

Interdisciplinary management care for older person; A Scoping Review of Randomized Control Trial Study

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Conflicts of Interest

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KEYWORDS

*interdisciplinary
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ABSTRACT

Introduction: The decrease of function capacity elderly and various comorbidities in older person related with elderly quality of life. Interdisciplinary is an approach to solve health problem involving various professions, however, limited interdisciplinary evidence review related to the life quality of older person. **Objective:** identified types of interdisciplinary intervention for older person. **Method:** Scoping review study with four databases, including Medline, EBSCOhost, PubMed, Science Direct. The assessment of the article quality was conducted using Joanna Briggs Institute. **Results:** The search results contained 976 studies, with 194 duplicates, and 782 were selected according to the literature study problem. Forty-six articles were completely scanned; from the total number screened, there were 10 articles that fulfilled the criteria to be reviewed. Two main themes were found 1) The type of interventions for elderly's quality of life; a) Homebased geriatric interdisciplinary rehabilitation, b) interdisciplinary interprofessional collaboration, c) Multidisciplinary integrated care, d) Home visit. 2) Obstacles in implementing an interdisciplinary approach; a) Patient awareness and the function of family members, b) Health factors of the elderly people. **Conclusion:** Interdisciplinary approaches have positive impact for older person with various health problems. Interdisciplinary approach recommended in performing care to the elderly with their various health problems, however specific elderly health problem with types of the intervention are recommended for future work.

INTRODUCTION

Aging related with irreversible pathophysiological process [1]. Degenerative process in aging were decreased biological, psychological, and social status with various health problems. [2]. Health status decreased due to the degenerative process was reported has affected the elderly's quality of life [3]. Quality of life is physical health, psychological condition, freedom level, social relation, self-confidence and relationships [4, 5]. Quality of life decreased caused

by some diseases, decreasing economic resources, a pressure environment, and the decrease of physical health [6, 7]. Study was reported most elderly experienced loneliness, socio-economic shortcoming, and degenerative diseases such as cardiovascular, rheumatic, and cataract which causes decrease in productivity and affects social life [1, 8], it is imply increased the health problem in aging process and the specific health intervention are needed.

The effective intervention approaches are needed in order to maintain elderly life quality [9]. Multidisciplinary intervention approach was improving frailty in elderly patients [3]. Multidisciplinary intervention was reported effectively cured and repaired the frailty of the elderly patients [10]. Another study showed that multidisciplinary intervention has been proven to improve activities, reduced anxiety level and depression status, fall incident, readmission rates, and increased quality of life [11]. In addition, comprehensive geriatrics-based multidisciplinary services are superior to conventional services in reducing the risk of death or institutionalization and increasing functional capacity [12].

Home rehabilitation program with intradisciplinary was reported improving recovery and independence of daily life activities in elderly with hip fracture [8]. In order to optimize the recovery, the rehabilitation should cover the orthogeriatric care model with an interdisciplinary team [13, 14]. However, there was limited specific evidence explained the interdisciplinary care approach in improve elderly quality of life, therefore this review was performed to identified the interdisciplinary program approach related the elderly quality of life.

METHODS

Data Sources

The scoping review question; Is interdisciplinary improve the quality of life of the *older person*? (Table 1). Four databases were used including Medline, EBSCOhost, PubMed, and Science Direct. The preferred reporting item for systematic reviews and Meta-analysis (PRISMA) Flowchart were used in study selection. Relevant article the interdisciplinary topic in order to increase the life quality of the elderly, interdisciplinary, multidisciplinary, health improvement, quality of life, elderly, older people, elderly people were identified.

Included and Excluded Studies

The inclusion criteria; (a) Article with Interdisciplinary or Multidisciplinary towards the life quality of the elderly; (b) Randomized controlled trial Study; (c) conducted for studies published 2018 to 2023, (d) full-text article was available in English. The exclusion criteria were as follows: comments (such as blogs and electronic newspapers), reviews, letters, guidelines, and protocols.

Search Strategy

Keyword determined, by adding “OR”, “AND” that is suitable with the topic of ((((((interdisciplinary) OR (multidisciplinary)) OR (health improvement)) AND (quality of life)) AND (elderly)) OR (older people)) OR (elderly people). Information source item explains about the literature searching source was used.

Study Selection

Two researchers examined the article titles and abstracts for eligibility. Subsequently, the full texts of the potential studies were screened to determine final eligibility for inclusion in this review. Uncertainty concerning the inclusion of the studies was checked by a third researcher. In addition, reference lists of included articles were screened for eligible studies that were not found in the search.

Data Extraction

The first author extracted the data of the included studies, which were verified by a coauthor. Information was collected regarding the title of the study, year, authors, country, study design, study sample, outcomes, and the conclusion. (Table 1)

Quality of the study

The Joana Briggs Institute (JBI) were used for Quality of the included study. 10 articles passing the critical assessment process with the assessment of every question was in line with JBI assessment, the selected articles were of high quality.

RESULTS

The initial search identified 976 studies, of which 194 were duplicates and removed. The remaining 782 abstracts were screened. Of these, 46 full-text articles were deemed eligible for full-text review. 10 studies were included in the review (figure 1)

Characteristics of the Included Studies.

Characteristics of the Included Studies summarized in table 1. All study is Randomized control trial study, two were conducted in Sweden [8, 15], one study was conducted in Netherlands [16], one study was conducted in Norway [2], one study was conducted in United States of America [17]. Three study was conducted in Great Britain [18-20]. one study was conducted in Germany[21]. one study was conducted in China [22].

The type of interdisciplinary care

Two main themes were found 1) The type of interventions for elderly's quality of life; a) Homebased geriatric interdisciplinary rehabilitation [2, 8, 16, 18], b) interdisciplinary interprofessional collaboration[20, 22], c) Multidisciplinary integrated[19] care, d) Home visit [15]. In addition 2) Obstacles in implementing an interdisciplinary approach were found; a) Patient awareness and the function of family members[17, 18], b) Health factors of the elderly people[21, 22].

DISCUSSION

a. The type of interventions in older person's quality of life

1) Homebase geriatric interdisciplinary rehabilitation

Rehabilitation is a series of interventions designed to optimize the function and to reduce the disability individuals with health conditions in interacting with their environment [23]. Interdisciplinary rehabilitation could be a helpful approach in managing the complex problems that might be relevant to improve the elderly's life quality [24]. Homebase rehabilitation for the elderly without severe cognitive disorders were increased physical activity [25], reduced length of the hospitalized days [8] and increase autonomy and self-confidence in performing daily activities, in addition was reduced caregivers burden [26].

The results of a study in Sweden showed that geriatric interdisciplinary home rehabilitation for elderly individuals with hip fractures does not reduce the number of complications, readmissions, or days spent in the hospital after discharge compared with conventional geriatric care and rehabilitation [8]. Elderly individuals also included those having cognitive disorders and living in residential care facilities receiving interdisciplinary geriatric rehabilitation at home after femoral neck fractures were more likely to relapse than those receiving conventional geriatric care and rehabilitation [18].

Individual-centered, multidisciplinary rehabilitation programs were also considered feasible and beneficial for community-dwelling older adults with dementia [7]. It is because the rehabilitation puts the efforts to maximize the function, activities, and participation, and

not to mend, then the rehabilitation should be offered to the dementia patients even if this disease is neurodegenerative [27]. Besides, dementia patients seemed to have fewer access to rehabilitation in a clinical condition after an incident such as hip fracture or stroke compared to those without cognitive disorders [28].

Meanwhile, according to the study [8] early discharge in the elderly with bone fracture followed by geriatric interdisciplinary home rehabilitation resulted in restoration of independence in daily activities [8]. Hip fracture was a serious problem for elderly individuals with negative consequences to their mobility and the ability to do daily activities (Nordström [14]. In order to optimize the recovery, homebase rehabilitation should cover the orthogeriatric treatment model with an interdisciplinary team, using a comprehensive geriatric assessment [29].

2) *Interdisciplinary interprofessional collaboration*

Interdisciplinary interprofessional collaboration practice was one of the promising interventions in elderly care living in communities. Interdisciplinary interprofessional collaboration involved the care from the doctor team or other professionals with various backgrounds that work with each other in providing a comprehensive, qualified, and effective service. Such elderly care practice could be the way to provide extensive support and coordination in doing elderly care remembering the complex needs of the health care for the elderly living in communities [30, 31].

Interdisciplinary interprofessional collaboration could improve the communication between health workers and other professionals related to the elderly care [20]. The communication and interaction between professionals that is in-depth, intense, and focused on various problems related to patients will give good results. Clear and effective communication between professionals and also with the patients and their family were the essential part in the care. Due to that, all professionals needed to understand the care plan and delivered/explained it to the patients and family [32].

The elderly conditions that are various and complex needed coordination and collaboration between professionals. The collaboration between professionals in various service sectors or organizations was one of the strategies in optimizing the human resources, improving the quality and safety, as well as the inter-sector liaison [30]. The collaboration and coordination between professionals will ease in accommodating the treatment/care plan in the elderly. Interdisciplinary interprofessional coordination and collaboration could also prevent bad things in the health service for example to prevent or minimize a duplication or clinical error and to improve the quality of the service [32].

Research conducted in the Philippines mentioned that the majority of the interdisciplinary interprofessional collaboration in geriatric care were not executed maximally so that such collaboration was ineffective. The lack of collaboration between professionals in such meetings may be due to the communication between the professionals involved. The majority of the communication was only used for administrative matters and only briefly discusses the needs of the elderly. Therefore, the implementation of the interprofessional coordination and collaboration should be inclusively and comprehensively performed in order to achieve the maximal results [30].

Interdisciplinary interprofessional collaboration gave good results to the elderly's health in the communities. Interdisciplinary interprofessional collaboration has proven to be effective and safe in the elderly care. Interdisciplinary interprofessional collaboration also reduced the rate of repeat visits of elderly people who have been allowed to go home to hospital and reduce/save elderly care costs [31]. Study showed interventions by interdisciplinary interprofessional involving general practitioners, physiotherapists and service providers with counselling services prevent physical decline and mobility that can

have a negative impact on health. The good physical and mobility function of the elderly will contribute in maintaining independence so that the need and cost of elderly care will be reduced and allow for more participation and a better quality of life [19]. Another research stated that comprehensive professional treatment affected the mental health of the elderly in communities. The elderly's mental health who was included in the intervention was more stable compared to the elderly who were given common treatment. The elderly's mental health who got common treatment tended to decline [16].

3) *Multidisciplinary integrated care*

Care or integrated care is a care managed and given on an ongoing basis including health promotion services, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care which are coordinated at various levels and service/care locations both within and outside the health sector in accordance with needs throughout the human life cycle. Care or integrated care was considered as a comprehensive multidisciplinary concept that includes engagement and collaboration across different health care organizations [33]. The approach that was often used in integrated care was by developing a multidisciplinary team. Multidisciplinary team was a combination of professionals in the fields of health and care to plan and coordinate with each other regarding the care to be provided. Professionals could exchange information, make decisions together, and planned an intervention according to the elderly's need, elderly got holistic care and better-quality service [34].

Integrated care programs for the elderly living in communities sometimes covered *Comprehensive Geriatric Assessment (CGA)* in order to improve the understanding about the needs and preference in performing elderly care [35]. CGA is a multidimensional interdisciplinary assessment to evaluate the medical, psychological and physical/functional problems of the elderly in order to determine the strategy or treatment plan and long-term care plan that are coordinated and integrated so that the health status of the elderly can improve [36]. Integrated multidisciplinary care programs for the elderly living in communities was the same as *Comprehensive Geriatric Assessment (CGA)* for the elderly living in communities. Such a care method could reduce the risk of unexpected/planned hospital admission. The reduction of hospitalizations could decrease the risk of functional decline in the elderly so that the elderly's life quality could be maintained. The elderly's health was prone to be worse, especially the decline of function during hospitalization that will affect the length of hospitalizations in the hospital and the nursing home as well as the increase of the social care costs [35].

Study showed elderly receiving integrated care for 2-4 weeks experienced well-being and quality of life improvement [37]. Another research conducted in Switzerland showed that the intervention of multidisciplinary integrated care improved the life quality more and the independent care activity (which covered common diet habit, diabetes diet and blood sugar test habit) compared to those receiving common care [38].

Integrated care service in the multidisciplinary team could reduce the decline of function, emergency room visits and hospitalizations in the elderly [39]. The use of CGA could increase the physical and cognitive function as well as to reduce the mortality rate and the hospitalizations were not only for the elderly in the hospital but also in the communities [40]. The previous research stated that the elderly patients with heart failure who were followed up by a cardiologist and geriatrician were more effective in reducing the risk of hospitalization than those who were followed up by a cardiologist alone [17].

4) Pharmacy-based interdisciplinary

Pharmacy-based interdisciplinary was a series of pharmacist interdisciplinary intervention in pharmaceutical services in order to increase compliance with medication [2]. Such interventions required a very often and structure visitation to the community's pharmacy [41]. Compared to the common care, pharmacy-based interdisciplinary at least only increasing adherence to treatment but also suggested long-term clinical improvements in improving quality of life related to heart failure (HF). Pharmacy-based interdisciplinary intervention increased the average towards the heart failure treatment with adhered patients' proportion more than 80%, intervention also reduced cardiovascular hospitalizations and, increased the quality of life compared to the group or patients receiving usual care [2]

Pharmacy-based interdisciplinary intervention consisted of two major components namely medication review and continuous intervention. Medication review in the community's pharmacy basically aimed to produce an integrated/consolidated treatment plan. Medication reviews covered preparation of the patient's overall medication (based on the doctor's medication list and interview/question and answer with the patient at the pharmacy), Checking Drug-Related Problems (DRP) (drug interactions and multiple medications using checklists), as well as discussion with the related doctor towards the problem and risks that might happen. Continuous intervention was a bi-weekly routine visit to the pharmacy. Besides being given medications, several treatments were also performed such as measuring the blood pressure and pulse, discussion and counselling related to the treatment, adherence, signs and symptoms of heart decompensation as well as the renewal treatment plan [41].

Elderly patients with polypharmacy were potential to experience DRP such as double medications, drug interaction, adverse drug reactions, or non-compliance [42]. Interdisciplinary efforts involving pharmacists could prevent the possibility of the occurrence of adverse drug reactions and therapeutic failure due to DRP. The intervention led by the pharmacists or pharmacy-based to the Chronic Heart Failure (CHF) patient could reduce the hospitalizations. Such attempts were very successful or became the most successful effort if the pharmacists became the member of the multidisciplinary team [41]. The treatment performed by the interdisciplinary team including the pharmacists increased the health compared to the treatment provided by the health professional performed separately. Interdisciplinary team care including such pharmacies could optimize chronic patient care. The collaboration between the pharmacists and the other professionals who were responsible in providing the care to the chronic patient could solve the related treatment to the chronic patient as the treatment optimization [43].

5) Home visit program

Home care efforts or home-based geriatric services supported the elderly living in the communities to maximize their independence when they were in their home environment. Home visit or home care became one of the solutions of the problems that are often overlooked and under-treated, especially elderly people suffering from dementia, is the ability to carry out daily self-care activities and maintain independence. Elderly especially those suffering from dementia, tended to experience difficulties in preparing food independently, managing finances, making phone calls, shopping, taking medication, dressing, bathing or going to the toilet. Such care practice will help them in recognizing and maximizing the capacity and the ability of the elderly in the daily activities either physical, social or community [18].

The efforts to maintain independence and autonomy in the elderly care was often characterized as an effort to maintain the quality of life of the elderly [44]. Home care service should be based on the situation or the elderly's needs [45]. The elderly needs referred above

could be in the form of physical or psychological needs, social and independence support as well as health behavior and contextual environment [44]. In such care there were social mechanisms such as interaction, participation, belief, and adaptation in order to maintain the life quality of the elderly [45].

Fifty percent of the elderly suffering from dementia used home care service when they were no longer able to do their daily activities independently. Home care service was based on the elderly's needs, such as service could be in the form of assistance in doing the chores, personal care or other social activities [46]. Another research conducted in Australia showed that home care could improve the ability to do self-care and the skill to live independently, life quality improvement, functional capacity and self-confident improvement in doing the activities such care efforts could also reduce the possibility of depression and to save the long-term health care costs [18].

Obstacles in implementing an interdisciplinary approach

1) Patient awareness and the function of family member

Patients who were hospitalized were individuals having health problems, so it was possible to experience difficulties in fulfilling their personal needs including to maintain self-safety, therefore, the patients needed support from the family to take care of them and prevent injury. Patient Safety or the safety of the patients was a system which made patient care in hospitals safer. This system prevented injury caused by the error due to the performance of a measure or performing the unnecessary measure [47]. Through the involvement of the patient's family, it could increase the patients' safety level when they were in the health service unit. The patients and their family have the rights to obtain the information about the plan and results of the service including the possibility of the occurrence of an incident that could result in injury to the patient. The safety in providing services can be improved by involving patients and families in the service process [48].

Family played a role in determining the way or care needed by the patients in the hospital. The success of the nurse in the hospital will be in vain if it is not being continued at home which then causes the patients to be hospitalized again (relapse). The role of the family in the beginning of hospitalization will improve the family's ability to take care of the patients at home so the patient will not relapse or it could be prevented [49]. The function of the family is one of the essential factors in supporting the improvement of the life quality of the patients with chronic disease. Having a good quality of life will reduce the risk of complications that could worsen the condition. Life quality is an individual's perception towards their position in life according to the cultural context and value system where they live, as well as in the relation with hope, aim, standard implemented by those individuals [50].

Family is a part of the treatment and care team. Thus, the role of the family is important to monitor the needs of the patients from the nurse's report or if necessary to do direct communication. family is a part of the first and main support system for the individual [51]. A good family support could be the source of motivation, passion, and protection towards the dangerous risks to the patients. Family is the closest unit to the patient, and the main nurse for the patients. Family played a role in determining the way or care needed by the patients in the hospital. The success of the nurse in the hospital will be in vain if it is not being helped by the family who played a role as a partner in the health service [52].

2) Health factors of the older person

The increase in population, especially the elderly, will have an impact on various aspects of life, both elderly themselves, families, communities and the government. The essential economic implication from the increase in numbers of elderly is the increase of old age ratio dependency [53]. Old age dependency is caused by the decline in physical, psychological, and social condition of the elderly that could be described in three stages, namely impairment, functional limitations, disability and handicap that will be experienced along with the declining process due to ageing process [54].

The things to consider for the elderly to maintain their health is immunization to prevent disease, and early detection including screening. Rehabilitative health efforts were also given as the follow up of the curative service for the health recovery of the elderly, such as physiotherapy, psychotherapy, and medications [55]. Disease prevention is also important for the elderly. Individuals entering elderly phase have higher risks towards particular diseases such as cardiovascular, diabetes, and stroke. Therefore, elderly need to avoid risk factors such as smoking, drinking alcohol, and eating unhealthy food. Proper care also needs to be considered in the elderly [56]. Individuals entering elderly phase need to check their health continuously and undergo routine health checking, such as health checking of the eyes, teeth, and ears. Besides, proper health care should be performed in the particular health condition that needs medical care. Mental health needs to be considered as well in the elderly. The elderly need to pay attention to the signs of depression and look for help if needed. The elderly who are physically and mentally healthy are able to improve their life quality and prolong their life expectancy. The health of the elderly is important to support optimal life quality in the older age. Healthy lifestyle, disease prevention, and proper care could help in maintaining the health of the elderly [53].

Limitations: the various types of interdisciplinary study and heterogenous of older person health problem could be have difference treatment and outcomes may have influenced the strong conclusion.

CONCLUSION

Healthcare providers should develop strategies and interventions for face increasing numbers of older persons and degenerative problem. Interdisciplinary have positive impact for elderly quality of life with various health problems. Interdisciplinary approach recommended in performing care to the elderly with their various health problems, however specific elderly health problem with types of the intervention are recommended for future work.

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