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Determinants of Activities of Daily Living Among Elderly in Nursing Homes

A Descriptive Literature Review

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The purpose of this descriptive literature review was to describe the challenges that elderly in nursing home encountered in their activities of daily living and how could nurses maintain their remaining abilities in nursing homes. The aim of this descriptive literature review was to provide more information related to the challenges that the elderly in nursing home faced in their daily living activities. Therefore, this information would help nurses to maintain the remaining abilities of the elderly in nursing homes.

Data were collected from databases CINAHL and PubMed according to the inclusion and exclusion criteria. Ten (10) articles were selected through PRISMA. Furthermore, inductive content analysis was utilized to analyse and synthesize the data.

Under the first study question, what are the challenges affecting the activities of daily living among elderly in nursing home. Five generic categories were established as morbidity in elderly, environmental factors, individual factors, functional impairment, presence of pain. For the second study question, how could nurses maintain the remaining abilities in activities of daily living among elderly in nursing homes. Three generic categories were found such as nursing assessment, nursing intervention and nursing evaluation.

Elderly in nursing home care suffer from multimorbidity and a growing requirement for complicated care treatments. Physical and social inactivity is connected with cognitive and physical deficits, which may lead to other health-related issues, such as the advancement of chronic illnesses that can lead to dependency on activities of daily living such as dressing, eating, bathing and toileting.

“The origin of this thesis has been checked by Turnitin program resulting similarity percentage of 14% resulting acceptable similarity percentage.”

Keywords	activities of daily living, elderly, gerontological nursing, nursing homes
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1 Introduction

Over the course of the next few decades, life expectancies will continue to rise, and the population group aged 65 and above will subsequently increase. This inevitable phenomenon may raise the risks of immobility wherein may affect their activities of daily living. (Brennan 2020: 22-26; William et al. 2021: 1-12.) Additionally, low-income senior citizens often lack the means to create a safer environment for themselves (Baksh, Pape, Smith and Strydom 2021: 1-11).

As people get older, even the basic daily tasks can be extremely difficult to carry out (Baksh, Pape, Smith and Strydom 2021: 1-11). If interventions are not identified, evaluated, and put into use, the negative effects of decreasing physical function may lead to an increase in incidence of functional decline among elderly and a possibility of unforeseen health costs which will then result to additional suffering and burden (Dunkle, Heijden, Stern and Chirwa 2018: 1-6).

The ability of elderly to perform activities of daily living (ADL) has been recognized and recommended by the World Health Organization (WHO) for geriatric epidemiological studies as an important criterion in assessing and studying their physical health status. The activities of daily living (ADLs) are an order of basic tasks that a person required to complete on a regular basis to take care of their personal hygiene, clothing, food, housing, and transportation needs, as well as to live freely in the community. The ability of older people to participate in these activities is an important measure of their overall health. Several studies demonstrated that individual socioeconomic characteristics, physical health, mental status, and health insurance all have an effect on ADL function. (Gao, Gao, Huo and Yang 2022: 15607.) It is also an important use to determine whether the elderly are capable of independent life and the capacity to perform ADLs. The World Health Organization (WHO) highlighted the fact that the key indicators of their health evaluation should not only include indications of death and disease but also the ability to live freely. (Kadar, Ibrahim, Razaob, Chai and Harun 2018: 63-68.)

Accordingly, the purpose of this descriptive literature review was to describe the challenges that the elderly living in nursing home encounter in their activities of daily living and how could nurses maintain the remaining abilities of elderly in nursing homes. The aim was to provide more information related to challenges faced by elderly living in

nursing home with regards to their daily living activities. This information helped nurses to maintain the remaining abilities of elderly in nursing homes.

2 Background and key terms

2.1 Activities of daily living for elderly

Activities of daily living play a vital role in the life of elderly people. Several researchers have conducted and examined the activities of daily living (ADL) limitations as well as the factors that affect these restrictions. For instance, a number of researchers have carried out a comprehensive evaluation of people over the age of 65 and studied the relationship between the variables of physical strength, cognitive function, ADLs, and suffering from depression in a study with statistical significance was discovered the whole variables. On the other hand, examinations about stepwise bootstrap mediation tests and regression analysis were used by other researchers to investigate the mediating influence of ADL skills on the relationship between diabetes and depression in older persons. (Gao, Gao, Huo and Yang 2022: 15607.) Elderly adults were separated into two groups, rehabilitation group and non-rehabilitation group to assess their capacity to accomplish ADLs by continual watching and inspection of the quality of life using the Philadelphia Geriatric Center Psychiatric Inventory. This was done in order to determine whether or not older adults could benefit from rehabilitation. According to the pertinent literature, the majority of investigations on the ADL capacity of older persons have utilized statistical analysis of quantitative studies as a technique, and rather mature ADL scales have been employed for grading. (Imanishi, Tomohisa and Higaki 2017: 1866-1872.)

Secondly, they investigated the determinants that influence the capability of people over 65 to carry out ADLs (activities of daily living). Different genders, with chronic diseases, disabilities, and social activities were regarded to be the primary determinants impacting factors on the capability to accomplish ADLs, along with the self-rated health and depression in older persons. (Gao, Gao, Huo and Yang 2022: 15607.) Investigations have been carried out in the name of gaining a better understanding of the connection between ADLs and depressed symptoms. Using the 2014 Chinese Longitudinal Survey on Aging Society, a number of researchers have investigated the connection between ADLs, cognitive performance, interaction with other, and their personal views

toward aging. These researchers used structural equation models in order to investigate the mediating implications of this association. Other researchers have explored the physical functioning associated with ADLs, taking into account the role that cognitive, psychological, and social aspects play, as well as employing physical, cognitive, psychological, and social instruments to investigate the basic activity (BADL). (Wang, Shi, Yao and Fu 2020: 581-598.) According to the findings of the studies (Candela, Zucchetti, Ortega, Rabaglietti and Magistro 2015: 313-322), the only individual component that was substantially linked with BADL levels was physical functioning. According to the findings of a number of researchers, depression has a substantial influence on the ability of senior people to carry out activities of daily living, and the greater the level of depression, the more severely elderly people are affected in their capacity to carry out activities of daily living (Gao, Gao, Huo and Yang 2022: 15607).

2.2 Factors influencing activities of daily living of elderly.

Smoking is one of the leading causes of disease and disability, if heavily used may lead to permanent impairment and death. It raises the risk of heart disease illness, pulmonary, and chronic disease as well as incapacity and possibility of neglecting oneself. In severe cases, smoking can cause considerable ADL impairment in older people. One of the negative impacts of long-term smoking can be seen in the decline of a person's lung function. Furthermore, it can induce a simultaneous deterioration in pulmonary ventilation and reserve function as well as an increase in airway resistance in persons who do not have respiratory symptoms. Therefore, to promote the improvement of ADL, elderly be educated on how to self-manage their health, lead an active lifestyle, and develop healthy behaviors. These habits include adopting a healthy diet, giving up smoking and limiting alcohol consumption, engaging in regular physical activity, developing an optimistic health mindset, and strengthening their contact with the outside world. (Gaggero 2022: 595-599.)

The ability of older persons to carry out ADL is significantly impacted by factors such as disability as well as chronic diseases (Yokota et al. 2013: 1003-1012). People who have disabilities are less able to take care of themselves, and older adults who have chronic conditions have a restricted ability to exercise, as well as a severely diminished capacity to express themselves (Jie et al. 2022: 1-11; Karakurt and Ünsal 2013: 221-

231). Proposed the development of a scoring system based on a ratio scale for evaluating disability in personal and social ADL in order to establish the degree of disability in older persons. This system would be used to measure disability in personal and social ADL. (Gao, Gao, Huo and Yang 2022: 15607.)

Older people who suffer from chronic conditions commonly have impaired bodily functions, lowered resistance, and limited mobility, which frequently require assistance from family members with activities like dressing and eating. This was proven to be true by Kara et al., who came to the conclusion that the rate of ADL impairment in older persons who suffered from chronic diseases was much higher than that of older adults who did not suffer from chronic diseases. Chronic diseases and disabilities continue to be key variables that contribute to the reduced ADL of adults in the middle years and in their later years. (Gao, Gao, Huo and Yang 2022: 15607.)

Several steps were identified as an effective way when it comes to the prevention of chronic diseases. Firstly, is to concentrate on an individual's initial state of physical condition and to increase knowledge of chronic diseases among older individuals through the provision of free medical checkups and education programs. Secondly, assisting middle-aged and older folks adopt healthy behavioral patterns and participate in social activities. This can also contribute to an improvement in the individuals' level of life satisfaction, which in turn can help improve their health state. Lastly, an improvement in family doctor contracting services should be made in order to provide corresponding health management services for persons of middle age and older who suffer from chronic diseases such as diabetes and hypertension. (Gao, Gao, Huo and Yang 2022: 15607.)

2.3 Nursing homes

Nursing homes are institutionalized shelter that provides numerous functions such as offering a secured environment to look after and help maintain the elderly's social, mental, emotional, and cognitive needs. Also, it is part of the responsibility of nursing homes is to identify the factors affecting the quality of life of elderly and their life satisfaction. (Hastaoglu and Mollaoglu 2022: 2978-2985.)

2.4 Elderly

The World Health Organization has placed a definite value in which elderly will commence. The organization established the period from 65 years old and above based on the sequential definition of elderly (WHO, 2022). They have grouped elders based on age range and the clusters are as follows: Young elder is from 65 to 74 years old; Advanced elder starts at 75 to 84 years old; and very advanced elder begins at age 85 years and higher (WHO, 2020). Furthermore, according to Cataloglu (2018), elderly is the whole process of changes that happens to an individual that increases the chance of death and transpires as the age progresses, however, other factors such as social, psychological, and cultural dimension should also be put into consideration. (Hastaoglu and Mollaoglu 2022: 120-3119.)

2.5 Gerontological nurse

Ageing population commonly raise demands to employ for competent geriatric nurses. Gerontological care nursing has been longly to recognized as part of nursing specialty. Although there are many programs for geriatric nursing, only few nursing students would like to take it as their specialty. Here are some terms interchangeably use in relation to nursing and elderly: Geriatric nursing is defined as providing care for elderly people experiencing health problems and needs for specialized care. Gerontological nursing, includes improvement of health, health education and preventing a disease. And gerontic nursing, which is not commonly used, it covers both aspects of nursing care of elderly people. (Kris 2015: 24.)

3 Purpose, aims and research questions.

The purpose of this literature review is to describe the challenges that the elderly in nursing home encounter in their activities of daily living and how could nurses maintain the remaining abilities of elderly in nursing homes.

The aim is to provide more information related to challenges that the elderly living in nursing home face in their daily living activities. This information would help nurses to maintain the remaining abilities of elderly in nursing homes.

The following questions are set for the review:

1. What are the challenges affecting the activities of daily living among elderly in nursing home?
2. How could nurses maintain the remaining abilities in activities of daily living among elderly in nursing homes?

4 Methodology and methods

A study must be based on current understanding of the subject to create a proper correlation on the foundation of all academic research activity. As a result, accuracy should be a top priority for all academic related research. Knowledge generation in the field of business study is increasing at an incredible rate while maintaining a fragmented and multidisciplinary approach. This makes it quite difficult to stay updated with modern research as well as to evaluate the collective evidence in a certain research area. A literature review is a systematic method of collecting and analysing past studies. It is a research approach wherein an efficient and well-conducted review establishes a strong basis for increasing knowledge and guiding theory development. (Snyder 2019: 333-339.)

It is useful in providing a summary of areas where research is different and multidisciplinary. Furthermore, a literature review is a good method of integrating study findings to present evidence on a meta-level and to identify areas where additional research is needed, which is an essential component of developing theoretical frameworks and conceptual models. Traditional methods of presenting and portraying literature, on the other hand, frequently lack thoroughness and are not carried out consistently. (Snyder 2019: 333-339.)

4.1 Data collection

A descriptive literature review is ideal when needed for a collection of quantitative studies because of the utilization of various methods to address unique theoretical concep-

tualizations, constructs, and/or relationships. Descriptive reviews summarize the findings of separate research studies without regard for the significance of statistics. They are especially beneficial for connecting studies on various topics for reinterpretation or interconnection to establish or assess a new theory. Each piece of data examined is valuable because of how it contributes to or evaluates an overall idea. For instance, integration of wide range literatures explains hypothesis that needs acceptance to be recognized as a common effective motivation. Descriptive reviews can also be used to offer a historical overview of the advancement of theory and research on a subject. (Siddaway, Wood and Hedges 2019: 747-770.)

4.2 Data search and selection

Facet analysis PEO for searches

Facet analysis is used to identify the main search terms (Table 1). Activity of daily living and elderly serves as the main topics and focus on this study of determinants of activity of daily living among elderly. The population, exposure and outcome were constructed from research questions, aim and topic. Boolean was used to create a different command to the search engines and databases. The AND command is to narrow down the search, OR is to broaden the search and NOT is to limit the result of the search. Other commands include parentheses, truncation, and phrases. (University of Toronto.)

Table 1. Facet analysis PEO for searches

Population		Exposure		Outcome
Elderly living in nursing homes	AND	"Activity of daily living"	AND	Determinants of Activity of daily living
OR		OR		
Aging		Basic activity of daily living		
OR				
"Geriatric"				

Databases such as CINAHL and PubMed was used in data collection as they are considered as a reliable source of related article about nursing, health care and science

(Table 2) refer in the appendix 1. Research articles found were limited to English language and the publication year from 2013 up to present.

Inclusion and exclusion

Preliminary search yielded n=499 from CINAHL and n=727 from PubMed a total of (N=1226) and additional data search from CINAHL n=15 and PubMed n=52. A total of (N=1293) both from preliminary search and additional search. Based on the inclusion and exclusion criteria, titles and abstracts were assessed and selected for further analysis. The following articles were excluded due to (374) duplicates, and (2) that cannot access the full text. Remaining articles were carefully selected based on the inclusion and exclusion criteria in (Table 3). Inclusion and exclusion criteria.

Table 3. Inclusion and exclusion criteria

Inclusion	Exclusion
Published between 2013-2023	Published older than 10 years
Focuses on factors affecting activities of daily living	Focuses only on the disease
Focuses on nurses and gerontological nursing	Focuses to practical nurse, caregiver, and other health care professional such as Occupational therapy and Physical therapy
Published in English	Published in other language
Peer-reviewed primary studies	Non-peer reviewed secondary studies

Prisma flow chart

Prisma flow chart (Figure 1) shows the outline of the screening process. It records the total articles found then will start the selection process by making a decision based on the inclusion and exclusion criteria. Numbers of articles are recorded at the various phases. It is important to indicate the reasons for excluding articles in the full-stage phase. (Subject and Research Guides 2023.)

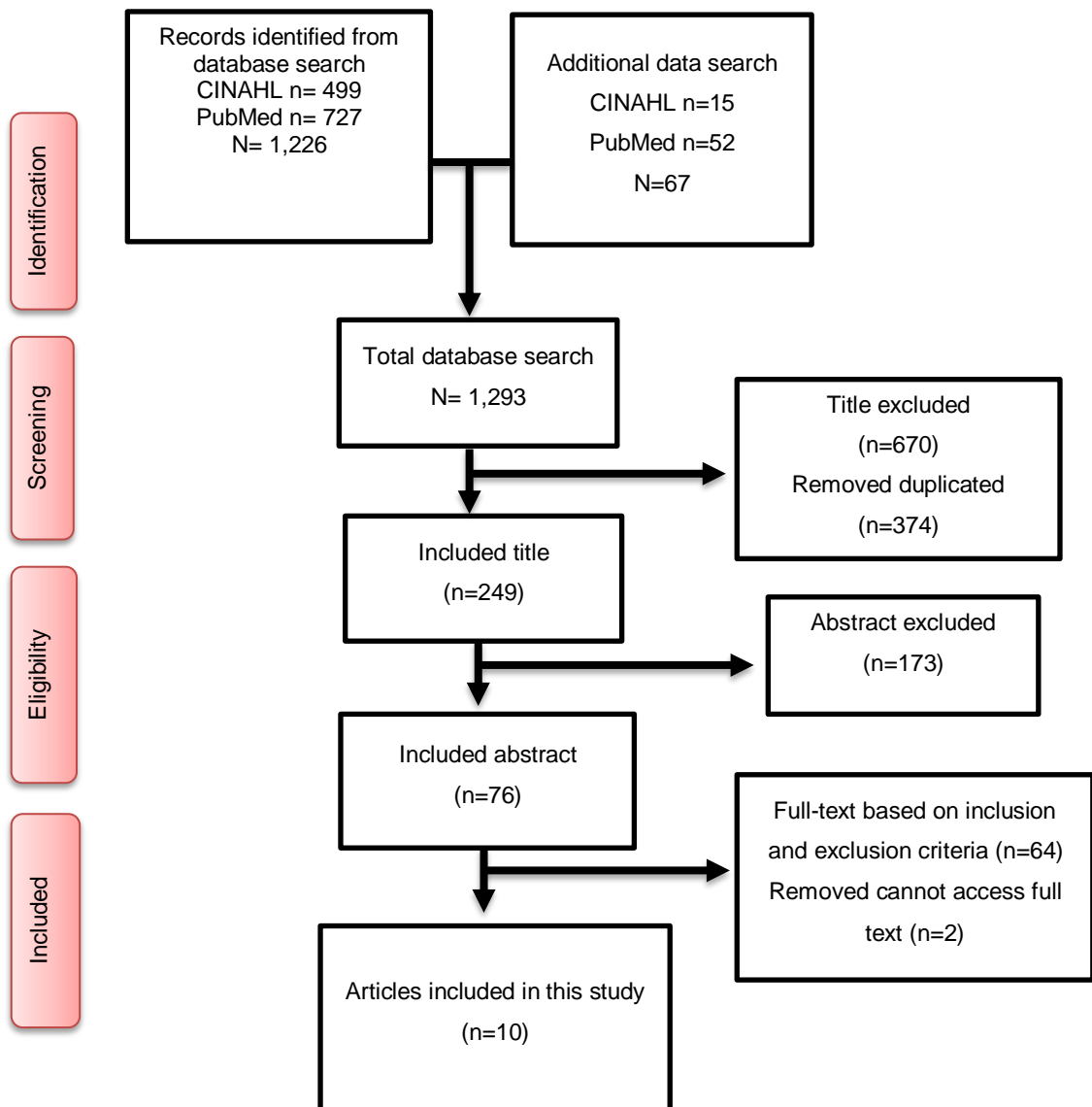


Figure 1. Prisma flow chart

4.3 Data analysis method

Content analysis is a method that can be used in qualitative and quantitative data or either inductive or deductive analysis. Inductive approach is used if there is no sufficient knowledge about the phenomenon or if the knowledge is disorganized. (Elo and Kyngäs 2008: 107-115.) The method based on inductive analysis focuses from specific to general, observing occurrences before integrated into a more comprehensive idea or generalization (Chinn & Kramer 1999). Inductive content analysis is conducted according to the following phases: coding, categorization and forming of concepts that can an-

swer the research questions. During the data analysis, the researchers will read, classify, merge, and categorize concepts and themes by identifying the correlation and variance of the coded data. The goal is to create an abstract from the raw data that gives a possible theoretical relation and summarize the main categories, concepts, and themes. (Kyngäs, Mikkonen and Kääriäinen 2020: 13-21.)

Inductive content analysis was done in this study. In the (Table 4) below shows the findings based on one of the research questions, what are the challenges affecting the activities of daily living among elderly in nursing home. Meaning units were selected from the searched articles, codes were generated and constructed a relevant subcategory. Subcategories were merge to generic categories and formed the main category. The example of content analysis was taken from the article of Prevalence of Spasticity in Nursing Home Residents. Five subcategories have been produced from this meaning unit and main category was created.

Table 4. Example of Content Analysis Table

MEANING UNIT	CODING	SUB-CATEGORY	GENERIC-CATEGORY	MAIN CATEGORY
Mean ADL dependency score was worse for residents with spasticity (21.7 4.1, $P < .001$; Table 1) than for residents without spasticity (17.1 5.7). A secondary analysis found that lower limb spasticity significantly predicted ADL dependency (4)	Residents with spasticity has ADL dependency. Lower limb spasticity might lead to ADL dependency.	Spasticity	Morbidity in Elderly	Challenges affecting the activities of daily living among elderly in nursing homes
		Muscle tightness		
		Involuntary muscle contraction		
		Spasm		
		Continues muscle stiffness		

5 Results

There were ten (n=10) articles selected after the data search. Seven (n=7) quantitative, two (n=2) qualitative and one (n=1) quality improvement studies. All articles were from different countries, one each from Netherlands, Switzerland, Turkey, Canada, Norway and two (n=2) from South Korea and three (n=3) from USA. In this study, inductive content analysis was used. The analysis coded five generic categories that associated to the challenges affecting the activities of daily living among elderly in nursing homes which are morbidity in elderly, environmental factors, individual factors, functional impairment, and presence of pain. Then three generic categories related to nurses' perspective on maintaining the remaining abilities in activities of daily living among elderly in nursing homes which are nursing assessment, nursing intervention and nursing evaluation.

5.1 Challenges affecting the activities of daily living among elderly in nursing homes.

Activities of daily living refers to the functional capacity to perform the basic daily task such as dressing, eating, bathing and toileting. ADL dependency causes individuals to become more reliant on caregivers and support from the health care provider. (Johansen et al. 2020: 488.) Several studies identified the determinants of activities of daily living among elderly in nursing homes. The common factors affecting the ADL are the morbidity in elderly. (Dalen-Kok et al. 2021: 906-913; Johansen et al. 2020: 488; Gill et al. 2020: 1157-1160; Wearing, Stokes and de Bruin 2019: 1-15; Aslan, Alkan, Tanir and Guner 2018: 1184-1191; Guthrie et al. 2018: 1-27; Chekani, Bali and Aparasu 2016: 617-624.) Functional impairment (Wearing, Stokes and de Bruin 2019: 1-15). Environmental factors (Johansen et al. 2020: 488; Chekani, Bali and Aparasu 2016: 617-624). Individual factors (Aslan, Alkan, Tanir and Guner 2018: 1184-1191; Chekani, Bali and Aparasu 2016: 617-624). And presence of pain (Dalen-Kok et al. 2021: 906-913).

5.1.1 Morbidity in elderly

According to a single-blinded, cluster randomised- controlled trial done by Dalen-Kok et al. (2020) in Netherland, A high score on the Reisberg Global Deterioration Scale (GDS), shows that the residents have an advanced dementia, and it is significantly indicated the possible functional decline in activities of daily living over the period of 6-months follow-up. (Dalen-Kok et al. 2021: 906-913.) In addition, an observational longitudinal study done by Johansen et al. (2020) in Norway, stated that nursing home residents with dementia have undergone every two years assessment from time of admission up to 36 months, indicated the level of dementia that was assessed using the clinical dementia rating sum of box (CDR-SoB) where in severe dementia both at baseline and follow-up evaluation was significantly correlated with the decline functional in personal activities of daily living, with maintaining stability throughout time. (Johansen et al. 2020: 488.)

Quality improvement study done by Gill et al. (2020) carried out in Tennessee, stated that spasticity is a common condition in nursing homes, and out of five there is one resident who has spasticity, and it is significantly associated with worsening ADL dependency. Even though spasticity was common, it is usually not diagnosed or treated. Although there are several treatments or medicine that is effective, and it can help the health care provider to ease the burden in nursing home setting. (Gill et al. 2020: 1157-1160.) Also, according to observational cross-sectional study done by Wearing, Stokes, and de Bruin (2019) in Switzerland, the presence of one or more disease and the lack of muscle control over urination or defecation was significantly associated with the level of ADL dependency (Wearing, Stokes and de Bruin 2019: 1-15).

According to a cross-sectional, descriptive, and correlative study done by Aslan, Alkan, Tanir and Guner (2018) in Turkey, when the scores of Barthel ADL index was assessed, participants with presence of chronic diseases were more likely to experience more functional dependent (Aslan, Alkan, Tanir and Guner 2018: 1184-1191). On the other hand, a cross-sectional design study done by Chekani, Bali and Aparasu (2016) in USA, Parkinson's disease residents with mood and behavioural symptoms had a higher ADL dependency compared to PD residents with no experience of these symptoms. (Chekani, Bali and Aparasu 2016: 617-624).

Lastly, A cross-sectional analyses were conducted by Guthrie et al. (2018) in Ontario, according to researcher's knowledge, it is the first study of dual sensory and cognitive impairments and their correlation with various important health conditions of elderly living in institutionalized care facilities or having a home care service. Elderly with a combination of impairments belong to at risk groups with special needs and problems. The presence of dual sensory impairments (vision and hearing) combined with cognitive impairments in elderly had the highest rates of functional decline in ADL compared to those elderly experiencing no impairments. (Guthrie et al. 2018: 1-27.)

5.1.2 Environmental factors

According to an observational longitudinal study done by Johansen et al. (2020) in Norway, there was a lower personal ADL function to residents with dementia that are living in regular unit (RA) compared to those residents being in the special unit (Johansen et al. 2020: 488). On the other hand, a cross-sectional design study done by Chekani, Bali and Aparasu (2016) in Texas, USA, that residents living in nursing homes located in Metropolitan statistical areas (MSA) has a higher dependency in ADL compared to those residents living in non-MSA. Also, residents living in other place prior to nursing homes admission has a higher dependency in ADL compared to the residents who came from a residential home. (Chekani, Bali and Aparasu 2016: 617-624.)

5.1.3 Individual factors

Cross-sectional, descriptive, and correlative study done by Aslan, Alkan, Tanir and Guner (2018) in Turkey stated that residents with low level of education and who had children were more functionally dependent (Aslan, Alkan, Tanir and Guner 2018: 1184-1191). In addition, a cross-sectional design study done by Chekani, Bali and Aparasu (2016) in USA, there was an increase points in ADL dependency as the patient's aged each year and residents who were married has a higher dependency in ADL compared to those unmarried residents. Therefore, age and marital status were significantly correlated with the dependency in ADL. (Chekani, Bali and Aparasu 2016: 617-624.)

5.1.4 Functional impairment

According to concurrent cohort study done by de la Rica-Escuín et al. (2014) in Spain, residents with slow gait speed and low physical activity have a higher risk of incident disability and combined incident disability or mortality, wherein, incident disability in basic ADL was considered when the onset of disability in bathing, grooming, toileting, dressing, eating or transferring was identified using Barthel index (de la Rica-Escuín et al. 2014: 329-334). Also, an observational cross-sectional study done by Wearing, Stokes and de Bruin (2019) in Switzerland, stated that there is a weak dependency in ADL correlated with lower handgrip strength, lower elbow-flexor strength, and lower physical activity while a moderate dependency in ADL associated with lower quadriceps strength (Wearing, Stokes and de Bruin 2019: 1-15).

5.1.5 Presence of Pain

According to single-blinded, cluster randomised-controlled trial done by Dalen-Kok (2020) in Netherland, residents with dementia in nursing home who were experiencing pain and change in pain was significantly associated with decline ADL function. It is important to be aware of the functional decline in ADL among elderly because it might serve as an indicator of presence of pain. (Dalen-Kok et al. 2021: 906-913.)

5.2 Nurses' perspective on maintaining the remaining abilities in activities of daily living among elderly in nursing homes.

Due to the increase population of elderly, maintaining the remaining abilities in ADL of residents is very important in nursing homes. Improving the nurses' knowledge and skills in nursing home practice should be included in the education of new nurses in the institutionalize care facilities. (Kim, H., Kim, S., Kim, M., Choi and Chang 2017: 73-80.) Several studies were conducted on how to promote the remaining abilities in ADL among elderly in nursing homes. It was demonstrated in Guide Map for Preserving Remaining Ability of Nursing Home Residents with Physical-Cognitive Functional Decline (Kim et al. 2017) and Nurses' clinical decision-making for preserving nursing home residents' remaining abilities. (Kim et al. 2016.)

5.2.1 Nursing Assessment

According to descriptive research done by Kim et al. (2017) in Korea, this study was carried out by analysing 144 nursing home residents' data related to the nursing care rendered by 19 skilled nurses in nursing home and a literature review. The data were gathered from the interviews of skilled nurses regarding the clinical decision about maintaining the remaining abilities of residents in nursing homes. According to the interview data, most of the nurses' assessments were residents' mood, communication, and appearance. Several problems that the nurse experienced were malnutrition, fall risk and impaired physical mobility. (Kim, H., Kim, S., Kim, M., Choi and Chang 2017: 73-80.) In addition, qualitative research conducted by Kim, Choi, Kim, Kim, and Chang (2016) in Korea, is to understand well the nurse's clinical decision-making in nursing homes about maintaining the abilities of residents with physical and cognitive functional decline. The researchers established 5 major themes about the clinical decision-making of nurses from the content analysis of the data collected from the notes and interviews of nurses. Under theme 1, it is seeing residents' potential, where in nurses' assessment was based on the physical, functional, and cognitive factors that affects the remaining abilities and overall condition in order to establish appropriate care plan for the residents. Then, the rest of the themes are under the nursing intervention and evaluation that will be discuss in the later part of this study. (Kim, H., Choi, Kim, M., Kim, S., and Chang 2016: 1326-1335.)

5.2.2 Nursing Intervention

After identifying the problem based on nursing assessment, the nurses' established an appropriate nursing intervention for residents depends on their diseases or health conditions. An example of nursing intervention based on the practical guide map created by the researchers, a resident who has an impaired physical mobility due to frailty and fatigue, the nursing care plan would be is to provide assistive devices for movement, motivate the resident to do physical activities, and passive movement or exercise. (Kim, H., Kim, S., Kim, M., Choi and Chang 2017: 73-80.) On the other hand, as it was mentioned in nursing assessment part, the other themes that were included in the qualitative research conducted by Kim, Choi, Kim, Kim, and Chang (2016) in Korea, theme 2 is physical, emotional and psychosocial care in daily routines where in nurses motivates the residents to join in group activities or routine program like exercise, sing-

alongs, and card games to promote physical activity, improve emotions, sustain cognition and maintain positive relationships with other residents and nursing home staff. Then, theme 3 is writing a personal chart, a customized integrative care plan is needed for residents and all health care provider should be included and must be informed with the same information and specific needs of the residents. Theme 4 is encouraging, promoting and physical and emotional support where in nurses motivates the residents to utilize their remaining abilities even though they have physical and cognitive functional decline and needed an assistance with ADLs. (Kim, H., Choi, Kim, M., Kim, S., and Chang 2016: 1326-1335.)

5.2.3 Nursing Evaluation

In the descriptive research study done by Kim et al. (2017) in Korea, based on the established practical guide map, the researchers have included their evaluation for the nursing care plan that was done to the residents. One of the examples of intervention is to motivate residents' physical activity or passive exercise to the residents and the evaluation was gripping power, and independency in ADL. (Kim, H., Kim, S., Kim, M., Choi and Chang 2017: 73-80.) Again, as it was mentioned in nursing assessment part, the last theme that was included in the qualitative research conducted by Kim, Choi, Kim, Kim, and Chang (2015) in Korea, theme 5 is preparing for more independent living where in it covers the development of the independency of the residents and nursing interventions. In addition, this theme includes the consideration of nurses for discharging residents from nursing homes after the residents have the ability to perform ADLs independently. Even though discharge from nursing home is not common, however, this is the goal of the nurses for residents with functional and cognitive decline. (Kim, H., Choi, Kim, M., Kim, S., and Chang 2016: 1326-1335.)

6 Discussion

Several themes had emerged from the analyzed literature pertaining to the challenges affecting activities of daily living among elderly at nursing homes. It was totally revealed vital developmental milestone an elderly may achieved such battling with illnesses, adjustment to environmental needs and struggles and personal differences as to the basic needs of individuality, making impairment functional and evidences of pain experiences. (Dalen-Kok et al. 2021: 906-913). It has been identified the functionality of elderly in battling dementia, Parkinson's diseases, spasticity, loss of muscle control in

urination and defecation, cognitive impairments, and other chronic diseases that are might associated to complications. These has been recorded in various relevant studies and had been seen that elderly ADLs are evidently affected. With these conditions, it affects also their adjustment prototype in their environmental atmosphere as such making their functionality as elderly individual delayed or struggled. It was significantly identified that their functional dependency is caused by their low education and support carer or children. These has been magnanimously identified in most of the studies in such way addressing the elderly's concerns on their ADL's functionality. (Aslan, Alkan, Tanir and Guner 2018: 1184-1191.) Incidental risks, low physical mobility and expressions of pain are all evident in their functionality that needs focus to address in order to manage their challenges. The various literature had significantly identified the need to manage these risks and avoid much burden to their functionality. (Dalen-Kok et al. 2021: 906-913.)

On the other hand, emerged themes on the nurses' perspectives on maintaining the remaining abilities in ADLs among elderly at nursing homes had revealed focused on nursing assessment, interventions and evaluation actions as nurses do at their primary focus in taking care of them. Assessment strategies of nurses in taking care of elderly at home are vital in order to maintaining their functionality and address their needs as well. Nurses may vary a certain best practice to this matter, but nursing homes may provide and consider a standardized practice in addressing concerns in various chronic conditions mentioned in the literature review. Nurses may develop more practice and home-based assessment procedure to ensure the quality and patient-centered approach of nursing care. In fact, this may vary differently to the conditions of the patients. Seemingly related to the interventions they are implementing to as to their actions of care. (Kim, H., Kim, S., Kim, M., Choi and Chang 2017: 73-80.) Nurses are caring specialist whether at the hospital and more so at nursing homes. Their abilities to provide scientifically proven interventions are much important to the need of their patients but more on the sustenance of the elderly ADLs functionality. As such, evaluation begins when a nurse decides to plan and ensuring its outcome goals to achieve functionality of elderly in their ADLs. Evaluative strategies of nurses shall be well understood by their patients and other member of the healthcare to strongly enforce its success as goal met. It is indeed very much important that nursing homes are visible in crafting clinical pathways in addressing the needs of the patients and more so getting nurses into updates on advancement in taking care of patients who are elderly at nursing homes. As to the findings of this study as among elderlies at nursing homes,

presence of illnesses, environmental adjustment, personal factors as to the indifferences, functionality and expression of pain are determinants to succeed their functionality on their ADLs which nurses may care in terms of assessment, interventions, and evaluations. Best practices among nurses' actions may be fully adopted as to maintain continuous quality care improvement. (Kim, H., Choi, Kim, M., Kim, S., and Chang 2016: 1326-1335.)

7 Ethics and validity

Ethical Principles should be applied and fully understood by the nurses in conducting their research and to the reading and review of research. The Declaration of Helsinki in 1964 is about the official statement of ethical guidelines that were first used in medical research but are now used in all forms of research. There are three core ethical principles, respect for persons, beneficence which states that researchers should work to lessen the danger and justice which states that researchers need to make sure that their research is fair. It is important to know if the research has been conducted ethically. There should be an approval by the committee assigned to review the ethical risks and process related to human study. Full comprehension and application of ethical principles is an important factor to make sure the highest quality of evidence-based practice. (Heale and Shorten 2017: 7.)

The study has been performed accurately, precisely, and methodologically sound by researchers. From the conceptualization, planning, implementation, and dissemination phases, they conducted this research ethically. As stated in the methodology section, all writers participated differently in the writing of this manuscript. Writers with knowledge of review writing experience improved the study's validity. This study required no permission to be carried out. Every source used in this research was properly cited in the text and in the reference list. (Sehularo, Molato, Mokgaola and Gause 2021: 1-8.)

Validity and reliability are the terms used in scientific literature to examine the research methods, designs, and outcomes. Validity analyses the explanation of the research instruments if it can be measured what it is intended to measure based on evidence and theory of the study area of examination. (Clark and Watson 2019: 1412-1427.)

In this literature review, research guidelines were applied to ensure the credibility and reliability of the study. The articles included in this study were obtained from the search

engine database that was recommended by the library of Metropolia University of Applied Sciences. These includes CINAHL (Ebsco) and PubMed. To check plagiarism, the study will undergo “turn it in” to make sure the reliability of the study.

8 Limitations

This study is limited through the use of inductive content analysis as the researchers transacted throughout the procedural matters had been deployed as to the identified inclusion and exclusion criteria. The study did not sought experts validation as to determine whether they are much adequate enough to support the assumptions made by the proponent. With that, the study is solely limited to the understanding and purview of the researchers as such literatre were recommended by the library of Metropolia University of Applied Sciences which limitedly includes CINAHL (Ebsco) and PubMed.

9 Recommendation and conclusions

As to the findings of the study in terms of the functionality of elderly in battling dementia, Parkinson’s diseases, spasticity, loss of muscle control in urination and defecation, cognitive impairments, and other chronic diseases with associated to complications, nurses must be given a platform to improve their knowledge, skills and even attitude in taking care of elderly with issues and struggles on their ADL’s functionality. Nurses may attend clinical-related seminars, trainings and skills advancement to particularly provide better attention to the needs of the elderly and their issues on their ADLs. Nurses must be given also opportunity with other members of the healthcare to make their patients more inform on their health conditions. Environmental adjustment, personal acceptance, and pain management shall be a mutually recognized area between the elderly patients and nurses to fully understand. Work instructions among nursing homes may be provide and more so a patient handbook may be developed as to assist better understanding for the patients. Special training on pain management may also be a platform for nurses, carer and even significant others to others the advancement of this condition. Nurses caring framework are much evident in terms of assessment, intervention and evaluation as to anchor to the nurses nursing management process framework but require an elicited experts advise to understand the applicability of this undertaking at nursing homes. A better validation and implementation of theoretical

nursing framework as a philosophy to practice nursing among elderly patients that are struggling in their ADLs at nursing home.

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Appendix 1: Data Search

Table 2. Data search

Data Search					
Database /Date	Search phrase	Total number of hits/citations	Papers/records included based on title*	Papers/records included based on abstract*	Papers/records included based on full text*
CINAHL 05/09/2023	"activities of daily living" OR "ADL" OR "daily living" AND elder* OR aging OR older OR geriatric AND nurs* OR "registered nurs*" OR "post graduate nurs*" AND "nursing home"	499	61	23	2
PUBMED 05/09/2023	((("activities of daily living" OR "ADL" OR "daily living") AND (elder* OR aging OR older OR geriatric)) AND (nurs* OR "registered nurs*" OR "post graduate nurs*")) AND ("nursing home")	727	179	47	7
Additional data search					
CINAHL 05/09/2023	challeng* AND "activities of daily living" OR "ADL" OR "daily activities" AND elder* OR aging OR older OR geriatric AND nurs* AND "nursing homes"	15	4	2	0
PUBMED 05/09/2023	challeng* AND "activities of daily living" OR "ADL" OR "daily activities" AND elder* OR aging OR older OR geriatric AND nurs* AND "nursing homes"	52	5	4	1
TOTAL		1293	249	76	10

Appendix 2: Summary of reviewed articles

Table 5. Summary of selected articles

Summary of reviewed articles					
Author(s), year, country	Title	Methodology & Methods	Participants	Main Outcomes	Limitations
Aslan, Alkan, Tanir and Guner 2018 Turkey	Effect of Functional Condition and Self-Efficacy Level on Morale: A Nursing Home Sample	Cross-sectional, descriptive, and correlative study - Quantitative	91 elderly people with no hearing impairments	The functional conditions of elderly people living in nursing homes affected their morale, self-efficacy did not directly affect their morale. It should be considered that elderly people living in nursing homes, who had low education levels, had chronic diseases, continuously used medication, and had children were functionally more dependent.	Elderly people with mentally retarded state, dementia, or psychiatric disorders, which prevented them from understanding the questionnaire; communications could not be set up with elderly people owing to problems such as speech disorder, stroke, and sensory problems.
Chekani, Bali, Aparasu 2016	Functional Status of Elderly Nursing Home	Retrospective cross - sectional	Study sample was of 98,093	As the patient's age increases each year,	The study sample are only pertaining to elderly with

USA	Residents With Parkinson's Disease	design - Quantitative	nursing homes residents with Parkinson's Disease	ADL assistance was also increased by 0.02 points. Patients that were married has a higher assistance point compared to those who are not married. Parkinson's disease patients who are staying in nursing homes located in metropolitan statistical area (MSA) have a higher point of assistance for ADL compared to non- MSA resident. Parkinson's disease patients staying in other place prior to nursing home admission have a higher point in assistance in ADL compared to those who came from residential home. PD patients with mood and behavioral symptoms have a higher point in assistance in ADL compared to those without these symptoms.	PD living in nursing homes and the last data from NNHS was acquired 10 years ago, the findings of the study may not only be focusing on residents with PD in other treatment settings like nursing homes facilities. There is a limited availability of data source of individual biological and environmental factors in different variable analysis. Also, due to the cross-sectional nature of the study, the factor between the dependent and independent variables cannot be assumed. Lastly, this study might have some limitations of the use of database such as inaccurate, lacking data and sampling error that could affect the findings of the study.
Dalen-kok et al			229 Residents		

2020					
Netherlands	The impact of pain on the course of ADL functioning in patients with dementia	Single-blinded, cluster randomised- controlled trial - Quantitative		Residents experiencing pain needs more assistant in doing their ADL compared to those who don't have pain. A change in pain score in first 3 months can serves as a predictor for decline ADL functioning over the 6 months follow-up, and a decline in transferring in the past 6 months follow-up and feeding in the first 3 months follow-up.	The usual duration of stay following admission to a psychogeriatric unit is just 2 years, the 6-month follow-up might seem short. The inconsistency of ADL functioning and pain makes it hard to record all changes, and even though longitudinal analysis facilitated examination of time-related changes in ADL functioning, the onset of ADL disability was not included. It also says that, and ADL scale would not be the best tool to assess the ADL functioning and examine the complex relationships between pain and ADL functioning.
de la Rica-Escuín et al.	Frailty and mortality or incident disability in institutionalized older adults: The FINAL Study	Concurrent cohort study	324 institutionalized adults older than 65 years	Residents with slow gait speed and low physical activity had a higher risks of disability incident and combined event of disability incident or mortality.	The weakness of the study is the sample is not representing all the institutionalized care facilities in Spain. However, the sample in the study are the two biggest institutionalized care facilities, both of them have a high standard health care professional and facilities.
2014					
Gill et al.					

2020					
Tennessee	Prevalence of Spasticity in Nursing Home Residents	Quality improvement	150 long-term care residents and 90 skilled nursing care residents	ADL reliance was found to be substantially related to spasticity and cognitive recall. Spasticity and age had a significant interaction as well. A further analysis discovered that lower limb spasticity influenced ADL reliance significantly, and that there was a strong interaction between lower limb spastic postures and age. It was unclear if upper limb spasticity was related to ADL reliance.	This pilot study has certain limitations. Since this study was performed in a single nursing home, which restricts the findings' generalizability, the majority of residents participated in this analysis, limiting the influence of selection bias.
Guthrie et al.	Combined impairments in vision, hearing and cognition are associated with greater levels of functional and communication difficulties than cognitive impairment alone: Analysis of interRAI data for home care and long-term care recipients in Ontario	Cross-sectional analysis - Quantitative	Long term care - 110,578 Home Care - 291,824	All residents with cognitive impairment + visual impairment and cognitive impairment + dual sensory impairment had a ADL dependency. ADL dependency was more associated to residents with CI+DSI compared to those without impairment.	Limitation not available
2018					
Ontario					

Johansen et al	Course of activities of daily living in nursing home residents with dementia from admission to 36-month follow-up	Observational longitudinal study - Quantitative	582 nursing home residents	Model 1: The higher baseline of clinical dementia rating – sum box (CDR-SoB) was related to lower personal activities of daily living function. With the score of poor/fair in general medical health rating (GMHR) and more apathy at baseline were related with lower personal ADL function. Model 2: higher CDR-SoB and poor/fair GMHR, more apathy, agitation, not using anti-dementia medication and resident staying in a regular unit were all associated with lower personal ADL function.	The limitation in this study is many were excluded due to death that leads to fewer participants and reduced data collected.
2020					
Norway					
Kim et al	Guide Map for Preserving Remaining		Analyzing 144 residents' case		
2017					

<p>South Korea</p>	<p>Ability of Nursing Home Residents With Physical-Cognitive Functional Decline</p>	<p>Descriptive research - Qualitative</p>	<p>data pertaining to the nursing care provided by 19 nursing home skilled nurses and a literature review</p>	<p>Nurses encountered problems were nutritional imbalance, risk for fall and decline mobility. After identifying the problem, RNs created a nursing care plan based on patients' health condition. Thru analysis of that data of nursing process, a guide map was generated.</p>	<p>The sample size was not enough to produce a complete practical algorithm for maintaining the remaining ability of residents in nursing homes. But the researchers tried to create an initial practical guide map for future use in developing a practical map that focuses on the remaining ability of residents in nursing homes. To create a guide map, it should undergo extensive research.</p>
<p>Kim et al 2015 Korea 2015 Korea</p>	<p>Nurses' clinical decision-making for preserving nursing home residents' remaining abilities</p>	<p>Qualitative approach</p>	<p>32 experienced nurses</p>	<p>Five major themes about nurses' clinical decision making for maintaining the remaining abilities of nursing homes residents with physical-cognitive functional decline were established and the data were obtained from the nurses' point of view. Theme 1: Seeing residents' potential. Theme 2: Physical, emotional and psychosocial care in daily routines. Theme</p>	<p>The variability of the NHs in terms of criteria such as the accessibility of on-site physical therapy and related equipment, facility size, and types of programs given for residents is a limitation of this study.</p>

				3: Writing a personalized chart. Theme 4: Encouraging, promoting and physical and emotional support. Theme 5: Preparing for more independent living.	
Wearing, Stokes and de Bruin	<p>Quadriceps muscle strength is a discriminant predictor of dependence in daily activities in nursing home residents</p>	<p>Observational cross-sectional study. - Quantitative</p>	<p>A total of 30 nursing homes residents aged 65 years and over</p>	<p>The level of ADL dependency is associated to the residents that has more than one medical condition and urinary impairment but not related to gender, age, falls, cognitive performance, medication, depressive mood, pain or frailty. ADL dependency is somewhat related to lower handgrip strength, lower elbow-flexor strength and lower physical activity but moderately related</p>	<p>Exclusion criteria were: not able to understand the content of the study and provide sign informed consent, poor decision making (Cognitive performance scale > 4 points), has a history of acute lower limb pathology (fracture and/or surgery within the last 6 months), skin conditions such as anterior thigh and/or arm, limb paralysis and bedridden.</p>
2019					
Switzerland					

				to lower quadriceps strength.	
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