

Health promotion of physical disabled elderly people

Yajie Wang

Jiaqi Yu

SNS19SBE

Bachelor's Thesis

June 2020

Social Services, Health, and Sport

Degree Program in Nursing

Author(s)	Type of publication	Date
Wang, Yajie	Bachelor's thesis	June 2020
Yu, Jiaqi		Language of publication: English
	Number of pages 33	Permission for web publication: x
Title of publication Health promotion of physical disabled elderly people A Literature Review		
Degree programme Degree Programme in Nursing		
Supervisor(s) Palovaara, Marjo & Kamau, Suleiman		
Assigned by		
<p>Abstract</p> <p>Population aging is a global problem. When people getting older, the physical function is declining. In current China, physical disabled people over 65 account for half of the whole disabled population. More and more elderly people are facing disability. However, the proportion of treatment and recovery is quite low because nurses lack systematic and effective methods to care and help patient and their families.</p> <p>This research aimed to find out health promotion methods to improve the living quality for physically disabled elderly people. The purpose was helping nurses to provide the knowledge and skills to physical disabled elderly people, helping their families to promote physical disabled elderly people's health and improve their living quality.</p> <p>The research was implemented as a literature review. The data was searched using the following two databases: CINAHL (EBSCO) and PubMed. Overall, six articles were chosen to be reviewed. Content analysis was applied in the analysis of the data. Two main categories were summarized: support for the elderly and their family caregivers, exercise and physical support. Result showed that nurses can help physically disabled elderly people to improve their quality of life through these ways. Nurses can choose the methods depend on the environment and patients' condition.</p>		
Keywords/tags (subjects) Health promotion, disabled, elderly people		
Miscellaneous (Confidential information)		

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1. Introduction

Disability is not a new concept and not something that has emerged as a result of increasing numbers of people affected. The notion of disability is enigmatic, even confusing. The term itself disability has negative connotations, which is no surprise given the prefix meaning absence or negation. (Mitra, 2017).

Physical disability is a type of condition of a human being. In modern China, there are more than fifty percent physically disabled people who were older than 65 years, and the proportion of physically disabled people increase from 39.7% to 53.24%. (Raifman,2018). But the proportion of treatment and recovery is quite low, according to the data, the rate increased from 8.2% to 18.7% between 2007 and 2013. (Zheng, 2018.) Therefore, it is important to find some effective and helpful nursing methods to increase the treatment rate and promote the health of physically disabled people. This literature review is going to research more useful nursing methods to help nurses to provide better support to physical disabled elderly people and their families.

The aim of this research is finding out health promotion methods towards a high living quality for physical disabled elderly people. The purpose is helping nurses to provide the knowledge and skills to physical disabled elderly people, helping their families to promote physical disabled elderly people's health and improve their living quality.

2. Physical disability and elderly people

2.1. Definition of disability

In ancient Europe, persons with disabilities were regarded as "devilish", "God's punishment". Later, disability was considered incompetent, poor, miserable and sinful because they could not contribute to society. Being treated as a ridiculous object of entertainment in a circus or exhibition was their only remaining value. They were even seen as a burden by their families. Some persons with disabilities were forced to undergo sterilization. Therefore, it was common for persons with disabilities

to be regarded as sinners. This form of unjust treatment and social prejudice towards the disabled impacted a negative psychological burden. (Mariani, 2017.)

In ancient China, the definition of disability in law also had limitations. It was usually pointed out that the disability of a person's body or features was disability. Historically, the general term for people with disabilities was "can fei" (残废), which means crippled and useless. The expression of words also reflected people's negative perception of disability. If there is something wrong with a person's intelligence, they would be ridiculed and discriminated against as fools. (Hallett, 2005.)

Even though, disability is an ancient concept that has existed for as long as people have existed. With the development of the times, although disability had not changed, there was a general change in perception of disability. There was a change in viewpoint and understanding that adopted a more scientific view that also considered human nature. (Mariani, 2017.)

Disability has been termed by the WHO as any condition that makes it difficult for an individual from participating in certain activities or in interacting with their world. Factors attributed to disability include mental, physical, cognitive, intellectual or a combination of factors. These may occur in their own development of bodies or may be affected by the external environment. In addition, impairments causing disability may be present from birth or occur during a person's lifetime. (WHO 2001.)

Disability is a contested concept, with different meanings in different communities (Simi,1998). It is no exaggeration to say that disability may be something that everyone will experience, almost everyone may suffer temporary or permanent injury at some point in life, and those who live longer will experience increasing difficulties in functioning (WHO 2011.)

WHO proposes the following definition of disabilities: Disability is a general term that covers impairments, activity limitations, and participation restrictions. Impairment means there are some limited body function or structure causing the body or brain can not to work normally. Activity restriction is an individual's difficulty in performing a task or action. While the participation limitation is the problem that the individual

encounters when participating in the life condition. So disability is not only a health problem but also a complex social phenomenon that reflects the interaction between a person's physical characteristics and the social characteristics in which he or she lives. This means that it requires interventions from all sectors of society to remove environmental and social barriers to persons with disabilities if we want to help them and improve their quality of life. (WHO 2016.)

The Law of the People's Republic of China on the Protection of Disabled Persons (1990) states that "a disabled person refers to one who suffers from abnormalities or loss of a certain organ or function, psychologically or physiologically, or in anatomical structure and who has lost wholly or in part the ability to engage in activities in a normal way." This law protects the people who are suffering from individuals with visual, hearing, speaking or physical disabilities, mental retardation, cognitive disorders, multiple disabilities, and/or other disabilities. This Law supports the rights of employment opportunities, education, legal liability, and enough care for disabled people. This study mainly focuses on physical disability. (The Law of the People's Republic of China on the Protection of Disabled Persons, 2008.)

2.2. Physical disability

Physical disability is defined as a person's physical function, mobility, tolerance and flexibility with varying degrees of limitations. It refers to a wide range of disabilities, which can involve the eight major circulatory systems of the human body, such as the loss or mutilation of the limbs, limitations on finger flexibility and obstacles to coordination between parts of the body and different organs. Disability in mobility either can be congenital or acquired with age problem. Physical disability can be a type of impairments that limit daily living, such as deaf mutism. It also can be due to the development of various chronic diseases, such as diabetic foot. Under the limitations and effects of these diseases, persons with disabilities often need assistive devices to enhance mobility. (WHO 2011 & Disabled World 2019.)

There are many factors that cause physical disability. These can be simply divided into two categories. The first category refers to hereditary or congenital. This means that

a person who was born with a physical disability or developed one due to inherited genetic problems. Harmful substances that mothers are exposed to during pregnancy, such as alcohol, tobacco, chemicals drugs, radiation, may cause these. In some cases, it can be caused during delivery like prolonged lack of oxygen, suffered an injury, due to the accidental misuse of forceps, for example. (Achieve Australia, 2019). Another category refers to acquired. An acquired physical disability could be due to an accident, infection, disease, obesity or aging. Some studies suggest that these important causes of disability on older people are age-related chronic diseases. The type of physical disability thus depends on the underlying disease that causes the disability. (Robbins, 1994.)

Visual impairment is another type of physical impairment. It also refers to as vision loss that means a decreased level of vision. Standard glasses or contact lenses cannot correct this condition. One of the most serious consequences is blindness. Other types of visual impairment include glaucoma, macular degeneration in old age, cataract, or diabetic retinopathy. (WHO 2015.)

Hearing impairment is a partial or total inability to hear. Causes of hearing impairment include noise, aging, genetics, infections, autoimmune attacks, or chemicals. It is recommended for the person with moderate impairment and above to use the hearing aid or learn lip-reading. (Olusanya, 2019.)

Speech and language disabilities have been classified into three and five basic types respectively. Speech impairments comprise of articulation, fluency and voice, while language disorders include phonological, morphological, semantic, syntactical and pragmatic difficulties. (Hulit, 2002.)

3. Health care of older people with disabilities in China

3.1. Statistics of physical disabled and older people in China

At the end of 2015, China had 143.9 million elderly adults aged 65 years or older, accounting for 10.5% of the total population. Two large-scale, national population censuses in China showed that 38.3 million of the Chinese elderly residents were suffering from disability in 2006, more than twice the number of 1987.

(Zheng, 2018.) Fifty percent of people with disabilities were aged 65 years or older in 2006, and almost 30% of older adults with disabilities had profound or severe disabilities. (Raifman, 2018.)

According to the data from two national sample surveys on disabled persons in 1987 and 2006, the number of disabled persons aged 60 and above in China rose from 20.51 million to 44.16 million, an increase of 23.65 million, accounting for 75.5% of the total number of disabled persons. The proportion of elderly disabled people in the total disabled population increased from 39.7 percent to 53.24 percent. The proportion of elderly people with disabilities in the total elderly population increased from 21.93% to 24.43%, and the rate of elderly disability was 3.85 times that of the total population. In fact, the rate of treatment and rehabilitation achievement among disabled older adults is still quite low, although according to surveillance survey data, the rate improved from 8.2% in 2007 to 18.7% in 2013. (Zheng, 2018.)

3.2. Social characteristics of the elderly with Disabilities in China

Researches have shown that the education level of the disabled elderly is low, and the gender difference is large. The second sample survey of disabled people showed that 62.1% of disabled people aged 65 and over were illiterate or had not attended school, 13.3 percentage points higher than those of non-disabled people. In terms of gender, the education level of male disabled elderly people is significantly higher than that of female disabled elderly people. It was further found that the proportion of elderly people with disabilities who were illiterate among women was 76.1%, 40 percentage points higher than that of men with disabilities. (National Bureau of Statistics of the People's Republic of China, 2006.)

In 2006, for the elderly aged 60 and over, they were born before the founding of the People's Republic of China, but before the founding of the People's Republic of China, the education system was poor, and the education level of people was generally low. Under the influence of the thought of inferiority of men and women in old China, girls had fewer opportunities to receive education. Formal education accorded to the disabled, in the form of special education was notably very poor. Therefore, in terms

of education level, the disabled elderly were lower than the overall elderly population, and the female disabled elderly were much lower than the male disabled elderly. (National Bureau of Statistics of the People's Republic of China, 2006.)

The proportion of widowed elderly with disabilities is high, and there is obvious difference between genders. The proportion of widowed couples in female disabled elderly is significantly higher than that in male. The survey shows that the proportion of widowed elderly with disabilities is 41.3%. In 2005, a sample survey of 1% of the population was conducted in China. The results showed that 27.6% of the elderly aged 60 and over were widowed, and the proportion of widowed couples of the disabled was 13.7% higher than that of the elderly. In terms of gender, the proportion of widowed elderly women with disabilities is 32.1 percentage points higher than that of men. (National Bureau of Statistics of the People's Republic of China, 2006.)

In terms of the sources of living, the sources of living for the disabled elderly are very concentrated, mainly reflected in the support of other members of the family and retirement fund, other sources are very few. The survey showed that 71% of disabled elderly people depend on other family members for their livelihood, and 21.4% depend on retirement income (National Bureau of Statistics of the People's Republic of China, 2006). From the practical point of view, the above sources of funding cannot meet the needs of elderly persons with disabilities for economic security.

3.3. Health-care condition of the elderly with Disabilities in China

The aging of the population will aggravate and the shortage of medical resources and carers available for providing services in health care is a challenge (Kennedy & Llewelyn, 2006). Ma Xiaowei said at the Second Session of the 13th National People's Congress on March 8, 2019, " by the end of 2018, the number of doctors in China had reached 3.607 million, but the number of patients receiving treatment per year had reached 8.31 billion"(The Second Session of the 13th National People's Congress on March 8, 2019).

At present, China has been facing the problem of unbalanced medical resources and the insufficient total number of medical personnel. The number of doctors in China is excessively concentrated in the grade-A tertiary hospitals in main big cities, while the number of doctors in urban-rural communities, especially in rural areas and remote mountainous areas, is very limited. In 2018, the ratio of doctors to patients was 2.59:1000. It is more than 4/1000 in Germany, Austria, and other developed countries. However, the ratio of doctors to patients is 1.8:1000 in rural areas, only 45% of that in urban areas. The number of doctors in rehabilitation, paediatrics, emergency medicine, psychiatry and other specialities is also relatively small, resulting in shortcomings in disciplines. The number of public health physicians is insufficient and decreasing year by year. Meanwhile, the talent team is relatively inadequate, which does not match the policy of prevention. The number of nursing and midwifery personnel per 1000 population is 2.342 in 2015 bellowing the world average level. (WHO, Density of nursing and midwifery personnel.)

People with disability seek more health care than people without disability and have greater unmet needs (WHO 2018). According to the data of the second National sample Survey of disabled Persons, the top five among the needs of elderly disabled people are medical service or assistance, poverty relief and support, device assistance, rehabilitation training and service and life service, accounting for 95% of the total demand. Thus, in addition to financial support, nursing care and services have become the greatest demand for elderly persons with disabilities. In the second national handicapped person sampling survey, the demand for medical services and aid to elderly persons with disabilities was 63675 people, accounting for 74.4% of the elderly people with disabilities investigated. However, actual received medical care and assistance was only 31572 people, accounting for 49.6% of the elderly persons with disabilities. The demand for medical service supply and demand ratio is less than 0.5, more than half of the demand for medical services for the disabled is not satisfied. (National Bureau of Statistics of the People's Republic of China, 2006.)

Mental health and physical health are interrelated. The WHO pointed out, in addition to the common stress of life, older people may experience more life and psychological stress due to their declining physical function and suffering from

chronic illness. For example, some elderly people who have mobility problems, chronic pain, weakness, or other health problems are more in need of some form of long-term care. As dependence increases, it may make them feel lonelier. Long-term loneliness and psychological distress will cause them to need more psychological help and care. Mental health has an impact on physical health and vice versa. (WHO 2017.) While the disabled elderly have lower social participation, less contact with the society and it is common that they lack spiritual comfort and communication. On the other hand, their emotional dependence on the family is also strong, but the reality is that the family and society rarely meet the needs of the elderly. (Xie, 2008.)

4. Aim, purpose, and research questions

The aim of this research is finding out the health promotion methods to improve the living quality for physically disabled elderly people. The purpose is helping nurses to provide the knowledge and skills to elderly people, helping their families to promote physically disabled elderly people's health and improve their living quality.

There is one research question:

What nursing methods can be used to promote health for physical disabled elderly people?

5. Methodology

5.1. Literature review

The literature review is an important aspect of most research manuscripts. The review seeks to synthesize published research findings that relate to the topic of interest. It often exposes gaps in the current knowledge base. For researchers using literature review as a research method, it is worthwhile to read already existing reviews to get an insight on methods used by other researchers. After exhausting the search and obtaining several related articles, each article needs to be analyzed

thoroughly. This includes a critical evaluation and synthesis of the articles, to show the current state of knowledge, and not merely a summary. (Matney, 2018.)

While conducting a literature review, researchers should be objective rather than subjective. This helps in employing a universal assessment method and avoidance of researchers own opinions. Through critical analysis, areas might be found that would benefit from further research. In addition to synthesizing the literature, it is important to provide implications that are reinforced from the analysis. It is good practice to list several questions that would like each article to identify. (Neill, 2017.) Regardless of research questions, philosophical positions, or methodology within a study, one investigates effectively by understanding what has been investigated beforehand. (Matney, 2018.)

Through the literature review, methods, investigations, and conclusions of previous researches can be established. This allows researchers to learn more information about the questions and fields which are going to be searched. The literature review informs and reorganizes evidence through a multiplicity of thinking. At first, a researcher must determine the questions about his or her topic. This step provides clear thinking and divides the topic into some small points. (Matney, 2018.)

At the same time, previous researches play an important role during studying period. Researchers study their topic and fields by comprehending existing evidence. Contents of articles should also consider existing literature. It is necessary to find some nursing articles about the studied topic, to find more knowledge and information. (Neill, 2017.) The focus of this literature review is on what research has been done on the population of elderly people in China and the type of physical disabilities they suffer. In approaching the research this way, it will be easy to narrow the scope of research.

Listing keywords about the topic is the next crucial step, this is useful and necessary for effective review, and it can help to find more correct articles that fit the topic (Neill, 2017). The health promotion, elderly and physical disability could be identified as the keywords. Every keyword has its definition and concept; they are different and help to screen out eligible articles.

5.2. Data analyses

Content analysis is one of the methods to find out the tendency, attitude, and position to some problems by analyzing and comparing the contents. A data analysis method objectively describes the content of the research data. During carrying out content analysis, researchers need to read existing materials without any individual perceptions to find out common values. A researcher considers all relevant materials collectively and does a comprehensive and systematic study of materials. It should be through logical reasoning and philosophical thinking on the materials and data obtained. The whole process of content analysis includes identifying problems, researching and developing problems, collecting research articles, analyzing and comparing the content and methods of articles from the different database for the same subject matter in the same period to select the best results. The results of the content analysis will be used to provide valuable empirical evidence to answer our problems. (Drisko, 2015.)

After data search was conducted six research papers were found suitable for this literature review. Both researchers read the six articles rigorously to make extracts methods and results in the articles. After analysis and discussion on these contents, retrieved content subcategories were formulated. The subcategories were then used to form two main categories. Each researcher selected one category of interest to do the specific analysis separately. One researcher chose aspects of support for the elderly and their family caregiver, while another one chose exercise and physical examination. Finally, the result was compared and discussed to find out the advantages and disadvantages of this result as well as how to improve and apply it in China. An example of the categorization process is presented in appendix 2.

5.3. Literature search

The primary literature search of publications was conducted from the electronic journal databases of CINAHL and Pub Med. The following search terms were used 'physical disability or disabled or mobility impairment or handicap', 'elderly people or old people or the aged or the old or senior', 'health promotion or health education or

patient education’. Table 1 demonstrates the search terms defined in the PICOS model. Table 2 shows the inclusive criteria and exclusive criteria. The detailed article search process is shown in Figure 1.

Table 1: PICO

P	elderly
I	health promotion
CO	physical disability
S	<ul style="list-style-type: none"> • Free full text • Peer reviewed • original research articles • Published year:2010- 2020 • Language: English • Target group people: 65+ years old

Table 2: Inclusive Criteria and Exclusive Criteria

Inclusive Criteria	Exclusive Criteria
Language is English	
Full Text	
Research Article	Literature review
Aged 65 or older	Aged under 65
Published between 2010 and 2020	
Physical disability	Mental or psychology disability

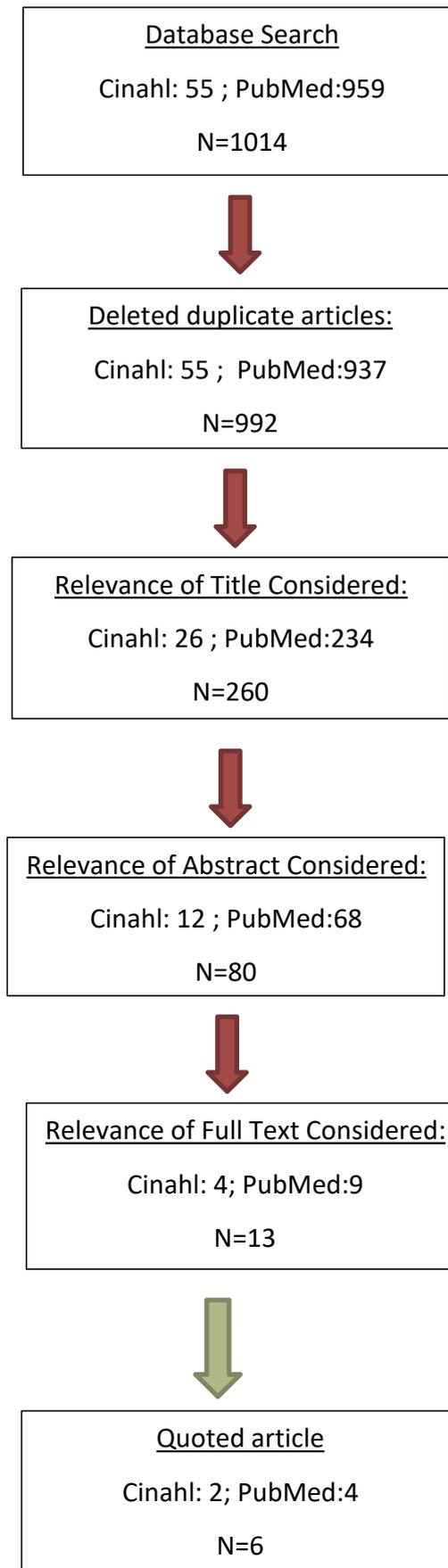


Figure 1: The process of selecting articles

6. Result

The results are divided into two main categories. Figure 2 illustrates the main categories and their subcategories. The results are further explained in the text.

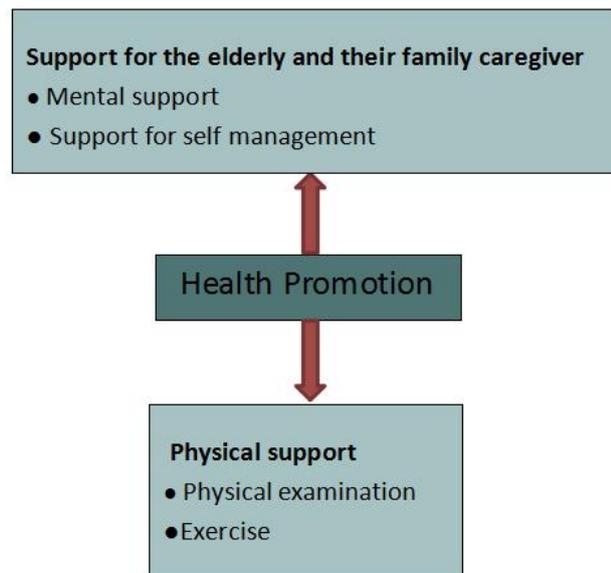


Figure 2: the categories of result

6.1. Support for the elderly and their family caregivers

Mental support

The decline of physical, psychological, and cognitive functions are primary factors leading to the development of depression in the elderly. In addition, the elderly are generally faced with reduced social activities, changes in life caused by physical inconveniences and a higher risk of death of loved ones or friends. Symptoms such as persistent sadness, fatigue, insomnia, and pain may be indicators of depression in older adults. Studies have shown that elder people in assisted living facilities are more likely to suffer from depression. The reasons can be attributed to the previous hospitalization experience, pain, poor physical condition, and inconvenience of their life. On the other hand, health-care providers focus on the physical health of older people who are in the assisted living environment, as they consider it urgently

needed and more appropriate for them. This may lead to more neglect of the mental health of elderly.(Almomani, 2017.)

One-third of older persons with disabilities were reported to have at least one mental health problem. And the existence of mental health condition will greatly reduce self-efficacy. Negative disease management attitudes can hinder the self-management and recovery effect of physical health. Without intervention, this would be a vicious circle. (Peters et al., 2019.)

Setting up interdisciplinary teams of medical staff, psychotherapists, nurses, physiotherapists, and other professionals is helpful to identify, screen, diagnose and treat depression and psychiatric disorders in the elderly as early as possible. Reducing the incidence of depression as an integral part of the support of the elderly having assisted living, it requires nurses to consider psychological assessment as a routine assessment of the elderly so that the elderly can access to all aspects of care to meet a variety of health needs. Community nurses provide counselling and assistance to these families and make personalized care plans to promote their health habits, exercise, treatment, and rehabilitation based on their different family backgrounds and cultures. (Almomani, 2017.)

The study also found that not only the mental health of the elderly deserves attention, but also the mental health status of family caregivers needs to be paid enough attention. Their psychological burden stems mainly from the work stress of caring for the elderly. Therefore, nurses should provide them with more technical and resource of care supporting to relieve stress and psychological problems. (Juan et al., 2017).

Support for self-management

The quality of life is adversely affected by the disease, but patients can improve it through effective self-management. Professional health personnel believe that self-management is a key tool for managing multiple chronic diseases and reducing the number of visits. This urges health workers to provide patient-centered care services and to continuously support and promote active self-management of patients with physical diseases. The combination of patient self-management and clinical caring

will effectively improve the effect and efficiency of controlling disease development. (Peters et al., 2019.)

Self-efficacy refers to a person's confidence in his or her ability to act. Self-efficacy is an important factor to achieve good self-management so that higher self-efficacy can promote the occurrence of expected results. Assessing patients' self-efficacy is a standardized and convenient way to measure their self-management potential, which has been considered as an integral part of long-term care management. Studies have shown that the quality of life of multi-morbid primary care patients with lower self-efficacy was relatively low and they also had a greater burden of disease, while higher self-efficacy can promote self-management of health care patients and thus improve their quality of life. (Peters et al., 2019.)

Patient self-efficacy is a variable value. Nursing staff can improve patients' self-efficacy and self-management by imparting disease management skills to patients. These skills can include diet, exercise, relaxation, pain control and medication. Good communication can also significantly improve their self-efficacy. The encouragement of language and the stimulation of cognitive function can reduce the psychological distress of the elderly disabled, thus increasing the self-confidence and self-esteem. During the consultation process, nurses should provide more help and support with the patient as the center. It is very helpful to help them understand more about their physical condition and illness. This information can help patients manage themselves better and improve their quality of life. (Peters et al., 2019; Almomani, 2017.)

The increase in population aging has led to an increasing number of groups of elderly people with functional or cognitive impairment in communities. In China, most family members undertake long-term care work for the elderly disabled. There are two reasons for it. One is the influence of Chinese traditional culture of filial piety. The other is the lack of institutionalized long-term care in China at present which makes it difficult for family caregivers to acquire adequate resources and support. The long-term commitment of caring for the elderly with disabilities places them under multiple pressures. (Juan et al., 2017).

According to the data, the average years of care provided by family caregivers for the disabled elderly is up to five years, and the average daily care time exceeds 12 hours. Data for most caregivers indicate that they are bearing a moderate burden. Daily care for the disabled directly leads to a decrease in their personal time so that they have little time and opportunity to relax or participate in social activities. Less social relationships and activities may mean more emotional distress. In other words, this usually greatly increases their psychological stress. Furthermore, because institutionalized long-term care systems have not yet been established, there are not enough resources such as home care services to support them. Most family caregivers cannot gain better professional skills guidance and adequate information resources. (Juan et al., 2017.)

To solve these problems and better support them, it is essential to prioritize the development of family community care service models for older persons. Professional health workers provide care services to such families and caregivers, such as individualized care plan counselling, technical education in rehabilitation, provision of information resources and mental support. This will reduce the burden on caregivers and improve their self-management capacity as well as the quality of care for older persons with disabilities. (Juan et al & Almomani, 2017.)

6.2. Physical support

Physical examination

Elderly people often suffer from one or more diseases, some have physical disabilities, and due to these health-related reasons, their lifestyle may change in old age (Hsu et al, 2016). Walking difficulty is a common phenomenon in the elderly and it can lead to loss of independence, higher morbidity, and higher mortality. In most situation, physically disability can be prevented through some methods (Brach et.al, 2017).

Physical examination is a check method for preventive medicine, and the annual physical examination could help to promote the status of public health. General or

special physical examinations can improve the rate of survival and be linked to reduce the risk of chronic disease and a slower decline in physical function. Health professionals recommend that elderly people should have the preventive physical examinations regularly. Physical examinations can help in the early detection of potential health problems and early intervention or treatment to reduce their impact and severity. Physical examinations are also seen as a preventive health practice and a part of a healthy lifestyle. People with a healthy lifestyle are more concerned about their own health and are therefore more likely to receive physical examinations than people who under a terrible condition. (Hsu et al, 2016.)

Exercise

Exercise is good for physical and mental health and prevents walking difficulties. Exercise programs are an option for health promotion and may be used to improve walking in older people. Exercise is based on the principles of motion learning to improve skills, or smooth and automatic motion control. The program includes warm-up, stepping, walking, strengthening, and cooling. Stepping and walking patterns are goal-oriented, increasingly difficult patterns that promote stepping timing and coordination, combined with the stages of the gait cycle. The goal of the walking pattern is to promote the transfer of the center of stress while standing in the middle, and to promote timing of muscle activity and coordination between the limbs. (Brach et.al, 2017.) An unconventional intervention, including exercise, can also significantly improve self-efficacy in older people (Peters et al., 2019).

For elderly people who suffer from osteoarthritis, clinical guidelines recommend exercise as the primary non-drug treatment of osteoarthritis. Common types of exercise to treat osteoarthritis include aerobic exercise, such as jogging, cycling, and swimming and specific knee exercises, which include resistance exercises, primarily to strengthen the muscles around the knee, proprioceptive exercises, and range-of-motion exercises. (Chen, 2019.)

7. Discussion

7.1. Ethical considerations, validity, and reliability

Research ethics provides a conceptual framework for responsible research conduct. It is not just about getting approval from ethics committees. Researchers need a way of thinking and a process of self-reflection when they are faced with ethical issues. (Marilys 2004). Ethical principles include integrity, objectivity, confidentiality, respect, social responsibility, non-discrimination, legality. For example, the researchers should report the experimental data and results honestly without falsification or distortion of data. Researchers should respect intellectual property, not use unpublished data, methods, or results, and not plagiarize. (The Economic and Social Research Council, UK, 2015.)

Researchers should respect the right to privacy of participants and ensure the confidentiality of their personal information. Each participant in the study signed a written informed consent contract. To protect the participants' privacy, the researchers recorded the data using only identification numbers for anonymous tracking. These studies were conducted under the review of the ethics committees. It protected the legitimate rights and interests of subjects and researchers. In order to show the authenticity of the data and avoid being mistaken for data fabrication, the researchers present the collected data information in multiple diagrams. (Peters et al., 2019; Juan, 2017). For this study, authors avoid misidentifying the content of other authors as their own through appropriate references and explanations, according to research reporting guidelines of JAMK. This follows the principle of respecting intellectual property rights and avoiding plagiarism.

Reliability and validity are used to evaluate the quality of research. Reliability indicates the consistency of the results, and validity is about the precision of the results. Reliability should be considered during the process of data collection. When articles are selected, it is important that the results are precise, stable, and reproducible. (Middleton, 2019.)

All research articles of this study were selected from two databases: CINAHL (EBSCO) and PubMed. Both databases provide comprehensive articles for data search and

they are reliable and accessible. In addition, all research articles were selected using the same criteria. This ensured further validity and reliability of the articles. The review only focused on articles that were published between the years 2010 and 2020. Table 2 shows the inclusive criteria and exclusive criteria of reviewed articles. They help to support the reliability and validity of this study as well. The literature reviewed in this study is from four countries: China, the United States, the United Kingdom and Jordan. The language used in English and the research methods were all qualitative. The authors of this literature review come from the same county; similar cultural background provided the guarantee for reliability and validity. During the reviewing, authors discussed the information and exchanged ideas; this helped to ensure unity of thought.

7.2. Discussion of results

Psychological interventions for older persons with disabilities are increasingly being discussed compared to previous studies. These studies were more evidence of the importance of psychological intervention measures. More specific psychological interventions for older persons with disabilities need to be identified. The spouse of an older person is the best source of his or her psychological support. (Zi, 2018.) However, the proportion of widowed elderly with disabilities is 41.3% in China (National Bureau of Statistics of the People's Republic of China, 2006). How to help lonely elderly people face loneliness is worthy for community nurses' to consider. It requires nurses to have a holistic view of the idea of humanism when they care for such elderly people. (Solveig, 2017). Nurses can assess the mental state and needs of the elderly in each communication. Finding evidence and reasons for the loneliness of the elderly is an important purpose for nurses to assess them. It proved to be an effective intervention that nurses can stimulate the desire of the elderly to participate in social activities through communication and encouragement. In addition, such as nostalgia, touch, drama, and art, which can reduce the loneliness of the elderly and increase elderly people's self-esteem in the help of nurse-led technical groups. (Cohen, 2013.)

In addition, we find that a cost-effective way to improve the self-management ability of the elderly is through education. Health-care workers need to communicate with the elderly to know about their basic information. They will formulate action plans and set self-management goals. Topics discussion could include nutrition, physical exercise, drug use, self-assessment, and techniques to deal with adverse emotional and health problems (Lee Smith, 2017). It is worth noting that some of these older persons over 65 years of age are at a lower level of education, according to the data searched. The second sample survey of disabled people showed that 62.1% of disabled people aged 65 and over were illiterate or had not attended school, 13.3 percentage points higher than those of non-disabled people. (National Bureau of Statistics of the People's Republic of China, 2006.) The degree of education may affect one's health literacy. While the lack of health literacy will lead to the decline of cognitive skills and the ability of acquisition for the elderly. This is an obstacle which will impact elderly people's views on how to keep healthy, how to take care of themselves, how to follow health care guidance properly, when they need to seek medical help and how to help themselves recover. (Chesser, 2016.) Therefore, in response to this phenomenon, nurses need to assess the understanding and learning ability of these elderly people as well as the degree of the ability of self-management they have. In addition, nurses need to think about how communication skills and expressions can make these older people understand them better.

Results also discussed the importance of support for family caregivers. Considering the basic responsibilities of family caregivers in caring for family members and the risks they face in doing so, community nurses should carefully assess their needs and the ability to provide care. Health professionals need to assess whether these caregivers can provide competent care without harming themselves and their families (Reinhard et al, 2008). When a nurse is the assessor of family caregivers, they need good communication skills, including the ability to listening, ability to explore facts, certain psychological knowledge, and a point of view of cultural diversity. Assessors should assess caregivers through their backgrounds, perceptions of care recipient's health and functional status, their own health status, individual time planning, and caregivers' values. (United Hospital Fund, 2008.)

Understanding basic nursing knowledge is a basic requirement for family caregivers. More guidance and information are needed for those family caregivers in China who have less care experience. Nurses are supposed to provide them with enough information and guidelines. Family caregivers need to know enough specific information about illness, medication, treatment, observation, Pain management, first aid and emergency contact information. This requires nurses to communicate effectively with clients and their family caregivers in order to understand their current situation and needs to develop cost-effective care plans. In addition, we believe that this is an important reason for developing community care in China. (Reinhard et al., 2008; Juan, 2017.)

Moreover, this literature review also addressed the mental health of family caregivers compared to previous studies. Long-term caregiving tends to lead to fatigue and stress among carers. Nurses can provide them with regular counselling. It is not only to provide effective information guidance but also to help them release the psychological burden. Studies have also pointed out that anger and depression management interventions can effectively reduce anger, hostility, and depression. This can effectively promote the mental health of family caregivers and improve their self-management and control. (Reinhard et al., Juan, 2017.)

In the past decade, population aging has become a concern in every country. China's aging population is also growing fast. At the same time, many older people suffer from various chronic diseases and different disabilities. Physical exams can help them screen for disease early and get treatment early, which can minimize the consequences of the disease. (Hsu et al, 2016.) Assessing the body's flexibility is an important part of older adults, because with age inevitably comes affected exercise and loss of balance. Physical mobility can be checked by several types of examinations that include a routine physical examination and laboratory testing procedures. (Ahire & Kulkarni, 2019.)

For some highly educated and health-conscious seniors, they tend to receive regular checkups to help them maintain a healthy state. In contrast, the poorly educated elderly, who suffer from a variety of illnesses, might be reluctant to be examined because they are unwilling to face the fact that they are sickly. In this case, the nurse

is responsible for encouraging the elderly to receive a physical examination. Nurses can go to an elderly person's home to give them a simple physical examination and to guide them to accept the physical examinations. (Hsu et al, 2016.)

The importance of exercise physical health and wellbeing for elderly people is testified by many studies. However, many elderly people are not well informed about how to do that safely and how to protect themselves during this process. There are many reasons why older adults are not willing to exercise, for instance, cognitive decline and physical function recede a lack of knowledge about exercise and how to a minimum the risk of falls. These reasons may affect the elderly person's motivation to exercise and moving. Nurses and other healthcare staff can play a key role in encouraging and motivating elder people to exercise. (Palmer, 2020.)

Some researchers recommend multi-component exercise-based interventions that combine physical and mental exercises that are proper intensive. Strength and resistance training, balance, mobility training and aerobic exercise should be involved in the physical exercises. The professional staff who can communicate and connect with the patient and use the proper methods and materials, taking into account the speed of initiation, the length of intervention, the encouragement of active lifestyles and enjoyable activities, should support these types of physical and mental exercises. (Booth et al, 2019.)

For some disabilities in older people, these disorders may be due not only to a deterioration in physical function but also to neurological problems, to a decline in concentration and mobility in older people, resulting in an inability to coordinate properly. This leads to limited mobility and increases the risk of falls. (Ahire & Kulkarni, 2019.) Cooperative exercise is important for this kind of older people. Coordinated exercise may be an important tool in community health promotion exercise programs to improve the ability of the elderly to move from all parts of the body. (Brach et.al, 2017.)

Research limitations indicate weaknesses in the study design that may affect the results and conclusions of the study. It is an obligation for researchers to present to the academic community the complete and honest limitations of the proposed

research (Ross, 2019). In this literature review, analyzed data was limited to articles published in the past ten years. Criteria of this research also excluded some useful studies. For example, we excluded excellent research literature on dietary intervention because the group they studied was composed of elderly people under the age of 65. Besides, we cannot get full access to some articles that we were interested in through reading their abstracts. The nursing interventions identified in this literature review were very limited and only classified into two categories. Later studies should study more innovative measures to meet growing demand.

Nurses, nursing students, family caregivers in the health promotion of elderly people who are physically disabled, can use the results of this literature review. Although the countries used in the reviewed literature are China, Jordan, Britain and America. This result can be used in China and other nations that have a similar context as China also.

A lot of group and individual experiments were found to be used in the data analysis. We recommend the experiments in the future could be designed to compare the difference between group exercise and individual exercise. Group exercise may not only help the elderly to prevent diseases and strengthen their physique but also benefit the mental health of the elderly. Nevertheless, individual exercise may be more suitable for older people who cannot get outside.

8. Conclusion

With the development of the aging population, it is crucial and necessary for nurses to promote physically disabled elderly people's health. Paying attention to mental health and using psychological assessment can effectively prevent depression for physical disabled elderly people. Imparting elderly people how to improve their self-efficacy and self-management ability could help improve their quality of life. In addition, regular physical examinations play an important role in preventing diseases. Exercise can not only prevent disease but also improve the physical function of the elderly who are already disabled.

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Appendix 1

No.	Author(s), Year, Country	Title	Aim(s) and Purpose	Participants, Sample size	Data collection and Analysis	Key results
1	Peters, M., Potter, C.M., Kelly, L. & Fitzpatrick, R. 2019 England	Self-efficacy and health-related quality of life: a cross-sectional study of primary care patients with multi-morbidity	to explore the relationship between self-efficacy and quality of life in primary care patients with multi-morbidity.	Adults diagnosed with one of the following 11 specific chronic diseases at least 12 months ago(N=848, The mean age of participants was 67.0)	Cross-sectional design using a questionnaire survey of primary care patients in England. Descriptive statistics, analysis of variance and linear regression analyses were conducted to examine the relationship between quality of life (dependent variable), self-efficacy, and demographic and disease-related variables.	Low quality of life for patients with multi-morbid primary care with lower self-efficacy and higher burden of disease
2.	Du, J., Shao, S., Jin, G., Qian, C., Xu, W. & Lu, X. 2017. China	Factors associated with health-related quality of life among family caregivers of disabled older adults	To investigate the HRQoL of Chinese family caregivers of the elderly with disabilities in Beijing and to explore the predictors of family caregivers' HRQoL.	800 primary family caregivers of disabled older adults from those same communities in Beijing. (n = 766)	A community-based cross-sectional study of caregivers in Dongcheng District of Beijing. Data collection from face-to-face interviews and And closed questionnaires. the variance component model and hierarchical multiple regression (HMR) analysis	The findings suggest that reducing the burden on caregivers can improve health-related quality of life. Besides, additional social support is important in decreasing the impact of caregiving on HRQoL.
3.	Almoman, FM. 2017 Jordan	The incidence of depression among residents of assisted living: prevalence and related risk factors	To recognize and estimate the prevalence of depression and its risk factors among residents of ALS in Jordan.	A national representative sample of 221 residents selected from all AL units across Jordan. N=221	Collect demographic information from the subjects and their files. Assessment of patients with GDS, MMSE, TAB, DASH The study data were saved and analyzed using the SPSS® software (version 20). Calculate the mean,	Medical professionals should cooperate in identifying the symptoms of depression in residents as early as possible in order to provide patients with the best combination treatment and avoid the long-term

					standard deviation, and frequency distribution of all study variables	impact of depression on their health
4.	Hui-Chuan Hsu, Wen-Chiung Chang 2016 China	Health, healthy lifestyles and health examinations among the older people in Taiwan	To examine the relationship between the general physical examinations and healthy lifestyle.	A random sample of individuals (aged >60 years) taken from the older population of Taiwan.	Data were taken from the 'Taiwanese Longitudinal Survey on Aging'. Generalised linear modelling was used to analyse data.	People with more chronic diseases More likely to get a health check, but The rate of change decreases with time. Those who exercise regularly are more likely to get a health check.
5.	Brach, J. S., Perera, S., Gilmore, S., VanSwearingen, J. M., Brodine, D., Nadkarni, N. K., & Ricci, E. 2017 USA	Effectiveness of a Timing and Coordination Group Exercise Program to Improve Mobility in Community-Dwelling Older Adults	The aim was designed to establish the effectiveness and explore the sustainability of the OTM group exercise program.	Those individuals living in independent facilities and senior housing, and attending community centers in the greater Pittsburgh, Pennsylvania, area.	The prespecified intention-to-treat analysis was used to the statistical analysis. Participant flow was summarized using a CONSORT diagram.	the On the Move group exercise program was more effective at improving mobility than a usual-care group exercise program,
6.	Hongbo Chen 2019 China	The effects of a home-based exercise intervention on elderly patients with knee osteoarthritis: a quasi-experimental study	The aim of this study was to evaluate the effectiveness of a home-based exercise intervention (HBEI) to reduce KOA symptoms and improve the physical functioning of elderly patients.	Elderly patients with KOA from four community centers in Beijing	The data were analyzed using SPSS version 23.0 (IBM Corporation, Armonk, NY, USA).	HBEI reduced pain intensity and joint stiffness, increased the muscle strength of the lower limbs, balance, and mobility, and improved the quality of life of elderly people with KOA living in the community.

Appendix 2 Data analysis process

Raw data	Subcategory	Main Category
<p>“Unfortunately, there is currently a lack of LTC insurance, and thus medical and nursing services for disabled older adults living at home are severely limited.”(Juan et al.,2017.)</p>	<p>Support for self-management</p>	<p>Support the elderly and their family caregivers</p>
<p>“The median number of caregiving hours per day for the disabled older adult was 12, ranging from 1 to 24. The mean SSRS score was 31.3 (SD 6.9), indicating that caregivers experienced low levels of social support.” (Juan et al.,2017.)</p>	<p>Support for self-management</p>	<p>Support the elderly and their family caregivers</p>
<p>“As self-efficacy is modifiable, patients with multi-morbidity could experience better quality of life, and services may benefit from a reduction in use through effective self-management support by health care professionals.” (Peters et al., 2019.)</p>	<p>Support for self-management</p>	<p>Support the elderly and their family caregivers</p>
<p>On this basis, the results of our study found assisted living conditions themselves to be a potential risk factor in the levels of depression experienced by residents.....As expected, a significant number of participants in the study sample reported symptoms of</p>	<p>Mental support</p>	<p>Support the elderly and their family caregivers</p>

depression. (Almomani,2017)		
Exercise therapy, which is one of the most important non-pharmacological treatments, is a safe and low-cost method for treating walking difficulty that has been shown to delay disease progression, relieve pain, and improve knee function. (Chen et al., 2019)	Exercise	Physical support
Preventive health examinations are recommended by health professionals . Health examinations are expected to provide early detection of potential health problems and to initiate early interventions or treatment that may reduce the impact and severity of those problems.(Hsu et al.,2016)	Physical examination	Physical support
Walking difficulty is a common, costly condition in older adults. Walking difficulty contributes to loss of independence, higher rates of morbidity, and increased mortality. Exercise is beneficial to physical and mental health and may prevent walking difficulty. (Jennifer S. et al. 2017)	Exercise	Physical support