

REVIEW

**by Prof. Dr. Silviya Aleksandrova-Yankulovska, MD, PhD, DSc,
Head of the „Public Health Sciences“ Department
at the Medical University of Pleven
of the dissertation of Donka Panayotova Nikolova
on "Rehabilitation Care for Overcoming Loneliness in Elderly People"**

By Order № P-109-482 / 18.11.2021 of the Rector of the Medical University “Prof. Dr. P. Stoyanov”- Varna on the basis of Protocol № 173 / 09.11.2021 of the Faculty Council of the Faculty of Public Health I was appointed a member of the scientific jury under the procedure for obtaining the educational and scientific degree PhD of Donka Panayotova Nikolova in the field of higher education 7. Healthcare and sports, professional field 7.4. Public health, scientific specialty "Health Care Management". At the first absentee meeting of the scientific jury I was appointed a reviewer.

Brief data on career development and qualifications

Donka Panayotova Nikolova has a multidisciplinary qualification and extensive professional experience.

In 1989 she graduated from the Institute for Health Personnel Training "Dr. P. Beshev" - Pleven, majoring in "Rehabilitator". Since May 1989 she has been working successively as a rehabilitator in a physical therapy salon in the Physiotherapy Department of the 5th Polyclinic - Varna; Sanatorium "Sana" of the General Directorate of Construction Troops in the resort Druzhba - Varna; Medical and Psychological Center, VFU "Chernorizets Hrabar".

In 2006 she graduated with a bachelor's degree in Psychology and in 2007 with a master's degree in Applied Psychology at Varna Free University "Chernorizets Hrabar" - Varna, in connection with which since 01.07.2011 she has been working as a psychologist at the Social Rehabilitation and Integration for Children with Special Educational Needs "Joy" Center at the Foundation "Joy for Our Children" - Varna. From 01.11.2013 she also holds the position of Director of the same institution.

On March 25, 2015, Donka Nikolova began her academic development as an assistant professor at the Rehabilitator Training Sector at the Medical College of the Medical University - Varna. She conducts exercises in: kinesitherapy in internal medicine, kinesitherapy in surgery, kinesitherapy in geriatrics, kinesitherapy in rheumatology, therapeutic massage, zonotherapy and healing gymnastics.

In 2017 she graduated with a Bachelor's degree and in 2018 with a Master's degree in "Health Care Management" at the Medical University "Prof. Dr. Paraskev Stoyanov", and currently specializes in Public Health.

So far, the candidate has 15 participations in national and international forums and 28 full-text publications in Bulgarian and international scientific journals.

General characteristics of the dissertation

The dissertation has a total volume of 145 pages and is structured as follows:

- Introduction - 2 pages.
- Chapter I - Literature Review - 39 p.
- Chapter II - Purpose, tasks, material and methods - 11 p.
- Chapter III - Results and discussion - 74 p.
- Summary - 7 pages.

- Conclusions - 2 pages.
- Contributions - 1 p.
- Recommendations - 1 p.

The dissertation includes a total of 94 figures, 8 tables and 7 appendices

Relevance of the dissertation

The problem of loneliness and social exclusion of the Old people is particularly relevant in recent decades, which have been marked by an aging population. In the conditions of the KOVID pandemic, this problem was further aggravated in an unfavorable combination with the depletion of human resources for health and social care. The reasons for loneliness in adults, both internal and external, are outlined by the PhD student in the introduction, along with the possibilities for complex rehabilitation, aimed at the biological, mental and social side of the problem.

Evaluation of the structural parts of the dissertation

1) The Literature Review systematizes and analyzes 168 literary sources, of which 53 are in Cyrillic and 115 in Latin. There are seventeen Internet sources. The literature is contemporary, with 74.4% being sources from the last 20 years. Particularly impressive is the inclusion of sources from 2021, which shows that the PhD student until the last moment before the approbation has updated her literature. However, some of the sources are not precisely described and a different standard of description is used for the Latin and Cyrillic sources.

Donka Nikolova structures the literature review in 5 parts, covering: socio-demographic and health profile of elderly and old people; social services for elderly people; loneliness, social isolation and social communication in elderly and old people; practical approaches to dealing with loneliness; provision of rehabilitation care to users of the social service "Home for Old People".

The literature review represents 27% of the entire dissertation work, which generally complies with the recommended 1/3 volume for this section. The overview is concentrated and well balanced. The proposed 6 conclusions from the literature review reflect the most important moments in it and offer a rationale for the development of a complex methodology "From Past to Present".

2) Methodology and organization of the research

The aim of the dissertation project is to research and establish the impact of specific rehabilitation care to overcome / reduce the feeling of loneliness in elderly and old people by conducting an experiment. The experiment is not defined by type.

To achieve this goal, five tasks have been formulated, including: clarification of the socio-demographic profile of users of the social service "Home for the Old"; development of the above methodology and conducting an experiment on its application; assessment of the tested loneliness before and after the experiment. Logically, tasks 3 and 4 should swap places, ie. to evaluate the tested loneliness first before the experiment and then to conduct it.

Three hypotheses are defined, two of which are positive and one negative.

The research methodology is described in detail with a focus on the complex methodology "From Past to Present".

The empirical studies cover a total of 86 people, users of the social service "Home for Old People", divided equally on a random basis into experimental and control groups. As a potential shortcoming in the design of the research, I find the selection of participants from only one nursing

home, for which, however, there is no data on how it was chosen. Can we consider Home for Old People "Gergana" representative of similar such institutions in the country?

The research was approved by the Research Ethics Commission of Medical University - Varna.

The research was conducted in eight stages, which are described in Table 2 by period and accompanying tools. No more detailed information is provided on the tools in stage 1 - analysis of the specialized literature. It is not clear which "specialized publishing databases" were used and which keywords were searched. For both scales (loneliness rating scale and life satisfaction rating scale) it is good to give more information about how well they are established in practice (internationally and in our country), as well as whether they are validated for use in us (or specifically for the present research). Are there other scales for assessing loneliness and life satisfaction and if so, why were the UCLA Loneliness Scale and SWLS Diener chosen?

The information in Annex 4 may be better adapted for the purposes of informed consent. I find it unnecessary to provide information to participants about international authors who publish on improving cognitive functions (the term itself should be replaced by common Bulgarian), improving mood, improving communication and more. Assurance must be added that the person's refusal to participate will not affect his or her care and that the person is free to withdraw his or her consent at any time..

It is not clear why the toolkit describes documents that are standardly filled in and contained in the health file of social service users (individual care plan, needs assessment, occupational therapy sheet) and are not created specifically for the purposes of this research work.

The sociological research methods used include documentary and survey methods. No questionnaire was proposed for the documentary method, but the PhD student has made a short list of the main research topics.

The scales for assessing loneliness and life satisfaction, I think, should be separated as a separate group of methods.

3) Results and discussion

The results are presented in three parts:

3.1. Socio-demographic and health profile of the surveyed persons. The study involved 68.6% of women and 31.4% of men with a mean age of 79 years. The largest (54.7%) is the share of persons with secondary education; persons with children (84.9%) and persons who have lost their partners (69.8%). The PhD student also describes the subjects by place of residence, source of income and available illnesses, explaining the relationship of the latter with the increase in feelings of loneliness. The relationship between other factors and loneliness is not sufficiently interpreted in the dissertation. It is not clear whether some of these factors have a beneficial effect on the problem studied - loneliness. special attention is paid to the use of rehabilitation programs and the desire to participate in group activities, as well as their potential to make new contacts and improve communication skills in adults (and hence presumably have a positive effect on dealing with loneliness). At the same time, Donka Nikolova has found that 60.5% of respondents prefer passive activities to physical exertion, which carries the risk of hypodynamics, monotony and deepening feelings of loneliness.. Here are well presented the possibilities of occupational therapy, with which 91.9% of respondents are familiar, and 66.3% say they want to participate in it. The effects of retirement on physical and mental well-being and the need to improve communication as a factor in "successful aging" are further examined. The disproportionately larger share of adult communication studies is impressive, as this part is

somehow separated from the rest of the research material. The formation of intermediate conclusions clears these gaps in coherence and provides a logical transition to the results of the experiment.

3.2. Results and discussion of the Loneliness Scale questionnaire. The application of the methodology "From Past to Present" shows statistically significant differences "before - after" in the direction of reducing: the feeling of unhappiness (from 32.6% to 20%); the feeling that there is no one to communicate with (from 18.6% to 7%); the inability to tolerate being alone (from 30.2% to 20.9%); the opinion that no one understands them (from 18.6% to 2.3%); problems in making new friends (from 16.3% to 4.7%); "Clogging" for a company (from 32.6% to 16.3%); the inability to find an approach to communication (from 20.9% to 4.7%); the feeling of being completely alone (from 37.2% to 16.3%); the expectation to receive a call (from 65.1% to 37.2%); the feeling of isolation from others (from 20.9% to 4.7%). It is good for each of these results to indicate the statistical significance. In the control group, all elements showed an increase after the classic rehabilitation program. Comparative results between the experimental and control groups show statistical significance. In conclusion, Donka Nikolova summarizes that after participating in the complex methodology "From Past to Present" respondents are able to do different things on their own without making them feel unhappy; they have become more confident in themselves and in their own abilities; they have overcome the need to communicate with their loved ones and have reduced the feeling of loneliness; a new approach to communication with others has been built, mobilizing one's own resource to present oneself in a more favorable light. The PhD student supports her own results with a large number of similar studies by foreign authors.

3.3. Results and discussion of the Life Satisfaction Scale. Only 16.3% of the participants in the experimental group (EG) and 14% of the control group (CG) felt satisfied. After the end of the study, a twofold increase in life satisfaction was found in the participants in the EG (32.6%), while in the CG it increased by 9.3%. The PhD student attributes the lack of dynamics in the level of satisfaction of the control group to the fact that the rehabilitation program in this group is not characterized by individual impact and the possibility of personal development..

In the summary of the methodology Donka Nikolova notes that "the successful application of the complex methodology involves the inclusion of a team of collaborators: doctor, psychologist, occupational therapist, social worker and rehabilitator, who are familiar with the purpose and methodology of the study." Is there such a human resource in the social institutions in our country and is it possible for a reduced team to achieve equivalent results?

Among the results I find especially interesting the section with approbation of the methodology outside the specialized institutions for social services, in the pensioners' club "Nadezhda" in the "Vinitsa" residential area. This experience is shared very sparingly and in my opinion should be separated in a self-designated section of the dissertation and, accordingly, the results should be subjected to more in-depth analysis..

4) Conclusions, contributions and recommendations

The conclusions generally reflect the implementation of the objectives of the study, but can be optimized in the direction of a direct link "task - conclusion", as well as to avoid fragmenting the text of some conclusions into multiple subsections. It is good to explicitly declare the confirmation or rejection of the three working hypotheses.

Contributions of a theoretical nature: contribution 2 is rather of a practical-applied nature.

Contributions of practical and applied nature: contribution 2 is formulated with too general a sound; contributions 3 and 4 I think can be combined.

I fully accept the **recommendations** made.

The abstract meets the structure of the generally accepted requirements. The content of the dissertation is fully and accurately reflected. The most significant results and the established dependencies are presented, as well as the conclusions, contributions and recommendations of the study.

In connection with the dissertation, 4 articles were presented in academic journals in our country and one participated in a scientific conference with international participation. Donka Nikolova is the first author in all four articles.

Conclusion

The presented dissertation "Rehabilitation Care for Overcoming Loneliness in Elderly People" shows in-depth mastery of the subject by the PhD student, is indisputable relevance and fully meets the requirements of the Regulations for the development of academic staff at the Medical University of Varna, therefore I suggest members of the Scientific Jury to vote positively for the award of educational and scientific degree "PhD" in the scientific specialty "Health Care Management" by **Donka Panayotova Nikolova**.

January 17, 2022



Reviewer:

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