the one hand, all the above-mentioned concerns could be a threat to the study’s credibility (Elo, Kääriäinen, Kanste, Pölkki, Utrianen & Kyngäs, 2014); but on the other, this gave us the possibility to get in touch with this vulnerable group. According to Liamputtong (2007), vulnerable groups must be especially protected from harm in research, and a safe approach in contacting participants is an essential part of this. Persons who are held in high respect and wield authority may help a researcher gain access to a group; it was therefore important to cooperate with the NGO. Another essential aspect of research among vulnerable groups is the need to build trust and rapport; the persons from the NGO, including the interpreter, were well known to and highly respected by the participants. The analysis process is described in both text and tables, which may strengthen the study’s dependability (Elo, Kääriäinen, Kanste, Pölkki, Utrianen & Kyngäs, 2014). The results contain quotes reflecting the participants’ voices. However, in the translation process from Romanian to Swedish and back to English, important meanings may have been lost; accordingly, this may have had an impact on the study’s credibility. This is one of several challenges involved in conducting research including ethnic minorities, as discussed by Morville and Erlandsson (2016).

Study V

In scoping reviews, there is no quality appraisal of the included articles; however, Levac, Colquhoun, & Brien (2010) and O’Brien et al. (2016) argue for the development of scoping study methodology and the need for a quality assessment of the included studies. A scoping methodology was chosen for this thesis because of its strength in providing a rigorous and transparent method for mapping areas of research. This method provided an overview of the research findings and identified the research gaps (Arksey & O’Malley, 2005). One of the search criteria was articles published from 1992 until now, which meant that many of the articles were quite old. The reason for choosing 1992 as the starting date was to include Schkade & Schultz’s first publications, and thus potentially all previous publications in the area.
Conclusions

There are no common occupational challenges or adaptive responses in the various vulnerable life situations, but a common feature is that the context has great importance for occupational adaptation. However, in this thesis there are some common aspects related to vulnerable groups and their adaptive responses. If the environment places too much demand on a person and social support is lacking, this can cause maladaptation (context of disability). In a supportive environment, the older persons found adaptive strategies themselves (context of ageing). The environmental demand, such as weather conditions and public transport, can cause overly high demands on a person and have a negative impact on occupational performance, and may have a negative impact on health in the long run. Related to poverty, there are multiple factors beyond a person’s immediate environment and individual control that have an impact on the occupational adaptation, such as socio-economic and political structures.

The results indicated that personal factors needed to be strengthened to meet the demand from the environment and to reach occupational adaptation in vulnerable life situations. Persons with low functional capacity were more vulnerable to environmental demands and dependent on a supportive environment for their adaptive response. The physical environment restricted a positive adaptive response and hindered occupational performance. However, persons living in a supportive environment found adaptive strategies on their own. Social support from a peer group was a strong force in stimulating adaptive response among the older participants. A professional group leader who could strengthen the persons’ self-esteem, so they could found adaptive strategies themselves, was also found to be important. Furthermore, maintaining occupational roles was a driving force in finding ways to adapt and to perform occupations. The results also showed the opposite: if important occupational roles were lost, due to disability or social conditions, it was difficult to adapt to new situations.

OA is mostly used within traditional areas of practice for occupational therapists, namely the healthcare setting. The framework is undeveloped within community-based and health-promotive areas, and in relation to negative adaptation. Research on OA is conducted almost exclusively within
the English-speaking Western world; therefore, there is likely no knowledge about its applicability in other parts of the world. OA needs to be developed and updated when it comes to the definition of concepts, and the environmental components should be expanded to include the societal level if the goal is to participate in society. It is doubtful that OA is appropriate to apply within socially excluded groups, since broader societal factors are not considered in the theoretical frame and an individual approach is not the most suitable approach for these groups.

**Implications for practice**

Occupational therapists and other health professionals should support and strengthen the person’s own strategies for occupational adaptation and create appropriate alternatives for the adaptation if needed. To make adaptation possible, occupational challenges could be reduced by supporting persons in acquiring a reserve capacity. One way of doing this is to strengthen the personal factors needed to meet the environmental demands. Another way to acquire a reserve capacity could be to build a healthy lifestyle. Occupation-based health-promotion group interventions stimulate persons to adaptively respond to occupational challenges. Peer support should be developed as it has been found to be important for the adaptive response, as is a professional group leader. The person’s whole environmental context must be taken into consideration, and attention should be given to the social determinants of health. The environmental demands should be decreased in order to support an adaptive response. The use of theory to guide practice may increase the design and evaluation of programmes for occupational adaptation to better stimulate persons’ health and well-being.

**Implications for further research**

One way to develop the conceptual foundation in OA and get a deeper understanding of the theoretical constructions, such as person and occupational environment, could be to relate them to ICF. An approach could be to conduct a thorough run-through of the concepts in OA and ICF and test whether they are compatible and whether this could be a way to develop OA.

Further knowledge about negative adaptation, or maladaptation, is needed, as the knowledge about these phenomena is sparse. This knowledge could be
used to avoid situations in which negative occupation adaptation or maladaptation occur, and to stimulate positive adaptation.

Research is also needed concerning OA in relation to health promotion. The development of an adaptive response to develop healthy habits and promote well-being could be implemented in an intervention study to determine whether OA is useful in health promotion.
Svensk sammanfattning

Introduktion
Denna avhandling handlar om aktivitetsanpassning (adaptation) i utsatta livssituationer som kan uppstå hos äldre personer (II, III), personer med funktionsnedsättning (I, II) och personer i fattigdom (IV), samt aktivitetsanpassning i ett teoretiskt sammanhang (V).

Aktivitetsanpassning är ett relevant begrepp inom både praktik och forskning inom arbetsterapi. Även om begreppet är relevant och ofta använt så saknas en gemensam uppfattning om hur det ska definieras och användas. Tidigare forskning beskriver aktivitetsanpassning som en persons respons på en aktivitetsutmaning. Anpassningen krävs när personens vanliga respons inte är tillräcklig för att bemästra en aktivitet inklusive ett aktivitetsutförande.

Bemästrning av aktiviteter är betydelsefullt, då engagemang i personligt meningsfulla aktiviteter bidrar till upplevelse av ett tillfredsställande aktivitetsutförande, vilket i sin tur relaterar till hälsa och välbefinnande. Genom aktivitetsanpassning kan således ett för individen meningsfullt aktivitetsutförandet upprätthållas som kan påverka hälsa och välbefinnande.

Den personliga motivationen till att utföra en aktivitet är en drivkraft till aktivitetsanpassning. Det bör dock tilläggas att människor, på grund av socio-ekonomiska såväl som politiska sammanhang, har olika möjligheter att engagera sig i och välja de aktiviteter de vill göra. Dessutom är inte alla aktiviteter hälsofrämjande utan ett engagemang i vissa aktiviteter kan också leda till ohälsa.

En persons förmåga till aktivitetsanpassning kan utmanas genom utsatthet på grund av hög ålder, funktionsnedsättning eller andra stressfyllda livssituationer. Ju mer omfattande begränsningarna är, desto större krav ställs på förändringar i en persons anpassningsprocess. Det finns ett behov av mer kunskap när det gäller aktivitetsanpassning i relation till hälsofrämjande åtgärder samt inom arbetet med utsatta grupper. Vidare finns ett behov av mer kunskap när det gäller vad som påverkar aktivitetsanpassning, speciellt för utsatta grupper i samhället, och hur det i sin tur påverkar hälsa och välbefinnande.
Syfte
Det övergripande syftet med avhandlingen var att undersöka och beskriva aktivitetsanpassning i olika sammanhang med fokus på personer i utsatta livssituationer.

Metoder
Avhandlingen genomfördes med mixad design; omfattande kvantitativa och kvalitativa metoder och en litteraturstudie. Datainsamlingsmetoderna bestod av frågeformulär (I-III), individuella intervjuer (II, IV), gruppintervjuer (III) och databassökningar (V). Sammanlagt deltog 115 personer i studierna, och 50 artiklar inkluderades i litteraturstudien. Kvalitativ innehållsanalys användes för att analysera intervjuerna (I-IV) och artiklarna i litteraturstudien (V). Parametrisk och icke-parametrisk statistik användes vid analys av det kvantitativa datamaterialet (II, III).

Resultat
aktivitetsutmaningar med såväl positiva som och negativa anpassningar som följd (IV). En litteraturstudie (V) visade att forskning om aktivitetsanpassning huvudsakligen är baserad på Schkade och Schultz och Kielhofners teoretiska ansatser. I vissa av de granskade artiklarna användes aktivitetsanpassning utan ytterligare förklaring eller teoretiska argument (V).

**Slutsatser**

**Praktiska tillämpningar**
För att möjliggöra aktivitetsanpassning kan aktivitetsutmaningar reduceras genom att stödja personen i att skaffa sig reservkapacitet. Ett sätt att skaffa reservkapacitet är att stärka personliga faktorer (motoriska, kognitiva, psykosociala) inklusive personens egna strategier i syfte att bättre kunna möta kraven från den omgivande miljön.

Aktivitetsbaserade, hälsoränjande åtgärder i grupp stimulerar äldre personers anpassningsstrategier inför aktivitetsutmaningar. Stöd och tips av jämnåriga, samt av en professionell gruppledare, var viktiga faktorer för äldre personers aktivitetsanpassning.

För att stödja aktivitetsanpassning kan de miljömässiga kraven ses över. Man bör ta hänsyn till personens hela sammanhang, liksom de sociala bestämningsfaktorerna för hälsa, det vill säga både levnadsförhållanden och
levnadsvanor.

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