



Title of Degree Thesis

**Visual Impairment in the Elderly and what Care Givers
need to know: A Literature Review**

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<p>Abstract:</p> <p>The aim of the study is to find current knowledge about vision loss in the elderly in late life and what the care giver must know and do to help them. The two research questions that were used to achieve this aim are: What are the challenges faced by the elderly with different levels of visual impairments? What do care givers need to know about vision loss in the elderly? The theoretical framework was based on social support theory. The method used in this study was literature review with content analysis. Information to support the second research question is also gained from an interview by an expert in the field.</p> <p>The results showed that the challenges can be categorized into social, psychological/emotional and functional categories. Also what need to be known by care giver was categorized into social support, informational support, emotional support, competence support and tangible support.</p> <p>Furthermore the results showed that there is low level of participation in daily activities of those who are ageing with visual impairment. The care giver can maximize coping, adjustment and independence by using a client-centered approach in planning activities for the elderly including visual rehabilitation and contacting and consulting the visual rehabilitation counselor.</p> <p>The conclusion is that environmental interventions for the elderly person with visual impairment must not focus on functional difficulties only but also address social challenges to optimize participation.</p>	
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1 INTRODUCTION

There are a lot of changes in the body that comes with ageing. Some of these changes lead to impairments. One of these impairments is vision which can affect the elderly to the extent of disabling and eventually prevent them from living independent lifestyles.

With an increasing elderly population in many countries, more people will be at risk of age- related visual impairment (WHO factsheet 2013). Also by the year 2020, WHO estimates that there will be 76 million people who are blind in the world with 54million being 60 years of age and older.

According to the Finnish Federation of the Visually Impaired (FFVI), about 80% of the visually impaired are elderly people.

Visual impairment in the elderly often occurs from diseases such as glaucoma, age-related macular degeneration, cataract, and diabetic retinopathy to the eye. (Iecovich & Isralowitz 2004).

Visual impairment, in the elderly can affect their everyday activities to a large extent and this can lead to dependency. There is also physical handicap, increased incidence of fall, depression and social isolation associated with these impairments. It is also important to know that vision is very important in recognizing and processing information about the environment. (Loh & Ogle 2004).

It is therefore important for professionals caring for the elderly to have in depth knowledge on visual impairment and how to maintain good quality of life to the elderly in such situations

The author got the motivation when on practical training. There were many good practices to maintain good care for the elderly living in the institutions. But one client who was having vision problem specifically blindness, was always in her room unlike the others due to her impairment making her more or less isolated.

Aim of the study and research questions

The study aims at finding current knowledge to achieve good care for visually impaired elderly.

The author feels that it is important for care givers to improve their competence in different levels of vision loss associated with aging so as to provide good care to the elderly people. The study will also find out the problems associated with vision loss in the elderly and how best they can cope with the situation.

The questions formulated in order to reach the aim are:

What are the challenges faced by the elderly with different levels of visual impairments

What do care givers need to know about vision loss in the elderly?

2 BACKGROUND

Vision impairment (often referred to as visual impairment) is any diagnosed condition of the eye or visual system that cannot be corrected to within normal limits. Disease, damage or injury causing vision impairment can occur to any part of the visual system the eye, the visual pathways to the brain or the visual centre of the brain.

According to the international classification of diseases, there are four levels of visual function and these levels are normal vision, moderate visual impairment, severe visual impairment and blindness. Moderate visual impairment combined with severe visual impairment is grouped under the term “low vision”: low vision taken together with blindness represents all visual impairment. (WHO 2012)

2.1 Previous Researches

The different levels of visual impairment are very common as one advances in age, therefore it becomes very challenging for the elderly to do the same things they used to do when they had normal vision.

Visual impairment is found to have remarkable effect on ability to function daily and health status as well as sense of life satisfaction. People with visual challenges have deteriorated health status and low level of life satisfaction as compared with those not having visual problems (Iecovick & Isralowitz 2004)

According to Smith (2008), vision loss comes with age, and this loss can affect individual's ability to read standard print, prepare meals, use telephone, go shopping as well as take medication. With all these challenges people with vision loss have the desire and need to do everyday activities that support their life roles, and usually try to adjust to the challenges of performing these activities.

Visual impairment is highly associated with falls. It is also confirmed that visual impairment is highly linked with risk of falls and hip fracture. Also study of falls before and after cataract surgery showed that removal of cataract was effective in reducing the risk of falls among the elderly. (Serval et al 2011).

As these challenges are so common with the elderly suffering from visual impairment, it is very important for all care givers to know more about their challenges and the related effect of some of these challenges. According to (Hayman et al 2007), Depression is common among older adults 75 years and above with severe visual impairment, indicating that a person who is visually disabled is more likely to suffer from depression.

Visual impairment is associated with a loss of function in activities of daily living. Avoiding physical activity is also common in older people with visual impairments, and an important risk factor for falls. Possible ways to reduce activity limitation and improve mobility and activity can be environmental and behavioral interventions delivered by a number of health professionals. (Skelton et al 2013).

2.2 Description of Concepts

The description of the following terms associated with vision and the diseases are beyond the scope of this study, but as mention earlier among the elderly, visual impairment is commonly caused by cataract, presbyopia, age-related macular degeneration,

glaucoma and retinopathy it is therefore necessary for care givers to have knowledge about these diseases, hence their description.

Visual Acuity

In the book 'Visual Impairment Handbook' by Punani & Rawal 20, visual acuity is the ability to see details. Visual acuity of 6/60 means that the person examined cannot see, at a distance of 6 meters, the object which a person with normal eyesight would be able to see at 60 meters. If vision is so impaired that to see the biggest E of the E-chart, the person has to come within 6 meters or even nearer, he is considered blind. The easiest method of testing visual acuity is to see whether the person can count fingers at a distance of six meters. Figure 1 shows the maximum distance between a person and ability to see a finger as 6meters, showing visual acuity of 6/60. Figure 2 also shows how the maximum distance between a person and ability to read the biggest E on the chart is 6meters meaning visual acuity is 6/60. (Punani & Rawal 2002).

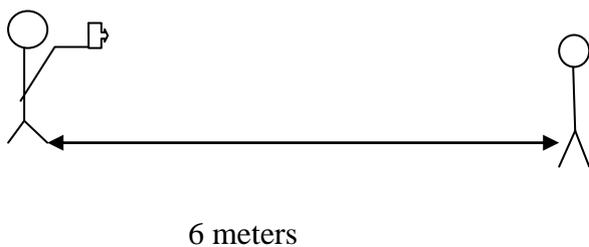


Figure 1. How to measure visual acuity. Source: Punani & Rawal (2002)

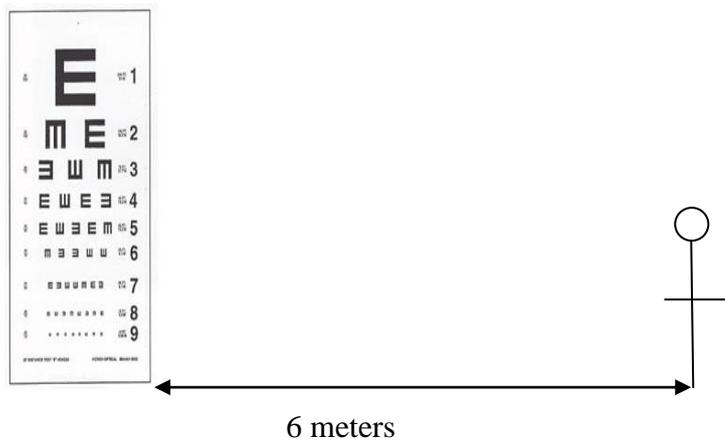


figure 2: E- chart for refraction. Source: Punani & Rawal (2002)

Normal Vision

Normal vision is when one has visual acuity of 6/6 or 20/20. This means that a person with normal vision can see at six meters (20 feet in imperial) with both eyes, a letter on an eye chart that is designed to be seen at 6 meters or 20 feet.

Low Vision

A person with low vision is one who has impairment of visual functioning even after treatment and/or standard refractive correction, and has a visual acuity of less than 6/18 to light perception, or a visual field less than 10 degrees from the point of fixation, but who uses, or is potentially able to use, vision for the planning and/or execution of a task.(WHO 1992). Low vision by measures of visual acuity and/or visual field is visual acuity less than 6/18 (20/60) and equal to or better than 3/60 in the better eye with best correction or visual fields less than 20 degrees in diameter.(WHO 2013)

Visual Impairment

According to WHO criteria used for International Classification of diseases, visual impairment is a best-corrected visual acuity of less than 0.3 (20/60) but not less than 0.05 (20/400) in the better eye. The second criteria is mostly used in the United States and it

says visual impairment is a best-corrected visual acuity less than 0.5 (20/40) but better than 0.1 (20/200) in the better eye. (WHO 1980)

Blindness

The WHO criteria for International Classification of disease define blindness as a best-corrected visual acuity of less than 0.05 (Snellen, 20/400) in the better eye or a visual field not greater than 10° around central fixation., and the United States criteria defines blindness as a best-corrected visual acuity of 0.1 (20/200) or less in the better eye.

Cataract

Cataracts are cloudy patches in the lens that can make vision blurred or misty. It is a common cause of visual impairment in the elderly and the commonest cause of blindness worldwide. Cataracts are also the most common treatable cause of visual loss in the elderly, but it is often unrecognized. People suffering from cataract describe their vision as foggy or fuzzy, and colour perception may also be affected. (Loh and Ogle 2004).

Risk factors for age-related cataract include diabetes, prolonged exposure to sunlight, tobacco use and alcohol drinking. Vision can be restored by surgically removing the affected lens and replacing it by an artificial one (WHO 2012).

Presbyopia

According to the medical dictionary, it is the loss of the eye's ability to change focus to see near objects. The reasons for this loss of the power of accommodation are not yet fully known. It is conventionally said to be due to the lens becoming less elastic with time. Presbyopia is normally associated with ageing and it also leads to significant visual impairment but does not usually cause blindness. The early signs are difficulty in reading fine print and feeling ocular fatigue whiles reading. (Loh & Ogle 2004).

Age-related macular degeneration

Age-related macular degeneration (ARMD) is a leading cause of vision loss and blindness among older adults in the USA and throughout the developed world. (Haddad et al 2006) It is the most prevalent cause of vision loss in developed countries. There are two main types of ARMD namely the 'Dry' form also known as the non-exudative type and the "Wet" form also known as the exudative type. The non-exudative ARMD is milder but it is associated with profound visual loss. The exudative ARMD is more serious and account for most cases of severe visual impairment related to ARMD. (Loh & Ogle 2004).

At present, the available evidence points to the relevance of smoking prevention and cessation as inductive to preventing incidence of ARMD. As for the cure of the disease ARMD there is at present no definitive treatment. Palliative treatments which are able to retard the progress of the disease include the use of intravitreal drugs, lasers, dynamic phototherapy and sometimes surgery. The early beginning of rehabilitation for those with the disease includes psychological support, mobility and life skills to continue conducting a full life experience and face no limitations, as well as adaptation of the living places, and the use of special aids for reading and computer use. (WHO 2012).

Glaucoma

There are several types of glaucoma, however, the two most common are primary open angle glaucoma (POAG), having a slow and insidious onset, and angle closure glaucoma (ACG), which is less common and tends to be more acute.(WHO 2012).

According to National Eye Institute, glaucoma is a group of diseases that damage the eye's optic nerve and can result in vision loss and blindness. However, with early detection and treatment, you can often protect your eyes against serious vision loss.

In open-angle glaucoma, even though the drainage angle is "open", the fluid passes too slowly through the meshwork drain. Since the fluid builds up, the pressure inside the eye rises to a level that may damage the optic nerve. When the optic nerve is damaged from increased pressure, open-angle glaucoma—and vision loss—may result. That's why controlling pressure inside the eye is important. There is no cure for glaucoma. Vision lost from the disease cannot be restored.

Diabetic Retinopathy

According to National Eye Institute, diabetic retinopathy is the leading cause of blindness in the elderly suffering from both type I and type II diabetes mellitus. It is the most common diabetic eye disease and a leading cause of blindness. It is caused by changes in the blood vessels of the retina. As the duration of diabetes increases, the prevalence of diabetic retinopathy also rises. Risk factors for diabetic retinopathy include duration of diabetes, dependence on insulin, nutritional and genetic factors. Medical interventions can decrease some of the risk to vision caused by diabetic retinopathy. If sight-threatening retinopathy is present, timely laser photocoagulation of the retina decreases the risk of a subsequent severe visual lesion (WHO 2012).

2.3 Theoretical Framework

A group of statements composed of concepts related to form an overall view of phenomenon is referred to as theoretical framework. (Fitzpatrick & Wallace 2006).

Social support theory is used as a theoretical framework in this research. Elderly people who suffer from visual impairment normally have problem with stress. Studies have shown that social support is beneficial in stressful times. It also protects people from the effect of stressful events. Linking this theory with health, social support protects people from the bad health effects of stressful events by influencing people's thinking and how to cope with the events. This theory will help the author to show how best elderly hav-

ing visual impairment can be helped with challenges they face in this situations as well as to establish barriers for care givers. (Cohen & Mckay 1984)

Social support Theory

Social support is defined as the process of interaction in relationships which improves coping, esteem, belonging and competence through actual or perceived exchanges of physical or psychosocial resources (Gottlieb 2000).

Scheafer et al (1981) also described social support as five types namely emotional support, esteem support, network support, Information support, Tangible support.

According to House 1981, emotional support is the support that gives people the feeling of being loved, trusted and cared for that bolsters our sense of self-worth and belonging.

From the point of view of Scheafer et al (1981), esteem support is encouraging an individual to take needed action as well as convincing them that they have the ability to confront difficult problem. These writers that is Scheafer et al (1981) also say informational support is also providing information or advice to an individual who is struggling with a problem or in making a decision. And finally network support reminds subjects that they are not alone in whatever situation they are facing. This support does not focus on emotions or self- concept.(Scheafer et al 1981).

Tangible support is also providing goods or services for an individual. It acts directly on something that causes stress to an individual example preparing food for someone who is sick.(House, 1981).

The stress and coping perspective

Social support can be viewed from the stress and coping perspective. In this view, Lakey & Cohen (2000) say support contributes to health by protecting people from the adverse effects of stress. Also, support directly influence health by promoting self-esteem and self-regulation, regardless of the presence of stress and this happens to be the social constructionist perspective. Finally, we have the relationship perspective

which predicts that the health effect of social support cannot be separated from relationships processes that often co-occur with support such as companionship.

Health Benefit of Social Support

Social Support helps one to cope with challenges as well as to feel better. It also leads to improved physical health, psychological health and overall well-being. Meaning being able to access adequate social support is essential to a healthy life. (Schaefer et al 1981).

According to Mortimore et al, (2008), there is effect of social support on elderly individual's recovering from hip fracture. Those with less social contact and support were five times more likely to die within five years of fracture than those with more social contact and support.

Effect of Support on the Provider

Making yourself available to someone in need can cause emotional strain, at the same time there are other costs that providers may experience, example expenditure of time.

Being there for someone can also change providers' attitude. Providers can turn see the recipient as weak and needy and this can be harmful to the relationship between provider and recipient, especially if recipient was previously self-reliant and independent.

Stress in the lives of recipient can increase providers' vulnerability because they turn to become more aware of the risks that exist in their own lives. It is also possible that providers may need support at point yet they must be giving support to the recipient, such situation can be stressful to the provider.(Shumaker & Brownell 1984).

3 RESEARCH METHODOLOGY

The author will use literature review, by this means it will be possible to find out more about the visual impairment in the elderly.

Content analysis is mainly used, since this study is based on previous researches. In order to scrutinize the research questions thoroughly, analysis of previous researches categories and subcategories were formed.

3.1 Literature Review

According to Dawidowicz, 2010, examination of knowledge available on a topic is called literature review. It is also the use of appropriate peer-reviewed articles, and these peer-reviewed must not be biased and also objective. Dawidowicz also states that the examination of scholarly information and research-based information on a specific topic is called literature review.

3.2 Data collection

In order to answer the research questions for this study, collection of data was done by the author using Nelli Portal from Arcada and then remote access to Nelli from outside Arcada. The following databases were used; Academic Search Elite (EBSCO), CINAHAL (EBSCO) and Google Scholar. The following search terms yielded results when used; Visual impairment AND elderly people; Vision loss AND elderly people; Visual impairment AND elderly AND coping; Vision loss AND elderly AND challenges. Using the inclusion and exclusion criteria, the articles that were relevant to answering the research questions were chosen. Table 1 shows the exclusion and inclusion criteria which was used in selecting the articles. Articles that were used were based on the measures under the inclusion criteria while the exclusion criteria shows how articles were not selected. The author also had in mind of selecting articles that had different aims and results but all answering the research questions in this study.

Table 2 shows how the 15 articles for this study were selected by the author.

Table 1: Inclusion and Exclusion criteria

<ul style="list-style-type: none"> • Articles with abstract and results • Articles in full text • Articles which are free and electronically available • Articles written in English • Articles which are peer reviewed • Published between 2001 to 2013 	<ul style="list-style-type: none"> • Articles in other language apart from English • Articles not scientifically written
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The various searches that were done by the search engines as shown earlier and the results they yielded have been listed in table 3. A total of 64 articles were yielded out of which 15 were selected reviewed to answer the research questions.

Table 2 : Data Search Process

Data base search	Search terms	Selected articles	Articles used
Academic search Elite (EBSCO)	Visual Impairment AND Elderly;	58	10
	Visual impairment AND elderly AND	20	1

	coping		
CINAHL (EBSCO)	Visual Impairment AND Elderly	3	1
Academic Search Elite (EBSCO)	Visual Impairment AND Elderly AND Challenges	1	1
Google Scholar	Problems associated with visual impairment in the Elderly	20	2

Description of Material

Table 4 shows the full list of all the 15 articles that were reviewed to answer the research questions. The table shows the authors of each articles, the year of publication, the title as well as the aim and results. The articles were published between 2001 and 2012. Some of the 15 articles answered only one of the research questions for this study, while some of them answered the two research questions. Eight of the articles were from the United States of America, two were from Netherlands, two from United Kingdom, one from Germany, one from Canada and one from Australia.

Table 3: Description of the selected articles for the study

Authors/Year of Publication	Titles	Aim of the article	Results
Alma, M, et al (2011),	Participation of the elderly after vision loss	To assess the degree of participation of visually impaired elderly and to make a comparison with population-based reference data.	Comparison with reference data of the elderly showed that visually impaired elderly persons participated less in heavy household activities, recreational activities and sports activities.
Burmedi, D.et al (2002).	Emotional and social consequences of age-related low vision	To narratively review findings on emotional and social adjustment among visually impaired older adults.	There are firm indications that social support can provide an effective buffer against age-related vision loss.
Authors/Year of Publication	Titles	Aim of the article	Results
Crews, J et al (2006),	Double jeopardy: The effects of comorbid conditions among older people with vision loss	To examine multiple effects of nine comorbid conditions on physical functioning, participation, and health status among older adults with visual	Older adults with visual impairment frequently experience comorbid conditions and that these conditions are associated with difficulties in walking and climbing steps and socializing.

		impairments.	
Desrosiers, J, et al (2009),	Participation in daily activities and social roles of older adults with visual impairment	To document participation in daily activities and social roles of older adults seeking services for visual impairment and compare it with that of the older population without VI or other disabilities.	Participation in daily activities and social roles of participants with VI.
Authors/Year of Publication	Titles	Aim of the article	Results
Eperjesi, F., & Nabila A.,(2004)	Rehabilitation in Charles Bonnet syndrome: a review of treatment options	To describe the rehabilitation of people with CBS and in particular, to discuss visual, pharmacological and social management	People with vision loss sometimes experience visual hallucinations associated with Charles Bonnet syndrome.
Alma, Manna	"Loneliness	To describe the de-	The prevalence of loneli-

A., et al.. (2011)	and self-management abilities in the visually impaired elderly	gree of loneliness among the visually impaired elderly and to make a comparison with a matched reference group of the normally sighted elderly	ness among the visually impaired elderly was higher compared with the reference group
Gohdes D.et al (2005).	Age-related eye diseases: An emerging challenge for public health professionals	Prevalence of and risk factors for age-related eye diseases, as well as opportunities to preserve and restore vision.	Age-related eye diseases threaten the ability of older adults to live independently and increase the risk for accidents and falls.
Authors/Year of Publication	Titles	Aim of the article	Results
Horowitz, A.et al (2003).	The influence of health, social support quality and rehabilitation on depression among disabled elders	Examine the influence of health, social support, disability, and vision rehabilitation services on depression among visually impaired older adults seeking vision rehabilitation ser-	Being unmarried, in poorer health, having lower quality of relations with family, and lower stability in friendships were significant independent risk factors for initial depression

		vices.	
Lamoureux, E, et al (2010),	The relationship between visual function, duration and main causes of vision loss and falls in older people with low vision	To determine the relationship between visual function, duration, and main causes of visual impairment, and falls in individuals with low vision.	Overall, visually impaired people were three times more likely to fall if they were physically inactive.
O'Donnell, C (2005),	The Greatest Generation Meets Its Greatest Challenge: Vision Loss and Depression in Older Adults	When working with older adults who are visually impaired, it is important to remember that they are older adult and have lost vision later in life	The challenges of those who are aging with visual impairment include identifying depression, addressing multiple conditions, promoting well-being, and using a client-centered approach.
Authors/Year of Publication	Titles	Aim of the article	Results
Reinhardt, J. P. et al. (2009)). Personal and social resources and adaptation to chronic vision impairment over time	To examine the effect of personal and social resources on adjustment to chronic vision impairment in older adults	Greater use of acceptance coping, less use of wishfulness coping and higher family support were associated with better adaptation
Wang Shu-Wen,	Staying connected: re-	To examine the nature of relationship-	Responses were either to readjust one's behavior to

2008	establishing social relationships following vision loss	related challenges experienced adults with vision impairment, as well as the strategies employed to deal with them	maintain relationships or to let relationships go or turn sour.
Berger, S. 2012	Is my world getting smaller? The challenges of living with vision loss	The challenge of engaging in leisure activities outside the home for older adults with vision loss	Themes that emerged related to limited leisure activities outside the home include both personal and environmental factors, such as challenging physical environments.
Watson, G. R., (2001)	Low Vision in the Geriatric Population: Rehabilitation and Management	Discusses the common age related changes in vision and the most prevalent visual impairment associated ageing, and the resulting functional implications.	There is the need for teamwork to provide a full scope of rehabilitation services to older adults with low vision, and the importance of support by the family members and caregivers to maximize coping, adjustment, and independence
West, S. K. et al (2002).	How does visual impairment affect performance on tasks of everyday life?	To determine the association between performance on selected tasks of everyday life and impairment in visual	Both visual acuity and contrast sensitivity loss were associated with decrement in function

		acuity and contrast sensitivity	
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3.3 Data Analysis

The author started the process of analysis by first arranging the articles in alphabetical order in terms of the authors who wrote the articles. The articles were then numbered from 1 to 15. The articles were carefully read one after the other to understand the content very well. The next step was reading each article carefully this time with the research questions in mind, two markers were used. An orange marker for research question one and yellow marker for question two. The information in every article that answered the research questions were highlighted with the corresponding marker. As stated by Hsieh & Shannon (2005) p. 1278, " content analysis is a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns". Furthermore, data analysis means understanding and presenting results by showing themes, developing categories and subcategories to describe findings. (Elo & Kyngäs 2008).

The two research questions for the study were used as the themes and the findings from the articles being reviewed were used to form the categories and subcategories. The theoretical framework used for this study " Social Support theory was also considered informing the categories and subcategories.

3.4 Validity and reliability

Validity is when findings are credible or convincing, and also the findings relate to other contexts. (Guba & Lincoln 1994).The author chose articles which were scientific and peer reviewed, hence making the work valid.

LeCompte & Goetz (1982), define reliability in qualitative research as how the set of meanings developed from several interpreters correspond to each other. The author be-

believes the research questions were in relation to the aim of the study and with the help of the theoretical framework reliable conclusions will be reached.

3.5 Ethical consideration

According to Arcada guideline for writing thesis, first and foremost the school has to accept the thesis that is being written. Hence the author prepared a short plan of the thesis and presented to the supervisor which was signed and forwarded to the commissioning party for approval. The Förbundet Finlands Svenska Synskadade (The Federation of Swedish Speaking Visually Impaired in Finland) commissioned the thesis. The guidelines for writing the thesis was read and followed throughout the whole writing of the thesis. To gain more information for the second research question that could not be found from the articles about expert/(professional?) support for elderly with visual impairment in Finland, there was an interview with an expert from the commissioning party, the rehabilitation counselor. The information gained was summarized in chapter 6.

4 RESULTS

In this chapter, the results will be divided into main themes, category and subcategory. The first theme which was discussed was challenges, and it is the challenges that visually impaired elderly face as a result of vision loss that comes with ageing. Figure 3 shows how these challenges were grouped under categories and subcategories.

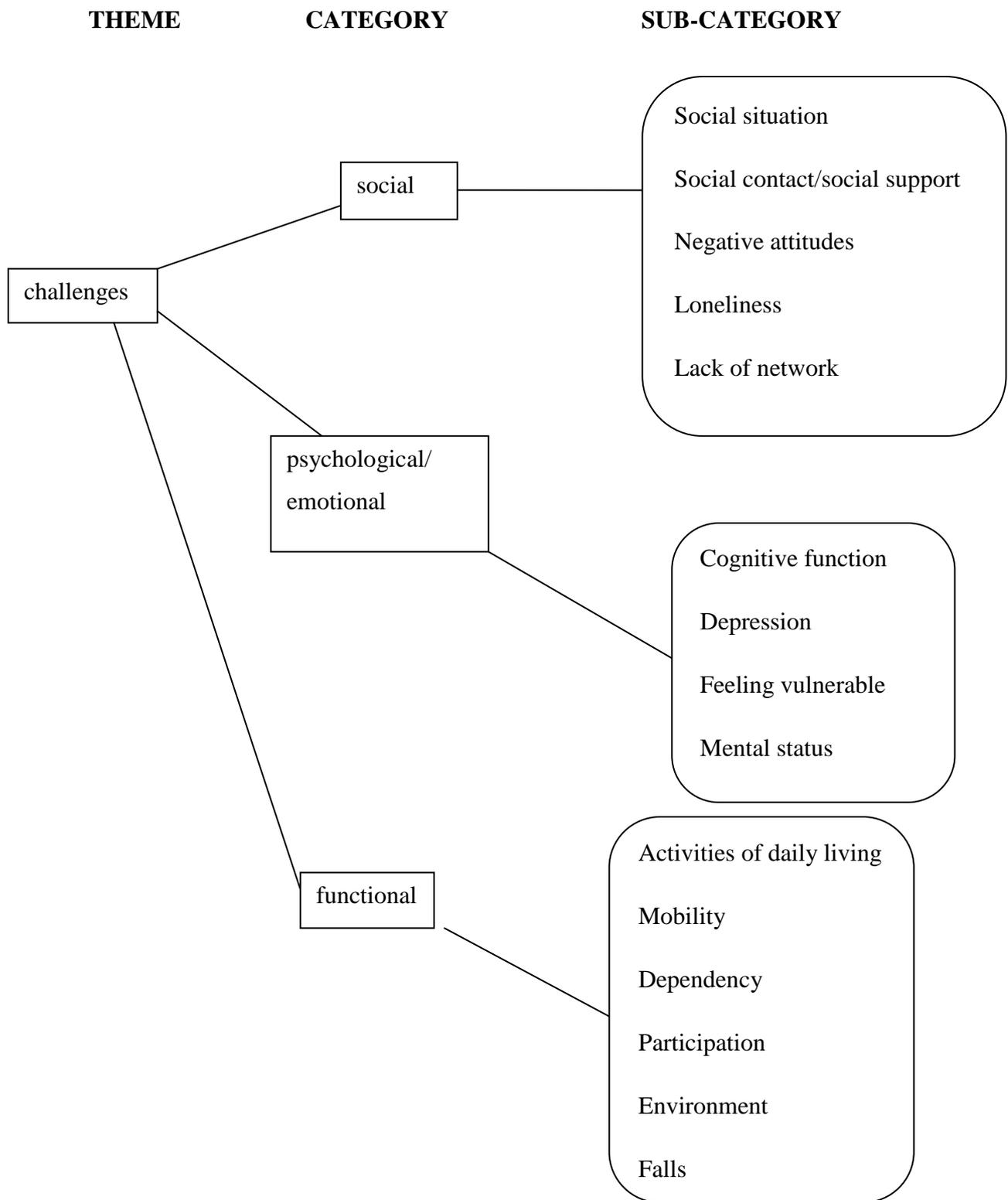


Figure 3. Theme, categories and subcategories of challenges faced by visually impaired elderly (question 1)

4.1 Challenges faced by the visually impaired elderly. (Question1)

Age-related changes in vision are common with every elderly person. These common changes can cause the elderly to have challenges. (Watson 2001). The subcategories under the categories: social, psychological/emotional and functional talks about these challenges.

4.1.1 Social challenges

Social situation

Staying connected after vision loss can be difficult because it is possible the subjects themselves might lack visual cues or the lack of understanding from others about vision impairment. These challenges normally cause the elderly to end their former relationships because communication with others who do not understand the changes becomes difficult. This leads to either maintaining relationships or letting them go and turn sour. (Wang & Boerner 2008).

O'Donnell, (2005) also says elderly with visual impairment were less likely to get together with friends or take part in the community, example going to church or temples and attending movies as compared with their counterparts who had good sight.

Social support/social contact

It is important to maintain relationships with both family members and friends as the best means of dealing with stressors such as chronic impairment associated with old age.(Reinhardt et al 2009).

Horowitz et al (2003) had found that relationships with close family and friendship can change for the worse because of elderly person's vision loss.

Negative attitudes

In the study by Horowitz et al (2003), there are strong and pervasive stereotypes that surround 'blindness' in the society. And some of the adults themselves who become visually impaired in later life have some kind of devaluing and internalized attitude.

According to Watson (2001), because of these negative attitudes, elderly with low vision pretend to be fully sighted to avoid these negative attitudes. But in doing so they end up with problems because some may not be able to recognize faces well and they may be seen as no more friendly.

Loneliness

According to Alma et al (2011), there is high prevalence of loneliness among the visually impaired elderly. It was also found that more self-efficacy among the elderly with visual impairment made them have fewer feelings of loneliness.

Lack of network and rehabilitation

Reinhardt et al (2009) found that the use of rehabilitation was able to promote friend network over time.

But mostly rehabilitation services are more available in helping individuals who can return to work, that is those still in the working age, but not usually linked with public health or home health services for older adults. (Gohdes et al 2005).

4.1.2 Psychological/emotional challenges

Cognitive function

One of the most emotional disabling conditions of later life is vision impairment which is both real and perceived consequences of vision loss. (Horowitz et al 2003).

Studies have shown that emotional adaptation declined in visually impaired people while it was stable in sighted people. It can therefore be concluded that the challenge of visual impairment has limited the capacity for psychological resilience that is ability to preserve a sense of well-being despite physical and social losses. (O'Donnell 2005)

Depression

Common reactions to loss and age-related visual impairment are anxiety and depression. This anxiety and depression can be due to negative impression about visual impairment and lack of motivation to attempt rehabilitation, but if rehabilitation is able to be given to such elderly, anxiety and depression should reduce. (Watson 2001).

Findings from Burmedi et al 2002, O'Donnell 2005, Horowitz et al 2003, Reinhardt et al 2009 and Desrosiers et al 2009 all mentioned in their studies that depression is likely to set in with the elderly with vision loss.

Feeling vulnerable

According to a study by Berger (2012), it stated that feeling vulnerable limited the participants' ability to do activities that were important to them. A participant in this study said when he went out; he did not use his white cane, which he believed was an indicator that he was an easy target for being attacked. Furthermore, Horowitz et al 2003 also stated that visually impaired elderly see vision loss as inescapably leading to dependence and that this misconception leaves them socially and psychologically vulnerable.

Mental status

According to Reinhardt et al (2009), both coping strategy of wishfulness or believing that one is unable to control ones' health can hinder the process of adaptation.

Complex visual hallucinations, which is known as Charles Bonnet Syndrome may be experienced by visually impaired patients. The hallucinations consist of well-define, organized and clear images over which the subject has little control. This condition leads to cognitive defects and social isolation but it is not a mental illness. (Eperjesi & Akbarali 2004).

4.1.3 Functional challenges

Activities of daily living

Desrosiers et al (2009) has stated in their study that participation in daily activities and social roles of participants with visual was significantly lower than those without visual impairment.

Also everyday tasks take longer and require more effort with vision loss. The elderly person may experience reduced concentration and visual endurance and this can lead to depression (O'Donnell 2005). Furthermore studies have shown that visual impairment has a more severe impact on everyday functioning than many other age-related conditions (Horowitz et al 2003). Finally West et al 2002, has stated that both visual acuity and contrast sensitivity loss contribute independently to deficits in performance on everyday tasks of daily living.

Mobility

Tasks that involve mobility, most persons were not disabled until they had visual acuity greater than 1.0 or less than 20/200. (West et al 2002). Elderly with visual impairment frequently experience conditions that are associated with difficulties in walking and climbing steps and shopping (Crews et al 2006).

Most participants in the study by Berger 2012 were able to access public transport although many of them expressed frustration with doing so. The challenge of 'getting there' limited participants from choosing out of home activity.

Dependency

O'Donnell (2005), states that elderly people with visual impairment gradually give up activities that are frustrating or hand it over to someone else to do. The down-ward spiral of vision loss, functional loss, and depression-dependence starts to spin.

Participation

The elderly who are visually impaired participate less in household activities, sports activities and also went less to recreational places. It is also found that the severity of vis-

ual impairment does not play additional role in less participation, but rather merely having visual impairment means there will be less participation.(Alma et al 2011).

In another study which was between the visually impaired and the sighted people in six life domains(Nutrition, Communication, Mobility, Responsibility, Community life and Leisure) there was high level of handicap experienced by people with visual impairment hence their low level of participation(Desrosiers et al 2009)

Also according to Berger 2012, the visually impaired elderly complained they did not have enough energy to prepare, get to, and engage in activities outside the home. One participant in this study said she no longer go to church because it is difficult to follow along with the prayers and songs.

Environmental

Elderly people mostly will want to be living in their own homes, but then the move. Visually impaired elderly find themselves in new environments like senior apartments, living with family members, assisted living situations or nursing homes. These environments can have its own challenges. These challenges will be more profound for the person who has just lost his or her vision. (O'Donnell 2005).

Also according to the study by Berger 2012, it was rare to find environmental adaptations in the community for the visually impaired, making it difficult for them to engage in out-of-home leisure activities. For example restaurants in the community environments normally had dim or caused much glare making participation difficult for the visually impaired.

Falls

Problems in the elderly such as falls and hip fractures are associated with decreased vision. (Gohdes et al 2005).

According to Lamoureux et al(2010), for every five visually impaired people more than two falls annually, meaning greater proportion of this group is vulnerable to falling. But it was also seen that four aspects of visual function which was observed during the study were not found to be associated with falling, therefore the visually impaired elderly's frequent falls might be due to something else apart from the vision loss and that is likely to be lack of physical activity.

4.2 What Care Givers Need to Know (QUESTION 2)

Visual impairment can be one of the many changes that come with ageing. With the many challenges associated visual impairment, it is important for care givers to be well informed of these challenges and what best can be done. The care givers need to have teamwork to give better rehabilitation services to the elderly and also maximize coping, adjustment and independence in them. In this chapter the research question "what care givers need to know" will be answered. Categories and subcategories are formed. Five types of social support namely emotional, network, informational, competence and tangible support in the theoretical framework for this study was used to form the categories and then subsequent subcategories were also formed. Figure 4 shows all the categories and their corresponding subcategories.

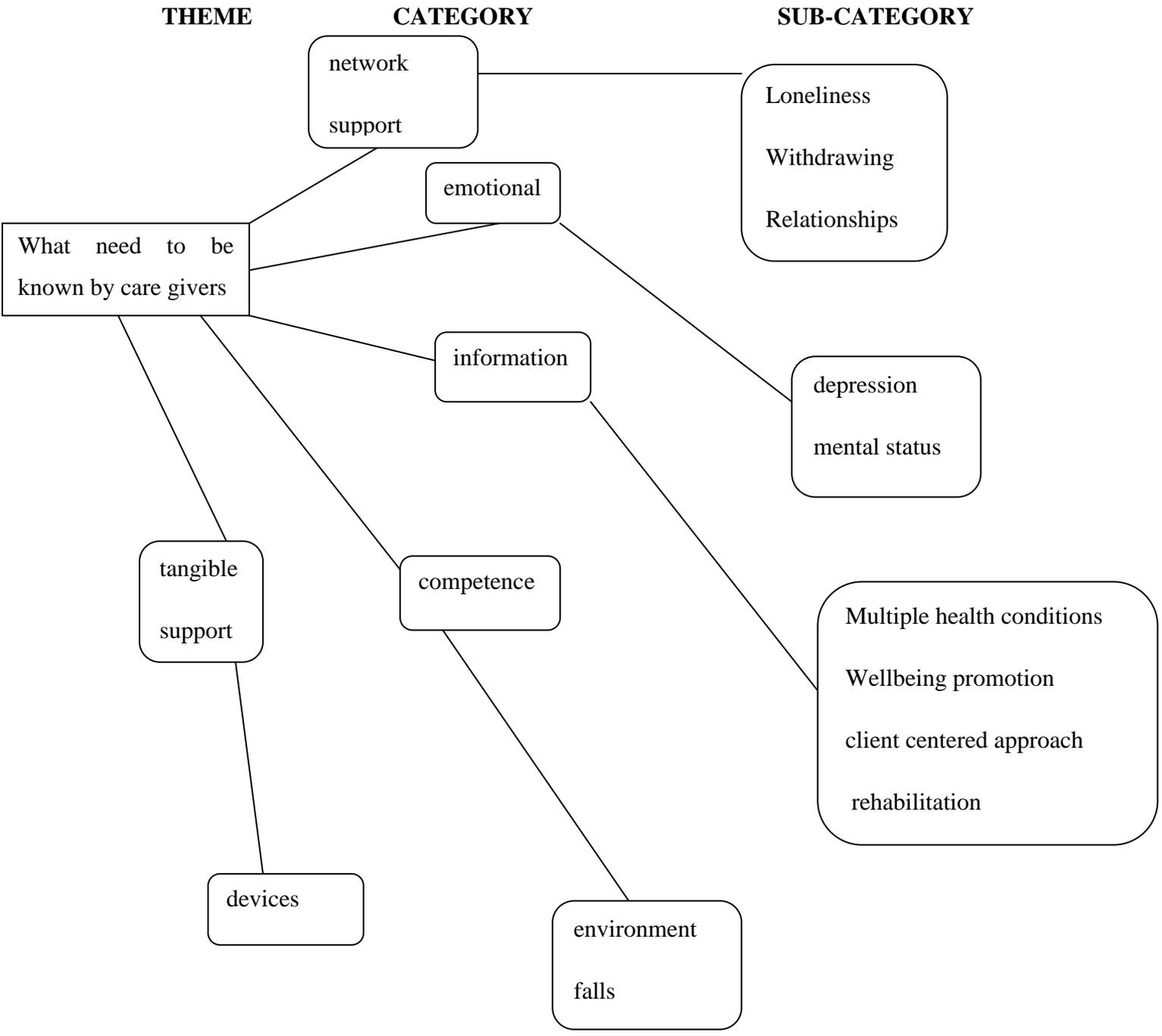


Figure 4. Theme, categories and subcategories of what care givers need to know to be able to help (research question 2)

4.2.1 Network Support

Loneliness

In the visually impaired elderly, fewer feelings of loneliness were experienced by those with self-efficacy as well as those with higher self-esteem and who had partners. It also found that just having visual impairment was associated with more feeling of loneliness but not necessary the severity and the duration of the visual impairment. A contradiction to other previous studies was the lack of a significant association between loneliness and social network. It is seen that Self-management training can help the visually impaired to reduce feelings of loneliness by providing skills to manage the practical, social and emotional challenges of vision loss. (Alma et al 2011).

More Participation

The elderly with visual impairment experience restrictions when it comes to participation in society due to the vision loss. This information is important because participation is an indicator for good aging. (Alma et al 2011).

Some of the problems that keep visually impaired elderly from activities outside home are feeling vulnerable, lacking energy and assertiveness (Berger 2012) and these problems in effect cause withdrawal. Maintaining important contacts with family and friends can be done for the visually impaired elderly by helping them to continue social activities, hobbies, crafts and games. This will help them to be participatory. (Watson 2001) It is therefore important to find means with the elderly with visual impairment to explore ways of making participation in leisure activities possible. There must also be advocacy for features that enhance access and participation, addressing safety and how to conserve energy. (Berger 2012).

Maintaining relationships

There must be better understanding of potential challenges faced by those with vision loss when it comes to relating to others. How they can adapt to these challenges can help facilitate social interactions for all involved. (Wang 2007).

Also due to the voluntary nature of friendship, compared to natural expectation from family members, friendship might play a more direct role in influencing affective states in older adults experiencing chronic impairment (Horowitz et al 2003).

Reinhardt et al 2009, also states that it is important to maintain relationships with both family members and friends as a means of dealing with stressors such as chronic physical impairment that is more pronounced in old age. Finally there are firm indications that social support can possibly provide an effective solution for age-related vision loss. (Burmedi et al 2002).

4.2.2 Emotional Support

Depression

According to O'Donnell 2005, the current generation of old people see themselves healthy and therefore may not see the signs of depression or just ignore. Because to them depression is a private problem. It is therefore important for professionals and for that matter care givers to watch out for early signs of depression. The early signs of depression can even affect the elderly person to take part in rehabilitation, because the depression affects their learning capacity or ability to retain information. Some signs of depression which is common with all elderly people and must be observed by care givers are:

- hypersomnia or insomnia
- loss of self-esteem or expressions of self-depreciation
- chronic tiredness or low energy level
- a decreased ability or an inability to concentrate or attend to activities, as well as a decreased ability to think clearly
- decreased effectiveness in attending to personal affairs example personal care
- irritability or excessive anger (Mogk & Mogk, 2004)

Another important thing that needs to be known is that, according to Horowitz et al (2003), being able to maintain relationships with friends, expect experiencing functional disability has a significant impact on depression. These writers also stated that through previous researches social support can be influenced by individual's depression, the stronger influence is in the direction of social support on depression than de-

pression on social support. Watson (2001) also says that depression and anxiety can be reduced with successful rehabilitation.

Mental status

The hallucination which is associated with visual impairment also known as Charles Bonnet syndrome (CBS) must be known to care givers. Incorrect diagnosis can make one think the sufferer is having psychiatric problem. Eperjesi& Akbarali (2004), therefore thinks that someone suspected to having CBS should immediately be referred to low vision specialist who can help to reduce or eliminate the hallucination by increasing visual function, recommending techniques like illumination modification and blinking and by providing information and reassurance. Also if there is self-help group available the sufferer must be encouraged to attend.

4.2.3 Competence/Functional

Environmental

Elderly with visual impairment must be oriented to both familiar and unfamiliar environment because onset of vision loss can make even the most familiar environment seem strange. (Watson 2001). Watson further stated that making a greater contrast between objects and their background helps the visually impaired see easily, example a black television remote on a bright surface. Illumination is also important to consider, while most need more light, some are also sensitive to light therefore there must be assessment before light illumination. When caring for a visually impaired elderly it good to use organizational strategies example doors are never left partially open and placing chairs under tables when not in use to promote safety. (Watson 2001).

Environmental changes can have a potential to improve health of the visually impaired elderly. Improved sidewalks, safer pedestrian crossings, and increased illumination could encourage physical exercise in the community and promote social participation. (Crews et al 2006).

Apart from vision, there are other factors that affect performance on task that is age, sex, race, education and comorbid conditions. (West et al 2002).

According to a research by Berger (2012), participants who were visually impaired had made environmental adaptations in their homes. Example they turned on lights and used multiple lights positioned specifically for certain tasks in their homes.

Falls

According to Lamoureux et al(2010), previous studies have shown that falls are predicted by muscle weakness such as inability to get up from a chair without using the hands. In their study it also came up that when the visual system deteriorates a factor like participation in physical activity may be more significant. Also visually impairment is associated with problems in the elderly such as fall and hip fractures. (Gohdes et al 2005). But Lamoureux et al (2010) concluded that it was non-participation in physical activity that leads to falling.

4.2.4 Information Support

Multiple health conditions

There is interaction between visual impairment and comorbid conditions among older adults, since measures of functioning, participation, and worsening health strongly affect both visual impairment and comorbid condition. It is therefore suggested that health promotion interventions for the visually impaired has the potential to improve their health. (Crews et al 2006).

Ageing comes with changes in many areas of health and these cause functional problems and depression and hence create challenges for the visually impaired elderly. Other health conditions which are found to be common among the elderly with visual impairment are hypertension, heart disease, arthritis and diabetes.(O'Donnell 2005).

Promoting well-being

It is important to consider what promotes well-being generally in the elderly, a study by 'Well Elderly Study', the elderly who were able to select and participate in meaningful

activities that was planned for them achieved a healthy and personally satisfying daily routine.(O'Donnell 2005).

Client centered approach

Client centered approach in working with the elderly means 'having a genuine interest in him or her, participating in his or her experiences and sharing frustrations and successes (Kannenber& Greene,2003). When a professional takes time to listen to an elderly person's then the elderly can be assisted in choosing what is uniquely meaningful to him or her as everyday occupations.

Rehabilitation

Rehabilitation is very important in the elderly but rehabilitation services are normally to help people to return to work and are not usually linked with public health or home health services for older adults. (Gohdes 2005). Meanwhile according to Crews et al 2006, by improving exercise and conditions in rehabilitation, programs for visually impaired elderly can have the ability to improve hypertension and heart and respiratory function.

Furthermore it is found that maintaining one's friend network over time can be done through rehabilitation. (Reinhardt 2009).

Also Horowitz 2003 mentioned that rehabilitation services were a significant predictor of decline in depressive symptoms, even within health, functional disability and social support. Hence rehabilitation should not only focus on functional difficulties only but should treat the visually impaired person more holistically by addressing social challenges as well. (Wang 2008).

Also in working with adaptive tools, optical devices in rehabilitation, the professional should introduce them to the visually impaired elderly through activity that is meaningful to the older person. (O'Donnell 2005). If a professional chooses wrong goals, irrelevant tasks or interventions that are beyond the client's capacity, then the client may appear uncooperative or unmotivated or even look like not having potential for rehabilitation. (O'Donnell 2005).

It is therefore important that those who provide services to the elderly who are visually impaired work with the clients to find best ways to facilitate participation in leisure activities in the community as well. (Berger 2012).

Finally the elderly must be encouraged to consider goals they want to achieve when assisting them in preparing for rehabilitation.

4.2.5 Tangible Support

Devices

There are devices that can be helpful to the visually impaired elderly; these are optical devices, electronic devices or other tools that enhance vision. Some optical devices that incorporate refractive correction can be acquired through prescription. There are others which are simple example lamps, reading stands, or large print books. There is the need for the assessment of the visually impaired to know the best device for him or her. (Watson 2001). It is also important for care giver to know that there are possible side effects of some of these devices, for example motion sickness, nausea, dizziness can be side effects of using magnification. Hand tremor can be so serious to the extent that hand-held magnifies or telescopes are not useful.

5 DISCUSSIONS

This research study was to first of all find more about the challenges that visually impaired elderly face due to their vision loss in later life. The results showed clearly that the visually impaired elderly have many challenges.

The social challenges that emerged in this study are that the visually impaired elderly could no longer maintain friendship due to the fact that friends could no longer understand them and the elderly themselves could not see faces well, hence making their relationships goes sour. The impaired elderly themselves have negative attitudes towards visual impairment, hence pretending and faking which ends up creating problems for

them, leading to isolation. These social challenges can create low level of satisfaction. (Iecovick & Isralowitz 2004).

Ability to participate in household activities, sports and recreation was found to be a big challenge for the visually impaired elderly, and this was mainly due to unfavorable environment, the feeling of vulnerability and not having enough energy. But self-management and coping strategies can help the visually impaired to adapt to the challenges. (Smith 2008). Falls which was also seen to be a challenge for the elderly was found out to more link to limited physical activities by the elderly but not directly to the vision disorders. (Serval et al 2011).

Another focus of this study was to find out what care givers need to know about these challenges and how best they can help the elderly.

Loneliness avoidance and more participation can be done through self-management training, use of hobbies to increase participation, use of coping strategies like acceptance rather than wishful thinking can be the best way a care giver can help the visually impaired elderly.

Another challenge of the visually impaired elderly is that they are likely to have other diseases apart from the vision loss. (Iecovick & Isratowitz 2004). Some of these diseases can be hypertension, diabetes and dementia.

Environmental challenges were the most crucial ones for the visually impaired and this can be managed from room arrangement, lighting system and making the impaired elderly become very familiar with the environment. With all this challenges the underlying solution is rehabilitation. Vision rehabilitation is define by the American Optometric Association as "the process of treatment and education that helps individuals who are visually disabled attain maximum function, a sense of well-being, a personally satisfying level of independence, and optimum quality of life" Hence it will be very essential for the visually impaired elderly to have the vision rehabilitation for good ageing.

Finally it is clear that social support theory, the theoretical framework of this study has guided it. Because in finding solution to the challenges which was the answer to the second research question, "what care givers need to know" the categories were formed

from the description of social support by Scheafer et al (1981) which is namely emotional support, esteem support, network support, informational support and tangible support. Also one of the important ways to handle visual impairment in the elderly, which came up in this study is by using coping strategies and maintaining relationships. And this is in agreement with what Lakey& Cohen (2000) have stated earlier. They had stated that concerning stress and coping, self esteem and self-regulation are important as well as relationships.

CRITICAL REVIEW

The author had some challenges writing this thesis though it was also interesting. It was not easy finding answers to the second question because most of the articles selected were mainly focusing on challenges associated with visual impairment in the elderly than the solutions, and also the care givers were not the focus of most of these previous studies hence the difficulty in answering the second question. Also the articles which came up during the search process which had good information were not about the elderly but about children and younger adults.

Furthermore, despite the strengths of describing in detail the different types of visual impairment and the diseases causing visual impairment in the elderly in this study, most of the articles reviewed in this study were not specific on any of the age-related visual disease.

Finally when interpreting the findings of this study, a multidisciplinary approach is needed since elderly persons who become visually impaired have to learn new skills and has to cope with the loss of normal vision. In addition to the emotional shift from being a typically sighted person, not only visual impairment but also cognitive disabilities like dementia need to be considered in the ability to cope with the situation. Skilled professionals will be needed in such situations.

6 INTERVIEW WITH THE FEDERATION

This chapter presents the interview with Rehabilitation Counsellor at the Federation of Swedish Speaking Visually impaired in Finland.

Date: 6th of November 2013

Interviewee: Ann-Catrin Tylli(Rehabilitation Counsellor)

How the Federation function:

- The Federation provided services for the visually impaired people from children to seniors for Swedish speaking Finns in Finland
- The make sure information are accessible to their members
- Audio materials (Celia library) and braille are made available (see appendix 1)
- Rehabilitation service
- There are four rehabilitation counselors for the Swedish speaking Finns in Finland

How people get in contact and how they help their clients:

- Their contact is available online hence they can be reached easily.
- The federation counsellors then visit the home of the client to assess the place and give needed recommendations and advice.

For example can the lighting system be modified to help the clients? Other things like color contrast and arrangement are also considered.

Where they need optical aids, the federation helps client to get them by contacting the rehabilitation for visual impaired and in some cases social service for the needed support. There is also available the service of a rehabilitation counselor, and there is peer support group for all members.

Contact with the institutions:

There is no regular contact with the institutions, but care givers can also call to the federation for appointments just the way relatives normally call on behalf of the elderly.

Future plans by Federation:

The counselor said they are planning to reach out to the institutions themselves if the institutions are not contacting the federation.

She believes little is done about the lighting system and the vision status of the elderly in the institutions.

Cost of their services:

All services at the federation are free.

7 CONCLUSIONS AND NEED FOR FUTHER RESEARCH

Age related visual impairment can be very challenging since the elderly person had once lived without this disability. It is therefore important to help the elderly to age well.

Environmental interventions for the visually impaired elderly's' home and community are important. Color contrast in the room or home of the elderly with visual impairment is very important as well as the lighting system, while some need more light some are sensitive to light. Therefore the care giver needs to know the condition of the client in other to do the right thing; here a specialist must be contacted. Also room arrangement must not be changed because this can cause accidents and falls.

In situations where the visually impaired elderly has multiple disability example hearing loss, the care giver needs to show empathy since it is very challenging when other senses like hearing can also not be relied on.

With the visually impaired who still has say hearing ability, it is important for the care giver to maximize the ability that is the hearing by listening to audio material which can be borrowed from the Celia library.

The care givers must do well to promote well-being as well as use client centered approach, which means taking time to listen to an elderly person and then being able to assist him or her to choose what is uniquely meaningful to him or her as everyday occupation. This is very important when rehabilitation is being planned for the visually impaired elderly. Also rehabilitation should not only focus on functional difficulties but rather it must be holistic and address social challenges as well.

From the interview with the federation, it was clear that the institutions have little or no collaboration with the federation. It was also clear that neither the management nor the care givers in the institutions were contacting the Federation concerning the visually impaired.

The result from literature has shown that rehabilitation is very important for the visually impaired elderly. But the interview with the federation shows clearly that the elderly in the institutions might not be getting that. Therefore it is important for the federation and the institutions to come together and find how best to collaborate and help visually impaired elderly in the institutions.

At the mean time the care givers can always contact the federation for advice on devices like canes or electronic that can be helpful to clients. Care givers can also become members of the Celia library so that they can borrow audio materials for their clients. Helpful information can be found in the appendix.

Finally since visual impairment in the institutions are not reorganized enough, further studies must be done on how to get guidelines for the care giver to enable the elderly with visual impairment to promote good ageing.

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APPENDIX 1

The Federation of Swedish Speaking Visually Impaired in Finland

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