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"You Feel a Little Healthier"

Evaluating the Use and Meaning of the Rooftop Terrace at Sunnaas Hospital, Norway

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Abstract

The objective of this study is to evaluate how patients, staff and visitors use the rooftop terrace at Sunnaas hospital, and to investigate the significance of the terrace for stroke patients' well-being and rehabilitation.

Being in a hospital is for many a difficult experience, representing a transition from normal life and a threatening to well-being. Hospital gardens have shown to have positive influence on patients' well-being and recovery, through e.g. being a pleasant environment and a place for engaging in enjoyable occupations. Hospital gardens can also supplement patients' rehabilitation.

This study has a qualitative design. Observations were carried out on the terrace in order to find out how the terrace was used. Semi-structured interviews with five stroke patients were carried out to explore the meaning of the terrace. The attempt was to obtain both descriptive and more phenomenological data.

It was found that terrace had many visitors and that numerous activities were undertaken there. The five most frequently observed activities were: socializing, looking at the view, eating, drinking coffee and smoking. Socializing and looking at the view were popular activities among the informants too.

The informants found the transition to being in hospital big. They had different experience with using the terrace. Most of them felt more light minded or happier when using it. Different atmosphere and fresh air were two of the descriptions that they used. Some thought it had significance for their stay in hospital, saying it had helped them and made the stay easier.

The terrace is a popular placed used by many for different purposes. The main impression is that the terrace is a social and relaxing place. Recognized limitations for patients' well-being were stress and mental fatigue, as well as loss of control, loss of occupations and loss of place. The terrace is of significance for its users through being a possible place to escape to, being a familiar and nice place, where valuable and enjoyable occupations are undertaken. This influences patients' well-being and recovery.

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1. Introduction

The objective of this thesis is to evaluate the use of the rooftop terrace at a rehabilitation hospital in Norway and investigate its significance for the well-being and recovery of stroke survivors.

The context of this study is Sunnaas hospital. Sunnaas has specialized competence within rehabilitation and physical medicine, and is the largest of its kind in Norway (Sunnaas Sykehus HF n.d. b). In September 2012 the rooftop terrace at Sunnaas was upgraded with the intention to provide patients and staff with a nice outdoor environment that would promote pleasure and well-being (Mester Grønn 2012). This thesis seeks to evaluate the use and meaning of the terrace one year after it was upgraded, and the research question in this thesis is therefore as follows:

> *How do patients, staff and visitors use the terrace at Sunnaas hospital, and how can the terrace be of significance for the well-being and rehabilitation of stroke survivors?*

Being ill, losing functions and being in hospital is for many a situation where well-being is restricted and where negative feelings exceed the positive (Marcus & Sachs 2014; Ulrich 1999). A number of studies have shown that environments dominated by nature elements have a positive effect on people in general (Hartig et al. 2014) and especially patients (Davis 2001; Söderback et al. 2004). Studies that look at hospital gardens show for instance that *being* and *doing* in hospital gardens can promote recreation and relaxation in patients, foster social interaction, supplement rehabilitation and promote general well-being (Davis 2001; Söderback et al. 2004)

This notion is to a large degree acknowledged, however not always taken into consideration when designing hospital environments and when working out the strategies for patients' recovery (Ulrich 1999). The use of outdoor nature environments and recognition of it as beneficial for health were in fact more common in earlier times than during the last century, and the idea of using for instance hospital gardens for therapeutic purposes therefore has a long history (Straus & Simson 1998). After approximately a century with a rather narrow focus on health, where modern medicine and -technology, and effective and functional hospital environments, have been recognized as having key importance for people's health, the meaning of nature in a health beneficial context is again paid more attention (Hartig et al. 2014; Marcus & Sachs 2014).

2. Background

In this section traditions around rehabilitation in a health promoting perspective will be described. Therapeutic hospital gardens will be defined, and the use and benefits of them will be presented in connection to previous studies on the topic. Sunnaas hospital and the rooftop terrace at Sunnaas will be presented briefly. First, however, it can be useful to understand what stroke is and how it can affect individuals and populations.

2.1. Stroke

Stroke is a brain damage caused by either a blood clot, narrow blood vessel or a burst in a blood vessel which in turn causes a stop in the supply of blood to the brain (MacKay et al. 2004). Normally it occurs from the age of 40 and the risk increases with age (ibid). It is one of the major causes of death and disabilities in the world today, and the incidence is expected to increase considerably worldwide in the years to come (MacKay et al. 2004). In Norway stroke was in 1996-97[1] the third most common cause of death, and the leading cause of disabilities among elderly (Ellekjær & Selmer 2007). Ellekjær and Selmer (2007) estimate that in the years to come, 11 000 Norwegians will be hit by stroke for the first time, and 3500 will experience recurrent stroke. Although the mortality rate after stroke is decreasing, the incidence seems to remain at the same level. Because of an aging population, it is predicted that the number of people hit by stroke will increase in the future (ibid). Stroke is therefore at the time, and will likely still be in the future, one of the major public health challenges both in Norway and in the rest of the world (Ellekjær & Selmer 2007).

Stroke survivors must often deal with a number of challenges after stroke, both physical and cognitive, but also emotional and social (Clarke et al. 1999; Fure et al. 2006; Hackett & Anderson 2005). Typical physical impairments are paralysis or weakness in arm and/or leg and problems with sight (Clarke et al. 1999), which make many stroke survivors dependent on help to do everyday tasks like dressing, taking a shower and taking a walk (Hackett et al. 2000). Several years after stroke many still have a prominently decreased functional level (Aström et al. 1992; Hackett et al. 2000). Typical cognitive impairments are problems with memory, understanding and expressing language, as well as orientation and attention (Tatemichi et al. 1994). Depression and anxiety are common emotional symptoms occurring

[1] This is the last time the incidence of stroke was recorded in Norway.

[2] Syden is a term in the Norwegian language referring to countries where one is going on sun holidays, for

after stroke, and it is rather normal that they persist for years after (Aström et al. 1992; Fure et al. 2006; Hackett et al. 2005). In a review of observational studies Hackett et al. (2005) found that the incidence of depression after stroke was 33 %. Problems in social settings is another challenge often experienced by stroke survivors (Indredavik et al. 2010).

Physical and cognitive impairments, emotional symptoms and social problems reduce the well-being for many stroke survivors (Clarke et al. 1999). In fact, compared to the rest of the population, stroke survivors generally report a lower degree of experienced satisfaction, strength, calmness and happiness (Wyller et al. 1998).

Studies also show that physical and cognitive impairments, and emotional symptoms, are interlinked and influence each other mutually: depression is more common in stroke survivors with more severe physical- and cognitive impairments (Hackett & Anderson 2005), while the severity and persistence of both physical- and cognitive impairment are affected by depression and the way the stroke survivor regards his or her illness and situation (Downhill & Robinson 1994; Parikh et al. 1990; Shimoda & Robinson 1998).

2.2. Rehabilitation in a health promoting perspective

Health promotion is defined by WHO (1986) as "the process of enabling people to increase control over, and to improve, their health". The idea around health promotion sprung out of an increasingly critical view on the classical medical definition of health, or in other words how health is defined among health care workers and within the discipline of western medicine (Naidoo & Wills 2009). This view on health is rather narrow, where the absence of illness and disease has been emphasized as having key importance to health (Naidoo & Wills 2009; WHO 1986). In a health promoting perspective health is seen as a resource, rather than an obstacle for living (WHO 1986). Instead of placing the focus on the determinants of illness, health promotion perspectives look at what leads to people's well-being (ibid).

Well-being is a state provided by the presence of several conditions: a general satisfaction with ones' life and situation, experiencing an overweight of positive feelings, and having few negative feelings (Diener 2000).

Rehabilitation as it is used in this thesis can be defined very briefly as "restoration, after a disease or injury, of the ability to function in a normal or near-normal manner" (Punwar 1994:

284). A more elaborated definition is that rehabilitation after stroke is a "complex set of processes usually involving several professional disciplines and aimed at improving quality of life for people facing daily living difficulties caused by chronic disease" (Young & Forster 2007: 86). The aim of rehabilitation is therefore to restore physical and psychological function, to enable coping with emotional symptoms like anxiety and depression, and to strengthen social abilities (Indredavik et al. 2010; Young & Forster 2007). Through that and more the patient is equipped to handle life after stroke (ibid). Patients undergoing rehabilitation in hospitals will therefore, dependent on the stroke severity, be in need of comprehensive professional care from doctors, nurses, physiotherapists, ergonomists, neurologists, speech therapists, neuropsychologists and social workers (Indredavik et al. 2010; Young & Forster 2007). Traditionally this rehabilitation is carried out in indoor training rooms with typical training equipment (Marcus & Sachs 2014).

In the Norwegian guidelines for treatment and rehabilitation of stroke (Indredavik et al. 2010) the patient's environment is mentioned once, in connection to rehabilitation in the patient's home. Here, being in a familiar environment (the patient's home) is presented as being the most natural type of rehabilitation (ibid). Engagement in leisure- and social activities is in the guidelines presented as one of the aims of a patient's rehabilitation plan, but it is not mentioned whether the rehabilitation hospitals shall attempt to make arrangements for that in the patients' spare time (ibid).

The fact is that being in a hospital is for many a difficult experience (Marcus & Sachs 2014). Reasons for that are linked to the illness itself, like being in pain and the loss of functions, to the transition to being in hospital, and also to the hospital environment (Ulrich 1999). During the last century, along with the growing awareness around hygiene and the development of modern medicine and new technology, the hospitals have been designed primarily for functionality and cost-effectiveness, and less for being an environment that considers patients' well-being (Marcus & Sachs 2014; Ulrich 1999). At the same time a growing number of studies have shown that the hospital environment can in fact contribute to the recovery of patients (e.g. Davis 2001; Söderback et al. 2004), and an increasing number of rehabilitation hospitals have in more recent years directed attention towards the significance of the hospital environment as a whole (Marcus & Sachs 2014). Outdoor environments dominated by nature elements can be of particular significance, and serve as a place in which patients can go in order to relax and to forget about their situation for a while (Marcus & Sachs 2014).

2.2.1. Therapeutic hospital gardens

This thesis examines the experiences stroke survivors have with using a hospital rooftop terrace, or one can say a hospital garden, with possible therapeutic qualities. The term therapeutic hospital garden refers to an outdoor garden in a hospital that has positive health influences on patients. The therapeutic effect comes from merely *being* in the garden, meaning that it does not have to be part of a rehabilitation program (Marcus & Barnes 1999b; Marcus & Sachs 2014).

Garden, in this thesis, is defined as "[…] any green outdoor space within a healthcare facility, one that is designed for use" (Marcus & Barnes 1999b: 4). "Green outdoor space" refers to a predominance of nature elements. Nature, as used in this thesis, is defined as "[…] physical features and processes of nonhuman origin that people ordinarily can perceive, including the 'living nature' of flora and fauna, together with still and running water, qualities of air and weather, and the landscapes that comprise these […]" (Hartig et al. 2014: 208). Note however that the study site in this thesis, meaning the rooftop terrace, is only *dominated* by nature elements, and it consists of manmade physical features as well.

It should be mentioned that there are several terms referring to the therapeutic qualities of nature. It is not implied here that these terms are necessarily defined in the same way, but in many ways they overlap, and for the purpose of this thesis they will not be strictly separated from one another here. These terms include words like therapeutic, healing and restorative (Marcus & Sachs 2014), and are used in combination with words like gardens, landscapes or horticulture. In this thesis these terms are used without distinction between them, but they all refer to the therapeutic qualities of the rooftop terrace.

Use of nature for therapeutic purposes has a long history (Marcus & Barnes 1999b; Marcus & Sachs 2014; Straus & Simson 1998) and can be traced as far back as to ancient Egypt (Straus & Simson 1998). Not only was the use of herbs as medicine outspread in hospitals before the introduction of modern medicine, but also having a garden in the hospital was in fact very common in earlier times as the general belief was that nature had healing abilities (Marcus & Barnes 1999b). After decades where nature has attained little attention in the therapeutic context it is now more agreed upon that the entire hospital environment is important for the well-being of patients (Hartig et al. 2014; Marcus & Sachs 2014; Ulrich 1999).

Exactly why nature has a positive effect on humans is not entirely certain, but there is evidence that humans tend to prefer natural environments over built environments (van den Berg et al. 2003). One theory is that humans have an inseparable bond to nature, and will innately respond positively to it (Stigsdotter & Grahn 2002).

There is more knowledge about the *way* in which nature has a beneficial influence on humans, or *pathways* which is the term used by Hartig et al. (2014) in their review of others' reviews on the topic. Some of these ways are presented below and are results from studies on the area. Other ways are presented in relation to the theories further on in the thesis.

Sensory stimulation is one of the factors that can contribute to the beneficial effects derived from being in a garden, meaning that through sight, sound, scent, feeling and taste gardens can influence its visitors' health positively (Söderback et al. 2004). More specifically the sensory stimulations that a garden can provide includes: seeing beautiful sceneries, seeing flowers of different shapes and colors, seeing insects, birds and the seasonal changes (Söderback et al. 2004); hearing nature sounds like the wind, rattle in leaves and birdsong (Alvarsson et al. 2010; Söderback et al. 2004); smelling flowers, herbs and other plants; feeling the wind and the sun, or even the rain, or touching the vegetation (Söderback et al. 2004) and tasting herbs, berries or fruits that can be found in a garden (Söderback et al. 2004).

Both visual stimulation through nature sceneries and auditory stimulation through nature sounds have been found to have a positive effect on recovery from psychological stress (Alvarsson et al. 2010; Ulrich 1984). Also, it was found that visual stimulation through having a view to natural landscapes influenced the subjective well-being of patients' undergoing rehabilitation (Raanaas et al. 2012).

In a study of the therapeutic hospital garden at Danderyd Hospital Rehabilitation Clinic in Sweden, Söderback et al. (2004) found that being in that garden and doing gardening activities could be a supplement to the rehabilitation that patients with brain damage were undergoing. In their study they proposed that the garden was a place the patients would visit for their mental well-being, to rest, relax and recreate, and to do social activities, and that it had impact on both their physical and cognitive rehabilitation (ibid). These findings are also supported by other studies. Patients seek to hospital gardens to relax and socialize, this was found in for instance a number of case studies described in Marcus and Barnes (1999a) and

Marcus and Sachs (2014), and being in a garden or doing garden activities has shown to support patients' physical and psychological recovery (Jonasson et al. 2007; Kim et al. 2010).

In another study of a rooftop hospital garden in the USA, Davis (2001) found too that the patients would use the garden for relaxing and being with family and friends, and that it had rehabilitative effects both physical and psychological. Additionally, the garden had significance for the patients' feeling of identity, for their general well-being and for their future outlook (ibid). Most of them also thought that the garden met some needs that the indoor environment at the hospital could not meet (ibid).

The rooftop terrace at Sunnaas can, as suggested, be defined as a therapeutic hospital garden, but is referred to as the *rooftop terrace* or the *terrace* in this thesis.

2.3. Brief introduction to Sunnaas and the rooftop terrace

When Sunnaas was established in 1954 by Rolf and Birgit Sunnaas, one of the main aims was patients' well-being (Feiring 2004). Two things were therefore especially emphasized: beautiful surroundings and high quality in the treatment (Sunnaas Sykehus HF 2009). It was at that time a private nursing home with room for only a few patients (Feiring 2004), today it is the largest hospital with specialized competence within rehabilitation and physiological medicine in Norway, which treats around 2800 patients every year (Sunnaas Sykehus HF n.d. b). Patients' well-being is still one of three core values, the other two being professionalism and engagement (Sunnaas Sykehus HF n.d. a).

The rooftop terrace at Sunnaas hospital has been there the entire time, but was upgraded after Sunnaas won a competition in a Norwegian housing magazine, *Bo Bedre*, in 2011 (Bo Bedre 2012). The prize of the competition was money and professional help from, among others, a Norwegian florist's shop to tile, plant and furnish the terrace. It was finished and inaugurated in September 2012 (ibid). The initiator of entering Sunnaas in the competition was ergonomist specialist at Sunnaas, Nina Levin, who had an idea that an outdoor space with flowers, attractive design, and a nice view would increase the well-being of patients, staff and other visitors at Sunnaas (Mester Grønn 2012). The terrace is 400 square meters, and is situated in connection to the cafeteria at Sunnaas, with view over the Oslo fjord, in quiet and shielded surroundings. The terrace is designed after principles of universal design (Mester Grønn

2012), meaning that everyone can use it equally (Asmervik 2009). It is planted with different species of flowers, herbs, shrubs and trees in flower beds that are built up to seating height.

3. Theory

Two perspectives from different disciplines are used as the theoretical basis of this thesis: restoration theories from the field of environmental psychology, and occupational perspectives. First a brief overview of the field of environmental psychology will be given, before narrowing it down to two theories where the restorative qualities of nature are explained. Secondly theories within occupational science that are used in this thesis will be described.

3.1. Environmental psychology

Environmental psychology is defined as "the discipline that studies the interplay between individuals and their built and natural environment" (Steg et al. 2012: 2). Environment as a concept has been defined and redefined multiple times through the history of the field, expanding the views on environment from mainly the built, to including the natural environment (De Young 2013), and later also the social (Cassidy 1997). Seeing these three forms of environments in separation from each other is however seldom useful, as they in most environments are found in coexistence (De Young 2013). Wilderness untouched by humans is very rare, and even in the most urbanized areas natural elements are found (ibid). The context of this thesis, the rooftop terrace, is also an environment where all three are found entwined.

The individual thus lives and acts in a complex and reciprocal relationship with its environment (Cassidy 1997), which normally comprises built, natural and social features (De Young 2013). This means that the individual is both influenced by and influences its environment, with all its aspects and attributes (Bechtel & Churchman 2003; Cassidy 1997; Steg et al. 2012; Yadav 1987). Environmental psychology as a field can therefore be useful in investigating how the environment affects "human experiences, behavior and well-being" (Steg et al. 2012: 2).

Within the field of environmental psychology the focus was for a long time mainly on the built environment, especially architecture (Cassidy 1997). The influence of nature on people was therefore until quite recently a rather understudied area, where the first published study that documented this relationship was issued in 1984 by Roger Ulrich (Stigsdotter & Grahn 2002). Ulrich is perhaps the best known for his studies on this topic along with Rachel and

Stephen Kaplan, with their theories on how interaction with natural environments can have restorative effect on people.

3.1.1. Ulrich's theory of supportive gardens

Roger Ulrich's (1999) theory of supportive gardens enhances the restorative abilities of nature. Here restoration is mainly meant as coping with stress experienced by patients in hospitals, both psychological and physiological. *Stress* in this sense shows to a "process of responding to events and environmental features that are challenging, demanding, or threatening to well-being" (Ulrich 1999: 32). Ulrich (1999) proposes, based on his own and others empirical research, that there are four resources in a supportive garden that lead to stress reduction, or in other words promote restoration, and therefore also lead to improved health. These four are not dependent on the presence of the others in order to benefit patients' health, as they according to Ulrich (1999) each contribute to reducing stress. The four resources are as follows:

Control

Sense of control is the first resource of a supportive garden, and refers to a "person's ability to determine what they do, to affect their situations, and to determine what others do to them" (Ulrich 1999: 37). Researches show that loss of control is one of the factors contributing to the experience of stress (Evans & Cohen 1987), and is therefore in Ulrich's (1999) opinion one reason why patients experience hospitalization as stressful. More specifically, what can redeem this experience is the loss of self-determination when being in hospital, for instance losing determination over ones meals, personal hygiene, bedtime and time to wake up (Ulrich 1999). Also the experience of not having control over pain related to illness, over loss of function and over medical issues can be factors contributing to the feeling of losing control (Ulrich 1999). According to Ulrich's theory being in a garden can make the patient regain control. The explanation for this is that one experiences a feeling of being away (ibid) or as Ulrich (1999) would formulate it, "temporary escape", which is in accordance with also Kaplan and Kaplan's (1989) theory as shall be seen later.

Social support

By social support it is meant the empathy, care and material or physical support a person experiences to have from another (Brannon & Feist 2009). The feeling of belonging to a

social group is also included in this term (ibid). According to Ulrich (1999) there seems to be a correlation between the amount of social support patients experience and their health condition, including level of stress. Ulrich (1999) implies that a garden in a hospital can accommodate for the social contact patients need in order to reduce stress. Studies on social support among stroke survivors did not however find much significant correlation between social support and health related quality of life (Salter et al. 2010).

Positive distractions

With positive distractions Ulrich (1991) means elements or situations in the environment that promote positive feelings, prevent negative feelings and/or affect physiology positively, for instance through lowering stress hormones. The use of nature elements in a hospital may work as a positive distraction, and according to Ulrich (1991) it affects patients' health positively because it arouses positive thoughts and feelings, and steals focus from the negative and difficult, such as illness and being in hospital. Several studies have shown that to have a view to or be in natural landscapes can affect people's health positively, for instance in Raanaas et al. (2012), Söderback et al. (2004) and Ulrich (1984). McCuskey Shepley (2006) found in a literature review that nature is one of the most significant types of positive distractions in health care settings. Additionally is has been found that positive distractions reduced patients' feeling of pain when undergoing surgery through seeing photographs of nature scenes and hearing nature sounds (Diette et al. 2003)

Physical activity

The fourth resource of a supportive garden is according to Ulrich (1999) that it fosters physical activity or exercise. This will only be briefly mentioned here, as it is not considered very relevant for this thesis. Ulrich (1999) argues that it is already well known that physical activity may benefit physical health, but that physical activity also benefits psychological health, perhaps especially in preventing depression.

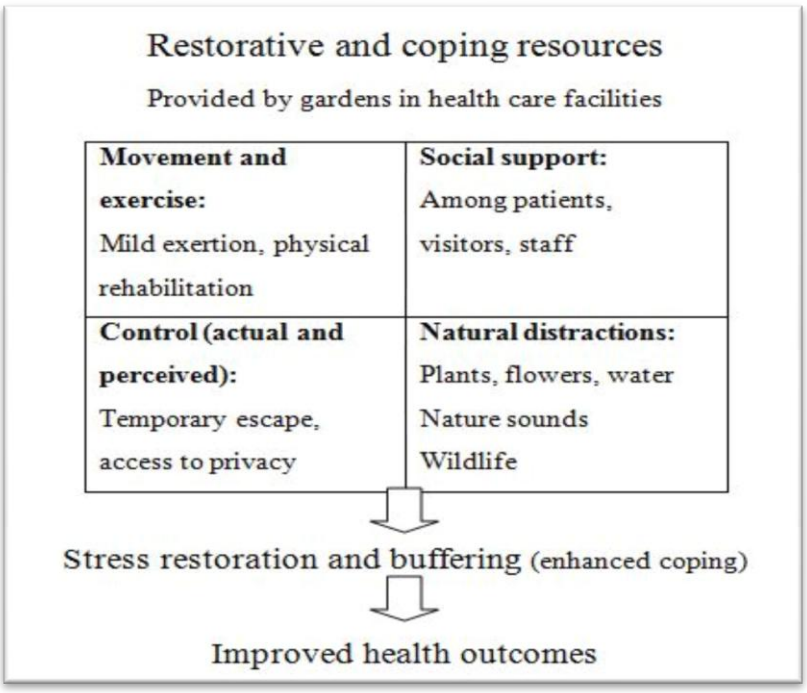

Figure 1 Ulrich's (1999) conceptual model of restorative resources in hospital gardens

Ulrich's theory of stress reduction from viewing or being in nature is also supported by more recent studies. Hartig et al. (2003) found that the test persons' blood pressure fell more rapidly among those who had view to trees compared to those who did not have a view at all. Also walking in nature gave this effect (ibid). In another study Dijkstra et al. (2008) found that plants in the indoor health care environment reduced patients' stress.

3.1.2. Kaplan and Kaplan: restorative environments

In this theory a restorative environment shows to a certain environment that contains specified qualities that together have a restorative effect in a person that suffers from being mentally worn-out (Kaplan & Kaplan 1989).

The theory of restorative environments, or Attention Restoration Theory (ART), was developed by the American researchers Rachel and Stephen Kaplan based partly on their own studies in the USA in the 1970s and -80s (Hågvar et al. 1996). This theory centers around the qualities that an environment must possess in order to have a restorative effect on persons that suffer from mental fatigue (Kaplan & Kaplan 1989). Kaplan and Kaplan (1989) explain mental fatigue as the state where the mind is "worn-out" and is in need of a break. It is a state that most people experience from time to time, often as a result from long term stress, worry

or anxiety, or merely from having too much to do (ibid). Kaplan and Kaplan (1989) define stress as "the preparation for an anticipated event that has been evaluated as being threatening or harmful" (p. 178).

Explained more in depth mental fatigue is really, as the name of the theory suggests, a tired attention which needs to be restored (Kaplan & Kaplan 1989). Humans operate with two conflicting kinds of attention: one in which we control, called "directed attention" (which can also be called concentration), and one that is incontrollable and spontaneous. In contrast to what might is expected it is not concentrating in itself that leads to a tired mind, it is concentrating while constantly being interrupted by the spontaneous attention (Kaplan & Kaplan 1989). A lot of energy is therefore spent on sorting away all the spontaneous attention in order to keep concentration, and that is what, over time, wears the mind out (ibid).

A restorative environment is according to Kaplan and Kaplan (1989) an environment that allows the directed attention to rest and restore. A restorative environment has four qualities or characteristics, which will be explained below, and Kaplan and Kaplan (1989) point to nature as a prominent example. The four qualities are as follows:

Being away

The feeling of being away can have different meanings. Usually it refers to the escape from something normally present in a person's everyday life, but is not wanted there according to Kaplan and Kaplan (1989). They identified three scenarios for why one would want to get away: escaping distraction, escaping from work or from "pursuing certain purposes", or escaping from tiring mental activity. An escape can therefore accommodate for a needed change or rest, which in turn can contribute to the restorative process (ibid).

Extent

Being away is alone not sufficient to have a restorative effect. Kaplan and Kaplan (1989) use a prison cell as an example of being in an environment that breaks with the tiring environment, yet will likely not start a restorative process in a person. In order to be restorative an environment must also have a certain extent, either in its literal sense or in the individual's perceptions of extent. However the conditions that must be fulfilled for feeling extent is that of cohesion and sensing that one is part of a larger whole (ibid).

Fascination

The third quality of a restorative environment is according to Kaplan and Kaplan (1989) that it contains something that fascinates. Fascination is important because it catches the spontaneous attention, and therefore allows the directed attention to rest (ibid). However, there can be many things that fascinate people that will not have a restorative effect on them. War is an example of something that is fascinating for many, but for most people watching war scenes is probably not restorative for a worn out mind (ibid). It is therefore important to remember that the fascination element, like the other resources, cannot be seen in isolation (Kaplan & Kaplan 1989). When it comes to fascination it must be a part of the larger whole and the feeling of extent (ibid).

Compatibility

Finally, there must be compatibility between the environment and the person (Kaplan & Kaplan 1989). This means that the person's values, interests and intentions must be in accordance with the environment (ibid). Using a garden as an example, in order for a person to have a restorative effect from being in a garden it requires a certain interest in being there and at least some aspects with it must be valued. The garden also invites to undertaking certain actions, for instance sitting to relax or plucking in the flowerbeds, and the person must therefore have an intention to do so (ibid).

A number of studies have documented nature's ability to restore attention and affect mood positively after mental fatigue. The positive effects have been found when test persons' have been physically in nature, e.g. by taking a walk in a park, but also from just having a view to nature elements or looking at photographs of nature. This is found by for instance Berman et al. (2008), Berto (2005), Hartig et al. (2003), van den Berg et al. (2003) and Tennessen and Cimprich (1995) to mention some.

3.2. Occupational perspectives

3.2.1. Defining occupation

Occupational science is the field of knowledge looking at the human occupation, or in other words, and very briefly explained, what people do (Christiansen & Townsend 2010). Occupation as a concept in occupational science includes a lot more than what is commonly perceived as occupation, which is paid work (Christiansen & Townsend 2010). In fact

occupation is everything that humans do in place and time, both observable and non-observable actions, from working to leisure activities, to doing everyday routines, to sleeping and recreating (Christiansen & Townsend 2010; Jarman 2010; Polatajko 2010).

Occupation is a dynamic process that comes to being in the interaction between three basic constructs: the person, the task which is undertaken, and the environment which provides the context (Dunn et al. 1997; Dunn 2007; Persson et al. 2001). A person's interests, abilities and previous experiences, and the possibilities and challenges that are offered by the environment, result in tasks. When tasks are combined they form occupations (Dunn et al. 1997; Dunn 2007; Persson et al. 2001). Occupations are highly complex matters, often nested together and consisting of layers of other occupations that can be hard to see in isolation from one another (Jarman 2010).

There are numerous and varying definitions of occupation. Christiansen et al. (1995) define it as "the ordinary and familiar things that people do every day" (p. 1015). Here, *ordinary* occupations in *everyday* life is emphasized. Townsend (1997) on the other hand describe occupation as a *process*, but also here the focus is on everyday life: "Occupation is the active process of everyday living. Occupation comprises all the ways in which we occupy ourselves individually and as societies" (p. 19). A third way of seeing occupation is as ways to survive and to respond to the surroundings: "doing occupations is our way of meeting our basic needs and coping with the environmental demands" (Harvey & Pentland 2010).

These are definitions of occupation emerging from the field of occupational science. Occupation has also been defined in another occupational field, namely occupational therapy. Here occupation is referred to as being meaningful and purposeful: "Occupation, that is, purposeful activity. Occupation is the mechanism by which individuals demonstrate the use of their capacities by achievements of value and worth to their society and the world" (Meyer 1922).

Also in occupational science it is now more agreed upon that occupations can create meaning and have health benefits for people, as shall be seen in the next section.

3.2.2. Meaningful occupations and well-being

Occupation is, as seen above, one of the most fundamental parts of being human. The acknowledgement of this has led to the idea that occupation must also be an important part of

the subjective or perceived well-being of a person (Christiansen et al. 1999). However, it is not indifferent what these occupations are. In order to affect personal well-being they must be *meaningful* to the person undertaking them (ibid). Though it should be mentioned that occupations contributing to the well-being in one person do not necessarily so in another (Hasselkus 2006).

Occupational value: according to Persson et al. (2001) value is one of the prerequisites for meaning. They present three different types of value which influence feeling of meaningful occupations, and two of them will be described here: symbolic value and self-reward value

Symbolic value: occupations can be valued based on their significance for the person doing them (Persson et al. 2001). Symbolic value can be found on three levels: personal, cultural and universal level. Value on the personal level is subjective, and is based on the person's former experiences and background (ibid). On the cultural level occupational value is attached to a certain culture, group of people, or ideology (ibid). Value on the universal level shows to occupations valued across cultures (Persson et al. 2001). Using hiking in the forest as an example, it can be of value for a person on the personal level because it arouses childhood memories, on the cultural level because it is a valued occupation in the society and gives a feeling of belonging to a group, and on the universal level because of an innate bond to nature.

Self-reward value: occupations that are undertaken for the enjoyment of it have self-reward value (Persson et al. 2001). Such occupations result in immediate satisfaction, not necessarily because something is accomplished, but because the occupation is pleasant and enjoyable for the person doing it (ibid). Occupations of self-reward value can give an experience of forgetting oneself and time (ibid).

Eklund et al. (2003) found in a study that occupational value was of significance for the health and well-being of the test persons, both persons with mental illnesses and persons without.

Occupational balance: the theory of occupational balance claims that an individual's well-being is related to whether or not there is a balance in the individual's occupations (Backman 2010). Occupational balance is a perceived state of being which is achieved when values and expectations is in accordance with the occupations that is undertaken, or one can say, when a person is doing occupations that are perceived as meaningful and meet with her abilities (ibid). When the case is the other way around it is referred to as occupational imbalance,

which can be caused by too many or too few occupations, or doing occupations that are not perceived as meaningful (Backman 2010). In two studies by Eriksson et al. (2010, 2011) it was found that therapeutic gardening as an occupation for persons with stress-related illnesses had positive effect on occupational balance. The most emphasized findings were that pleasant occupations in safe environments contributed to giving the participants occupational balance, and that the experiences with the program motivated the participants to continue doing pleasant occupations in their daily lives (Eriksson et al. 2010; Eriksson et al. 2011).

3.2.3. The meaning of place

Places are "physical surroundings or environments that are either natural or built" (Hamilton 2010: 252). Human occupation is undertaken in places, in fact it is impossible imagining human living outside physical environments (Hamilton 2010). The meaning and interpretation of place is however socially constructed, and each individual may therefore experience places differently (Hamilton 2010). Experiences with certain places and the occupations that are undertaken there is to a large degree a contributor in creating meaning (ibid). Places also influence the occupations humans engage in, through the physical design, and through the former experiences, the shared social rules and/or the expectations to a place (ibid).

Most occupations people engage in are undertaken in places where the basic needs are met, meaning in people's everyday life (Hamilton 2010). Places are therefore central in the most vital parts of living, and it is therefore easy to imagine that the failing of a place to meet people's basic needs affect the undertaking of daily occupations (ibid). Places can also be lost, involuntarily, for instance through hospitalization or illness which may result in changes of the daily occupations (Hamilton 2010).

Moreover, people make relationship with places (ibid), that can be very personal and emotional, and also important for people's sense of security and not least for the feeling of self-identity (Gustafson 2001). Peoples' memories and experiences are attached to places, and certain places can therefore play important roles in peoples' life (ibid).

The relationship between people and places also includes awareness around the different attributes and meanings of them, which allows for valuing some places more than others (ibid).

4. Aim of the study

The aim of this thesis is twofold:

1. To describe how the terrace is used by patients, staff and other visitors.
2. To explore how stroke survivors experience to use the terrace.

The research question of this thesis is therefore as follows:

> *How do patients, staff and visitors use the terrace at Sunnaas hospital, and how can the terrace be of significance for the well-being and rehabilitation of stroke survivors?*

The second part of the research question, the significance of the terrace, is given most attention in this thesis and is explored more in depth than the first part of the question, the use of the terrace.

In order to answer the two aims of the study these sub-questions will also be answered:

- *Who visit the terrace, when and what activities do they perform?*
- *What can be recognized as limitations for patients' well-being?*
- *How does the terrace meet with the criteria for having restorative qualities?*
- *How does the terrace function as a place for occupation?*
- *What can be identified as important aspects of the terrace that promote well-being and rehabilitation in patients?*
- *How can the terrace be a supplement to the rehabilitation at Sunnaas?*

5. Methods

5.1. Qualitative design

The design of this thesis is qualitative, meaning that the aim is to describe the investigated phenomenon in depth and in words, rather than in range and numbers. This study will therefore describe, explore and find meaning in the use and significance of the rooftop terrace at Sunnaas (Berg & Lune 2012; Kvale et al. 2009). The objective of this study has been approached by using a phenomenological framework. Phenomenology is in qualitative research the search for persons' descriptions and understandings of the world and social phenomena within it (Kvale et al. 2009). A central concept within phenomenology is *life world*, meaning how the world appears to a person in daily life (ibid). The aim of using a phenomenological method is therefore to grasp the meaning in a person's description of phenomena, seeing these phenomena freed from foreknowledge and prejudices, and from there reach the true essence of phenomena (Kvale et al. 2009).

Two qualitative methods have been used for collecting data to this thesis: observation and semi-structured interviews. These two methods and implementations will be described later in this chapter.

5.2. Description of site: the rooftop terrace at Sunnaas hospital

Sunnaas hospital is situated on a height on the northern tip of Nesodden, a headland in the Oslo fjord, in quiet and shielded surroundings. The rooftop terrace at Sunnaas is located as an extension to the cafeteria at the hospital, close to the main entrance, reception and waiting area (see figures 2 - 6 below for an overview and photos). It is partly visible from these areas and is easy to locate and access. From the inside the door to the terrace is opened with a door opener, and from the outside it is only opened with a patient- or staff ID-card. Access to the terrace is stepless, and all parts of the terrace are accessible for all. The size of the terrace is 400 m², and the foundation is of concrete tiles mostly, wooden boards in a few areas.

The terrace is designed in a way that divides it into two different, though connected, parts. In this thesis these are referred to as the inner and the outer part of the terrace. The inner part is more secluded with flower beds making natural "walls" and compartments. The east and south side of the inner part is built up with walls, making the terrace more concealed from the outside and protected from wind. A smaller part has roof over it, for shade and for protection

from rain, and a pergola is built over this part for shade. This part of the terrace is therefore entirely shaded in the mornings up until approx. noon, and a smaller part is shaded during the entire day. The inner part of the terrace is furnished with red couches mostly along the east and south wall, with seating for 15-20 persons.

The outer part of the terrace is more open. The north side is the hospital cafeteria. On the west side there is a glass railing and view over the fjord. There is at least a 180 degree view from the south to the north, over the fjord and to the mainland on the other side, and there is constantly boat traffic on the fjord. On the outer part of the terrace there is seating for 35-40 persons at tables, which makes this part more suited for eating lunch/dinner. In addition the terrace has room for people sitting in a wheelchair on both parts of the terrace.

The terrace contains different types of vegetation. This might vary from year to year as many of the plants are annual, and the idea is that some of the patients shall plant and take care of the flowers on the terrace as part of their rehabilitation program. In 2013 the terrace was planted with flowers like marigold, nasturtium, marguerites, hydrangeas, different climbing plants and different flowers in the pea family; herbs like oregano, lavender, rosemary and sage; and trees like olive trees and lilac. Sensory stimulation was considered in the selection of plants, and it was therefore used an overweight of purple and red colors; plants that flower at different times; plants with scent; and herbs to pick, smell and taste. The flowerbeds are built up to seating height, so it is easier for the users to pick, weed and water. Birds and insects, like butterflies and bumblebees, are attracted by the vegetation and were observed several times on the terrace.

Additionally there is a barbeque on the terrace that is sometimes used for preparing dinner for patients and staff, and the terrace has also been used for concerts.

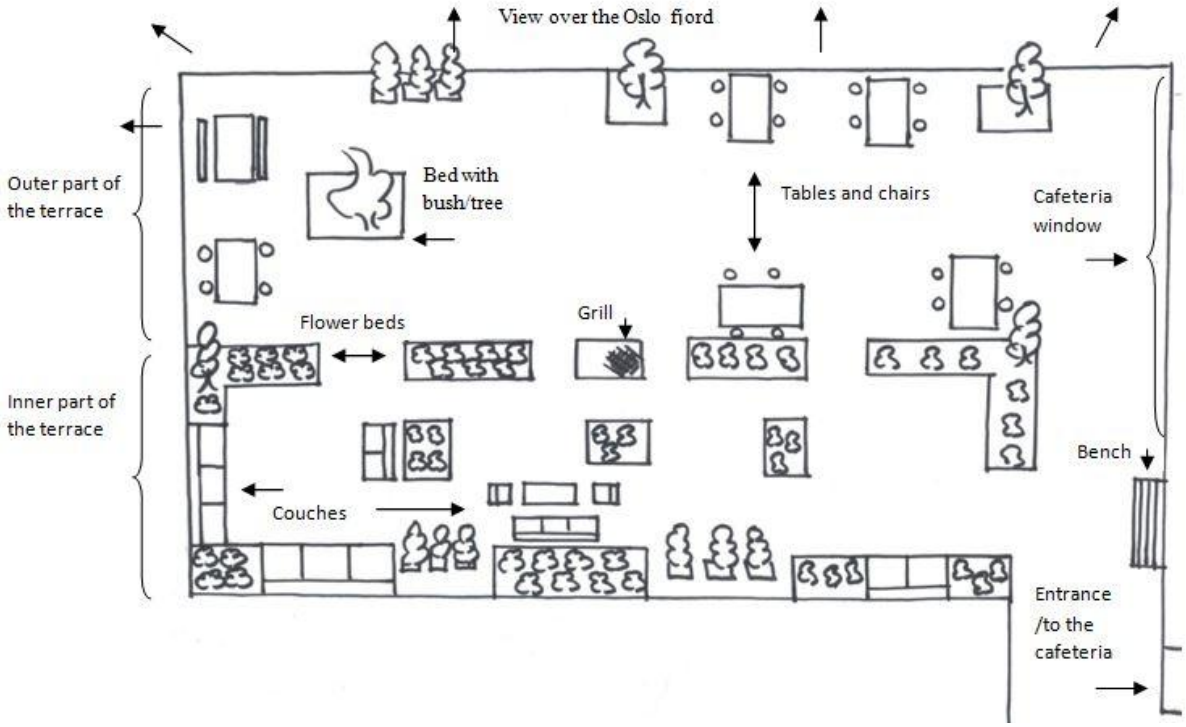

Figure 2 Sketch of the rooftop terrace seen from above. Note that this is drawn on free-hand and is not necessarily accurate with regards to size and measurement (drawing: Marte Eliassen)

Figure 3 Terrace seen from the inner part. All photos: Marte Eliassen

Figure 4 Terrace and the pergola seen from the entrance

Figure 4 One corner of the terrace's inner part

Figure 6 Outer part of the terrace with tables and chairs

5.3. Observation

Observation was used as a method in the first part of the data collection, meaning that people and their doings were observed in a study site (Atkinson & Hammersley 1994), here the rooftop terrace. It is often separated between participant and non-participant observation, where in participant observation the observer takes part in the study scenery in a manner as close to possible as the people that are being observed (Atkinson & Hammersley 1994; Fangen 2010). The observation carried out in connection to this thesis was somewhere between participant and non-participant, as the observations were carried out on site while using it as any other visitor, but at the same time there was no participation in any social activity. The aim was to observe how the terrace was used by patients, staff and other visitors.

Observations were carried out on the rooftop terrace five days in August, over a period of two hours per observation. It was observed on both weekdays and during a weekend, and on different times of the day, to see how the terrace was used at different times. The five days of observations were carried out in the following manner: Thursday between lunch and dinner, Friday from dinner time and onwards, Saturday during lunch, Sunday between lunch and dinner and Monday during early lunch. There was no difference in weather on the five days of observations. All days were sunny and warm, with temperatures above 20 °C.

Beforehand observation posters with information about the project and the data collection were put up in the hospital, for instance on the door leading to the terrace.

Observations were carried out on the rooftop terrace, usually sitting at the table down to the left on the outer part of the terrace (see figure 2), as it was the only place with an overview of the entire terrace. It was not attempted to conceal that notes were being taken, beyond that it was attempted to use the terrace like other visitors, through for instance eating lunch.

To register the observations a sketch over the terrace was used with numbering of the different seating areas (the sketch is similar to figure 2, but with numbers), as well as a scheme where the following was noted: who (e.g. two men), approximate age, activity, the visit's duration, and seating area. In addition the date, time, weather and temperature was noted for each observation. All observable activity was noted, but content in conversations and information that can identify persons were not registered. The scheme can be found in the appendices (appendix 1). Additionally, it was taken notes during and after each observation with general impressions from the day and general descriptions of the terrace's design.

The data from the observations were structured in frequency tables that show the number of visitors, the time and duration of visits, the number of single visitors and group visits, as well as the activity of each visitor. The activities were categorized. Examples of categorized activities were *eating, looking at the view, social interaction* and *smoking.*

5.4. Interview

Semi-structured interviews with stroke patients were used as a second method. This interview form is used to understand the informants' life world, meaning that everyday issues in the informants' lives are discussed (Kvale et al. 2009). Semi-structured interviews are close to everyday conversations in its form, but the structure is more fixed. It is not however as structured as questionnaires (Kvale et al. 2009). Usually there are some predetermined topics that the conversation will centre around, and when natural there are asked elaborative questions and follow-up questions (Kvale et al. 2009).

The interviews were undertaken at Sunnaas hospital in September, four weeks after the observations. It was considered as still being a time of year where the weather and temperature allowed for using the terrace, but the temperature had dropped a few degrees since the observations.

5.4.1. Recruitment and information about informants

Five stroke patients were recruited for this study. Recruitment was made by employees at the section for brain damage at Sunnaas hospital.

Inclusion criteria for participating in the study were: ability to give informed consent; oral communication skills; and the patients had to have visited the terrace. In addition, it was desirable that the informants were of different age, had varying functional level, and that there were an equal number of women and men. It was thereafter made a list over persons to contact, and the patients' were then contacted in their rooms and asked if they were willing to participate. Initially seven patients' were asked, whereas two declined, and five gave their consent to participate.

The five informants were of different age, sex, functional level and with different length of stay at Sunnaas hospital. In that respect it was a varied group of stroke patients that

participated. The informants' backgrounds were however more alike in other ways. Three of the informants were from the same city, and all five were from the eastern part of Norway, as was natural as Sunnaas is situated in eastern Norway. Four of the five informants either had a garden at home or used to have a garden, and the four were also fond of being outside and doing activities like walking in the forest, walking their dogs, going to their cabin, hunting or picking mushroom. Three of the informants had also been participating in a horticulture group arranged at Sunnaas. The five informants are described below and their information is summarized in table 1. All the names are fictitious and their age is given in 10-year spans to protect their identity.

Idar: man in age group 60-69. He had been at Sunnaas hospital for six weeks at the time of the interview and was discharged from the hospital two days after. Idar was at the time of the interview able to walk, but needed remedies like crutches and a walker, and thought that he would need it for some time. He also said that he had some troubles with his memory after the stroke. Idar would use the rooftop terrace every day when sunny and hot outside.

Brita: woman in age group 50-59. At the time of the interview she had been at Sunnaas for seven weeks and thought she would be there for two more months. She sat in a wheelchair and was paralyzed in her right arm and leg, and had some problems with her memory, which made it for instance hard for her to read. Brita had aphasia after the stroke, but was able to make herself well understood. She would use the terrace every day when the weather was nice.

Turid: woman in age group 60-69. She had been at Sunnaas for two weeks at the time of the interview and thought she would stay for four weeks more. Turid sat in a wheelchair, but was able to walk a little. She also had some problems with her arm and leg. Turid had visited the terrace three or four times since she came to Sunnaas.

Albert: man in age group 40-49. He had been at Sunnaas for only 10 days when the interview was undertaken, and thought his stay at Sunnaas would last for three months all together. Albert sat in a wheelchair, and was paralyzed in his left arm and leg. He would visit the terrace usually two or three times, or more, every day, also when raining and thought he would continue visiting it when the weather would turn colder as well.

Hilde: woman in age group 60-69. At the time of the interview she had been at Sunnaas for five weeks, and was going to be discharged the week after. She sat in a wheelchair, but was

able to walk a little with a walker. Hilde had aphasia and had some troubles with expressing herself. She would visit the terrace when she had visitors.

Table 1. Information about informants

	Sex	Age	Functional level	Lenght of stay
Idar	Male	60 – 69	Walks with cruthes or a walker	Six weeks
Brita	Female	50 – 59	Aphasia. Sits in a wheelcahir. Right arm and right leg paralyzed.	Seven weeks
Turid	Female	60 – 69	Sits in a wheelchair	Two weeks
Albert	Male	40 – 49	Sits in a wheelchair. Paralyzed in left arm and left leg.	Ten days
Hilde	Female	60 – 69	Aphasia. Sits in a wheelchair.	Five weeks

5.4.2. Interview guide

The central topics of the interviews were the following: the experience of being in hospital and the transition to being ill; the loss of activity and the imaginable life after rehabilitation; the use of the roof top terrace; and the meaning of the terrace for the patient. It was not asked questions of sensitive or clinical character. After the interview the informants had the possibility to ask questions about the interview and the project.

The entire interview guide can be seen in the appendices (appendix 2).

5.4.3. Conduction of interviews

The interviews were carried out one-to-one at Sunnaas hospital in September, with exception of one interview where the patient's wife was present during the interview and also answered some of the questions. Three of the interviews were carried out in the patients' own room and two of the interviews on the terrace. Initially it was desired to have all five interviews on the terrace, as it is according to Kvale et al. (2009) an advantage that the interview is carried out in the environment which is discussed, but the patients' wish for place of interview was respected. Each interview was 20 to 40 minutes of length and was tape recorded.

Before the interview the informants got a briefing about the project and could ask questions. They were informed about how the information would be used and gave either oral or written consent. The interviews had a semi-structured form, meaning that they were not built around any fixed structure and that they were more like everyday conversations in their structure (Kvale et al. 2009). However it was used an interview guide with some topics settled beforehand, and additionally it was asked follow-up questions and elaborative questions when it was natural.

5.4.4. Analyzing the interviews

After the data collection the interviews were structured for analysis through transcription. The chosen analytical tool was coding of meaning, and the statements of the informants were therefore sorted in categories like *social interaction* and *meaning of terrace* (Kvale et al. 2009). In each category the most central keywords were additionally highlighted. Afterwards the categories were linked with central topics from the theories used, like *being away* and *identity.*

6. Ethics

The ethical foundation for this thesis has been the guidelines in the Helsinki declaration for medical human research, last amended by the 64th World Medical Association (WMA) general assembly in 2013 (WMA 1964), and the four ethical principles for research methods described by Kvale et al. (2009).

During the entire project it has therefore been given careful consideration to the following:

Ethical approval of project protocol: the project protocol was before the project start sent to the regional ethical committee (REK) for guidance and commenting, as the Helsinki declaration require (WMA 1964). The committee however found the project as being of a character not in need of approval by the committee, and the project protocol was therefore sent to the commission for personal protection at the Norwegian Social Science Data Services (NSD), where it was approved.

Informed consent: before the interview the informants were given information about the project and the interview, and gave their consent to participate (Kvale et al. 2009; WMA 1964). They were informed about the project's purpose, how the interview would be carried out, how the data would be used, and the date for the deletion of the data. Participation in the interviews was entirely voluntary and the participants could withdraw from the interview at any time (Kvale et al. 2009; WMA 1964). The information letter that was given the informants can be seen in the appendices (appendix 3).

It was not possible to gather informed consent from the visitors of the rooftop terrace for the observation, as there were very many visitors. It was however put up information about the observation inside the hospital and on the door leading out on the terrace in advance. Moreover, the data collected was considered being very little private in its character.

Protection of privacy/confidentiality: all data have throughout the project been treated confidentially in order to protect the privacy of the participants, meaning that information about the informants has not been revealed (Kvale et al. 2009; WMA 1964). Data that could identify an informant has therefore been omitted or made anonymous. This passes for both the interviews and the observation. The names of the informants in this thesis are fictitious and their age is given in groups of 10 years.

Beneficence: throughout the project the attempt has been to avoid causing the participants any harm or negative consequences (Kvale et al. 2009). Possible benefits from participating in the interviews were: a chance to talk rather freely about their own situation and a topic of interest, and a chance to contribute with their own thoughts and experiences in research. For some it might have been experienced as meaningful or even therapeutic. The informants were not rewarded materially in any way.

Role of the researcher: a researcher can never be an entirely neutral actor, free from own experiences, point of views or influences (Kvale et al. 2009). Thus, what is needed to strive for is not full objectivity, but rather awareness around one's own role, what influences this, and moral questions (ibid). This has also been a consideration throughout the project.

7. Findings

This section presents the findings from the observations and interviews. First the use of the terrace will be described: who visits the terrace and when, and what is the terrace used for. Afterwards there will be a presentation on how the informants in this thesis experience using the terrace and how the terrace is of significance to them.

7.1. How the terrace is used

7.1.1. Who visit the terrace and when: observation

The terrace was used by patients, hospital staff and visitors of patients, with no clear majority of any group. There were more visitors on the terrace in the weekend and during lunchtime. At most there were 77 persons visiting the terrace over a period of two hours. The terrace had the fewest visitors on a weekday when the observation was carried out between lunch and dinner, within the hours of training programs for the patients. There were then 37 visitors over a period of two hours. In table 2 the total number of visitors on the different days is presented.

The terrace was visited both alone and in groups of two or more, but group visits were far more common in the weekends, and slightly more common in weekdays, except from one day were there were more single visitors (see table 2). In the weekends there were also larger groups that visited the terrace together, patients were visited by their families with children and sometimes also dogs. There were no considerable differences in the number of women and men visiting the terrace.

People spent different durations of time on the terrace. Some would just eat their lunch or stand by the railings looking at the view for a few minutes before going inside again. Others could stay for more than an hour or an hour and a half. On the five days of observation three persons were visiting the terrace through the entire observation of two hours. The most frequent length of time spent on the terrace is presented in table 2. Note however that this time use is not entirely accurate as it was not possible to measure the exact time spent on the terrace among visitors who were already there when observation started, and who were still there when observations ended. The true length of stay is therefore possibly longer, and the time given in the table can therefore be regarded as a minimum.

It was also observed that the terrace had several regular visitors. The same people were

Table 2. Use of the rooftop terrace: the day, time, number of visitors, alone or together, and length of stay

	Time	Program	Number of visitors	Visit alone/together	Most frequent length of stay on terrace
Thursday	1.30 p.m. – 3.30 p.m.	Between lunch and dinner	37	21/16	20-30 min
Friday	4.00 p.m. – 6.00 p.m.	Dinner	38	10/28	20-30 min
Saturday	11.30 a.m. – 1.30 p.m.	Lunch break patients and staff	68	9/59	10-20 min
Sunday	2.20 p.m. – 4.20 p.m.	Between lunch and dinner	72	6/66	10-20 min*
Monday	10.30 a.m. – 12.30 p.m.	Lunch break patients and staff	77	22/55	20-30 min

*The second most frequent length of stay this day was 90-120 min

observed at the terrace on different days, and at different times of the day.

7.1.2. Who visit the terrace and when: interview

Two of the informants visited the terrace on a daily basis when the weather was nice. One of the informants visited it at least once every day, sometimes as much as three times per day and in all kinds of weather. Two informants had visited it a few times, but not as often as every day and usually when having visitors.

7.1.3. Parts of the terrace used

It was observed that the entire terrace was in use, but it could vary after time of day and activity which part that was the most visited. All the observations were undertaken on warm and sunny days, but in the mornings up until around 11 a.m. the air would be a little cooler and most parts of the terrace would be shaded. It was then observed that the visitors would sit in the sun on the outer part of the terrace, close to the railing. From around noon and onwards there would only be shade on the inner part of the terrace under the roof, and the visitors would then use the entire terrace, some would sit in the sun and some seek to the shadows.

During lunch hours the terrace was full, or almost full, on all the observed days. The visitors would then sit by tables in the outer part of the terrace, only using the inner part when there were no available tables. Some would walk out on the terrace with their food trays and then turn and walk inside again when seeing there were no available seats.

Almost constantly there would be people sitting on both the outer and inner part of the terrace, no considerable difference was observed with regards to parts of the terrace used. However, many would drag chairs from other parts of the terrace to the railing faced towards the fjord and sit there to gaze at the view. Also, many of those sitting in a wheelchair chose to sit by the railing, though there were observed people in wheelchairs on all parts of the terrace during all five days of observation.

7.1.4. What do people do on the terrace

These are findings from both the observations and the interviews. Table 3 at the end of this chapter shows the seven most undertaken activities.

Social interaction: A lot of social activity was observed on the terrace. On all five days of observations the most frequent observed activity that took place on the terrace was social interaction, like talking to each other or just merely being together. Especially in the weekends there were a lot more people using the terrace in groups than alone, and also in larger groups, than during the week.

When asked why they use the terrace and what they use it for, all the informants say they use it for social interaction as one of the main reasons. Some of the informants find it easier to get in contact with other patients out on the terrace.

> "You can just come out here and you meet someone, it is almost like you cannot sit here alone if that is what you want" (Brita)

One explains that the atmosphere is a lot lighter out on the terrace than inside the hospital:

> "you can walk inside these halls and you see the same people… you exist in here, you can say, but when you come out there it is a completely different atmosphere, and you hear laughter and people talking to each other […]" (Idar).

The informants say that when having visits they often go to the terrace or sit inside the cafeteria.

> "[…] when my son and my grandchild is here we usually go there (to the terrace) for a while, because it is very nice there […]" (Turid)

Looking at the view: It was observed that looking at the view was the most frequent activity next to social interaction. This activity was undertaken both by single visitors and group visitors. Sometimes groups of four people or more could sit and gaze at the view together, either while together or just in silence. Additionally it was observed that some took pictures of the view, and that the view was the topic for some conversations as people were pointing and commenting when for instance boats passed on the fjord.

Four of the informants mentioned the view as one of the reasons for why they used the terrace and/or what they used it for.

> "[…] and the nice view, it gives inspiration to all sorts of things"

Three of them also mentioned the boat traffic, and that it was nice that something was happening that they could look at.

> "[…] and you have the view and the boat traffic, it is a completely different life to come out there (to the terrace)" (Idar)

> "[…] it is more liveliness kind of, because you see the boat traffic constantly, and when you see water it is a lot that happens" (Turid)

None of the informants preferred to sit in their room to look at the view from there, even though most of them had a view of the fjord.

Eating lunch: on the two days of observation during lunchtime it was observed that many took their lunch out on the terrace rather than eating it inside the cafeteria. Both patients and employees did this and they either had it alone or together with someone. The terrace was full of people during lunch hours and they packed themselves together around the tables. On the day of observation during dinnertime a few people also had their dinner out on the terrace, but most people had it inside the cafeteria.

None of the patients that were interviewed used to have their meals out on the terrace.

Drinking coffee, smoking, reading: it was observed that other activities frequently undertaken were to drink coffee, smoke and to read a book or a newspaper. These activities were performed especially by those who visited the terrace alone. One of the interviewed informants said that he used to have coffee on the terrace and that his wife used the terrace for smoking.

Sunbathing, resting, sleeping: quite a few times it was also observed that people used the terrace for sunbathing. Some were just sitting, with their eyes closed and face towards the sun. Others would lie down on the couches, and some took their shirts off. Others also used the couches to lie on and rest, some looked like they were sleeping.

Other activities: in addition to the already mentioned activities it was also observed activities like drinking beer, eating ice-cream, knitting, having a staff meeting, plucking in the flowerbeds and walking around.

Table 3 Seven most performed activities on the terrace, and the number of visitors undertaking them on different days

	Talking together/ Socializing	Looking at the view	Eating lunch/ dinner	Drinking coffee	Smoking	Reading newspaper/ Book	Making phone calls
Thursday	12	14	3	5	5	3	1
Friday	28	4	5	6	5	2	1
Saturday	51	23	23	3	4	3	0
Sunday	59	30	11	3	2	2	0
Monday	38	15	43	2	3	4	5
Sum:	188	86	85	19	19	14	7

7.2. The meaning of the terrace for stroke patients

The experience of being in hospital: the informants had different experience with being in hospital. One said that it was good to be there. Some of them expressed that they were very thankful for being in Sunnaas hospital and praised the hospital staff.

> "I have to praise them, very nice staff, wonderful food. Everything is good so I have nothing to complain about at all. Of course, it is a hospital, but it does not feel that bad" (Turid)

Another of the informants thought that it was tough being in hospital:

> "Once you get inside a hospital you are a patient, even here which it is not an ordinary hospital […] here it is only about training and eating" (Brita).

The transition to being ill/being in hospital: there were also some differences in how the informants found the transition to being ill and being in hospital. One answered that he had no problems with it, and another that the transition was big, but that she had not thought about it very much. The three others expressed that it was a considerable transition.

> "Everything was turned upside down in a second. I was pretty active and went from that to being entirely paralyzed" (Albert)

> "I had more deep valleys and high mountains, you can say, I could go from laughing to crying to laughing again" (Brita)

T*aking care of oneself:* Three of the informants mentioned that not being able to take care of oneself was one of the challenges with being ill, and that basic things they had not given any thought before had now become difficult.

> "To start with I could not take care of myself or anything" (Brita)

> "There are many things one does not think about, like dressing in the morning, putting on socks, putting on the bra, it is impossible" (Turid)

> "To be unable of taking care of yourself, to depend on help all the time, you cannot put yourself in that situation before you are there" (Albert)

Occupational loss: Four of the informants also expressed that they were now unable to do some of the occupations that normally were part of their everyday lives. One of the informants starts to cry when talking about her occupational loss. One of the interviewed has expressed that she is very pleased with everything, but starts crying when saying that: "It will be nice to come home" (Hilde)

> "What I think is sad is that I am not allowed to drive a car for a while, so I won't be able to get outside […] normally I would be out in the forest now picking mushroom" (Idar)

> "I cannot take care of my dog like before or visit my mother in the nursing home […] there are many things I liked to do before that I cannot do" (Brita)

> "What I think is bad is that I have a little dog at home, and I miss it so much" (Turid)

> "It is only two weeks to the moose hunt starts, and I have two dogs, but it won't be any hunting for me I think" (Albert)

The terrace is a nice place: All five informants expressed that the terrace was very nice and pleasant.

> "It's just a fantastic place" (Idar)

> "[…] and we enjoy the surroundings, the way it is built is very nice, it's kind of undisturbed" (Brita)

All of the informants also talked about the flowers as a reason for why they found the terrace nice, and all of the informants thought that the current design made the terrace an interesting place to visit.

Feelings when on the terrace: the informants were asked if they feel any different when being on the terrace. Two of the informants were certain that they did.

> "Yes, when you come out there you feel like a completely different person […] it is like medicine" (Idar).

> "Yes, you feel a little healthier when you have been out there, and had fresh air, and also you feel a little more light-minded. It has always been part of my everyday life to be out in nature, it means a lot to come out and feel weather and wind" (Albert)

Two of them said that they might feel a little different.

> "I don't know. Out here it is difficult to be in a bad mood, at least for very long. But, I don't know if I feel any different, more calm perhaps" (Brita)

> "At least I get a little fresh air, that's nice" (Turid)

One said that she did not feel any different, but that she thought it was nice to sit there and to be outside.

Four of the five informants said that they either felt more light minded or in a better mood when being on the terrace.

Getting some fresh air: fresh air was mentioned by three of the informants when talking about why they use the terrace.

> "To be social and to have some fresh air, to be a place which is nice, because it's nice here" (Brita)

> "The nice view, and to have some fresh air and be outside, that is what's joy" (Albert)

Dream away: when asked if they sometimes could forget being in hospital when being in the terrace, two of the informants said they could dream away when being on the terrace.

> "You're dreaming away to other places. When you're out there and you see the boat traffic, sail boats and… it is even better than Syden[2]" (Idar)

> "Yes, you can almost dream away here" (Albert)

The significance of the terrace: the informants were asked if the terrace had any significance for their stay at Sunnaas. Four of them thought that it was of significance.

> "I think it (the terrace) has actually helped many of us here, who are ill… I don't think I'm the only one that reacts the way I do […] it is pure medicine to come out there" (Idar)

> "It contributes in maintaining who I am, kind of […] it is a part of my self-image which I've had the chance to maintain because of this terrace" (Brita)

> "It can give a little meaning because of all the flowers, I enjoy the flowers a lot, so that is nice" (Turid)

> "Most of them (other patients) use it and most of them think it does them well to come out here and have some fresh air, and all of them talks about it… so I don't think I'm the only one… I think it has great significance for most of the patients here" (Albert)

> "[…] it has been part of making our situation easier, that's for sure" (Albert)

"Albert" also thought that the terrace could soften the transition to being in hospital:

> "[…] it becomes more natural in normal surroundings"

[2] Syden is a term in the Norwegian language referring to countries where one is going on sun holidays, for instance countries around the Mediterranean.

8. Discussing the use and meaning of the terrace

The discussion in this thesis is divided into two parts. The first attempts to answer the first part of the research question, and therefore the *use* of the terrace is discussed. This part is more of a descriptive character and will not discuss the matter in depth. It is suggested in this part that the terrace is a social and relaxing place.

The second attempts to answer the second research question and therefore looks at the *meaning* of the terrace for stroke patients. This part is more of an in depth, explorative character. First the experience of being in hospital is discussed, then the two disciplines that are applied in this thesis, environmental psychology and occupational science, are discussed, first separately and later together. In this part the attempt is to answer how the terrace can contribute to the well-being and rehabilitation of stroke patients.

8.1. The use of the terrace: a social and relaxing place

First of all it can be established, based on both the observations and interviews, that the rooftop terrace is a popular place at Sunnaas hospital. At the most busy times of the day there were so many visitors on the terrace that there was not enough room for all, and some would therefore come out on the terrace and then turn to go inside again. It should also be mentioned though, that at other times of the day, for instance within the patients' training program or in late afternoon, there could be only three or four visitors there at the same time. However, during all ten hours of observation the terrace was never empty.

The informants all praised the terrace, describing it as "fantastic" and "very nice" and none of them could find anything negative to say about it. However, the terrace's popularity is most probably individual, it cannot and will not be suggested here that all patients, staff and visitors care an equal amount for it. Some might perhaps not care for it at all, but the general impression is that many would visit and enjoy being in the terrace.

It also seemed that for some people the terrace was the place where they would spend their free time. Some visitors were seen at the terrace every day and they could stay there for a long period of time. A couple of times it was observed that some people stayed there through the entire observation of two hours. It also seemed that quite many felt at home on the terrace, doing common everyday occupations that would in a normal situation probably be undertaken at home. Some would lie on the couches to sunbathe, sleep or rest, some would read the

newspaper or a book, several took their phone calls at the terrace, and a considerable amount of the visitors took their meals there.

The terrace thus seems to have a great number of uses, however some more common than others. From both the observation and interviews, the impression was that the main functions of the terrace for most of the visitors were to socialize, eat and to look at the view. These three occupations, as well as other occupations that were undertaken on the terrace, are not necessarily isolated (Jarman 2010), and many would combine different doings, such as eating, while chatting *and* looking at the view. Furthermore, occupations that are observable is one thing, another is occupations that are not. Probably there were undertaken a number of non-observable occupations at the terrace as well, simply because a great deal of human doing cannot be seen (Polatajko 2010). So it is reasonable to suggest that many of the observed occupations that were undertaken on the terrace were nested together with some non-observable occupations.

Relaxing was an occupation that was sometimes observed on the terrace, at least that is the interpretation of occupations such as e.g. laying on the coach, but it can also be an occupation which is not that easy to observe. Despite not being listed as one, it is suggested here that relaxing was also a frequently undertaken occupation on the terrace. This assumption is based on both the interviews with the patients, and previous studies of hospital gardens where it was found that patients visited gardens to relax, in e.g. Söderback et al. (2004) and Davis (2001). In the case of the rooftop terrace at Sunnaas it is conceivable that relaxing was an occupation nested in other occupations. To sit and look at the view could just as well also be to relax. The same goes for having a lunch break on the terrace, or having coffee together while talking. There are also other thinkable uses of the terrace which are non-observable, like for instance recreating, planning and dreaming.

It seems that the terrace serves for different needs. The inner part of the terrace is more secluded and shielded. The flowerbeds divide this part into different compartments, which possibly gives room for more privacy. This part of the terrace is shaded and is perhaps the most comfortable part to sit in as well because of the couches. The outer part of the terrace is more open and has a full view over of fjord. Instead of couches there are tables and chairs on the outer part, possibly making it more suited to sit and eat.

The different designs of the two parts of the terrace therefore seem to serve for doing different occupations. However, the open space on the outer side of the terrace could possibly be filled

with more seating areas, especially with regards to two occupations: eating and looking at the view. During lunch time there were on the days observed not enough tables suited for having lunch at, and visitors crowded around the tables, or had their lunch in the couches with their plates on their laps. Also, many would drag chairs or couches to the railing in order to sit there and gaze at the view. As by now there are only tables close to the view, but no seating places meant to sit and gaze. It will therefore be suggested here to have a couple of tables more on the terrace to accommodate for all the lunch visitors, and put comfortable chairs and couches by the railing for those who want to look at the view. It is important though to ensure space for people in wheelchairs. Additionally, one of the informants requested to have some lights on the terrace after dark, as he thought it would be nice to use the terrace in the evening as well.

8.2. The meaning of the terrace for stroke patients

8.2.1. The experience of hospitalization

In order to grasp the meaning of the terrace for stroke patients one should also understand how being in hospital is experienced, and the aspects of it which can be a limit for patients' well-being. The following two chapters look at the transition to being ill and being in hospital, how that affects stress and well-being, and the loss attached to hospitalization.

8.2.1.1. Transition, stress and mental fatigue

Looking at the presented theories and the interviews with the stroke patients there is reason to believe that hospitalization is for many experienced as a considerable transition from everyday life, and as shall be discussed later, an experience of losing control. Three of the stroke patients thought the transition was big.

> "Everything was turned upside down in a second" (Albert)

The question then arises whether the stroke patients in this thesis experienced stress or felt that they were mentally worn-out. Using Ulrich's (1999) definition, stress is a response to something in the environment that is difficult or threatens well-being. He also argues that to lose control through hospitalization, meaning in this connection losing control over i.e. daily routines and taking care of oneself, is one of the factors that can cause a feeling of stress

(ibid). Kaplan and Kaplan (1989) also talks of stress as a prohibitor of well-being. In their theory stress can result in mental fatigue, as can worry and anxiety.

For some of the informants being ill and being in a hospital seemed to be associated with difficult experiences. One expressed it in this manner: "of course, it is a hospital" and another said that: "once you get inside a hospital you are a patient". They did not further explain what they meant with these phrases however, as if the meaning of them is already given, and as if the common understanding is that being in a hospital is associated with negative feelings.

The contrast between being inside the hospital and out on the terrace was also outlined in a manner implying that being ill and being in a hospital environment, even in a hospital like Sunnaas, is more or less a hinder for well-being.

> "You exist in here, you can say, but when you come out it is a completely different atmosphere" (Idar)

For "Idar" being in hospital was perhaps more about existing, or meeting basic needs, while the pleasures and joys he would mainly experience outside on the terrace. Some informants also described that they felt different when being on the terrace than inside the hospital, expressing that they felt more light minded, happier and calm, and that there was more liveliness on the terrace.

Being in hospital then seems to have negative associations and feelings attached to it, and is consequently for many an experience of anticipating difficult events, of lacking control over one's situation and having a predominance of negative feelings.

The impression is therefore that the informants have to some degree felt stress and/or mental fatigue trough hospitalization and illness which have been threatening their well-being.

8.2.1.2. Losing control, losing occupations and losing place

Based on the theories and on the experiences of the informants in this thesis it will here be suggested that a keyword that first comes to mind when looking at hospitalization is *losing.* This word includes several aspects of hospitalization: Ulrich (1999) talks about how one is losing control over one's own situation, meaning losing control through the loss of functions and over the small daily routines that is part of everyday life, like getting dressed, and the planning and preparing of meals. These two, the loss of function and the loss of control over

everyday life, is of course interlinked. To some of the informants these things were the most challenging parts of being in hospital.

> "To be unable of taking care of yourself, to depend on help all the time, you cannot put yourself in that situation before you are there" (Albert)

In occupational science the losing part of this is linked to the loss of occupation. One theory shall be discussed in that regard: occupational balance (Backman 2010). Hospitalization and illness are situations that can cause loss of meaningful occupations, and thus cause occupational imbalance. In the case with the informants in this thesis they expressed that they were unable to do the everyday, basic occupations, like already discussed up towards Ulrich's theories, and that they were unable to do occupations requiring mobility and transportation. Not least, they were unable to do occupations which they valued. "Idar" and "Turid" regret that their driver's licenses were taken away and that it would be more difficult getting around. "Brita" found it hard to read, and missed doing occupations such as walking with her dogs and visiting her mother in the hospital. "Albert" would normally be in the forest hunting moose, and was sorry that he would miss this year's season. He was possibly the one of the five informants experiencing the biggest transition, as he went from being very active, or one can say engaging in a great number of occupations, to being almost paralyzed both in the sense of his functional level and in the sense of the loss of occupation.

The loss of occupation might have lead to at least some of the informants experiencing what was presented as occupational imbalance (Backman 2010). By that it is meant that being in hospital and being ill hindered them from engaging in occupations that for them are regarded as interesting and meaningful (Backman 2010).

> "Once you get inside a hospital you are a patient, even here which it is not an ordinary hospital… here it is only about training and eating" (Brita).

The third loss that the interviewed patients possibly experienced is loss of place, also called displacement (Hamilton 2010). Hospitalization is a situation which can cause that, because the daily occupations that characterize the place where the basic needs are met, meaning home, suddenly changes (ibid). The informants found themselves in a place with different challenges, demands and opportunities than their normal environment. As was pointed out in the previous section, being in hospital caused a loss of daily undertaken routines and loss of personal valued occupations such as walking the dogs.

Moreover, the informants have probably been displaced from a place that they have an emotional relationship to, where they feel safe and with features they know and that are part of their self-image. It is not said that the informants expressed that they did not feel safe at Sunnaas, quite the contrary, they expressed deep gratitude for the way they were taken care of, but being in hospital is after all being in an unfamiliar environment, in which they lack control over.

8.2.2. Restorative qualities of the roof top terrace

In the attempt to answer what significance the rooftop terrace can have for patients this section will try to answer whether the terrace has the restorative qualities that a hospital garden can have, according to the theory of supportive gardens and restorative environment. When seen together these two theories suggest a total of six qualities or resources of restorative gardens, as some of the qualities in the different theories overlap. Each will be presented further below, however not so much in depth as it will be discussed further on in the thesis.

It seems that the rooftop terrace at Sunnaas to a large degree can serve as a restorative environment for many patients, both because it seems to have, at least to a certain degree, all the elements that must be present, and because the elements seem to be harmonizing with each other, possibly giving a feeling of wholeness and connectedness. It must be emphasized however that the rooftop terrace may not be restorative for all patients, and that it is hard to establish the restorative effect that the terrace can have seen in isolation from other aspects at the hospital, such as the staff and the training program, because they are contributing factors as well.

8.2.2.1. Control and getting away

These two resources are seen as similar enough to present them together, at least with regards to temporary escape when talking of control, which has also been the emphasis in this thesis. Within the term *control* is also access to privacy, but this resource is not emphasized here as the impression from the interviews is that the informants did not have much need for seeking privacy, at least not at the terrace, since they could have privacy in their rooms.

The rooftop terrace at Sunnaas seems to give, at least some of its visitors, a feeling of being away and getting a temporary escape. Two of the informants that were interviewed said that

they could almost forget being in a hospital when out on the terrace, and that they could "dream away." The other informants did not express it explicitly, but thought it was nice to get outside to "get fresh air". It can be discussed whether this phrase might be a metaphor that for instance *could* mean that they had a feeling of being away to some extent when being on the terrace. This will be further discussed later.

8.2.2.2. Social support

It seems that the terrace at Sunnaas to a large degree fosters social contact and likely also social support. When asked why they use the terrace most of the informants expressed that one of the main reasons was the social. Some thought it was easier being social out on the terrace, and easier to get in contact with others. The patients also preferred being on the terrace when having visitors.

8.2.2.3. Fascination and positive distractions

Fascination and positive distractions can also been seen together in this thesis.

It seems that the terrace has elements that are fascinating and distracting for the visitors. Especially the boat traffic was mentioned by several of the informants, and it also looked like the visitors that were observed enjoyed looking at it. The plants, herbs and flowers were also mentioned by most of the informants, and all of them thought the terrace would be less interesting to visit if it were not for the current design with flowers. Social interaction can possibly also function as something fascinating or distracting, and as established there were a lot of social interactions on the terrace.

8.2.2.4. Extent

The terrace is situated on a height with a considerable view of the Oslo fjord. In itself the terrace has a certain extent, and together with the view it is very likely to give a feeling of extent. When asked what they liked about the terrace, the informants mentioned the view as one of the first things. It was also evident throughout the observations that the visitors of the terrace enjoyed the view, as they could sit or stand by the railing and gaze outwards.

8.2.2.5. Compatibility

Some of the informants said that they would visit the terrace every day, and they would all rather be on the terrace when having visitors than in other places in the hospital. It seems

therefore that the informants have a great deal of interest in being on the terrace. Several of them also expressed that they have an interest in gardening or being in the nature as well, which could also be a factor creating compatibility. For some it may not only be the interest that makes them use the terrace, being on the terrace may be in accordance with their values and feeling of self-identity as well. Like one of the informants said: the terrace contributed in maintaining who she is.

8.2.2.6. Physical activity

In Ulrich's (1999) theory physical activity is one of the resources that can have restorative effect on the visitors of a hospital garden. Physical activity was barely mentioned by one of the informants and was very seldom observed in the rooftop terrace, and then only in the form of walking slowly around the terrace or plucking in the flowerbeds. For some who has low functional level this form of physical activity can have effect, and for some this is part of the training program according to one of the informants. The terrace can therefore to some degree foster physical activity, but to a very limited intensity. However, in the case of Sunnaas and the rooftop terrace, physical activity is probably not a very important resource, because that is covered in the patients' training program and physical activity beyond that is likely not necessary.

8.2.3. The rooftop terrace as an attractive place for doing

As was discussed in the chapter of the terrace's use, the terrace is a place suited for doing numerous and different occupations. That is the impression from both observations and interviews.

However, there seems to be an additional element to the occupations that are undertaken at the terrace. The terrace is an *attractive* place for doing. Some occupations are probably undertaken at the terrace because it is the best suited place for doing that. Examples of that are social interaction and looking at the view. Others are undertaken there although there are other places in the hospital specifically meant for doing such occupations, for example eating and smoking. Many chose to have their lunch out on the terrace, even though the cafeteria is well suited for that and is closer in vicinity, and many went out on the terrace to smoke although there is a smoking corner right outside of the entrance to the cafeteria. Resting could

possibly also be an example of such an occupation, as some would for instance choose to lie on the couches to rest instead of resting in their rooms.

There is therefore reason to believe that the occupations that took place on the terrace did so for other reasons than just because the terrace functions for doing them, and the theories suggest that people do occupations for other reasons than just the doing. This will be more thoroughly discussed later.

The terrace is probably an attractive place for undertaking non-observable occupations too, and as it has been suggested earlier there are probably a number of non-observable occupations that found place on the terrace as well. These are however not all that easy to establish, but based on the interviews, and partly also the observations some non-observable occupations that possibly found place on the terrace can be suggested.

Looking at the view was a frequently undertaken occupation among the informants and the observed visitors of the terrace. This is a very passive form of occupation, yet something many seemed to do to occupy their time, sometimes for a considerable amount of time as well. One should believe that it is more to looking at the view than merely *looking*. Two of the informants said they could dream away when sitting on the terrace. Perhaps when being on the terrace and e.g. looking at the view people dream away to other places, to their garden at home or to places they would go for vacation. Perhaps they recall valuable memories and get amused by it. Perhaps they look at the boats and wonder where they have been and where they are going. Perhaps they get lost in their thoughts and forget about place and time, as can be experienced when engaging in enjoyable occupations (Persson et al. 2001).

Several of the informants said that they had a garden at home and that they liked taking care of it. They also mentioned that the flowers on the terrace were something that made the terrace nice. Additionally one of the informants said that being in the terrace could inspire him. Perhaps being on the terrace inspires some of the visitors to plan projects or events to do when going back home.

8.2.4. Linking environmental psychology and occupational science

Environmental psychology and occupational science are perspectives that can be useful in order to understand what happens outside of the training program in a rehabilitation hospital, because they look at two of the most vital parts of human living: the place and environment in

which we live and act in, and everything that we do (Christiansen & Townsend 2010; Steg et al. 2012).

Moreover, the two fields of knowledge both have several meeting points and complement each other well. In occupational science a person's *doing* is always undertaken in the *environment* of which this person is in (Dunn et al. 1997). Environmental psychology is about the interrelationship between the person and the environment and how the two mutually affect one another (Cassidy 1997). In other words, a person's environment affects this person's doing and vice versa. There is, when put like this, an obvious resemblance between these two fields of knowledge, and it shall here be attempted to link these two, to possible give a broader view on the meaning of the rooftop terrace for rehabilitation and well-being.

8.2.5. Three factors for well-being: getting away, familiar place and balance

There are probably many aspects that could have been discussed with regards to the rooftop terrace and its significance for patients' well-being. Here three aspects of the terrace's significance will be emphasized especially, and they are discussed because they represent how the terrace can function as a counterweight to the loss of control, place and occupations that were presented as possible outcomes of hospitalization. In this thesis it is suggested that these aspects can contribute to the well-being and rehabilitation of patients. They are presented separately, but are in reality interlinked, and can be seen in order: getting away from the hospital environment, to the rooftop terrace which is a familiar place, to find identity and balance.

Rooftop terrace as a place for getting away

Getting away or getting a temporary escape was one of the qualities in a restorative garden/environment and refers to the feeling of escaping from an environment which one is in on a normal or more temporary basis, and which is not wanted (Kaplan & Kaplan 1989; Ulrich 1999). Here that environment is the hospital environment and the state of being ill.

Although Sunnaas hospital was praised by the informants and described as being a hospital that is different from other hospitals in a positive sense, being in Sunnaas and being ill represents a transition from the normal everyday life, and is a situation that after all is unwanted (Ulrich 1999). An environment, or a place, is perceived and experienced not only for its physical features and its physical location, but also with regards to the socially

constructed meanings of it, the individual's former experiences with it and the expectations to it (Hamilton 2010). It is reasonable to suggest that a hospital is a place that has socially constructed associations to something negative: illness, disability, a clinical and uninspiring environment, and some might have negative experiences from being in hospital. Two quotes from the interviews can be drawn forth to especially illustrate that. "Of course it is a hospital" and "once you get inside a hospital you are a patient". The meaning of these quotes were also earlier attempted to grasp, and it was suggested that they imply that there are negative thoughts and feelings associated with being in a hospital, that hospitalization is forcing an identity as "patient" on them, and that these are commonly understood truths. Getting away from the hospital environment, with the negative associations attached to it, could therefore have significance for the patients' well-being, as well-being is a state where the positive feelings exceed the negative (Diener 2000).

The rooftop terrace on the other hand is a place which is probably not initially associated with illness and negative feelings. In fact it seems that the terrace serves as a place where patients, at least some, get a feeling of getting away. Some of the informants expressed so explicitly, that they could almost forget about being in hospital when being on the terrace.

> "You're dreaming away to completely different places" (Idar)

A couple of them also expressed that they felt less ill when being there. One of them talked about the atmosphere being totally different on the terrace than inside the hospital, that people seemed happier and more social when being there, and that it was like a different world to get out there.

Others expressed it more implicitly. A couple of the informants said that it was nice being on the terrace, but could not really express why it was so and if they felt any different when time had been spent there. Some said that they felt happier or more light minded when being on the terrace. Also, the informants said that they seek to the terrace when for instance having visitors. Some of the informants found it hard to explain why they would use the terrace and if they felt any different when being there, but there is obviously something about it that makes it an attractive place to spend time and do different occupations.

The phrase "getting some fresh air" was used by several of the informants for why they would use the terrace. Although it could have been meant literally, it could possibly also be understood as having more subtle meanings. At least in the Norwegian language there is more

to the phrase than just the physical doing of breathing in fresh air. Usually when using the phrase one is referring to something which is also mentally good. Going outside to "get fresh air" could just as well be about having a change of environment. To go from an environment that is associated with negative feelings to an environment that brings out the positive. Getting "fresh air" could be about clearing the head and getting a distance to the difficult things in life, to feel refreshed and restored. In other words, it could be about restoring a mentally tired mind (Kaplan & Kaplan 1989).

This assumption is also supported by the theory of occupational value within the category of self reward. The rooftop terrace is a place that the visitors choose to be in because it gives them immediate enjoyment. That is probably one of the factors that invite the patients to use the terrace, because the occupations undertaken there cause immediate enjoyment, as shall be discussed more later on. From feeling enjoyment it is easy to experience to forget about place and time (Persson et al. 2001).

Getting away, or getting temporary escape, has another layer to it. Escape can give a feeling of regaining control, meaning that the patient regains control over what to do and over her own situation (Ulrich 1999). "Brita" is perhaps the best example of how "escaping" from the environment associated with illness, from the inside hospital environment to the rooftop terrace, can help regaining control. She experienced that the illness brought mood swings with it, but when being on the terrace she found it easier to be happy and calm. For her the terrace possibly helped her regaining control over her thoughts and feelings. What is more, "Brita" expressed that the terrace contributed in maintaining her identity, possibly giving her a feeling of having increased control over her situation, through being reminded of whom she is and forgetting about being a patient. "Brita" herself said it like this:

> "I had more deep valleys and high mountains, you can say, I could go from laughing to crying to laughing again"
>
> "Out here it is difficult to be in a bad mood, at least for very long. But, I don't know if I feel any different, more calm perhaps"
>
> "It contributes in maintaining the one I am, kind of […] it is a part of my self-image which I've had the chance to maintain because of this terrace"

Rooftop terrace as a familiar place and maintainer of identity

It was suggested that the stroke patients in this thesis have experienced displacement, or loss of place, through their illness, loss of function and hospitalization. Displacement can and likely will, as presented previously, be a difficult experience. A result of that might be a feeling of not having a place of familiarity, and a place which is comfortable and safe (Hamilton 2010).

It seemed that this was partially the case for the informants. Some of them expressed that the small daily occupations that they associate with their everyday place, the normal environment at home, were changed or harder to undertake when being ill and in hospital, such as getting dressed in the mornings. As mentioned before, a hospital is essentially an unwanted place to be in, and it was expressed several times in the interviews: "here it is only about training and eating", "you can walk inside these halls and you see the same people", "of course, it is a hospital".

On the other hand, all of them expressed gratitude and satisfaction with being taken care of in hospital, and especially in Sunnaas.

> "I have to praise them, very nice staff, wonderful food" (Turid).

According to some of the informants, being in Sunnaas gave not the same feeling of being in a hospital as in other hospitals, and the displacement of the patients used as informants in this thesis might not have been as disrupting as could have been the case in other situations, although this is of course only an assumption. There are probably several qualities with Sunnaas that could have been discussed in that regard, and not least the interplay between all those qualities. That can be useful to keep in mind when looking at the qualities of the rooftop terrace, because it is after all part of a larger whole and can therefore not be seen entirely in isolation. At the same time it represents a break from what a hospital as an institution represents: the illness and the role as a patient. That is perhaps what makes the terrace as a place particularly interesting.

There are assumedly some meaningful qualities with the rooftop terrace. Perhaps, in fact, the rooftop terrace at Sunnaas contributes in giving the patients a certain feeling of being in a safe and familiar place, which are, according to occupational perspectives Gustafson (2001), two of the important attributes that are present in the emotional relationship between a person and a place. Four of the informants expressed that they had a garden at home or that they were

fond of being outside. It is possible that for these four the rooftop terrace served as a familiar place, by having familiar scenes, being a place where one knows what is expected and that it gives associations to places they have experienced as positive. "Albert" thought that the terrace made the transition to being in hospital easier for him because the surroundings on the terrace were more normal. For him being outside was a large part of his normal life, and the terrace offered an opportunity to continue doing that.

The feeling of familiarity can also have significance for the patients' feeling of identity, on several levels. First and perhaps most important, the rooftop terrace can have significance for the maintenance of patients' identity on the personal level, meaning that the patients' former experiences with similar places and/or nature elements can give a feeling self-identity when being on the terrace (Persson et al. 2001). Four of the informants were fond of working in their garden or being in nature, and the impression was that this was occupations that were important for them.

As earlier mentioned, one of the informants expressed it herself: that being on the terrace contributed in maintaining who she is. It seems therefore that the terrace served as a place that was in compatibility with the informants' values and interests and doing occupations that are in accordance with one's values is important for the feeling of self-identity (Backman 2010).

The terrace can be of significance for the feeling of identity on a cultural level and universal level as well. As earlier suggested the terrace functions as a topic for conversation, as a place for social interaction and social support, and where the users share experiences. It can therefore be a place that gives a feeling of belonging to a group or a culture (Persson et al. 2001).

> "And you can just come here and you meet someone, it is almost like you cannot sit here alone even if that is what you want" (Brita)

It is also claimed that there is an inherent bond between human and nature which makes humans naturally enjoy nature environments (Stigsdotter & Grahn 2002) and the significance of the terrace can therefore also be understood on a universal level, meaning that it is possibly something that everyone appreciate inherently. That might be the reason for why some of the informants expressed that the terrace was "fantastic" and that they enjoyed being there, but had problems with expressing exactly why and what they liked about it.

The positive experiences with being in the rooftop terrace and Sunnaas as a whole might also have to do with the ability to distinguish between places and compare them to each other (Gustafson 2001). Perhaps when the stroke patients have accepted the situation which they are in and have experienced the alternatives, that is being in other hospitals and not having the same opportunity of going outside, they value being in the rooftop terrace even more.

Rooftop terrace as maintaining occupational balance

It was argued that hospitalization in many cases will lead to loss of occupation. The informants in this thesis had experienced loss of occupations in different ways, from the small daily routines such as getting dressed, to leisure occupations such as walking the dogs and hunting. Losing control over daily routines came as a surprise to some of the informants, and seemed to be one of the greatest challenges for them. Occupations that were meaningful for the patients, such as walking in nature, seemed to be what the patients missed the most.

> "I cannot take care of my dog like before or visit my mother in the nursing home […] there are many things I cannot do that I liked to do before" (Brita)

> "What I think is sad is that I have a little dog at home, and I miss it so much" (Turid)

The lack of meaningful occupations or engaging in too few occupations was referred to as being in occupational imbalance (Backman 2010).

The terrace was used for doing a number of occupations. Several which are often undertaken at home or in everyday life, such as eating, resting, reading etc. Social activity was one of the most frequently observed occupations, and it was mentioned by most of the informants as well. Looking at the view was also frequently undertaken, and included in that was also looking at the boat traffic. The informants phrased that it was nice that "something happened" and that there were more life on the terrace.

> "It is more liveliness kind of, because you see the boat traffic constantly, and when you see water it is a lot that happens" (Turid).

The occupations that people engage in are influenced by among other things the experiences the person has with similar places (Hamilton 2010). As suggested earlier, the terrace might have some attributes that the patients value and have former experiences with, which make it

easier for them to engage in valuable and enjoyable occupations. Sitting and enjoying the flowers for instance could possibly be a valuable occupation for some of the patients.

> "It can give a little meaning because of all the flowers, I enjoy the flowers a lot, so that is nice" (Turid).

It seems that the patients engaged in occupations at the terrace which they found valuable. Also, for some of the informants it seemed that time would go by more slowly inside the hospital than out on the terrace, and that there were more to be fascinated by on the terrace.

This is in accordance with the distracting and fascinating qualities of supportive/restorative environments that were presented in the theories (Kaplan & Kaplan 1989; Ulrich 1999). There are obviously some positive distractions on the terrace, which cannot be found inside the hospital, that bring positive feelings, that keep the thoughts on something enjoyable and make time pass by more quickly.

It is therefore reasonably to suggest that the terrace functions as a place where something nice happens, a place for doing enjoyable occupations and as a nice place for killing time. Said in other words, visitors at the terrace engage in occupations that are compatible with their interests and values. The terrace can therefore possibly cause a shift from being in occupational *imbalance* to being in occupational *balance.*

8.2.6. Expanding the views on rehabilitation

The ideology and practice of rehabilitation is very comprehensive, and there is a broad and complex understanding of all the different areas in which stroke survivors are in need of help for rebuilding function and how to do it (Young & Forster 2007). However, it seems that the traditional idea around rehabilitation, although possibly changing, has a shortcoming. The understanding of the significance, and not least potential, of what is happening outside of the training program is not that comprehensive, yet (Marcus & Sachs 2014). Studies have shown that *being* and *doing* in hospital gardens have several advantages, and that it in fact can function as a supplement to the rehabilitation program (Jonasson et al. 2007; Kim et al. 2010; Söderback et al. 2004)

This seems to be *recognized*, but not really *emphasized*. In the Norwegian guidelines for treatment and rehabilitation after stroke the patients' environment and doing enjoying

occupations are mentioned as significant (Indredavik et al. 2010), although very briefly, and is not given much attention. The patient's home is described in the guidelines as the most natural place for rehabilitation, because it is undergoing in the patients' familiar environment (ibid). Seemingly, a homely and familiar environment is therefore an advantage according to the guidelines, but is not receiving any attention in the guidelines besides that, such as in the section about rehabilitation in hospital.

Rehabilitation is about restoring patients' functions in order for the patient to live a normal, or near-normal, life (Punwar 1994). Another definition of rehabilitation suggests that rehabilitation is to improve patients' quality of life (Young & Forster 2007).

Looking at these definitions of rehabilitation it seems that Sunnaas hospital, not least because of the rooftop terrace, is a place that to a large degree is a place able to rehabilitate both within and outside of the rehabilitation program. The terrace functions as a place where some can live closer to their normal life, probably because the terrace represents a change in environment (getting away), to something nice and familiar and because engaging in meaningful and enjoyable occupations seems to come natural there. Informants said that the atmosphere was lighter, the social interaction easier, and that they have an emotional relationship to garden and/or nature. Not least is the terrace contributing in increasing some of the patients' quality of life in the hospital setting, which is evident through the informants' descriptions of how they felt when being on the terrace and if it were of any significance for them.

> "I think it has actually helped many of us here, who are ill… I don't think I'm the only one that reacts the way I do […] it is pure medicine to come out there" Idar.

> "It has been part of making our situation easier, that's for sure" Albert.

Looking at the definition of health promotion, "the process of enabling people to increase control over, and to improve, their health" (WHO 1986), it can be argued that the rooftop terrace at Sunnaas is a positive contribution to health promoting work. Patients at Sunnaas seem to use the terrace because they experience that it does them good, and the terrace thus seems to better enable the patients to take control over and improve their health. The initial idea with the terrace was to improve patients' well-being, and it looks like that aim is to a large degree fulfilled.

Based on the findings in this thesis, it will here be suggested that the views and thoughts about rehabilitation should be extended to acknowledge the importance of what happens outside of the rehabilitation program, and the importance of also mental well-being for rehabilitation. Rehabilitation hospitals can with advantage recognize how the hospital environment and spare time occupations of the patients also influence the patients' well-being, positive feelings, recreation and thus rehabilitation.

8.3. Validity and limitations of the study

In this study qualitative validation refers to whether the investigated phenomenon, here the use and meaning of the rooftop terrace at Sunnaas, has been investigated and presented in accordance with reality (Fangen 2010; Kvale et al. 2009). Qualitative validation is however not a term entirely agreed upon within the qualitative research community, as validation stems from quantitative research (Fangen 2010). As qualitative studies deal with considerable different methods and data than quantitative, some qualitative scientists are in the opinion that the term cannot be used within qualitative research (Fangen 2010; Kvale et al. 2009). These disagreements shall not be further discussed here, but it is an important point that the term *qualitative* validation must not be mistaken with *quantitative*, where the latter also refers to findings that can be generalized (ibid).

8.3.1. Observation

The validity of information acquired through participant observation is rather high compared to other qualitative methods (Fangen 2010). This is because the observer becomes a more or less natural part of the study scenery and is therefore not likely to influence people's behavior particularly (ibid). In the observations undertaken in connection to this thesis the experience was that the visitors did not take much notice of being observed, even though being informed about it. It was fairly easy to blend in at the terrace, by behaving like an ordinary visitor, e.g. by eating lunch and drinking coffee. The impression is therefore that the observations were not a disturbing element.

Still, it is not possible to be entirely assured that the results are free from biases.

First, it is imaginable that the visitors of the terrace might have acted in a different manner when knowing that they were observed (Fangen 2013). Some might have been destining from

using the terrace and some might even have chosen to visit the terrace out of curiosity. Also the behavior of the visitors might have been influenced in some way or restrained by the observation (ibid). It was attempted to avoid causing a change in the way the terrace normally was used by distributing information about the project and the observation in the hospital beforehand observation. It was informed that the observations were only of how the terrace was used and that the content of conversations would not be recorded. Hopefully this made the present of a stranger sitting on the terrace and taking notes less mystifying, yet it could of course have made people aware of the observation and thus caused a change in the usage of the terrace.

Secondly, there might be errors in the recorded observations. At the busiest times there were many people at the terrace, and at times it was hard to keep an overview of all visitors and all the activities undertaken (Fangen 2010).

Thirdly, some of the activities that were recorded might only be the interpretation of the observer and not the true action of the visitor (Fangen 2010). However, what was observed was of very basic character, and required little interpretation.

8.3.2. Interview

There are several ways in which biases can have occurred when carrying out interviews.

First of all, the role of the interviewer (Kvale et al. 2009) and the ability of the interviewer to communicate with the informant in an adequate manner is important for the validity of the data (Berg & Lune 2012). In regards to communication there are several issues that might have occurred (ibid). First, the language used and phrasing of questions can have led to misunderstandings or simply that the informants did not understand the questions (Berg & Lune 2012). In this thesis it was considered to be especially important to ask uncomplicated questions and using every day words when carrying out the interviews, as stroke survivors can have cognitive impairments that might cause language difficulties (Tatemichi et al. 1994).

Second, the questions that were asked and the way they were asked might have influenced the answers of the informants, meaning that the questions might have been leading (Berg & Lune 2012; Kvale et al. 2009). The questions or the formulation of the questions might unintentionally have led the answers in a certain direction, and the informants might also have

given answers they thought were wanted (ibid). This was also considered when formulating interview questions, and tried to avoid.

Third, the informants might have felt uncomfortable in the interview situation or felt like not wanting to share all their experiences, as some can experience the interview setting very private or feel like it is prying (Kvale et al. 2009). This was tried avoided by thinking carefully through the interview guide and by chatting about more trivial topics with the informants before the interviews in the attempt of creating an everyday, relaxed conversation.

Another possible problem is that the stroke might have affected some of the patients' ability to express themselves. Many experience having problems with talking or just finding the right words after having a stroke. One of the inclusion criteria for the informants was that they had to have the ability to express themselves orally, yet a couple of the informants had some problems with talking and finding the words, and that can of course have had effect on the answers. Additionally, one of the informants gave voice to being very satisfied with being in hospital and that there were no changes in mood after the stroke, yet started to cry when asked what looking forward to with coming home. It was sometimes therefore uncertain is she expressed what she really thought and felt. The data from her interview is for that reason and because it was difficult to understand her not given much attention in this thesis.

9. Conclusion

Two objectives have provided the framework for this thesis: to evaluate how patients, staff and visitors use the rooftop terrace at Sunnaas, and investigate how it can be of significance for the well-being and rehabilitation of stroke patients.

The use of the rooftop terrace:
The rooftop terrace at Sunnaas is a popular place. During ten hours of observations there were always people there. At most there were 77 visitors during two hours; and patients, staff and other visitors all used the terrace. Lunch time and weekends were the most popular times, and it was used both alone and together with others.

Social interaction, looking at the view, and eating (primarily lunch) were the three most frequently observed activities. However, not all occupations are observable (Polatajko 2010), it was therefore suggested that some of the observable occupations that found place on the terrace, such as looking at the view, reading and quite possibly also being social, were also about *relaxing*. The rooftop terrace is therefore a social and relaxing place

The significance of the terrace for stroke patients' well-being and rehabilitation:
It was argued that the patients at Sunnaas, to some degree and from time to time, experience mental fatigue and stress, in the way the terms are defined by respectively Kaplan and Kaplan (1989) and Ulrich (1999). Being in hospital was expressed by the informants as being difficult and also that it was challenging not having control over one's situation.

Further on it was suggested that hospitalization is a story of losing: losing control over every day routines and over one's functionality (Ulrich 1999); losing occupations that are personally interesting and valuable (Backman 2010); and losing the place where the basic needs are met, and that is safe and familiar, meaning home (Gustafson 2001; Hamilton 2010). These three, as well as mental fatigue and stress, were recognized as limitations for the well-being of the patients in this thesis.

Seen together the two theories of supportive/restorative environments held six resources: control and feeling of being away, social support, positive distractions/fascination, extent, compatibility and physical activity (Kaplan & Kaplan 1989; Ulrich 1999). It was suggested that the rooftop terrace hold all these resources and therefore has restorative qualities, but that physical activity is limited by the design, and that it is probably not that important either as it didn't seem to be any need for physical activity outside of the rehabilitation program.

The rooftop terrace is an attractive place for doing. Some occupations are probably undertaken there because that is the best suited place for doing that, but additionally the terrace attracts doers of occupations such as eating, smoking and resting, which are occupations that it is accommodated for in other places at the hospital too.

Three factors of the rooftop terrace were especially emphasized with regards to promoting well-being and rehabilitation: being away (Kaplan & Kaplan 1989; Ulrich 1999), familiar place (Hamilton 2010) and occupational balance (Backman 2010). It was argued that the patients regained control through getting a temporary escape (Kaplan & Kaplan 1989; Ulrich 1999) from an environment associated with being ill, and were being a patient is the ruling identity. Further it was suggested that the terrace is a place that has other associations attached to it which are of a more positive kind. This is also a place which holds familiar attributes that some have personal and emotional experiences with (Gustafson 2001), and which can be reminders of one's identity (Persson et al. 2001). Thirdly, the terrace is a place where many find meaningful and enjoyable occupations to engage in, and it can therefore help people in occupational imbalance to regain occupational balance (Backman 2010).

It is therefore argued that the terrace is a place promoting well-being in patients, because it has restorative qualities and is a counterweight to the losses that hospitalization brings with it.

Furthermore, well-being is an important contributor to patients' recovery and rehabilitation, and the already quite comprehensive rehabilitative practice should therefore be extended to take even better hold of the health promoting perspective and seek towards rehabilitate also outside of the rehabilitation programs. Sunnaas with its rooftop terrace could possibly show the way for other rehabilitation hospitals in that regard.

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Appendices

Appendix 1: Observation scheme

Date:
Time:
Weather and temperature:

Number of people and sex	Approx. Age	Time	Activity	Place

Appendix 2: Interview guide

Briefing and questions.

Introductory questions:

Age

Length of stay at Sunnaas

Functional level

Challenges after stroke

Experience with being in hospital

Main topic: the rooftop terrace

How much do you use the terrace?

What do you use it for?

Why do you use the terrace?

How do you feel when being on the terrace?

Do you feel any different when being on the terrace/after being on the terrace?

What do you like about the terrace/what don't you like?

Do you think that your stay at Sunnaas would be any different if the terrace was not there? How?

Finalizing questions:

What is your former experiences with the use of garden and/or nature?

What is your room like? View? Atmosphere?

Appendix 3: Information letter to informants

Inquiry to participate in an interview in connection with a master thesis

I am a master student in public health science at the Norwegian University of Life Sciences and am now working on my master thesis. The topic for my thesis is the use and experience of the rooftop terrace at Sunnaas hospital.

In order to investigate this I'm seeking to interview six persons that are under primary rehabilitation for stroke, at Sunnaas. It will be asked how the terrace is used and its significance for your stay in hospital. No sensitive questions about the illness will be asked. I will use a tape recorder and take notes while we speak. The interview will take 45 to 60 minutes and will be carried out at Sunnaas hospital in September/October. We will make arrangements for time and place later.

Participation is voluntary and you can withdraw from the study at any time, without giving reason for it. It you withdraw all the collected data of you will be made anonymous. The data will be treated confidentially and no persons will be recognizable in the finished thesis. The data will be made anonymous and the records deleted when the thesis is finished, within July 1st 2014.

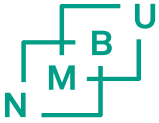
This study has been approved by the commission for personal protection.

Best regards,
Marte Eliassen

Declaration of consent:

I have received written information and am willing to participate in the study.

Signature …….



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