

A description of resilience for Norwegian home-living chronically ill oldest older persons

Aud Moe^{1,2*}, Knut Ekker³, Ingela Enmarker⁴

¹Faculty of Health and Science, Nord-Trøndelag University College, Levanger, Norway

²Department of Health Sciences, Mid Sweden University, Sundsvall, Sweden

³Faculty of Agriculture and Information Technology, Nord-Trøndelag University College, Steinkjer, Norway

⁴Faculty of Health Science, Nord-Trøndelag University Collage, Namsos, Norway

Email: aud.moe@hint.no, ingela.enmarker@hint.no

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ABSTRACT

Background: Despite worsening health the chronically ill oldest older persons have expressed feelings of inner strength, which can be understood as resilience. The objective was to describe and compare the characteristics of resilience in two different age groups of chronically ill oldest older persons living at home and who needed help from home nursing care. **Design:** Cross-sectional design was used to describe and compare the resilience qualities between the two age groups. **Methods:** The inclusion criteria were 80 years or older, living at home with chronic disease, receiving help from home nursing care, and with the capacity to be interviewed. A sample of 120 oldest older women (n = 79) and men (n = 41) separated in two age groups, aged 80 - 89 and 90+ years, participated in the study. Resilience characteristics were measured by Resilience Scale. **Results:** The whole group of oldest older people was vulnerable in relation to the characteristics of perseverance, self-reliance, and existential aloneness. Despite reduced physical health they reported a meaningful life, and equanimity. Even if there were no significant differences between the age groups among the oldest older persons in the characteristics of Resilience Scale (RS), in the characteristic of meaning there was a tendency of interaction between age and how much help from home nursing care the participants received. **Conclusions:** It is important to focus on the individual aging and the risk of developing illness and disabilities rather than focusing on chronologic age. Possessing meaning in life and equanimity may be strengths to meet challenges through illness and growing older.

Keywords: Chronically Ill; Cross-Sectional; Oldest

Older Persons; Resilience

1. INTRODUCTION

There is a growing population of oldest older persons in the western world and in Norway [1]. The oldest older persons gradually get more difficulties as life continues against biological limits [2], and increasing risks for multimorbidity and chronic diseases, which in turn leads to increased need of help from home nursing care [1]. However, studies have found that resilience is stronger for older persons than that of younger persons [3,4]. This study is a part of a larger study. The first part showed that the oldest old persons had low resilience [5]. The present study wanted to highlight resilience qualities for the home living chronically ill oldest older persons, separated in two age groups, 80 - 89 and 90+ to discover if resilience qualities are changing in older age.

There are noticeable bodily changes with reduced reserve capacity and worsening health for the oldest older persons [6]. Some studies of oldest older persons differentiate between ≥ 80 years [7,8], and others focus on oldest older persons aged 85+ [3,9]. The Berlin Aging Study revealed that good and bad functional abilities and one's need for community care were equally distributed among persons aged 80 - 89 years old. For persons aged 90+ there were a majority with functional disabilities and need of help [10]. Studies have focused on the aging process itself [6,11,12]. In a study by Berlau *et al.* [13] of persons 90+, ADL difficulties and dependency were found to be increasing as age advanced. However, growing older can also be seen as one's purpose in life [14], one's peace of mind [15], and adjustments and adaptation [16].

Adjustments can be associated with flexibility and resilience. Wagnild and Young [17] have focused on resil-

*Corresponding author.

ience as a trait, while others have studied resilience as a process [18,19]. In a qualitative study by Wagnild and Young [17], resilience was defined as the characteristics of meaningfulness, perseverance, equanimity, self-reliance, and existential aloneness. All characteristics involve individual adjustments for older persons, and meaning is the most important characteristic of resilience providing the foundation for the other four characteristics [20]. From this qualitative study the Resilience Scale (RS), was developed [21]. RS aimed to identify the degree of individual resilience that changed individual adjustments. For older persons, resilience is described as flexibility and capacity to adjust [22].

Resilience has been studied in relation to successful aging [3,17]. Successful aging is defined by Rowe and Kahn [23] as aging with low probability of disease and disease-related disability, high cognitive and physical functional capacity, and active engagement with life. However, because of the risk of illness among oldest older persons, this focus has been criticized [24,25].

Studies of resilience have focused on older people aged 67+ [4,17], older people with chronic illness [26], and healthy oldest older persons aged 80+ [3]. In contrast, chronically ill oldest older persons have shown low resilience [5]. There are few studies of chronically ill oldest older persons, aged 80+, particularly in the characteristics of their resilience. Oldest older persons tend to receive more help from home nursing care than old persons <80 years old do, so caregivers would benefit from having more knowledge about the limitations and strengths of oldest older patients. Therefore, we found it interesting to study different resilience characteristics for oldest older chronically ill persons using the questionnaire RS developed by [21]. The aim of this study was to describe and compare the characteristics of resilience in two different age groups of chronically ill oldest older persons living at home who needed help from home nursing care.

2. METHOD AND DATA COLLECTION

2.1. Study Population and Setting

A sample ($n = 120$) of older persons with a mean age of 87.5 years (range 80 - 101 years) participated in this study. They were separated in two age groups, 80 - 89 years and 90+ years. The respondents had a variety of diagnoses, such as diabetes, heart disease, chronic obstructive airways disease, and musculoskeletal disease. They had a variety of basic and instrumental ADL functions as well as visual and hearing impairment. Living at home meant that they lived in a traditional home or in a sheltered household. Receiving help from home care nurses means receiving help with general attention, personal hygiene, dressing, feeding, medication, wound care,

and other kinds of treatment. The home help services were doing housework. If something unexpected happened most of them had a security alarm.

The selection of participants was done by consecutive selection from municipalities in Norway. The inclusion criteria were 80 years or older, living at home with chronic disease, receiving help from home nursing care, and with mental capacity to be interviewed, valued by nurses.

The first author visited the older persons in their homes. Because the participants had many dysfunctions they wanted the researcher to verbally present the questions and the alternatives and to mark the questionnaires. Each older person decided the right response to the question, and the researcher wrote the remarks while the participant, if possible, controlled the content. The data were collected from springtime 2009 to springtime 2011.

2.2. Measurement and Data Collection

The Resilience Scale (RS) consists of 25 items that focus on their personal view of themselves on a seven-point Likert scale. RS items differ in five characteristics of resilience [17,20]. The five characteristics are as follows [20,21]: **Perseverance** means to keep going despite difficulties, not giving up, and having the courage to fight the good fight. Examples of perseverance questions in Resilience Scale are, "When I make plans, I follow through with them" and "I have enough energy to do what I have to do." **Self-reliance** is one's understanding of his or her capabilities and limitations. The understanding comes from experiences that lead to confidence in one's own abilities that can lead to problem-solving skills. Examples of self-reliance questions are, "I feel I can handle many things at a time" and "I can get through difficult times because I've experienced difficulty before". The concept of **existential aloneness** assumes that much of what we face in life, we must face alone. For example, resilient people learn to live with themselves and become their own best friends. Examples of existential aloneness questions are, "I can be on my own if I have to" and "My belief in myself gets me through hard times". **Equanimity** means balance and harmony and can be manifested in humor. Examples of equanimity questions are, "I take things one day at a time" and "I usually do not dwell on things that I can't do anything about". **Meaning** is to have a sense of purpose in life. It is the driving force of life and thus provides the foundation of the other four characteristics. Examples of meaning questions are, "Keeping interested in things is important to me" and "My life has meaning". Each characteristic is containing five items per characteristic with a total of 25 items [20]. The five characteristics [20] consist of five questions with a score range from 5 - 35. The RS has content and construct validity [21]. This meas-

urement has been consistently reliable with Cronbach's Alpha, ranging from 0.72 to 0.94 [20]. In the present study Cronbach's Alpha was 0.88. Cronbach's Alpha for the five characteristics in this study was; self-reliance, Alpha 0.76; meaning, Alpha 0.76; equanimity, Alpha 0.80; perseverance, Alpha 0.76; existential aloneness, Alpha 0.76. The respondents were asked questions from a version of the RS that had been translated into Norwegian and was already used in the studies by Waaktaar and Torgersen [27] and Moe *et al.* [5].

2.3. Data Analysis

We performed tests of internal consistency of resilience qualities by using Cronbach's Alpha. The characteristics of the sample, presented in **Table 1**, were tested by Pearson Chi-square for age differences. Frequencies, means, and standard deviations (SD) were used to describe the data of the RS total and the characteristics of resilience for the total sample, and the two age groups of the oldest older persons separately. Besides the Chi-square testing, independent sample t-tests were used to test age differences. In addition, analysis of variance was applied to examine whether there were any interactions between age and each of the variables; gender, housing condition, marital status, home help services, home nursing care together on self reliance, meaning, equanimity, perseverance, and existential aloneness.

Missing internal values ($n = 2$ for RS) were replaced with the mode value for the actual item. The analysis was carried out by using the Statistical Package for the Social Sciences (SPSS) for Windows, version 17 (SPSS, Chicago, IL, USA).

2.4. Ethical Considerations

The study followed the principals of the Helsinki declaration [28]. Permission to carry out the research was given by the Middle Norway Regional Committee of Research Ethics (4.2007/257). During the data collection, we followed the guidelines of the Data Inspectorate of Norway (19028). The home nursing care staff received written information regarding the project. Registered nurses then informed the participants verbally and via written information, about the purpose of the study, their ability to retire from the study at any time, the confidentiality of the study, and the intended use of the information from the questionnaires. All participants were able to give autonomous written consent to participate in the study before the interview started. For the participants being asked by the home nursing care it could be a pressure to participate because of their dependency on the nurses. Their voluntary participation was expressed as they welcomed the researcher back in a new visit.

3. RESULTS

Demographic characteristics of the participants are presented in **Table 1** (see the Method section). There was a significant difference in housing conditions ($p = 0.034$) between the two age groups. Otherwise, there were no other significant differences between them.

The description of resilience for the oldest older persons who participated in this study is shown in **Table 2**.

As can be seen in **Table 2**, the chronically ill, oldest older persons in both age groups were almost equal in resilience characteristics, *i.e.* the characteristics are common for people 80+ years old in this study. The partici-

Table 1. Characteristics of the sample of chronic ill oldest older persons separated in two age groups.

	Total sample % (n = 120)	80 - 89 % (n = 75)	90+ % (n = 45)	Chi-square for age differences
Gender				
Women	65.8 (79)	66.7 (50)	64.4 (29)	0.804
Men	34.2 (41)	33.3 (25)	35.6 (16)	
Marital status				
Living with wife/husband	9.1 (11)	10.7 (8)	6.7 (3)	0.462
Living alone	90.9 (109)	89.3 (67)	93.3 (42)	
Housing condition				
Ordinary home	52.5 (63)	60.0 (45)	40.0 (18)	0.034*
Sheltered household	47.5 (57)	40.0 (30)	60.0 (27)	
Home help services				
Yes	82.5 (99)	81.3 (61)	84.4 (38)	0.664
No	17.5 (21)	18.7 (14)	15.6 (7)	
Home nursing care				
1 - 2 times/week	25.8 (31)	28.0 (21)	22.2 (10)	0.484
1 - 6 times/day	74.2 (89)	72.0 (54)	77.8 (35)	

* $p < 0.05$ level.

Table 2. Mean scores (SD) for RS total and the five characteristics in RS for the total sample and two different age groups of the oldest older persons.

	Self reliance	Meaning	Equanimity	Perseverance	Existential aloneness
Total (n = 120)					
RS mean	25.14	28.11	27.35	24.17	26.06
(SD)	(3.34)	(3.70)	(2.85)	(3.56)	(3.44)
80 - 89 (n = 76)					
RS mean	24.97	27.96	27.53	23.74	25.70
(SD)	(3.52)	(3.94)	(2.89)	(3.77)	(3.50)
90+ (n = 44)					
RS mean	25.43	28.36	27.05	24.91	26.68
(SD)	(3.03)	(3.26)	(2.79)	(3.05)	(3.28)
p-value	0.498	0.591	0.403	0.087	0.141

*p < 0.05 level (2-tailed).

pants in the two age groups were particularly vulnerable with respect to the characteristics of “perseverance”, which means to keep going despite difficulties and “self-reliance,” which refers to one’s capabilities and limitations that can lead to problem-solving skills. These two seems to be limited because of their age and health problems. Their scores on “existential aloneness” meant that they had learned to live with themselves, but their functional disorders also made them dependent on others. By looking at the results for all of resilience characteristics, both age groups had an understanding of “equanimity” that means balance and harmony and that “meaning” entails a sense of purpose in life that is important for the other four characteristics.

The next step was to compare the two age groups’ gender, housing condition, marital status, home help services, and home nursing care on self-reliance, meaning, equanimity, perseverance, and existential aloneness. The results of this analysis of variance appear in **Table 3**.

The analysis of variance demonstrated an interaction between age and home nursing care for meaning ($p = 0.030$). There was a tendency for the 80 - 89 age group to find less meaning when they received help once or twice a week than those in the 80 - 89 age group receiving help every day. On the contrary, the 90+ age group felt more meaning when receiving help once or twice a week than those who received help at least every day. This interaction is presented in **Figure 1** but the respondents aged 90+ had more assistance from home help services and home nursing care than the respondents who were 80 - 89 years old.

4. DISCUSSION

The aim of the present study was to describe and compare the characteristics of resilience in two different age groups of chronically ill oldest older persons living at home who needed help from home nursing care. There

were no significant differences between the two age groups in characteristics of resilience on the Resilience Scale (RS). By studying all of the characteristics of the RS for the total sample, we found that both age groups of oldest older participants were vulnerable persons in relation to perseverance, self-reliance, and existential aloneness. Despite reduced physical health, they reported experiencing a meaningful life and equanimity. The experience of meaning, however, seemed to vary depending on age and how much help from home nursing care the respondents were receiving.

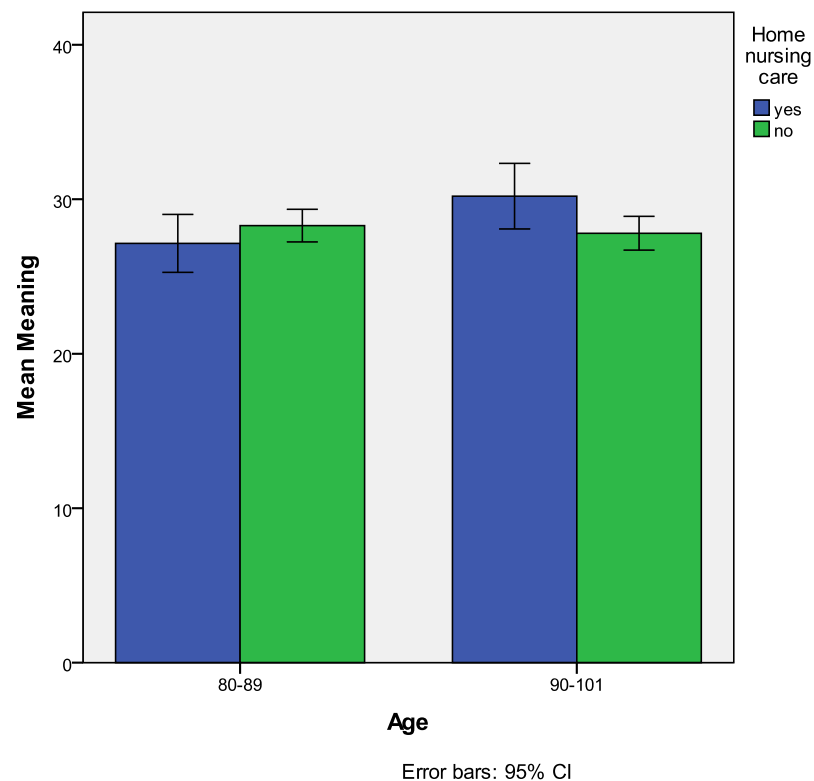
Table 1 show that the 90+ age group received more help with housework and more visits from home nursing care than those aged 80 - 89. In addition, more participants from the 90+ group lived in sheltered households. Berleau *et al.* [13] made similar observations. The fact that there were no significant differences between the two age groups in resilience qualities might be strengthened by the arguments that the personality is stable, despite physical dysfunctions, when life is moving to its limit [2].

For oldest older persons, the aging process generally resulted in vulnerability and frailty [6,10]. Nevertheless, resilience is reported to be stronger among older persons than younger ones [3,4]. The participants in this study were physically dysfunctional but had both weakness and strengths in their resilience. Their weakness in perseverance and self-reliance particularly contributed to their over-all vulnerability. The characteristic of perseverance is the determination to keep going despite difficulties [20]. This was limited for these chronically ill oldest older persons and may be caused by the aging process and frailty [29]. Illness and dysfunctions that made them dependent on others may limit their self-reliance, understood as a belief in oneself and one’s capabilities [17,20]. In this study the participants had weak self-reliance that may be because they were dependent on others in some

Table 3. Analysis of variance: Gender, marital status, housing condition, home help services and home nursing care in relation to age on resilience.

	Age									
	Gender		Marital status		Housing condition		Home help services		Home nursing care	
	F	sign	F	sign	F	sign	F	sign	F	sign
Resilience										
*Self reliance	0.013	0.911	0.036	0.851	0.747	0.389	0.161	0.689	0.880	0.350
Meaning	0.198	0.657	0.092	0.763	0.000	0.996	2.527	0.115	4.819	0.030
*Equanimity	0.154	0.696	0.005	0.944	0.471	0.494	1.651	0.201	0.838	0.362
*Perseverance	0.078	0.781	0.396	0.530	0.011	0.918	0.429	0.514	0.011	0.916
*Existential aloneness	0.589	0.444	0.699	0.405	0.004	0.949	0.015	0.901	0.455	0.501

*p < 0.05 level (interaction terms presented in **Table 3**; none of the main effects had p < 0.05).



Yes = less help; No = much help.

Figure 1. Interaction between age and help from home nursing care on meaning.

functions. However, this study showed that they still had some qualities of perseverance and self-reliance. This may be strengthened by empowering the oldest older persons in their resilience making adjustments [30].

This study found that one way to make adjustments was to accept a new life situation, such as getting older with chronic diseases and being dependent on others, in a

reintegration process that helps to gradually adapt to this new situation [31]. Baltes and Baltes [32] argue that low capacity may be compensated with adjustments like technological facilities or developing new dexterities. Redesigning their homes or moving to a sheltered household were two ways to compensate for the participants in this study. In contrast, Alex [33] found that healthy old-

est older persons had enough self-reliance to ignore their impairments; instead they could focus on mental, social, and cognitive abilities. This could be a reality for some of the chronically ill oldest older persons in our study, but probably not for those whose self-reliance was weak. This can influence their existential aloneness.

The participants reported both negative and positive experiences of existential loneliness during this study. According to other studies, resilient persons learn to live with themselves, and they have accepted themselves as they are [20]. The existential loneliness of these home-living participants could be due to their living situations. Some of the participants in previous studies perceived the home as a place of fear and abuse, which invokes feelings of imprisonment [34]. This may be in accordance with some of the participants in this study. Other studies connect older persons' sense of belonging to their homes with a feeling of satisfaction and purpose in life [35]. Living in one's own home despite challenges can be a meaningful experience and can generate the power to rebound in older persons [36]. Existential loneliness can be associated with "coming home to yourself" [20], which provides an opportunity for finding physical or mental space in which to bounce back from adversity [26]. Our findings show that oldest older persons who are chronically ill are limited in their ability to bounce back, because their existential aloneness was not high, nor was their perseverance and self-reliance.

The present study showed that the respondents' perseverance, self-reliance, and existential aloneness characteristics were weaker than their equanimity and meaning characteristics were. Richardson [30] described resilience as the motivational force that drives someone to be in harmony with a spiritual source of strength. The findings of our study showed positive experiences of equanimity; in other words, the participants were experiencing balance and harmony [20]. Harmony with oneself entails acceptance of chronic suffering and disease [37]. Experiencing harmony meant they accepted their life situation in accordance with Bury and Holmes [15], who found that older persons conduct their lives with equanimity. Our findings suggest that vulnerable oldest older persons can experience equanimity when experiencing meaning as reported in this study.

According to Wagnild [20], meaning is the most important characteristic of resilience. A description of meaning is purpose in life that has been associated with a positive view of life [38]. Bondevik and Skogstad [7] found that purpose in life for older persons was higher than that for younger persons. The present study showed significant interaction between differences in age and receiving help from home nursing care in experiencing meaning as a part of resilience. Another study of oldest older persons found that it was easier to be 90+ than 80 -

89 because several changes influenced life situations for persons aged 80 - 89. Persons aged 90+ reported being more respected and less lonely with a higher degree of purpose in life than those aged 80 - 89 [39]. In our study, meaning for respondents aged 90+ seemed to be stronger when they received help from home nursing care not more than twice a week. We found the opposite for those aged 80 - 89, because they experienced stronger meaning when they received help every day. However, factors that may influence this are that persons 90+ with little help are more independent, which may give meaning. This may be because these persons have developed their ego integrity understood as accepting one's life [40], which may be stronger for persons 90+ living relatively independently than among younger persons or those 90+ who were receiving more help. According to Erikson [40] ego integrity can be reached through looking back on happenings in life. Moreover, Hildon *et al.* [41] found that constructing and retelling happenings from the past in light of later happenings was decisive in the development of resilience in oldest older persons.

In the oldest older age life continue against biological limits [2], and have to be accepted to experience purpose in life [38] opposite to the idea of successful aging [23]. The participants in this study were chronically ill and not able to achieve successful aging. Baltes and Smith [12] discussed the successful aging of the younger old to the dilemmas of the oldest old and emphasized the possibilities to live and die in dignity. To take care of their dignity Harris [24] argue that the focus must be resilience rather than successful aging for the participants who show vulnerability but also strength in some resilience characteristics. This perspective is important to nurses assisting individuals to meet challenges of living with illness and aging [42] to reach a meaningful life through rediscovering resilience [25]. In addition, we would like to emphasize that nurses should be considerate of the vulnerabilities and strengths of each chronically ill oldest older person instead of focusing on successful aging. With that type of attitude, the nurses might support oldest older persons as equal participants, which could increase their sense of meaning that is the driving force in life [20].

5. LIMITATIONS

The sample of persons 90+ was small ($n = 44$), but the sample number was within the critical limit [43].

ADL was not measured in this study but we had knowledge about the participants' need of help in the house and from home nursing care. They were not screened for cognitive status and the scores may be less reliable with participants' cognitive impairment. One way to solve this was an evaluation by nurses who knew the persons

well and validated their possibility to participate and answer questions. We relied entirely on self-reported answers which could cause inaccuracy in the RS scores. On the other hand, we believe the oldest older persons are the best people to answer questions about resilience qualities, because resilience can be a largely subjective experience. Because of their physical and visual impairments, the participants wanted the researcher to fill out the questionnaires. The researcher did not give suggestions, and every participant was given time for reflections.

6. CONCLUSION

As the two age groups of chronic ill oldest older person were equal in resilience it is important to focus on the individual aging rather than focusing chronological age. By studying different characteristics of Resilience Scale, we found that the entire group of the oldest older people was vulnerable in relation to perseverance, self-reliance and existential aloneness. In addition to this they reported equanimity and a meaningful life. In receiving help from home nursing care they need support to strengthen these vulnerable characteristics with their inner strength as a basis. Adjustments for the individual experiences of meaning in life and their equanimity may be strength to meet challenges through illness and aging. Low perseverance and self-reliance may limit autonomous decisions and present challenge in taking care of the oldest older person's experiences of independence and integrity.

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