FACTORS THAT AFFECT QUALITY OF LIFE
FOR OLDER PERSONS WITH LIFE LIMITING ILLNESS
IN LONG TERM CARE HOMES

A Literature Review

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ABSTRACT

Dying is a normal life process. Palliative care is the means in which health care professionals care for individuals with either life limiting or terminal illness at or near the end of life. It is important to deliver palliative care across all health care contexts - from acute care to residential care. Nurses within the specialty of palliative care or who have had palliative care education consider all aspects of caring for individuals - physical, psychological, social, and spiritual. Quality of life (QoL) is important at all stages of life. Older persons with life limiting illness residing in long term care homes may have different factors that influence their QoL than younger persons in good health.

The purpose of this study was to describe factors affecting quality of life for older persons with life limiting illness who reside in long term care (LTC) homes. It was also of interest to discover what nursing strategies are used to promote quality of life for this population.

A literature review of sixteen articles was carried out. Articles which were relevant to the literature review’s aim were retrieved from CINAHL and PubMed databases. Twelve articles were retrieved from the databases and four articles were found using a manual search. A systematic process of reviewing each article, reading and re-reading them to analyze the method and results was undertaken. Deductive reasoning was used to develop themes with inspiration from the World Health Organization’s domains of quality of life.

Results were categorized into categories of sociodemographic characteristics, psychological/spiritual, physical health/independence, environment, and nursing strategies. It was found that being female and married positively affected one’s quality of life. Visits from family and friends positively affected QoL. Of interest was that having a higher education negatively affected one’s quality of life. Having a lower cognitive function and more comorbidities negatively affected one’s quality of life. Living in a smaller long term care home and also long term care homes with more leisure activities positively affected one’s quality of life. Nursing strategies to positively affect quality of life in long term care homes included education of staff in palliative care by a palliative care consult team, and assessment and treatment of older persons’ pain.

In conclusion, QoL must be emphasized in LTC homes since the world’s population is aging and more complex symptoms within an increase in co-morbidities require expert nursing. QoL is affected by social factors such as visits from family and friends. It is affected by nurses’ attention to pain management and their caring nature in supporting residents’ dignity. QoL is also affected by demographic characteristics which staff and managers must be aware of in order to support the resident in optimizing QoL in a LTC home. Nurses, nurse specialists and managers at LTC homes need to prioritize their work in order to positively affect QoL for older persons with life limiting illness.

Key Words: Quality of life, Palliative care, Long term care homes, Nursing
# TABLE OF CONTENTS

INTRODUCTION .................................................................................. 1
BACKGROUND .................................................................................. 1
Palliative care ................................................................................. 1
Nursing......................................................................................... 2
Older persons ................................................................................. 4
Long term care homes ................................................................. 5
Quality of life ............................................................................... 6
Problem statement ....................................................................... 7
AIM ................................................................................................. 7
Research questions ...................................................................... 7
METHOD .......................................................................................... 7
Design .......................................................................................... 7
Inclusion and exclusion criteria .................................................. 8
Data collection .............................................................................. 8
Data analysis ................................................................................ 10
Ethical considerations .................................................................. 11
RESULTS .......................................................................................... 11
Sociodemographic characteristics ............................................. 11
Psychological/ spiritual ................................................................. 12
Physical health/ independence ..................................................... 13
Environment ............................................................................... 14
Nursing strategies ........................................................................ 14
DISCUSSION .................................................................................... 15
Method discussion ....................................................................... 15
Results discussion ....................................................................... 19
Conclusion ................................................................................... 23
Clinical Implications .................................................................... 23
REFERENCE LIST ........................................................................... 24

Appendix 1 - Method matrix
Appendix 2 - Sophiahemmet University classification of academic articles
Appendix 3 - Results matrix
Appendix 4 - WHOQOL domains
INTRODUCTION

Dying is a normal life process. Palliative care is the means in which health care professionals care for individuals at or near the end of life, with terminal or life limiting illness. It is important to deliver palliative care across all health care contexts - from acute care to residential care. Health care professionals within palliative care, in particular nurses, consider all aspects of caring for individuals - physical, psychological, social, and spiritual.

Quality of life (QoL) is important at all stages of life. Older persons with life limiting illness residing in long term care homes may have different factors that influence their QoL than younger persons in good health. Information about factors that may affect QoL can possibly benefit nursing staff in long term care homes or nursing leaders in similar settings by helping to establish policies, procedures or choosing how to conduct nursing care.

BACKGROUND

Palliative care encompasses caring for persons with life limiting illness with a mandate to optimize the quality of life of those individuals and their families (Ahmedzai et al, 2004). It is an approach used when health care professionals strive to improve symptoms, maintain dignity and attend to quality of life for persons nearing the end of life and providing support to their families (Hall, Kolliakou, Petkova, Froggatt, & Higginson, 2014). Palliative care regards dying as a normal life process (Hall et al., 2014; Hall, Petkova, Tsouros, Costantini & Higginson, 2011b). Palliative care regards dying as a normal life process (Hall et al., 2014; Hall, Petkova, Tsouros, Costantini & Higginson, 2011b). Caring for persons with a life limiting diagnosis includes providing palliative care for them. As per the World Health Organization (WHO):

Palliative care is an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness through the prevention and relief of suffering by means of early identification and impeccable assessment of pain and other problems, physical, psychosocial and spiritual (Sepúlveda, Marlin, Yoshida & Ullrich, 2002, p. 94).

Life limiting illness is a term used by the WHO in the definition of palliative care. Traditionally, palliative care has been provided to persons with terminal diagnoses, such as cancer, amyotrophic lateral sclerosis (ALS), and acquired immune deficiency syndrome (AIDS). The WHO describes life limiting illnesses to include cardiovascular disease, stroke, dementia, chronic obstructive pulmonary disease, and even frailty in older persons with multiple comorbidities (Hall et al., 2011b). The term life limiting illness can also be used interchangeably with the terms life threatening illness, life limiting disease and limited prognosis (Ahmedzai et al., 2004; Gamondi, Larkin & Payne, 2013a).

The concept of palliative care focusing on pain and symptom management in the final few weeks of life is outdated (Hall et al., 2011b). Palliative care can be provided in many ways across the healthcare system. There can be a palliative approach to integrate palliative care methods in general health care settings. General or basic palliative care is
intended for persons with life limiting illness in many settings, where the primary focus of care is usually not palliative care but palliative care may be seen as possibly providing some benefit. Specialist palliative care is offered by expert palliative care health care professionals to manage complex problems or symptoms associated with life limiting illness. Specialized palliative health care professionals usually work solely in the field of palliative care (Ahmedzai et al., 2004; Gamondi et al., 2013a).

The term palliative care is sometimes used interchangeably with the terms end of life care, terminal care and comfort care. But the terms terminal care and end of life care imply that death is imminent. The term comfort care can suggest that the main focus is physical symptom management. To use end of life care, terminal care or comfort care as general terms to describe palliative care is inappropriate since the definition of palliative care encompasses so much more. End-of-life and comfort care are types of care along the continuum of palliative care (Albers et al., 2015). For the purpose of this literature review, palliative care will be the chosen term.

The European Association for Palliative Care (EAPC) has presented ten core competencies in palliative care (Gamondi et al., 2013a).

1. Apply the core constituents of palliative care in the setting where patients and families are based
2. Enhance physical comfort throughout patients’ disease trajectories
3. Meet patients’ psychological needs
4. Meet patients’ social needs
5. Meet patients’ spiritual needs
6. Respond to the needs of family carers in relation to short-, medium- and long-term patient care goals
7. Respond to the challenges of clinical and ethical decision-making in palliative care
8. Practise comprehensive care co-ordination and interdisciplinary teamwork across all settings where palliative care is offered
9. Develop interpersonal and communication skills appropriate to palliative care
10. Practise self-awareness and undergo continuing professional development

Palliative care helps people to live as actively as possible until death and to help their families cope with bereavement and illness (Hall et al, 2014). It is the goal for palliative care to be incorporated into all levels of existing health systems (Hall et al., 2011b). As nurses are an integral part of any health care team, palliative care is an important aspect of the nursing profession.

Nursing

According to Meleis (2012), nursing is a discipline which has both perspective and domain. Perspective is how we see and interpret the world. Nursing perspective has four aspects. Nursing is a human science focusing on humans as whole beings. Nursing is practice oriented where nurses provide care for persons with illness or who have the potential to become ill. Nurses as professionals provide this care by seeking knowledge in relation to what they do, why they chose a certain method or procedure and when to deliver care. Nursing is a caring discipline which is also related to the art of nursing. It can be defined as connecting with persons, grasping meaning of encounters with persons and conducting oneself morally. Finally, nursing is a health oriented discipline,
indicating that nurses focus on health, sickness, illness, and planning interventions. Across the spectrum of the nursing discipline, nurses assess their clients as per their perception of their own individual well-being and plan interventions accordingly. Nurses promote their clients to maintain healthy habits and maintain as much normality in life as possible. “These activities and goals reflect a health perspective” (Meleis, 2012, p. 94).

The domain of nursing has seven central concepts. Domains have broad concepts which contain major problem areas of a field (Meleis, 2012). The concepts central to nursing are: nursing client, transitions, interaction, nursing process, environment, nursing therapeutics and health (Meleis, 2012). Description of the central concepts of the nursing domain are as follows:

- The nursing client is a person who is receiving care from a nurse and either has or has potential to develop a health care need.
- The nurse may help the client through a transition in life such as a situational transition, health/illness transition or loss transition.
- Nurses develop a relationship with and interact with their client. Thus, communication is integral.
- The nursing process has been discussed by developing many theories in relation to communication, interaction, and approach to practice.
- The concept of environment reminds the nurse that it is important to optimize the location of care to promote healing and health. Nurses consideration of client settings, family and significant other involvement and other health professional consultation are important in providing care.
- Nursing therapeutics includes all nursing activities that can contribute to caring for nursing clients.
- Health is a central concept among many health professions. It is the absence of disease, adaptation to a new homeostasis, and the ability to perform roles and functions (Meleis, 2012)

The scope of practice is forever changing based on recent research evidence. Therefore, nurses require initial, as well as lifelong training (International Council of Nurses [ICN], 2013). Employers, in addition to nurses themselves, must take responsibility to educate nurses with regards to new skills, knowledge and to improve and maintain competency (ICN, 2013). Basic palliative care is something in which all nurses should be educated (Ahmedzai et al. 2004). Becoming a skilled and competent nurse who values the profession as both an art and science can enable one to also consider the quality of life of their clients.

Nurses are members of the health care team. Nurses take on many responsibilities. These responsibilities and interventions are outlined by the International Council of Nurses (ICN) within their Scope of Nursing Practice Position Statement (2013). Scope of nursing practice is related to tasks and functions, as well as knowledge, judgement, responsibility, professional accountability and skill with regards to interventions used to best care for individuals (ICN, 2013). Nurses must be able to assess, plan, implement and evaluate how to best care for individuals.

**Health promotion**

Nursing involves an individual or team approach to caring for individuals, families, groups or communities. It encompasses health needs whether persons are ill or healthy.
Nursing includes health promotion, illness prevention, as well as care of sick, disabled and dying persons (ICN, 2002). The promotion of health is one of nurses’ four fundamental responsibilities. The others are illness prevention, health restoration and alleviation of suffering (ICN, 2012). Health promotion aims to build public policies that sustain health and have the community work together as a whole to create supportive healthy environments (Hall et al., 2011b). Within palliative care, health is promoted by educating persons about understanding health needs, acceptance of loss and dying and to support persons and societies at the end of life (Hall et al., 2011b).

**Palliative care nursing**

Palliative care nursing is a specialty area of the profession. Expert palliative care nurses have good communication skills, are knowledgeable and experienced, provide comfort by managing symptoms and paying attention to details, and develop rapport with clients and families, providing support as needed. The expert palliative care nurse also has personal characteristics consistent with warmth, compassion, friendliness, and dependability (Johnston, 2002). Palliative care nursing can be different in different healthcare settings. It can take the form of education of staff in a general health care setting such as a long term care home or a general hospital ward. A referral to a specialized palliative care team can be made for individuals in the community or in hospital. Another method of palliative care is provision of care in a specialized palliative care ward. This is usually provided for persons requiring complex symptom management (Hall et al., 2014). One of the populations that palliative care nurses can care for is that of older persons.

**Older persons**

The term older persons is used extensively in research studies and reports. In these written documents, older persons are over the age of 65 years (Albers et al., 2015; Froggatt, 2001; Hall et al., 2011b; Seymour, Kumar, & Froggatt, 2010; Wowchuk, McClement & Bond Jr., 2007). Older persons who reside in long term care homes are often called residents of the homes (Kehyayan, Hirdes, Tyas & Stolec, 2015; Seymour et al., 2010; Street, Love, & Blackford, 2005; Wowchuk et al., 2007). Terminology used for the individuals in this literature review will be older persons and residents.

Ageing is the term often referred to by demographers when the proportion of population in the older ages is increasing (Ortman, Velkoff & Hogan, 2014). According to the European Union Ageing Report (2015) the population of Europe is ageing. That is, the average age is increasing. This could be due to a number of factors including decreased birth rate, decreased deaths by infectious diseases and an improvement in treating chronic and previously terminal illnesses (European Union, 2015; Hall et al., 2011b). By 2060, the European population of people over the age of sixty five will rise to twenty eight percent from eighteen percent in 2013. Of that older population that is over sixty five, forty two percent of them will be over eighty years of age in 2060 compared to just twenty eight percent in 2013 (European Union, 2015).

Other populations in the world are ageing as well. The population in the United States of America (USA) will increase by 27 percent by 2050 but the portion of that population that will be over 65 years of age will increase by nearly fifty percent (Ortman et al., 2014). By 2026, twenty percent of Canadians will be age 65 or older (Carstairs, 2005). Seventy five percent of all deaths in Canada occur in persons over age 65 (Carstairs, 2005).
An older population may bring about an increase in life limiting illness (Ökem, 2015). Older people are more commonly affected by multiple comorbidities such as dementia osteoporosis and arthritis near the end of life (Hall et al., 2011b). Multiple co-
morbidities, which often are chronic illnesses may be combined with medication side
effects, acute illness, and decreased physical function (Ökem, 2015). This can lead to
decreased independence related to activities of daily living. One of the settings where
older persons may reside and receive care is a long term care (LTC) home. It is
important that there is access to high quality palliative care no matter in which context
one is residing at the end of life (Quality End of Life Care Coalition of Canada, 2010).

Long term care homes

Long term care homes can provide twenty four hour professional nursing care, or provide
professional nursing care only part of the day, with twenty four hour care provided by
non-professional staff. The care provided in these facilities is for those who no longer
can manage independently in their own home due to frailty, advanced age or illness
(Ökem, 2015; Kaasalainen et al., 2010). The term long term care home has been
documented as a synonym for assisted living facility, nursing home, residential home,
skilled nursing facility and home for the aged (Hall et al. 2011b; Kehyayan et al. 2015;
Ökem, 2015). Long term care (LTC) home will be the term used to include each of the
above terms in this study.

Older persons reside in LTC homes. As reported in two studies, the mean age of LTC
home residents were 80 and 85 respectively (Kehyayan et al., 2015; van Soest-
Poortvliet et al., 2015). As a result of ageing and increased need for assistance with care needs in
later life, a move to LTC homes could become more predominant in the future. It is in
these places where palliative care is needed (Hall et al., 2011b). One of the ten core
competencies of palliative care states that it is important to deliver palliative care in the
setting where persons reside (Gamondi, Larkin & Payne, 2013b). LTC homes may need
to have their environment or staffing adapted in order to deliver high quality palliative
care.

These facilities are home to many, with a variety of care needs. They are committed to
healthy ageing and strive to provide a home-like atmosphere for the frail elderly while
promoting quality of life (Street et al. 2005). Palliative care is important to these
facilities as they are where older persons reside when they are in declining health
(Wowchuk et al., 2007). The residents care needs in LTC homes have become
increasingly more complex and there also can be high turnover of staff and staff
shortages (European Union, 2015; Hall et al., 2011b).

Care is often provided in LTC homes usually until a resident dies (Froggatt, 2001). In
2010, Seymour et al. showed that seventy six percent of deaths among nursing home
residents occurred in their home, the LTC facility. In one study done in the Netherlands,
one third of LTC home residents died within six months after admission and their mean
length of stay was one year (van Soest-Poortvliet et al., 2015). A U.K. study reported a
death rate of one quarter of care home residents dying over one year (Shah, Carey, Harris,
DeWilde, & Cook 2013). As we move into the future, there will be approximately four
million more people in the European Union in 2060 who will require the needs provided
in a long term care home when compared with 2013 (European Union, 2015).
Nursing in long term care homes

Long term care homes have a variety of health care professional and non-professional staff. Interdisciplinary healthcare teams can include: nurse, social worker, psychologist, physiotherapist, physician, occupational therapist, assistant, secretary and others (Thylefors, Persson, & Hellström, 2005). An interdisciplinary palliative care team at a LTC home can include managers, both professional and non-professional nursing staff, specialist care practitioners and physicians (Froggatt 2001).

Professional nurses are university or college educated and can be expert nurses in their field (ICN, 2013). They have professional responsibilities to people, their profession, co-workers and their practice (ICN, 2012). They are often governed by a local association and called registered nurses (RNs). Non-professional nursing staff do not have the same level of education or responsibility as RNs. They can work independently to assist professional nurses and are not obligated to follow the ICN code of ethics (2012) or scope of nursing practice (2013). They can be called licensed practical nurses (LPNs) or certified nursing assistants (CNAs). The focus of this study will be on LTC residents and both professional and non-professional nursing staff.

Nursing in long term care homes can have a palliative care focus. One of the main foci of palliative care is improving individuals’ quality of life (QoL) (Sepúlveda et al., 2002).

Quality of life

“WHO defines Quality of Life as individuals’ perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns” (WHO, 1997). QoL is a subjective term. It is used often in health care and different aspects of it are valued differently by different people. Quality of life is a multidimensional concept encompassing the status of one’s physical health, emotional well being, social relationships and surrounding environment (Gobbens, Luijkx, & van Assen, 2013).

The assessment of quality of life focuses on four domains: physical health, psychological health, social relations and environment. (Skevington et al., 2004). These four domains were derived by the WHO in 1997. There were initially six domains but it was decided by the WHO (1997) to merge physical health with independence and psychological health with spirituality in their abbreviated QoL assessment tool, the WHOQOL-BREF (WHO, 1997). See appendix 4 for detailed description of the domains.

Providing good nursing care to persons includes maintaining or improving their QoL (Gobbens et al., 2013; Low & Molzahn, 2007). Different stages of life value different domains with regards to quality of life (Hall et al., 2011b; Low & Molzahn, 2007). Within the WHO, further research has stated that QoL domains may have contrasting values for persons of different ages, health status and cultures (Power, Quinn, Schmidt & the WHOQOL-OLD Group, 2005; WHO, 1997). Power et al. (2005) have suggested the domains of sensory abilities, autonomy, past, present and future activities, intimacy, social participation, and death and dying may be most relevant to older persons. Within the social domain, QoL can also be linked to meaning and purpose in life (Low & Molzahn, 2007; Power et al., 2005). The population to be considered in this literature review is that of older persons.
Problem statement

Within palliative care, dying is regarded as a normal life process. By providing good quality palliative care, nurses will neither hasten nor prolong life. Nurses could influence the quality of life, possibly positively influencing the illness trajectory. Quality of life is an individualistic term. It can mean the general overall well-being of a person which can mean different things to different people at different stages of their lives.

People are living longer. As people age, they can experience more health problems resulting in a need for assistance with self care. Thus, much of the older population over sixty five will spend some time in a long term care home. This time is often in the few years prior to death and LTC homes are often the places where people die. Professional organizations such as the ICN and WHO encourage healthcare providers and professionals to focus on quality palliative care delivery in order to provide a standard of care each person needs at the end of life.

AIM

To describe factors affecting quality of life for older persons with life limiting illness who reside in long term care homes.

Research questions

1. What affects quality of life for older persons with life limiting illness residing in long term care homes?
2. What are nursing strategies to promote quality of life for older persons with life limiting illness residing in long term care homes?

METHOD

The method chosen for this project was a literature review. A literature review is the analysis of primary source research studies about a chosen aim (Polit & Beck, 2012). It requires the reviewer to read and re-read studies to evaluate all aspects of the studies from the method to the results and relevance to the aim of that study. The author objectively presents all findings as an answer to the literature review’s aim (Garrard, 2011). A literature review must be systematic. It requires being flexible, creative, and having an absence of bias (Polit & Beck, 2012). A method matrix summarizing all articles used in the literature review was organized and displayed in appendix 1.

Design

Literature reviews are important in the field of research to explore what research has been done on a topic and also to justify suggestion for further research studies. They can answer a question or represent a position questioned in the aim. They gather the most current evidence available on the topic of question (Garrard, 2011).

The author chose to perform a literature review to answer the aim. This was the chosen method as much research has been done in this field recently. Relevant articles to the aim had been published within the past six years. By reviewing the articles, research relevant to the aim was explored in detail and presented it in a concise manner.
The design of this literature review is the process in which the review was constructed. An orderly system of organizing articles was created. Articles were sorted, and selected based on their relation to the study's aim. Consideration was given to both qualitative and quantitative studies, with both a large and small number of participants to give the review a balanced outlook on the aim (Garrard, 2011; Polit & Beck, 2012).

**Inclusion and exclusion criteria**

**Inclusion criteria**

Articles published between 2010-2016 - within the past six years were considered. Articles published in the English language, peer reviewed articles, and those written about humans over age 65 were also considered.

When choosing articles, consideration was given to those of quality grade I (high quality), and grade II (moderate quality) if relevant to the aim as per the Classification guide of Academic Articles used by Sophiahemmet University (Appendix 2).

Search words included nursing homes, palliative care and quality of life. Other search terms were: assisted living facility, residential facilities, aged care facilities, long term care, end of life, death, dying and terminal care.

**Exclusion criteria**

Articles written about children and adults under age 65 were excluded. Secondary source documents such as literature reviews were also excluded. Grey literature which are unpublished papers or research reports (Polit & Beck, 2012) were also excluded.

**Data collection**

The databases of CINAHL, Medline, and PubMed were used to search for at least fifteen articles relevant to the aim. CINAHL stands for Cumulative Index to Nursing and Allied Health Literature (Polit & Beck, 2012). The version of CINAHL complete was used in this search. Medline was accessed using the PubMed database to search for relevant medical subject headings or MeSH terms. MeSH terms are used to index articles in the PubMed database. The PubMed database is more focused on medical publications than CINAHL, which is focused on nursing and allied health journals (Polit & Beck, 2012). Medline was used to identify relevant MeSH terms. PubMed and CINAHL were used to search for articles to use in the literature review.

Search terms included palliative care, end of life, terminal care, death, dying, long term care, nursing homes, assisted living facilities, homes for the aged, and quality of life. All titles of every hit displayed were reviewed and titles that had any potential to be relevant to the aim were further explored by reading the abstract. If the abstract was not related to the aim, there was no further reading of the article. If the abstract’s aim, purpose, and results seemed to be relevant, then the entire article was read in consideration for the literature review. If articles were unavailable in free text, they were obtained from Sophiahemmet University Library or Karolinska Institutet Library. Chosen articles were required to be primary source research reports. These reports are “descriptions of studies written by the researchers who conducted them” (Polit & Beck, 2012, p. 95).
The method of data collection is displayed in a database search table showing the date of database searches, database searched, number of articles found, number considered and number selected (Table 1). Both MeSH terms and free text were used as search terms in PubMed. Free text was used in CINAHL. Boolean terms were used in both databases. Boolean terms are used to connect words or phrases (Polit & Beck, 2012). Boolean terms of AND, OR and NOT were used (see Table 1). Duplicates of articles were found in both CINAHL and PubMed. A manual search was also done and four articles were selected to be used in the review. Twelve relevant articles were found in databases. A total of sixteen articles were used in the review. (See appendix 1 for Method Matrix.) It was decided to conclude the search for articles once saturation was achieved. That is, the search strategies were not obtaining any new information about studies to include (Polit & Beck, 2012).

A process of reading each article, highlighting aim and results, and categorizing them according to relevance to the study’s aim was undertaken. Printed articles, which included “articles examined” in the below table, were sorted into three piles - yes, maybe and no. Once nineteen articles were found that were relevant to the study’s aim, database searching and manual searching was discontinued. It was then, that each article was read again and a few more articles were eliminated as they were found to be not as relevant to the aim as others. It was decided to commence the analysis with sixteen articles.

Table 1: Database Searches

<table>
<thead>
<tr>
<th>Database: Date of Search</th>
<th>Search Terms</th>
<th>Identified Articles (hits)</th>
<th>Abstracts Reviewed</th>
<th>Articles Examined</th>
<th>Articles Included</th>
</tr>
</thead>
<tbody>
<tr>
<td>PubMed: 16-03-03</td>
<td>Palliative care OR Terminal care OR &quot;end of life&quot; AND Nursing homes OR assisted living facilities AND Quality of life</td>
<td>45</td>
<td>15</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>PubMed: 16-03-14</td>
<td>Palliative care OR end of life OR dying OR death AND Quality of life AND residential facilities OR nursing homes OR long term care</td>
<td>117</td>
<td>10</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>CINAHL: 16-03-03</td>
<td>Palliative care OR End of life OR Terminal care AND Nursing homes OR homes for the aged OR Assisted living facilities AND Quality of life</td>
<td>48</td>
<td>12</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>CINAHL: 16-03-14</td>
<td>Palliative care AND Nursing homes AND Quality of life&quot; (Major words in subject)</td>
<td>44</td>
<td>6</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Data analysis

“The purpose of data analysis is to organize, provide structure to, and elicit meaning from data” (Polit & Beck, 2012, p. 556). An analysis of the descriptive statistical tests that have been carried out in the included studies was undertaken as well as their relevance in answering the research question. Articles were read and re-read several times (Garrard, 2011). Each article has been analyzed for categories and subcategories, similarities and differences (Polit & Beck, 2012). The chosen articles which support similar findings were placed within the same categories. Some articles had numerous results and were therefore placed within several categories.

The WHO has developed a tool to measure QoL. Their tool has been adapted into an abbreviated form (WHOQOL-BREF). Within the WHOQOL-BREF tool, domains are presented as well as descriptions of these domains (Appendix 4). Inspiration was found within this written report (WHO, 1997) to develop categories and subcategories for this literature review. As per recommendation by the WHO (1997) the six domains were condensed into four. Demographics was added as part of the social category as many results had demographic factors.

Deductive reasoning (Polit & Beck, 2012) was used to categorize factors that answer research question one. A deductive method was chosen as it could provide clarity and focus to the many results. Some of the larger studies in the review presented their results as two or more similarly described categories, thus, it seemed logical that the review be structured in that manner as well. The following categories were used to answer the question, what affects quality of life for older persons with life limiting illness residing in long term care homes? They are: sociodemographic characteristics, psychological/spiritual, physical health/independence, and environment.

Different colours of highlighters, pens and post-it notes were used to categorize results from the sixteen included studies. Each result was written on corresponding coloured paper: blue for sociodemographic factors, white for psychological/spiritual, yellow for physical health/independence, green for environment, and pink for nursing strategies, which is research question two. Furthermore, once the post-it notes were grouped together, similar results were circled in similar coloured pens. The corresponding coloured highlighter marker was then used on the study to highlight the different results.

A results matrix (Appendix 3) was created including authors, results, and results divided into categories. The results matrix was created independently in order to organize results in a clear and concise manner. Each result was written in a corresponding themed column and the columns were then shaded as per the color of the highlighters used on paper.
It was not appropriate to include all results of every article. The study methods and results which are relevant to the literature review’s aim were reported (Polit & Beck, 2012). Once categories were chosen as answers to the aim, a decision was made about which results to pursue, and how to categorize the results.

**Ethical considerations**

When undertaking a literature review, there are ethical principles to consider. One must do their best to be comprehensive to include all good quality articles relevant to the aim and not exclude one because the result may be unfavourable. By this, bias is avoided to the best of the reviewer’s capability. All findings of included articles which are relevant to the study’s aim must be reported, even if contradictory to the aim (Polit & Beck, 2012).

In this literature review, the author will ethically conduct and present the research without research misconduct. Ideas will not be fabricated, data will not be falsified and no ideas or results will be plagiarised (Polit & Beck, 2012).

Articles selected for the review must take into consideration ethical principles in accordance with the Helsinki Declaration Ethical Principles for Medical Research (World Medical Association, 2013). Risks, burdens and benefits must have been described to research participants. Privacy, confidentiality and informed consent must have been adopted by each study. Research protocols including receiving approval from an ethical review board must have been followed. Thus, the ethical considerations were evaluated for each article considered for literature review.

Nurses must reflect on their professional code of ethics when undertaking a literature review. As per the International Council of Nurses, nurses must always consider their primary responsibility is to care for people requiring nursing care. So, within the research context, nurses must examine how the research can be used to advance nursing practice (ICN, 2012).

**RESULTS**

**Sociodemographic characteristics**

Within the category of sociodemographic characteristics, two subcategories were created. They are demographics and social relationships.

**Demographics**

The demographics found to affect QoL in this study were age, gender, marital status and education level. Female persons in nursing homes reported a higher QoL than males (Cordner, Blass, Rabins & Black, 2010). Therefore, being female positively affected QoL. Khader (2011), however, found a different result. It was found there to be no significant relationship between gender and QoL in LTC homes in Jordan. One study in this review found that being female positively affected QoL and one found there to be no relationship regarding the gender demographic.
Similarities and differences were found among three studies with regards to age of residents in LTC homes. In two studies, the older residents in the LTC homes reported lower QoL than younger residents (Khader, 2011; Shippee, Henning-Smith, Kane & Lewis, 2015). Thus, QoL was negatively affected by old age. Conversely, in another study, older age in the LTC setting had positive effect on QoL (Cordner et al., 2010).

Being married positively affected one’s QoL in LTC homes (Shippee et al., 2015). Khader (2011) also investigated the marital status demographic in LTC homes and found that single and married persons had a higher QoL than persons who were divorced, separated or widowed. In both of these studies, the percentage of married individuals in LTC homes was significantly less than individuals who were widowed, divorced or separated.

Two studies found the level of a person’s education affected their quality of life in LTC settings inversely. That is, if a person had a higher level of education, they had a lower QoL in LTC homes (Cordner et al., 2010; Kehyayan, Hirdes, Tyas, & Stolee, 2016). Higher level of education was described as equivalent to or higher than high school diploma. Khader (2011) found that education level had no influence on QoL.

Social relationships

Visits from family and loved ones has been presented as one of the most frequently reported factors that positively affect QoL (Dwyer, Hansebo, Andershed, & Ternestedt, 2010; Hall, Opio, Dodd, & Higginson, 2011; Strohbuecker, Eisenmann, Galushko, Montag & Voltz, 2011). One qualitative study reported visits from family and friends “were described as bringing light and happiness into the older person’s life” (Dwyer et al., 2010, p. 255). Another study’s results showed family, relationships, and social life as three of the top five nominated cues that positively affected their QoL in their care home (Hall et al., 2011). Strohbuecker et al. (2011) found that “family was reported as a source of strength, security and a reason to live” (p. 30). It is evident by the results found in numerous studies in this review that social relationships are one of the most common factors that positively affect QoL.

Psychological/spiritual

Three subcategories were chosen within the theme of psychological/spiritual. They are psychological, spiritual and cognition.

Psychological

According to Burack et al. (2012) having dignity was positively associated with QoL in LTC homes. Being recognized as a person positively affected one’s QoL as per Strohbuecker et al. (2011). The diagnosis of depression negatively affected QoL for older persons in the study by Kehyayan et al. (2016). Cordner et al. (2010) found that behaviour problems had a negative effect on QoL. Peace and contentment (Hall et al. 2011a) also positively affected QoL. Peace and contentment was related within the psychological sub-theme as it was described by Hall et al. (2011a) as “peace of mind, inner peace/meditation and reflection, no worries, being happy, and peace in the world” (p. 510).
Spiritual

Spirituality, with or without practicing organized religion has been found as a determining factor in a good QoL (Burack, Weiner, Reinhardt, & Annunziato, 2012; Kehyayan et al., 2016; Strohbuecker et al., 2011). In one of the studies Kehyayan et al. (2016) used the chosen word religion, and religiosity, while in two of the studies, the terms spiritual well-being and being spiritually connected were used respectively (Burack et al., 2012; Strohbuecker et al., 2011).

Cognition

In three studies, cognitive impairment negatively affected QoL (Cordner et al., 2010; Kehyayan et al., 2016; Shippee et al., 2015). That is, persons with decreased cognitive ability reported having a decreased QoL. One of the studies (Cordner et al., 2010) focused solely on persons with advanced dementia where the more advanced the dementia, the worse the QoL. In this study, QoL was evaluated by proxy - nursing staff or family. Two of the studies had participants who were cognitively intact, to moderately cognitively impaired (Kehyayan et al., 2016; Shippee et al., 2015). In these studies, QoL was evaluated by the participants themselves.

Physical health/ independence

There were three main subcategories within the chosen theme of physical health/independence. They are clinical characteristics, independence, and pain.

Clinical characteristics

Chronic medical conditions affected older persons’ QoL in LTC homes. Similarities were found in four studies. Castro-Monteiro et al. (2014) found that a higher number of chronic medical conditions negatively affected QoL. This was found by comparing retrospective data about older persons’ number of diagnoses with their QoL scores. It was also found that a diagnosis of cancer negatively affected QoL (Drageset, Eide, & Ranhoff, 2012). Frailty also had a negative effect on QoL (Kanwar et al., 2013), as did incontinence and hearing impairment (Kehyayan et al., 2016).

Independence

Similar results showing increased independence positively affecting QoL were found in four studies (Hall et al., 2011; Kehyayan et al., 2016; Shippee et al., 2015; Strohbuecker et al., 2011). Two studies reported that requiring extensive assistance with activities of daily living (ADL) negatively affected QoL (Kehyayan et al., 2016; Shippee et al., 2015). One study reported that having control of their personal hygiene positively affected QoL (Strohbuecker et al., 2011). In the reviewed studies, independence with regards to ADLs and hygiene was a frequent result in positively affecting a person’s QoL in a LTC home.

Pain

The study by Drageset et al. (2012) showed that older persons with cancer in LTC facilities reported increased pain and lower QoL. Thus, pain negatively affected QoL. A similar result was found by Strohbuecker et al. (2011), who reported that being physically
comfortable and free of pain positively affected QoL. Pain was the only physical symptom reported in the studies reviewed to negatively affect QoL.

Environment

Within the theme of environment, subcategories include social environment, physical environment and having a choice.

Social environment

Leisure activities organized within the LTC facility was the top nominated cue as positively affecting QoL in LTC homes (Hall et al., 2011a). Leisure activities were described as “going to the pub, TV, DVDs, entertainment, travelling, making models, reading and listening to music” (Hall et al., 2011a, p. 510). Enjoyment of food also positively affected QoL (Burack et al., 2012).

Physical environment

Several physical factors affected QoL for older people with life limiting illness in LTC homes. Size of the LTC home affected QoL in two studies. Small scale LTC homes of six to fifteen residents positively affected the social domain of QoL when compared with traditional settings (de Rooij et al., 2012). Residents in smaller sized homes reported a higher score on “having something to do” (p. 936) and also reported having better social relationships. Shippee et al. (2015) found similar results in that older persons in larger facilities reported lower QoL than persons in smaller facilities. In addition to physical size of the facility, location of the facility was also found to affect QoL. Kehyayan et al. (2016) showed that living in a rural LTC home positively affected QoL.

Freedom of choice

Freedom of the ability to have your own choice regarding your own life decisions falls under the theme of environment. Having a choice of food was a factor that positively affected QoL according to Strohbuecker et al. (2011). Having a choice of when and how personal hygiene assistance is conducted positively affects QoL (Hall et al., 2011a; Strohbuecker et al., 2011). Choice has been found to negatively be associated with QoL as well. Cordeiro, Paulino, Bessa, Borges & Leite (2015) found that persons who chose to reside in LTC settings on their own initiative had a lower QoL than those who moved into LTC settings due to medical or functional needs assistance, relatives insistence or abandonment. Thus, motive for moving into a LTC home can affect QoL for persons in the care home.

Nursing strategies

Assessment

Impeccable pain assessment and administration of pain medication positively affected QoL in three studies (Cordner et al., 2010; Drageset et al., 2012; Shin, 2013). One study found that use of pain medication positively affected QoL (Cordner et al., 2010). Drageset et al. (2012) found that reduction of cancer pain positively affected QoL. Shin (2013) found that RNs positively affect comfort level and enjoyment in care homes by helping with pain management. If older persons’ pain is well managed by assessment of
pain level and intervention with appropriate medications or other methods, they will have a better QoL in their LTC homes.

**Intervention**

A one-to-one individualized 30 minute interaction per day did not affect QoL for persons with advanced dementia (de Vocht, Hoogeboom, van Niekerk, & den Ouden, 2015). Even though positive behaviours were observed during post-tests compared to pre-tests, no significant differences in the QoL dimensions were revealed.

**Education**

According to Comart et al. (2012), education of nursing staff by a specialized palliative care consult service decreased depression among older persons in long-term care homes. The decrease in depression positively affected QoL.

**Staffing**

Different types of nursing staffing was found to both positively and negatively affect QoL in a study by Shin (2013). More registered nurse (RN) hours per resident day (HPRD) were found to positively affect comfort and enjoyment - physical domain. More licensed practical nurse (LPN) HPRD were found to positively affect dignity, autonomy and spirituality - within the psychological domain. More certified nursing assistant (CNA) hours positively affected functional competence - independence domain. As the HPRD for RNs increased, the scores for meaningful activity and relationship were negatively affected. That is, more RNs caused the social and environmental domains of QoL to decrease.

**DISCUSSION**

**Method discussion**

The method of conducting this literature review is one of its strengths. The author used systematic method (Garrard, 2011) of data collection over the time period of three weeks. The author registered an account in both CINAHL and PubMed which helped by saving searches, abstracts to be reviewed, and articles to be examined. This method was very helpful in keeping organized. This procedure helps to ensure that the literature review is reproducible. Each article was assessed for quality as per the Sophiahemmet University classification guide for academic articles (Appendix 2). This was important to reference when selecting articles in order to not include studies that had limited number of participants for the study type, inadequately described methods, and incomplete results presentation, among other points.

Another strength is that the articles retrieved for the study were all written within the past six years. This short time frame, as opposed to the suggested time frame of articles within the past ten years, indicates that there has been many studies related to the literature review’s aim published recently. A weakness of the literature review is that it is not truly representative of a global perspective with no studies done in Africa or Australia, among other areas of the world. Of interest, articles included were from twelve different countries: seven from Europe, six from North America, one from South America, and two from Asia.
By conducting a retrospective literature review, there is risk that the most recently published material would not be included. Just by chance, the study by Kehyayan et al. (2016) was retrieved by looking at the ‘similar articles’ area of a chosen article within a PubMed search. This article had not yet been categorized by the database into search words so was not showing up on any of the searches. It would have been unfortunate to not have this study included in the review as it had very recent and relevant results. Consideration is given to the possibility of missing other recently published studies as well. This could be a possible weakness of the study.

The method of data analysis is also one of the study’s strengths. In reading and re-reading the studies, results began to present themselves in relation to the WHO QoL domains (1997). They were also closely related to the palliative care core competencies defined in a white paper by the European Association of Palliative care. The associated core competencies include meeting patients’ physical comfort needs, as well as psychological, social and spiritual needs (Gamondi et al., 2013a).

Deductive reasoning (Polit & Beck, 2012) was how the measurement tool for QoL was related to the factors that affect QoL. This deductive method was chosen because as the results were collected, it was becoming evident that they were closely related to the WHO QoL domains (1997). The author altered the domains somewhat to accommodate the reviewed studies results that are related to the aim. These domains, plus the theme of nursing strategies, to answer the second research question, provided clear answers to the aim. It is not surprising that the factors that affect QoL closely mirror the domains, or categories, of QoL.

Creation of the manual division of factors with different coloured post-it notes, and different coloured highlighters worked well in the beginning. It gave the writer a sense of the categories and subcategories. However, it soon became evident that a table created by the writer on the computer would be a clearer method to organize the results. Results could be moved around much easier digitally. Thus, the results matrix was created. The colour coding which closely corresponded to the colours of paper and highlighters was able to closely link the first manual way of analyzing data with the digital method that had improved on its predecessor. A shift in perspective was made in the midst of data analysis in order to best sort the data.

To summarize, to enhance validity in this literature review, a systematic process for data collection and an organized method for data analysis was carried out. These two actions enabled organized structure. They also could lead to this literature review being reproducible.

All studies considered ethical rights of participants. For example, Kehyayan et al. (2016) considered privacy of personal health information by removing all personal identifiers from the data. Burack et al. (2012) and Drageset et al. (2012) obtained informed consent from participants. Shin (2013), and Cordner et al. (2010) obtained approval from ethical review boards prior to initiating their studies. All studies indicated that they obtained informed consent and permission from an ethics committee in their country.

Minimizing risks and maximizing benefits to the study participants is of ethical necessity in a research study according to the Helsinki Declaration of Ethical Principles for Medical Research (World Medical Association, 2013). This principle is evident in the
study by Comart et al. (2012). The researchers used the method of a retrospective study to determine whether a palliative care consult service in a LTC home would benefit residents. It would have been ethically wrong to not provide this intervention to some while offering it to others, thus, data was used from a time prior to the intervention being offered to obtain statistics for a control group.

All of the studies in this review are published primary research studies. Only one study supports a null hypothesis. It is that of de Vocht et al. (2015) who found there to be no relationship between QoL and a thirty minute individualized intervention. All other studies reported some relationship amongst the variables. Two studies reported a partial null hypothesis (Khader et al., 2011; Shippee et al., 2015). In publication of research reports, there can possibly be a bias which is against the null hypothesis. This is in terms of not publishing research unless there are relationships between variables to report. Thus, with regards to this literature review’s aim, it is uncertain if there are any unpublished studies which could have affected the results of this review.

The populations of the studies were residents of LTC homes in certain countries, states, or provinces. The samples taken of the residents were either of convenience (Castro-Monteiro et al., 2014; Comart et al, 2012) or at random (Shippee et al., 2015). A weakness of studies may be that many studies take their sample by convenience. But, this method of sampling may be appropriate when working with a vulnerable population who may be dependent on health care personnel (Polit & Beck, 2012).

The types of studies chosen for this review were varied. There were three qualitative studies, one retrospective study, three clinical control trials, and nine prospective studies. The abundance of prospective studies may be due to the fact that the population is that of older persons. It may not be ethical to have both a control and intervention group with a vulnerable population (Polit & Beck, 2012). Having a variety of study methods in this review is a strength and can contribute to the validity of this literature review.

In comparing and contrasting two different studies chosen for the literature review, the quantitative prospective study by Kehyayan et al. (2016) aimed to identify predictors of LTC home residents’ self reported QoL. The aim was achieved by having trained research assistants conduct interviews of residents to complete a QoL survey. Alternatively, the aim of Dwyer et al., (2010) took a qualitative approach to answer the aim of nursing home employees’ views on dying and death among older people they cared for. This aim was answered by interviewing twenty LTC home employees. Different types of study methods can conclude with similar results. They also often warrant different number of participants.

There was a significant difference in participant sizes of the studies included in the review. Study size ranged from nine for one qualitative study (Strohbuecker et al., 2012) to over ten thousand for a prospective study by Shippee et al., (2015). Having studies of different sizes shows the diversity of how the study’s aim can be answered in different ways. Both of these sample sizes work in their perspective studies.

Strohbuecker et al. (2012) interviewed nine residents. The small sample size was due to residents’ impaired ability to communicate or residents being too physically ill to participate in the study. This was acknowledged by the researchers in the written article. Results were presented using inductive reasoning. Inductive reasoning is, “The process of reasoning from specific observations to more general rules” (Polit & Beck, 2012. p.
It is used to identify categories to answer their aim. Six themes of resident needs were identified and presented in terms of quotations from resident interviews. Even though the sample size was quite small, the themes, or categories that were inducted from the interviews were clearly presented and each contained a sample from more than one participant. However, it was not specified that saturation was achieved with the small sample size.

Shippe et al. (2015) had a very large sample size of n=13,433. Interviews to administer a 52 question questionnaire were administered by the team of researchers. The qualitative data from the interviews were compared with historical clinical data on the residents’ minimum data set (MDS), which includes data on physical health, functional status, demographics, and other (Shippee et al., 2015). This study method was effective as it was a random sample and had many participants. A large amount of quantitative data was obtained in answer to the aim.

A concern in the study by Castro-Monteiro et al. (2014) is the attrition rate. The study started with a size of n=525 but a total of 251 dropped out over the course of the study. Twenty six percent of persons died during this longitudinal study, which is similar to that experienced in other studies, according to Castro-Monteiro et al. (2014). Twenty six percent amounted to 138 persons. Unfortunately, three of the participating LTC homes, decided not to continue with the study for the follow up portion which amounted to 90 persons. Twenty three persons who participated in the initial phase of the study changed care facilities as well. Both of these above reasons present a risk for weakness of longitudinal studies, which gather data collected at more than one point in time (Polit & Beck, 2012).

There are many instruments used to quantitatively evaluate QoL. Corderio et al (2015) used the WHOQOL-OLD tool. Both de Rooij et al. (2012) and de Vocht et al. (2015) use the QUALIDEM tool. This could be due to the studies both being conducted in The Netherlands and the QUALIDEM tool was available in the Dutch language which could be a strength of the study. The SF-36 tool was used by Kanwar et al. (2013) and Drageset et al. (2012). The variety of the instruments used could lead to unreliability of the consistency of data collected, which could be a weakness of this literature review. Although, all studies results are related to the categories deducted as described in the data analysis section.

Only two studies used an intervention to answer their aim. The two interventions were the retrospective study by Comart et al. (2010) and the thirty minute individualized interaction by de Vocht et al. (2015). Both of these studies described their intervention in detail.

The study by de Vocht et al (2015) provided individualized interventions based on a list of activities that had been proven to have a positive effect for persons with dementia. Family were then interviewed to help select the activities they think would best benefit their relative. Although this intervention was well described, it may be a weakness of the study as it is not the same, nor can it be, for each individual. The retrospective study by Comart et al. (2012) is the only other intervention in the literature review. This intervention is allocated equally among the population and all participants received it.

The procedure for data collection was also of consideration. It was beneficial if staff who collected the data were trained in administering the tools to evaluate QoL. This could be
a strength of a study. A research assistant often collected data (Burack et al., 2012). In another larger study (Kehyayan et al., 2016), data collectors had to complete webinar training in conducting interviews with residents about their QoL. The largest study in the reviewed articles (Shippee et al., 2015) did not describe who conducted the qualitative interviews, although an option to read more about survey methods is indicated by referring the reader to another report. This could be a weakness of the study.

Hall et al. (2011a) enhanced the trustworthiness of their qualitative data by having interviewers complete an interview record form as described in their study. Strohbuecker et al. (2012) have transcripts of interviews available upon request. Also, a detailed description of how the researchers used inductive reasoning to come up with six categories of residents’ needs is available in a supplementary document.

Although a literature review was the chosen method, other methods could have been used to answer the aim. A qualitative study of interviewing older persons residing in LTC homes about what factors affect their QoL could answer the aim. A semi-structured interview guide could have been constructed. Also, a quantitative study could also have been done to answer the aim. A developed assessment tool to evaluate QoL could have been chosen and administered to older persons in LTC homes. The answers of the older persons, which is the dependent variable could be compared to their demographic characteristics and clinical characteristics - the independent variables. However, it would most likely have been difficult to have the variety of results found in a literature review obtained in one quantitative or one qualitative study.

**Results discussion**

All of the results found in the studies of this literature review are relevant and of consideration for individuals, health care professionals, and healthcare providers. However, of particular interest, some results were either more prevalent or even unexpected. There are other results which are not surprising but their importance to older persons’ QoL suggests they should be of particular mention.

Older persons described dignity as being a key factor in affecting their QoL in nursing homes (Burack et al., 2012). LPNs have been found to positively affect dignity by providing care to residents using good manners of respect, modesty, listening, and being polite (Shin, 2013). It seems like common sense to treat one another in such a manner, but it is not always the case. In the author’s experience as a granddaughter of a resident of a LTC home, there were reminders posted in nursing stations around the home reminding staff to display such behaviour. This could be a good method in which to remind staff that the residents should be valued as dignified persons. This opinion is supported in Burack et al.’s (2012) study. “Supporting dignity should be the basis on which to build relationships between staff members and (residents)” (p. 51). Ahmedzai et al. (2004) include optimisation of quality of life and dignity are two of the objectives of palliative care.

In order to optimise quality of life and dignity, nurses need to focus on trying to maintain a level of independence and control symptom distress (Hall, Longhurst, & Higginson, 2009). This statement leads to support of the results of four studies indicating that independence with ADLs positively affects QoL (Hall et al., 2011a; Kehyayan et al., 2016; Shippee et al., 2015; Strohbuecker et al., 2011). Nurses can positively enhance the quality of life of LTC home residents by having ADL assistive equipment available to
residents such as, but not limited to, bath bars, bath seats, raised toilet seats, bed bars, bed alarms and walkers. This equipment is often obtained from consultation to other professional members of the healthcare team such as occupational therapists and physiotherapists. The author has worked extensively in this area, in close consultation with other professional members of the health care team to positively influence older persons’ independence. Not only can this positively affect QoL for older persons, but it can save on nursing care dollars if a resident is more independent. It is a win-win situation.

Three studies showed that by effectively managing pain, QoL will be positively affected (Cordner et al., 2010; Drageset et al., 2012; and Shin, 2013). These results can be related back to Hall et al.’s (2009) findings of dignity being obtained by minimizing or controlling symptom distress. Therefore, QoL, dignity, and symptom distress are closely linked.

By providing effective pain management, nurses can positively affect QoL for LTC home residents. These results can be related to some of the central concepts of nursing (Meleis, 2012). The concept of transitions can be applied as it is nurses’ responsibility to help their clients through the transition of pain management from pain to reduced pain, or perhaps managing the worsening pain until the transition to death. The concept of nursing therapeutics is also relevant when thinking about pain management. Since it is the professional nurse who has most positive effect on older persons’ comfort levels, nurses must develop therapeutic skills such as caring, touch, comfort, and symptom management as a means to deliver exemplary nursing care. Not to be forgotten is the concept of nursing process. The process by which nurses carry out impeccable assessment, implement an intervention, evaluate its effectiveness and plan for further care is a key to managing symptoms effectively.

To further expand upon the central concepts of nursing, environment and health (Meleis, 2012) should be reflected upon. Another result that is of interest is that QoL is negatively affected by a higher number of comorbidities (Castro-Monteiro et al., 2014). This result can also be linked to QoL being negatively affected by frailty (Kanwar et al., 2013). These results related to the above mentioned concepts of environment and health as stated by Castro-Monteiro et al. (2014), “Early promotion of a healthy lifestyle and the introduction of preventative methods could indirectly help maintain or even improve the QoL for older adults” (p. 2600). Thus, by creating an environment which fosters a positive healthy lifestyle, including caring, educated and trained nurses, along with interventions related to disease prevention and health promotion as per the ICN scope of nursing practice (2013), there will be a focus on QoL in LTC homes.

The results of this literature review are closely related to the ten core competencies in palliative care (Gamondi et al., 2013b). QoL is positively affected by nurses addressing pain management (Cordner et al., 2010). This result is related to the core competency number two of enhancing physical comfort throughout patients’ disease trajectories. Studies by Kehyayan et al. (2016), and Burack et al. (2012) both include results indicating spirituality positively affecting QoL. This result is supported by the core competency number five of meeting patients’ spiritual needs. Competency number eight states that interdisciplinary teamwork is needed which can include working together within the facility and also consulting external experts such as palliative care consult
services as needed. Interdisciplinary teamwork in delivering palliative care is also imbedded in the WHO’s definition of palliative care (Sepúlveda et al., 2002).

It has been experienced by the author that a palliative care consult service within an acute care environment can provide education to staff, and assist to manage complex symptoms, including physical, psychological, and concerns of the family. A palliative care consult service has been found to positively affect QoL in LTC homes as well (Comart et al., 2012). The palliative care consult services described in the study reviewed included specialist RNs who provided the education through means of mentoring, identifying areas of care that could benefit from improvement, guidance at the bedside, and formal education. “The goal was to encourage skilled, committed nursing staff to build on their capacity to offer compassionate end-of-life care” (Comart et al., 2012, p. 876).

The scope of nursing practice indicates that nurses themselves, along with their employers, must take steps to ensure continuing education and competence of nurses (ICN, 2013). Since nursing is such a vast domain with many areas of speciality, it would be impossible for a nurse to become very knowledgeable in all areas. This is why the education by a specialized palliative care team is essential in a LTC setting (Hall et al., 2011b). Unfortunately, Seymour et al. (2010) report that palliative care consultant services were infrequently accessed by LTC home staff. Family physicians, social workers, and spiritual support workers were some of the agencies frequently accessed by LTC staff. Palliative care consultants along with reflexologists and acupuncturists were infrequently requested (Seymour et al., 2010). This could have been due to the staff at the LTC homes in the study not having been educated with regards to the benefits and knowledge that palliative care consultants possess. It could also be because there were not many palliative care consult services available. The consult services as identified above were usually based in the community and were not often readily available as indicated in the study by Street et al. (2005). Recommendations from this study included increased availability to consultant services in the community. Due to the age of this study, hopefully some settings have taken up the recommendations identified.

There are many factors that affect QoL which nurses have no influence over, although awareness is essential to identify potential concerns. There are two results which are particularly intriguing. They are: education level and motive for moving into the LTC home.

Higher education levels negatively affected QoL for older persons in LTC homes (Cordner et al., 2010; Kehyayan et al., 2016). This result may have been due to older persons with higher educations not having intellectual stimulation in LTC homes. As per Maslow’s hierarchy of needs, physiological and psychological needs must be met prior to meeting the needs of belonging, esteem and self actualization (Boeree, 2006). Thus, LTC staff must meet the physical and psychological needs of their residents prior to meeting other needs.

Unfortunately, funding of health care systems and staffing levels do not often lead to the ability to provide such comprehensive and individual services. Nursing staff provided in some LTC homes find it challenging to meet the very basic needs, especially at the end of life. Staffing patterns often do not consider the increased care needs of persons near the end of life, thus putting a strain on staff, as well as residents (Wowchuk et al., 2007).
If older persons with higher education such as university or college education report a lower QoL, LTC homes must be presented with this factor and address it as they are able. LTC homes could consider providing more intellectually stimulating activities such as book clubs, guest lectures on academic topics of interest or help to prepare individualized interest interventions in order to promote QoL. Since QoL is valued very individually (WHO, 1997), it is necessary to consider each older person individually within all domains of QoL.

The result of the study by Cordeiro et al. (2015) was also intriguing. It concerned the motive for moving into a LTC home. Persons who move into a LTC home because they are abandoned or have high care needs reported a higher QoL. They may see the move as an improvement on their previous support network as well as they are now receiving the much needed assistance with their physical needs. Persons who move into a LTC home on their own initiative reported a lower QoL. They perhaps consider themselves to be a burden to their family or move into the home because they feel they may need more help in the future (Cordeiro et al., 2015). This can lead to adaptation difficulties and feelings of low QoL if they are observing others who are requiring more care and are they themselves just waiting for it to be their turn to have increased care needs. They may also have had a lower QoL prior to moving into the LTC home and were hopeful that the move would benefit their QoL. Awareness of these two factors can help nurses, families, and even older persons themselves consider interventions to prevent the evaluation of a lower QoL.

One of the most frequent results from this literature review is that visits from family and friends and social engagement positively affected one’s QoL while residing in a LTC home. From Dwyer et al. (2010) and Strohbuecker et al. (2011) who both conducted qualitative studies to the large quantitative study by Kehyayan et al. (2016), there was evidence that social engagement, particularly with family and friends was of utmost importance. This result ties to the definition of palliative care by the European School of Oncology which includes optimizing QoL of persons and their families and friends (Ahmedzai et al., 2004). Families and friends of the older person are an integral factor in optimizing their QoL. As nurses, we can facilitate these visits by providing adequate sized and inviting spaces for families to visit their loved one, organizing and promoting family activities in LTC homes, and even helping and encouraging arrangement of visits as needed. By enabling and promoting such visits, QoL will be enriched for both the older persons and their families.

Motivation to moving into a LTC home, impeccable pain assessment, and being treated with dignity are three of the vastly different factors that can affect QoL for older persons. As nurses, we must be aware of these factors and work within our scope of practice, to the best of our ability, and with consultation to experts to best care for the older persons in our care.

Incidental finding

In one study, an incidental finding was made. With regards to the thirty minute interaction between residents and nurses, even though no effect on QoL was revealed, it was found that nurses had higher job satisfaction during the study. Positive behaviour of the residents was also increased during the time of the study and the positive behaviour transferred to the other residents as well (de Vocht et al., 2015). So, even though QoL
was not qualitatively proven to be affected by this intervention, behaviour of residents was positively affected. The behaviour of both the residents in the study and the other residents was improved. Another benefit was that staff reported greater job satisfaction as a result of positive effect on behaviour.

Conclusion

QoL must be emphasized in LTC homes since the world’s population is aging and more complex symptoms within an increase in co-morbidities require expert nursing. QoL is affected by social factors such as visits from family and friends. It is affected by nurses’ attention to pain assessment and management and their caring nature in supporting residents’ dignity. QoL is also affected by demographic characteristics such as age, gender marital status and education, which staff and managers must be aware of in order to support the resident in optimizing QoL in a LTC home. Nurses, nurse specialists and managers at LTC homes need to prioritize their work in order to positively affect QoL for older persons with life limiting illness.

Clinical Implications

Nurses and nurse leaders who work in LTC homes may benefit from the knowledge gathered in this literature review. The review considers all domains of QoL, and the numerous variety of factors that influence them.

Nursing staff can focus on providing comfort to residents by managing pain and helping to maintain dignity. Nurse specialists can assist LTC staff to develop a palliative care approach on a basic level by educating staff, and at a specialized level by providing consultation to manage complex symptoms. Nursing facility managers can promote as much independence as possible for their residents by having ADL assistance equipment assessed for and available as needed. They need to implement policies to facilitate palliative care education for all nursing staff. They can also create organized leisure activities, some more focused on intellectual stimulation, and ensure there are adequate areas for families and friends to visit with their loved ones. Policy changes by nursing leaders or interventions by long-term care staff would benefit the nursing home residents and their families in receiving care focused on quality of life near the end of a lifespan.
REFERENCE LIST


Carstairs, S. (2005) Still not there: Quality end-of-life care: The right of every Canadian. Ottawa: Sub-committee to update ‘Of Life and Death’) of the Standing Senate Committee on Social Affairs, Science and Technology


## APPENDIX 1: METHOD MATRIX

<table>
<thead>
<tr>
<th>Author(s) (Year), Country</th>
<th>Title</th>
<th>Aim/Objective</th>
<th>Method</th>
<th>Participants (attrition rate)</th>
<th>Results</th>
<th>Design (Quality)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burack, M.A., Weiner, A.S., Reinhardt, J.P., &amp; Annunziato, R.A. (2012), U.S.A.</td>
<td>What matters most to nursing home elders: quality of life in the nursing home</td>
<td>To determine those components of nursing home quality of life that are associated with elder satisfaction so as to provide direction in the culture change journey</td>
<td>Quantitative research study with interviews of older persons using the Quality of life scales for nursing home residents instrument</td>
<td>n=62 (0)</td>
<td>Dignity, spiritual well-being and food enjoyment were predictors of quality of life in the nursing home. Dignity was positively associated with satisfaction with staff.</td>
<td>P (I)</td>
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<tr>
<td>Castro-Monteiro, E., Forjaz, M.J., Ayala, A., Rodriguez-Blazquez, C., Fernandez-Mayoralas, G., Díaz-Redondo, A., Martínez-Martín, P. (2014), Spain</td>
<td>Change and predictors of quality of life in institutionalized older adults with dementia</td>
<td>To assess the change in and predictive factors of the quality of life (QoL) of institutionalized older adults with dementia over a 20-month period.</td>
<td>Longitudinal study using a survey to evaluate QoL over 19 months. Survey answered by family or health care professionals. High attrition rate due to death (27%), residents moving facilities (4%) and three facilities dropping out of study (17%). Surveys used were EQ-5D and QOL-AD</td>
<td>n=525 (251)</td>
<td>An increased number of chronic medical conditions resulted in a lower QoL for institutionalized older persons with dementia over time.</td>
<td>P (II)</td>
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<td>Author(s)</td>
<td>Title</td>
<td>Study Design</td>
<td>Sample Size</td>
<td>Intervention/Outcome</td>
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<td>Comart, J., Mahler, A., Schreiber, R., Rockett, C., Jones, R.N. &amp; Morris, J.N. (2012), U.S.A.</td>
<td>Palliative care for long-term care residents: effect on clinical outcomes</td>
<td>Retrospective study of medical charts of control and intervention group.</td>
<td>n=250 (0)</td>
<td>A palliative care consult service resulted in less depression and fewer ER visits prior nursing home residents' death.</td>
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<td>Corderio, L.M., de Lima Paulino, J., Peixoto Bessa, M.E., Borges, C.L., &amp; Pedrosa Leite, S.F. (2015), Brazil</td>
<td>Quality of life of frail and institutionalized elderly</td>
<td>Cross sectional quantitative study with survey for data collection. Frailty determined by Edmonton Frailty Scale. Data collected from interviews from a convenience sample of residents using WHOQOL-OLD.</td>
<td>n=33 (0)</td>
<td>Persons institutionalized upon their own initiative had lower QoL than persons who entered through relatives, medical needs or abandonment.</td>
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<td>Cordner, Z., Blass, D. M., Rabins, P.V., &amp; Black, B.S. (2010), U.S.A.</td>
<td>Quality of life in nursing home residents with advanced dementia</td>
<td>Cross sectional study. Data collected from interviews of nursing home professional staff most familiar with the resident and interviews with family. Instrument used was Alzheimer disease-related QoL scale.</td>
<td>n=119 (0)</td>
<td>Residents who were female, older age, had less education, higher cognitive function, those with staff identified pain and those receiving pain medication had a higher quality of life. Residents with behaviour problems had a lower quality of life.</td>
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<tr>
<td>Authors</td>
<td>Title</td>
<td>Methods</td>
<td>Results</td>
<td>Study Design</td>
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<tr>
<td>de Rooij, A.H., Luijkk, K.G., Schaafsm, J., Declercq, A.G., Emmerink, P.M., and Schols, J.M. (2012), The Netherlands &amp; Belgium</td>
<td>Quality of life of residents with dementia in traditional vs. small scale long-term care settings: a quasi-experimental study.</td>
<td>To examine the assumed benefits of small-scale living (six to fifteen residents) for residents with dementia, compared to traditional long-term care.</td>
<td>Longitudinal, quasi-experimental study with control group. Pre-test, post-test design. Questionnaires completed by professional caregivers. QUALIDEM (quality of life in dementia) tool was used.</td>
<td>n=179 (0)</td>
<td>Small scale nursing homes (NH) had higher scores for social engagement: positive affect, social relations and having something to do. Higher scores indicate better QoL.</td>
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<tr>
<td>de Vocht, H.M., Hoogeboom, A.M., van Niekerk, B., &amp; den Ouden, M.E. (2015), The Netherlands</td>
<td>The impact of individualized interaction on the quality of life of elderly dependent of care as a result of dementia: a study with a pre-post design</td>
<td>To assess the impact of a one-to-one 30 minute individualized interaction per day on the behavior and quality of life of care-dependent residents with dementia.</td>
<td>Pre-test, post-test observation of interaction with residents. Pre-test, post-test semi-structured interviews of health care professionals (HCP). Surveys to assess QoL were completed by residents' primary nurses pre and post intervention. QUALIDEM tool was used.</td>
<td>n=15 (0)</td>
<td>More positive behaviours were observed during post-tests compared to pre-tests. Interviews with health care professionals (HCP)(n=13) post intervention described residents as having improved alertness, recognition of staff members, and more frequent eye contact. QoL surveys completed by HCP showed no significant change in residents’ QoL during the study period.</td>
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</tr>
<tr>
<td>Drageset, J., Eide, G.E., Ranhoff, A.H. (2012), Norway</td>
<td>Cancer in nursing homes: characteristics and health-related quality of life among cognitively intact residents with and without cancer.</td>
<td>To study the sociodemographic characteristics and health-related quality of life (HRQOL) among nursing home residents with and without a cancer diagnosis.</td>
<td>Cross sectional study with Short-Form (SF-36) Health survey.</td>
<td>n=227 (0)</td>
<td>Survey results showed a lower HRQOL for persons with cancer than those without cancer. Residents with cancer reported higher bodily pain suggesting that better pain control will lead to a better QoL.</td>
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<tr>
<td>Authors</td>
<td>Title</td>
<td>Methodology</td>
<td>Sample Size</td>
<td>Findings</td>
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<td>Dwyer, L.L., Hansebo, G., Andershed, B. &amp; Ternestedt, B.M. (2010), Sweden</td>
<td>Nursing home residents' views on dying and death: nursing home employee's perspective</td>
<td>Qualitative descriptive study that used focus group discussions</td>
<td>n=20</td>
<td>Visits from family and friends was the most important factor for providing meaning to everyday life, thus improving QoL.</td>
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<td>Hall, S., Opio, D., Dodd, R.H., &amp; Higginson, I.J. (2011), United Kingdom</td>
<td>Assessing quality-of-life in older people in care homes</td>
<td>Quantitative questionnaire completion to describe QoL and quantitative interviews to describe how QoL is influenced. The qualitative data was used to answer the aim of the review.</td>
<td>n=16</td>
<td>The factors that most affected QoL were leisure activities, family, relationships, social life, independence, and peace and contentment.</td>
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<tr>
<td>Kanwar A., Singh, M., Lennon, R., Ghanta, K., McNallan, S.M., &amp; Roger V.L. (2013), U.S.A.</td>
<td>Frailty and Health Related Quality of Life Among Residents of Long-Term Care Facilities</td>
<td>Cross sectional study with QoL assessed using SF-36 survey. Frailty determined by assessing gait speed, unintended weight loss and grip strength.</td>
<td>n=137</td>
<td>Frail residents had a lower health related quality of life. Frailty was prevalent among long term care residents.</td>
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<tr>
<td>Kehyayan, V., Hirdes, J.P., Tyas, S.L., &amp; Stolee, P. (2016), Canada</td>
<td>Predictors of long-term care facility residents' self-reported quality of life with individual and facility characteristics in Canada</td>
<td>Cross sectional study of convenience sample using inter-Resident Assessment Instrument (RAI) Self-report nursing home quality of life surveys of residents</td>
<td>n=928</td>
<td>Persons who were religious and socially engaged, had a positive global disposition or resided in rural facilities were less likely to report low QoL. Those with post-secondary education and were dependent on assistance for activities of daily living were more likely to report low QoL.</td>
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<td>Study</td>
<td>Title</td>
<td>Authors</td>
<td>Methodology</td>
<td>Participants</td>
<td>Findings</td>
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<tr>
<td>Khader, F. (2011), Jordan</td>
<td>Quality of Life in the Nursing Homes in Jordan: Perspectives of Residents</td>
<td>This study explored subjectively perceived quality of life and related factors of elderly nursing home residents.</td>
<td>Cross sectional study with WHOQOL-BREF questionnaire administered by face to face interviews. Demographic data were also collected.</td>
<td>n=140 (0)</td>
<td>Quality of life is determined by age, gender, marital status, level of education, and length of stay in the nursing home</td>
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<tr>
<td>Shin, J.H. (2013), South Korea, USA</td>
<td>Relationship between nursing staffing and quality of life in nursing homes</td>
<td>To investigate the relationship between nurse staffing and quality of life in nursing homes</td>
<td>Cross sectional correlational study. Data collection from an online survey certification and reporting (OSCAR) and minimum data set (MDS)</td>
<td>n=231 (0)</td>
<td>More RN hours per resident per day(HPRD) were associated with better comfort and enjoyment. More LPN HPRD were associated with better dignity and more nursing assistants were associated with better functional competence. Certified nursing assistant (CNA) HPRD had a positive impact on the security domain.</td>
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<tr>
<td>Shippee, T.P., Henning-Smith, C., Kane, R.L., &amp; Lewis, T. (2015), U.S.A.</td>
<td>Resident- and facility-level predictors of quality of life in long-term care</td>
<td>To assess multiple domains of QoL and examin facility and resident level correlates for different domains</td>
<td>Random sampling of a cross section of nursing home residents in Minnesota. Clinical data retrieval from MDS, self reported resident interviews using a multidimensional measure of QoL (the 2010 Resident QoL and Satisfaction with care survey) and facility-level characteristics from facility reports.</td>
<td>n=13,433 (2464)</td>
<td>Older age, requiring assistance with ADLs, and living in larger facilities was negatively associated with QoL. Having better cognitive function was positively associated with higher QoL. Higher LPN hours per resident day was associated with worse QoL.</td>
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<td>Strohbuecker, B., Eisenmann, Y., Galushko, M., Montag, T., &amp; Voltz, R. (2011), Germany</td>
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<td><strong>Palliative care needs of chronically ill nursing home residents in Germany: focusing on living, not dying</strong></td>
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<td>To explore the palliative care needs of nursing home residents in Germany who had not yet entered the dying phase</td>
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<td>Semi-structured interviews with residents from four NHs in Germany. Participants in the study suffered from chronic disease or frailty. Clinical judgement of the nurses selected cognitively intact or only mildly cognitively impaired residents to be interviewed.</td>
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<td>n=9 (0)</td>
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<td>Six categories of needs were identified: being recognized as a person, having a choice and being in control, being connected with family, being connected with the outside world, being spiritually connected and physical comfort.</td>
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APPENDIX 2: CLASSIFICATION GUIDE OF ACADEMIC ARTICLES - SOPHIAHEMMET UNIVERSITY

Classification guide of academic articles and studies regarding quality in both quantitative and qualitative research, modified from Berg, Dencker & Skärsäter (1999) and Willman, Stoltz & Bahsevani (2006).

<table>
<thead>
<tr>
<th>CLASSIFICATION</th>
<th>GRADING OF ACADEMIC QUALITY</th>
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<tr>
<td></td>
<td>I = High quality</td>
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<tr>
<td>Randomised controlled trial (RCT) is a prospective study that entails a comparison between a control group and one or more experiment groups.</td>
<td>Large, well planned and well executed multicenter study with an adequate description of protocol, material and methods including treatment techniques. The number of patients/participants is large enough to answer the research question. Adequate statistical methods.</td>
</tr>
<tr>
<td>Clinical controlled trial (CCT) is a prospective study that entails a comparison between a control group and one or more experiment groups. Not randomised.</td>
<td>Large, well planned and well executed study with an adequate description of protocol, material and methods including treatment techniques. The number of patients/participants is large enough to answer the research question. Adequate statistical methods.</td>
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<tr>
<td>Non-controlled study (P) is a prospective study but without a control group.</td>
<td>Well defined research questions, sufficient number of patients/participants and adequate statistical methods.</td>
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<td>Retrospective study (R) is an analysis of a historical material that is related to something that already happened, for example patient charts.</td>
<td>Number or patients/participants sufficient to answer the research question. Well planned and well executed study with an adequate description of protocol, material and methods.</td>
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<tr>
<td>Qualitative study (Q) often is an investigation where the aim is to study phenomena or interpret meaning, perceptions and experiences from the perspectives of the participants. The aim can also be to develop concepts, theories and models.</td>
<td>Context clearly described. Selection of participants motivated. Clearly described selection criteria, data collection, transcription process and method of analysis. Credibility and reliability described. Relation between data and interpretation evident. Critique of method.</td>
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</table>

* Some of the criteria for level I are not met, but the academic quality is deemed higher than level III – Low quality.

SHH 2007-03-22
**APPENDIX 3: RESULTS MATRIX**

<table>
<thead>
<tr>
<th>Author(s), (Year), Country</th>
<th>Results</th>
<th>Sociodemographic Characteristics</th>
<th>Psychological / Spiritual</th>
<th>Physical Health / Independence</th>
<th>Environment</th>
<th>Nursing Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burack et al. (2012), U.S.A.</td>
<td>Dignity, spiritual well-being and food enjoyment were predictors of quality of life in the nursing home. Dignity was positively associated with satisfaction with staff.</td>
<td></td>
<td>Spirituality and dignity positively affected QoL</td>
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<td>Food enjoyment positively affected QoL</td>
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<tr>
<td>Castro-Monteiro et al. (2014), Spain</td>
<td>An increased number of chronic medical conditions resulted in a lower QoL for institutionalized older persons with dementia over time.</td>
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<td>A higher number of chronic medical conditions negatively affected QoL</td>
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<tr>
<td>Comart et al. (2012), U.S.A.</td>
<td>A palliative care consult service resulted in less depression and fewer ER visits prior nursing home residents’ death.</td>
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<td>Palliative care multi-professional consult service decreased depression thus positively affected QoL. CNS nurses provided staff education in LTC</td>
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<td>Study</td>
<td>Findings</td>
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<tr>
<td>Corderio et al. (2015), Brazil</td>
<td>Persons institutionalized upon their own initiative had lower QoL than persons who entered through relatives, medical needs or abandonment.</td>
<td>Motive for move to LTC home: upon own initiative negatively affected QoL. Moved due to medical condition, relatives and abandonment positively affected QoL.</td>
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<tr>
<td>Cordner et al. (2010), U.S.A</td>
<td>Residents who were female, older age, had less education, higher cognitive function, those with staff identified pain and those receiving pain medication had a higher quality of life. Residents with behaviour problems had a lower quality of life.</td>
<td>Female, older age and less education positively affected QoL.</td>
<td>Better cognitive function positively affected with QoL. Behaviour problems negatively affected QoL.</td>
<td>Staff identified pain and pain management positively affected QoL.</td>
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<tr>
<td>de Rooij et al. (2012), The Netherlands &amp; Belgium</td>
<td>Small scale nursing homes (NH) had higher scores for social engagement: positive affect, social relations and having something to do. Higher scores indicate better QoL.</td>
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<td>Small scale long term care settings positively affected the social domain of quality of life</td>
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<tr>
<td>Study (Year, Location)</td>
<td>Intervention Details</td>
<td>Outcomes Related to QoL</td>
<td>Incidental Findings</td>
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<tr>
<td>de Vocht, et al. (2015), The Netherlands</td>
<td>More positive behaviours were observed during post-tests compared to pre-tests. Interviews with health care professionals (HCP) post intervention described residents as having improved alertness, recognition of staff members, and more frequent eye contact. QoL surveys completed by HCP showed no significant change in residents' QoL during the study period.</td>
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<td>A one-to-one individualized 30 min. interaction per day affected behaviour but not QoL for persons with advanced dementia. Incidental findings - work satisfaction for nurses increased and the positive behaviour of the residents in the study transferred to other residents.</td>
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<tr>
<td>Drageset et al. (2012), Norway</td>
<td>Residents with cancer reported a lower HRQOL than those without cancer. Residents with cancer reported higher bodily pain suggesting that better pain control will lead to a better QoL.</td>
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<td>A diagnosis of cancer had a negative effect on QoL. Persons with cancer reported increased pain.</td>
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<tr>
<td>Dwyer et al. (2010), Sweden</td>
<td>Visits from family and friends was the most important factor for providing meaning to everyday life, thus improving QoL.</td>
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<td>Nurses impeccable pain assessment and intervention positively affected QoL for persons with cancer</td>
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<td>Study</td>
<td>Findings</td>
<td>Factors Affecting QoL</td>
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<tr>
<td>Hall et al. (2011), United Kingdom</td>
<td>The factors that most affected QoL were leisure activities, family, relationships, social life, independence, and peace and contentment.</td>
<td>Leisure activities, Family, relationships, and social life, independence, and peace and contentment, Peace and contentment, Independence positively affected QoL</td>
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<tr>
<td>Kanwar et al. (2013), U.S.A.</td>
<td>Frail residents had a lower health related quality of life. Frailty was prevalent among LTC residents.</td>
<td>Frail residents had a lower QoL and frailty was prevalent among LTC residents</td>
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<tr>
<td>Kehyayan et al. (2016), Canada</td>
<td>Persons who were religious and socially engaged, had a positive global disposition or resided in rural facilities were less likely to report low QoL. Those with post-secondary education and were dependent on assistance for activities of daily living were more likely to report low QoL.</td>
<td>Social engagement positively affected QoL. A higher education (secondary and post-secondary) negatively affected QoL. Religiosity with or without practicing an organized religion and a positive disposition positively affected QoL. Mild cognitive impairment and depression negatively affected QoL. Requiring extensive assistance with ADLs, incontinence and hearing impairment negatively affected QoL. Living in a rural LTC setting positively affected QoL.</td>
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<td>Author</td>
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<tr>
<td>Khader, F. (2011)</td>
<td>Jordan</td>
<td>Quality of life is determined by age, gender, marital status, and length of stay in the nursing home. Academic level did not affect QoL. Older age negatively affected QoL. Education level and gender did not affect QoL. Being single or married positively affected QoL compared to persons who were divorced, separated or widowed.</td>
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<tr>
<td>Shin, J.H. (2013)</td>
<td>South Korea and USA</td>
<td>More RN hours per resident per day (HPRD) were associated with better comfort and enjoyment. More LPN HPRD were associated with better dignity. Certified nursing assistant (CNA) HPRD had a positive impact on the security domain. RNs positively affect QoL comfort level and enjoyment. LPNs positively affected QoL dignity. CNAs positively affected persons' security with regards to QoL.</td>
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<td>Shippee et al. (2015)</td>
<td>U.S.A.</td>
<td>Older age, requiring assistance with ADLs, and living in large facilities were negatively associated with QoL. Having better cognitive function was positively associated with higher QoL. Older age negatively affected QoL. Better cognitive performance positively affected QoL. Problems with ADLs had a negative association with all QoL domains. Larger facilities reported lower QoL than smaller facilities.</td>
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<tr>
<td>Study</td>
<td>Needs Identification</td>
<td>Positively Affect QoL</td>
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<td>Strohbuecker et al. (2011), Germany</td>
<td>Six categories of needs were identified: being recognized as a person, having a choice and being in control, being connected with family, being connected with the outside world, being spiritually connected and physical comfort.</td>
<td>Being connected with family positively affected QoL. Being recognized as a person and being spiritually connected positively affected QoL. Independence with ADLs, and physical comfort positively affected QoL. Having a choice in meals and a choice about when personal hygiene was conducted positively affected QoL.</td>
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### APPENDIX 4: WHOQOL Measuring Quality of Life (1997)

<table>
<thead>
<tr>
<th>Domain</th>
<th>Facets incorporated within domains overall Quality of Life and General Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Physical health</td>
<td>Energy and fatigue Pain and discomfort Sleep and rest</td>
</tr>
<tr>
<td>2. Psychological</td>
<td>Bodily image and appearance Negative feelings Positive feelings Self-esteem Thinking, learning, memory and concentration</td>
</tr>
<tr>
<td>3. Level of Independence</td>
<td>Mobility Activities of daily living Dependence on medicinal substances and medical aids Work Capacity</td>
</tr>
<tr>
<td>4. Social relationships</td>
<td>Personal relationships Social support Sexual activity</td>
</tr>
<tr>
<td>5. Environment</td>
<td>Financial resources Freedom, physical safety and security Health and social care: accessibility and quality Home environment Opportunities for acquiring new information and skills Participation in and opportunities for recreation/leisure Physical environment (pollution/noise/ traffic/climate) Transport</td>
</tr>
<tr>
<td>6. Spirituality/ Religion/ Personal beliefs</td>
<td>Religion/ Spirituality/ Personal Beliefs</td>
</tr>
</tbody>
</table>