

# Education of Formal Caregivers as a Predictor of the Quality of Institutional Care for Dementia Sufferers

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Original Article

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## Abstract:

**Introduction:** Due to demographic trends, caring for dementia sufferers is the subject of research by multidisciplinary research teams. In this paper, we declare the importance of increasing the knowledge, skills and competence of formal caregivers as a predictor of the quality of institutional care provided for dementia sufferers.

**Material and methods:** In the presented study, we determine the subjective assessment of the level of theoretical knowledge and practical skills of formal caregivers in relation to the care of dementia sufferers. The research involved 46 formal caregivers in two specialist facilities that provide health and social care to dementia sufferers. In order to meet the objectives, we

have chosen a quantitative method using a non-standard questionnaire of our own design.

**Results:** We found that the questionnaire respondents positively assess their previous knowledge and practical skills in providing nursing care to dementia sufferers, yet declare an interest in continuing education.

**Conclusion:** Preparation and implementation of continuing education of formal caregivers is the active part played by an educational institution in relation to the improvement of the quality of care provided to dementia sufferers and at the same time it is evidence of the link between theory and practice in professionally oriented study programs reflecting the currently expected demographic trends in society.

## Introduction

Dementia is increasingly targeted by policy-makers, civic organizations and multidisciplinary researchers (Wu et al., 2017). The number of people living with dementia doubles around every five years. The prevalence is higher in women than in men (Cao et al., 2020).

Dementia is a complex disease that requires a response to the biomedical, psychosocial and ethical challenges it poses. The disease requires that human resources workers in the health sector be equipped with knowledge and skills to support people living with dementia. The impact of dementia is felt at all levels of society. The stigma associated with dementia is significant and creates additional barriers to access to high-quality care and services provided. Human-centered care approaches and cooperation between the person, the person's family and the health care team are essential. These approaches require adequate staffing, education and organizational support.

Key areas in the care system for dementia sufferers are: the health system; the education and training of healthcare providers; partners in care; the integration of health and social support. Based on the identification of these areas (Boscart, McNeill, Grinspun 2019) discusses professional health and social policy interventions.

The aim of the multidisciplinary researchers is to contribute to improving the quality of care provided for dementia sufferers, with a preference for home care, and to look for ways to maintain and support it for as long as possible.

If we want to maintain and develop home care, adequate efforts are needed to support home

care. The cornerstones of home care are: well organized home care services; sufficient and suitable daily programs corresponding to age and culture. Currently, these services are distributed with limited availability. Supportive housing is an example approaching the ideal of caring for dementia sufferers.

Among the current challenges affecting the housing of people with dementia are: insufficient resources; a lack of supportive housing and assisted living; financial constraints; vulnerability and limited availability of services (Boscart, McNeill, Grinspun 2019).

The social scale of the problem of caring for dementia sufferers relates to the economic and sociological aspects. According to a study conducted by Joling et al. (2020) the median time from diagnosis to institutionalization and to death in people with dementia was 3.9 and 5.0 years, respectively. Older age and home care are the strongest predictors of shorter time till institutional care. Such data helps patients, relatives and policy makers understand the likely trajectories of care (Joling et al., 2020).

Half of people with dementia in high-income countries benefit from institutional care and more than two thirds of the population of facilities or homes suffer from dementia. Less than half of this population reports a good quality of life, and most older people are concerned about the prospect of institutional care. The most common reasons for institutionalization are worsening symptoms of dementia and the burden on caregivers from providing care at home. Delaying the institutionalization of the sick requires a systematic approach, focusing on slowing the progression of the disease, educating caregivers and pro-

moting care in the home family environment (Toot et al., 2017).

Due to the progression of the disease and the difficulty of caring for dementia sufferers, institutional care is a necessity in several cases. However, this means that we care about the high quality of services provided in an institutional setting too, which is reflected in the quality of life of clients and in the satisfaction of sufferers' family members with the services provided. Patients' quality of life is an important indicator of care when it comes to nursing or social work. In Slovakia, quality of services is a priority in the context of long-term care (Hudáková et al., 2017).

Increasing the quality of institutional care can be viewed from several perspectives. Our focus is on the care provided for dementia sufferers in an institutional setting. The current limits of health and social care in Slovakia require a search for options and solutions that we can implement and fulfil to improve the quality of care for dementia sufferers. Our proactive approach is aimed at increasing the knowledge, skills and competence of formal caregivers who provide nursing care to dementia sufferers in an institutional setting.

Developing the skills and attitudes of the team, education and support contribute to improving the quality of institutional care for the dementia patient (Siewert et al., 2020).

The National Research Summit on Care for Dementia Sufferers was supported by the U.S. Department of Health and Social Services and the Foundation for the National Institutes of Health, with private sector support. The task force prepared proposals to improve care for dementia sufferers and to improve the quality of care and support for individuals caring for those with dementia. The second objective is to accelerate the development, evaluation, implementation and dissemination of evidence-based services. The education and training of nursing teams was considered to be crucial (Weiss et al., 2020).

## Objective of the research

In order to improve the quality of the current institutional care provided for dementia sufferers, we wanted to make a subjective assessment of the level of theoretical knowledge, practical and communication skills of formal caregivers in relation to caring for dementia sufferers and, on the

basis of the data obtained, to prepare an educational program for increasing their knowledge, skills and competence in caring for dementia sufferers. Awareness of the need for continuing education is an important starting point for determining the design of caregivers' education. If caregivers did not need more education, we would have to focus on motivation and attracting interest in continuing education in the care of people with dementia as a first step.

## Method

### Sample

The choice of respondents was deliberate. Respondents were selected on the basis of availability and benefit. The research sample consisted of formal caregivers caring for dementia patients in a specialist facility. The reason for the selection of the research sample was not only the collection of data, but also the implementation of practical outputs and the education of formal caregivers. Specialized facilities have been in operation for a short time (1-4 years), and therefore it is appropriate to become involved in shaping the personnel structure and stabilizing the quality of the care provided, which is necessarily related to continuing education. The group of respondents consisted of 46 formal caregivers from two specialized facilities. The average age of respondents was  $40.72 \pm 12.06$  years.

### Course of research

Questionnaires were administered online in February and March 2021. Despite the challenging period marked by the Covid-19 pandemic, especially in facilities providing social services to clients, respondents expressed an interest in participating in the study.

### Tools

To meet the goals, we chose a quantitative method in the form of a non-standard questionnaire of our own design.

### Statistical preparation

We checked the set hypotheses at  $\alpha = 0.05$ , i.e. 95% probability. The result is a p-value. The basic test for verifying qualitative data from the questionnaire was the chi-squared test. The second statistical method we used to verify hypothe-

ses was the Kruskal-Wallis test. We used Cronbach's alpha standardized coefficient to verify reliability.

## Results

Continuing education is based on the assumption that education is an essential part of the process if we want to move forward and develop. Awareness of the need to learn is based on self-reflection and understanding. If we don't have the need to learn and develop, it is necessary to intervene in this process and positively influence the formation of subjective attitudes in relation to the need to expand knowledge, skills and competences. Therefore, our intention was to discover how formal caregivers of dementia sufferers in an institutional setting assessed their own level of theoretical knowledge and practical skills.

In the null hypothesis, we assumed that the subjective assessment of theoretical knowledge relating to care for dementia sufferers did not depend on educational attainment. We divided the hypothesis one into two separate calculations, as it is not possible to mix the obtained data.

Null hypothesis 1: There is no statistically significant relationship between the subjective assessment of theoretical knowledge and educational attainment.  $H_0: \mu = \mu_0$

Alternative hypothesis 1: There is a statistically significant relationship between the subjective assessment of theoretical knowledge and educational attainment.  $H_A: \mu \neq \mu_0$

To verify the established hypothesis, we used a test suitable for qualitative data, the chi-squared

test. The results of the test are given in Table 1.

Caregivers rate their theoretical knowledge as sufficient. The level of theoretical knowledge among respondents caring for seniors is statistically dependent on educational attainment and the result is not just a matter of chance.

The results given in Table 1 show that the calculated chi-squared value ( $\chi^2 = 14.33$ ) is greater than the critical chi-squared value for 6 degrees of freedom  $\chi^2(0.05)(6) = 12.59$  and at the same time the calculated p-value (0.03) is less than the specified materiality level ( $\alpha=0.05$ ), so we reject the null hypothesis and accept the alternative hypothesis in which we hypothesized that "*there is a statistically significant relationship between the subjective assessment of theoretical knowledge and educational attainment*".

In the second hypothesis, we hypothesized that we would find a statistically significant difference in the subjective assessment of practical skills among respondents caring for seniors based on educational attainment.

Null hypothesis 2: There is no statistically significant relationship between the subjective assessment of practical skills and educational attainment.

$H_0: \mu = \mu_0$

Alternative hypothesis 2: There is a statistically significant relationship between the subjective assessment of practical skills and educational attainment. To verify this part of the hypothesis, we used the Kruskal-Wallis non-parametric method, which is suitable for calculating multiple independent variables. In our case, these are three variables within educational attainment.

**Table 1** Differences in the subjective assessment of theoretical knowledge depending on educational attainment as established by the chi-squared test.

$\chi^2$	14.33
$ x $	12.59
Df	6
p-value	0.03

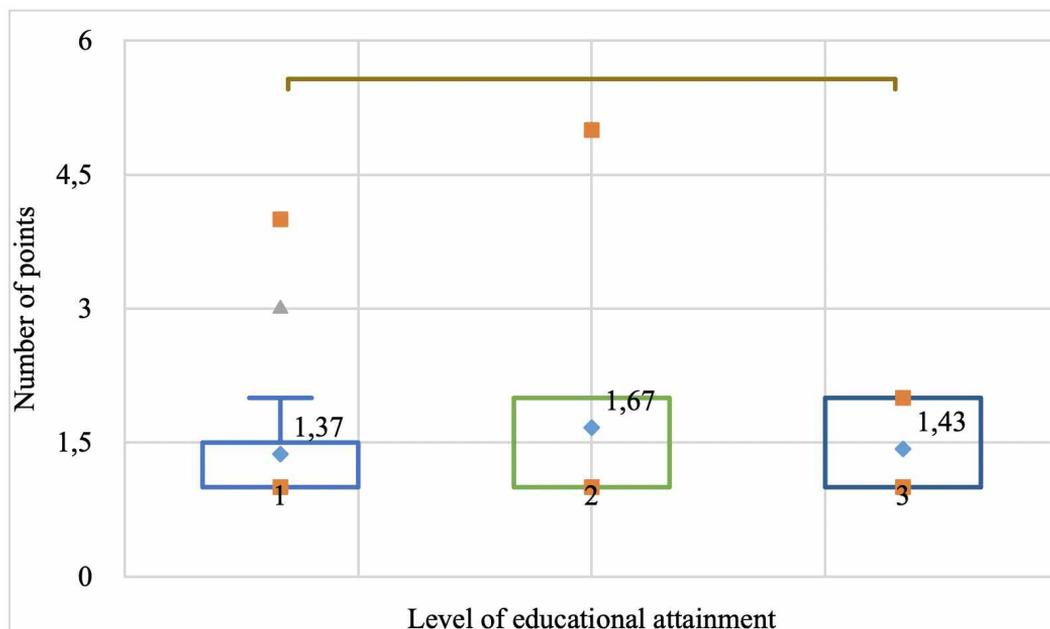
**Legend:**  $\chi^2$ : the calculated value of the chi-squared test;  
 $|x|$ : critical value of chi-squared distribution;  
 df – degrees of freedom at the required level of significance according to statistical tables; p-value – calculated p-value;

**Table 2** Kruskal-Wallis Test to Verify Hypothesis 2 Depending on Educational Attainment (N=46)

K	1.07
k	5.99
Df	2
p-value	0.59

**Legend:** K – the calculated parameter for the Kruskal-Wallis test;  
 $|K|$  - the critical value of the test; df – degrees of freedom; p-value - the result of the test.

**Figure 1** Comparison of the average score of the level of practical skills when caring for clients, depending on educational attainment



On the basis of the results given in Table 2 and shown in Graph 1, the calculated K test value (1.07) is less than the critical value of the test at 2 degrees of freedom (5.99) and the calculated p-value (0.59) is greater than the specified significance level ( $\alpha=0.05$ ). Based on the rule that a greater number of points means a worse rating, Graph 1 shows that the best average was achieved by respondents who had taken a 230-hour caregivers' course (1.37). The worst, i.e. the highest average, was achieved by respondents who were graduates of a healthcare high school.

In accordance with the established rules with regard to the test result, we can adopt the null hypothesis in which we assumed that *“there is no statistically significant relationship between the subjective assessment of practical skills and educational attainment”*, which implies that the level of practical skills in respondents when caring for clients is statistically independent of educational attainment and the result is only a matter of chance.

## Discussion

The level of theoretical knowledge and practical skills of professional staff is a guarantee of the quality of the services provided in assisting

professions, and it is a requirement for the desired result.

Standardized measuring tools can be used to assess caregivers' knowledge. The tools developed by the authors may be more relevant and save time (Resciniti et al., 2020).

In our local research, we found that respondents rate their theoretical knowledge based on their educational attainment as sufficient. In terms of the quality of care provided, it would be desirable to employ caregivers who are graduates of secondary medical schools. The position of caregiver is not financially attractive enough for the provider to have a choice of potential candidates, although in Slovakia there are significant regional differences in demand for this job. In view of this, establishments are forced to accept a minimum standard of caregiver education and this is the 230-hour care course provided by accredited educational institutions and organizations. It is pleasing to find that, despite their positive assessment of their own knowledge, respondents are interested in supplementing it.

As regards the respondents' assessment of their practical skills, our findings show that up to 90% of those surveyed have suitable practical skills, but are also interested in continuing edu-

cation in this area. Formal caregivers cover gaps in knowledge and practical skills are compensated by consulting nurses responsible for the healthcare provided in an institutional setting.

Nursing is the largest regulated workforce in the health sector and nurses are deployed in all sectors of the health system. The gerontological content in the education of nurses has long been considered insufficient. Better prepared nurses can have a significant impact on the quality of nursing care provided. In the context of caring for dementia sufferers, a move away from the medical model to the social model of care is needed, optimizing the quality of life of dementia sufferers (Boscart, McNeill, Grinspun 2019).

From research on predictors of care quality carried out by the German authors Donath, Luttenberger, Grasselova, which involved 404 caregivers for dementia sufferers, it is known that the most common wish of caregivers is practical teaching with subsequent demonstrations in the field of caregiving (Donath, Luttenberger, Grasselova 2009).

In Tokyo, research was carried out involving 83 outpatient dementia patients and 47 caregivers who were enrolled in an educational program. 36 caregivers were included in the control group. Caregivers were assessed for depression, stress and quality of life. Evaluations were performed at the start of the study and after 3 months. Caregivers from the educational program group gave lectures on the symptoms and progression of dementia, symptom management, use of social resources, etc. After 3 months, the prevalence of symptoms of depression in the educational program group had decreased significantly from 36% to 17%, while in the control group they had increased significantly from 22% to 50%. Depression and stress improved significantly in the educational program group, while in the control group they significantly worsened. With these results, we would like to demonstrate the importance of education for caregivers caring for clients with dementia (Terayama et al., 2018).

Caring for people with dementia is a significant burden for caregivers, which can lead to depression and anxiety as physical signs of overload. An Australian study has shown that non-formal caregiver education programs can delay patient institutionalization, reduce mortality, mental morbidity in caregivers and ultimately reduce

healthcare costs (Birkenhager-Gillesse et al., 2018).

The most common reason for institutionalizing a dementia patient is the enormous burden on informal caregivers at home. Educational programs and psychotherapy in combination with counseling have the strongest effects on eliminating the burden on caregivers (Cheng et al., Cheng et al., Cheng et al., 2020).

Due to the specificities of the care provided and the specific needs of specific clients, the employer can support the education of formal caregivers according to current needs and possibilities. In Slovakia, Act # 448/2008 on Social Services regulates education in social services and accreditation for the implementation of educational programs. Section 84 of the Act regulates qualifications and the continuing education of workers in social services, but no continuing education is compulsory for caregivers. Nurses, doctors, medical educators, psychologists and physiotherapists have a duty to undergo continuing education. The employer is obliged to create conditions for the continuing education of employees (Cunderlikova, 2019).

Based on these facts, our intention is to contribute to the knowledge of professional staff and to prepare a basis for the development of continuing education in a particular facility. Based on knowledge and experience and research on the data gathered, we have prepared an educational plan for formal caregivers. We focused on the knowledge, skills and competence of caregivers in the area of communication with seniors, the characteristics of dementia, the activation of the sick, the management of problem behaviors, the prevention of complications from immobility.

### **In educating caregivers, we will use the following methods:**

Methods of education in the performance of work – they are used every day in practice as part of the educational program – coaching, mentoring, rotation of work, etc. In our case, this method can be used by a nurse working in a specialized facility, who will be a mentor for caregivers with a focus on practical demonstrations.

Methods used at the workplace. The theoretical basis for care for patients with dementia according to the prepared educational plan will be prepared by the educational institution: Depart-

ment of Nursing of the Faculty of Health Care Professions of Presov University in Presov as part of the solution of the project VEGA # 1/0433/20 entitled: Factors of formal and informal care in the long-term care system.

In the current epidemiological situation, group education is limited, but this cannot be an obstacle to continuing education, so we are committed to using virtual reality, which can be an effective tool in the preparation of caregivers with dementia. The studies carried out so far on the efficiency of the education of caregivers using virtual reality show, among other things, improvement in the empathy and competence of caregivers (Hirt, Beer 2020).

Given the growing number of people with dementia, we can anticipate increasing interest from caregivers in education and support in the care of dementia sufferers. One option is online courses, which can fulfil this need. Online learning is more accessible, flexible and usually at no cost (Poole, Davis, Robinson 2020).

On-line learning is proving effective with a large number of students, but the complex nature of the problem requires a multidisciplinary approach and a combination of in-person and distance learning (Longhini et al., 2021).

## Conclusion

Continuing education of formal caregivers and increasing their professional knowledge is one of the possibilities for how to improve the quality of institutional care provided for dementia sufferers, while at the same time contributing to the elimination of the enormous psychological and physical burden on caregivers. In view of current demographic developments, the requirements for caring for dementia sufferers will be the subject of further research by multidisciplinary researchers.

## Conflict of interest

There was no conflict of interest in this study.

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*Factors of formal and informal care in the system of long-term care.*

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