

Interdisciplinarity of research in nursing: the crossing of health, biomedical and social sciences

Interdyscyplinarność badań naukowych w pielęgniarstwie: przenikanie się nauk o zdrowiu, nauk biomedycznych i społecznych

Nevenka Kregar Velikonja

University of Novo mesto Faculty of Health Sciences, Slovenia

ORCID:

Nevenka Kregar Velikonja: 0000-0002-0479-3779

CORRESPONDING AUTHOR:

Nevenka Kregar Velikonja
University of Novo mesto Faculty of Health Sciences
Na Loko 2, 8000 Novo mesto, Slovenia
e-mail: nevenka.kregar-velikonja@uni-nm.si

STRESZCZENIE

INTERDISCYPLINARNOŚĆ BADAŃ NAUKOWYCH W PIELĘGNIARSTWIE: PRZENIKANIE SIĘ NAUK O ZDROWIU, NAUK BIOMEDYCZNYCH I SPOŁECZNYCH

Wprowadzenie. Interdyscyplinarność i współpraca międzybranżowa stanowią istotną podstawę dla efektywnych, rozpoznawalnych i innowacyjnych badań naukowych. Badania naukowe w pielęgniarstwie łączą w sobie nauki o zdrowiu, nauki biomedyczne i społeczne. Tendencje demograficzne w rozwiniętych krajach wymagają integracji usług związanych ze zdrowiem oraz usług społecznych.

Cel pracy. Aby zbadać tendencje interdyscyplinarnego podejścia mając na uwadze opiekę społeczną w połączeniu z opieką pielęgniarstwa, zwłaszcza w obszarze opieki nad osobami starszymi, dokonano analizy publikacji naukowych związanych z tą tematyką z lat 1998-2018 w bazie PubMed.

Dyskusja. Analiza wykazała, że ilość publikacji naukowych dotyczących aspektu opieki społecznej wzrasta relatywnie szybciej w porównaniu do tych dotyczących opieki pielęgniarstwa, zwłaszcza tych odnoszących się do populacji osób starszych. Rozwój programów studiów powinien służyć realizacji potrzeb społeczeństwa, aby w ten sposób uniwersytety edukowały profesjonalistów którzy będą w stanie podołać pojawiającym się problemom. Zaangażowanie studentów w projekty badawcze odnoszące się do istotnych spraw zdrowotnych i społecznych może w ważny sposób przyczynić się do uzyskania przez nich wymaganych kompetencji.

Wniosek. Uzyskane dane odnoszą się do aktualnych tendencji integracji usług związanych ze zdrowiem oraz usług społecznych w praktyce oraz w badaniach naukowych. Interdyscyplinarne programy studiów, jak również zaangażowanie studentów w istotne projekty badawcze są ważne dla wydajnego i jakościowego rozwoju usług opieki.

Słowa kluczowe:

opieka zdrowotna, opieka społeczna, badania naukowe w pielęgniarstwie, interdyscyplinarność, programy studiów

ABSTRACT

INTERDISCIPLINARITY OF RESEARCH IN NURSING: THE CROSSING OF HEALTH, BIOMEDICAL AND SOCIAL SCIENCES

Introduction. Interdisciplinarity and interprofessional networking are important basis for a successful, recognizable and innovative research. Nursing research is at the intersection of health, biomedical and social sciences. Demographic trends in developed countries require integration of health and social services.

Aim. To examine the trend of interdisciplinary approach in terms of addressing social care in connection with nursing care and especially in the field of nursing care of the elderly, we analyzed scientific publications in this field over the period 1998-2018 in the PubMed database.

Discussion. The analysis showed that the number of scientific publications considering social care aspect is growing relatively faster in comparison to those addressing nursing care, especially when addressing elderly population. Development of study programmes should follow the needs of the society so that universities will educate professionals that will be able to tackle emerging problems and issues. Involvement of students in the research projects, dealing with relevant health and social care issues can significantly contribute to gaining required competences.

Conclusions. The obtained publication data are reflecting the current trends of integration of health and social care services in practice and research. Interdisciplinary study programmes as well as engagement of students into relevant research projects are important for the efficient and quality development of care services.

Key words:

health care; social care; research in nursing; interdisciplinarity; study programmes

INTRODUCTION

Nursing care and aspects of health and disease

According to the definition of ICN from 2002, nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Advocacy, promotion of a safe environment, research, participation in shaping health policy and in patient and health systems management, and education are also key nursing roles [1]. The general definition of health says that health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity [2]. Nursing care is therefore essential component of treatment process and should also contribute to improving health and quality of life of the patient in course of treatment as well as general population.

The global burden of disease study [3] revealed that among the diseases causing the majority of Global years lived with disability (YLDs) there are many musculoskeletal diseases (low back pain, neck pain, other musculoskeletal diseases), psychiatric disorders, (major depressive disorder, anxiety disorder, schizophrenia and other mental illnesses), and some other diseases with significant psychosocial component.

Interdisciplinarity of nursing care

In the view of presented role of nursing care it is obvious that interdisciplinarity is its basic feature.

To critically examine the opportunities and challenges that interdisciplinarity can provide for nursing research, it is important to see how the development of nursing research has intersected with other disciplines in the past.

Research in nursing began in Florence Nightingale during the first edition of Notes on Nursing [4], which provides descriptions of the importance of environmental factors that support and accelerate the physical and psychological well-being of the patient.

The initial focus of empirical research conducted in nursing was on nursing education. During the 1960s, nursing researchers gradually turned their attention to clinical research, studying health problems in patients and families [5].

Recent studies based on Science Overlay Maps, present nursing care as a highly interdisciplinary field at the intersection of clinical medicine, biomedical, cognitive and social science [6].

There has been some debate about the terms interdisciplinarity, multidisciplinary, transdisciplinarity and their adequate use [7] as they should be used for different meanings. Interdisciplinarity is largely recognized as the most favored term for explaining concepts of different professions in health care sector, as it conveys an orientation toward knowledge integration rather than sharing or exchanging [5].

It must be underlined that interdisciplinarity cannot be separated from disciplinarity, because it requires competent disciplinary knowledge. However, each expert must

recognize the partial and relative character of his own discipline and the focus it adopts [8].

The curricula of undergraduate education for registered nurses as a regulated profession are in EU defined with directives 2005/36/EU and 2013/55/EU, which require nursing, medical and humanistic sciences elements for development of adequate nursing competences. In postgraduate studies, the advancements are a bit more significant because research calls for interdisciplinarity, requiring contributions from several disciplines. In the case of nursing research, the mere complexity of the subjects that we deal with, such as violence, poverty, and vulnerability require a more interdisciplinary approach [8]. Specific interdisciplinary relations require specialisations in specific segments of nursing. For sharing specific interdisciplinary knowledge, sectorial nursing associations have been established, such as: International Society of Nurses in Cancer Care (<https://www.isncc.org/default.aspx>), Society of Trauma Nurses (<https://www.traumanurses.org/>), International Nurses Society on Addictions (<https://www.intnsa.org/>), International Society of Nurses in Genetics (<https://www.isong.org/>), International Association of Forensic Nurses (<https://www.forensicnurses.org/>) and many others.

Global aging of the population has a profound effect on contemporary social life [9], and consequently encourages the development of all areas related to aging, including the care of the elderly. At the international level, there are numerous associations and initiatives that study and develop caregivers in homes for the elderly [10] and study diseases and syndromes associated with aging, such as, for example, Alzheimer's disease [11] or urinary incontinence [12]. One such organization, which also prepares recommendations for the development of internships in homes for the elderly, is the International Association for Gerontology and Gerontology [13,14]. The International Council of Nurses (ICN) advocates the integration of nursing in the international area as well as the proper evaluation and importance of nursing care [15].

Integration of health and social care

Trends in structure of diseases causing majority of Global years lived with disability (YLDs) [3] as well as demographic trends in developed countries are important argument for integration of health and social services. As psychosocial influence and/or burden is well researched in psychiatric diseases, it has been recognised also for low back, neck pain and other musculoskeletal disorders [16] and several other diseases [17,18,19].

Morley et al. [20], in a study conducted in 10 countries, studied research priorities in the development of internships in homes for the elderly. They found that most of the problems related to the care of people with cognitive impairment / dementia and the behavioral and psychological symptoms of dementia in old people's homes are studied. Other important areas were palliative care, nutrition, polypharmacy and the development of new approaches based on evidence of supported practice and their enforcement in routine practice in nursing homes. An important aspect is the international comparability of standard

nursing procedures [21] and strategies for maintaining the quality of life of the elderly [22].

The need for integration of health and social care is recognised in several countries also on the level of state policy. Especially Scandinavian countries have common ministries for health and social affairs: Sweden has Ministry for Health and Social Affairs (<https://www.government.se/government-of-sweden/ministry-of-health-and-social-affairs/>), Norway has Ministry for Health and Care Services (<https://www.regjeringen.no/en/dep/hod/id421/>) and Finland has Ministry for Social Affairs and Health (<https://stm.fi/en/frontpage>).

Integrated care and services refer, on the one hand, to the care offered by Integrated Primary Care Teams, wherein medical care, nursing care, social care, healing practices and preventive practices all tie into each other smoothly, in a harmonious way that is optimal and sustained over time (horizontal integration) and, on the other hand, coordinated among different levels of services (vertical integration) [23].

Projects testing different concepts for integration of care services are run in several countries. An example of pilot project, aiming to improve the accessibility, quality and efficiency of care on the primary level in Quebec, Canada, has been published by Contandriopoulos et al. [24]. Implementation of interprofessional primary care teams should enable to simultaneously optimise accessibility, quality and effectiveness of the care being delivered. Optimising quality of care should have impact in aspect of technical quality, continuity and comprehensiveness. Team-based models involving a physician and a nurse or social worker were considered cost effective and supportive of good quality care in advanced palliative care planning support [25]. In Slovenian municipality Krško, pilot project started in 2019 for integrated long term home care, where a team is consisted from social worker, physiotherapist, work therapist and registered nurse [26].

To examine the trend of interdisciplinary approach in terms of addressing social care in connection with nursing care and especially in the field of nursing care of the elderly, we analyzed scientific publications in this field over the period 1998-2018 in the PubMed database.

METHODS

An analysis of number of publications considering nursing and social aspects of care was made. Search was limited to the collection of publications in PubMed database (<https://www.ncbi.nlm.nih.gov/pubmed/>). We used a combination of keywords: 'nursing', 'social', 'nursing care', 'social care' and 'elderly'. We searched for posts in period 1998-2018. We obtained the data in May 2019.

Relative increase of publications was calculated for 5-, 10- 15- and 20- year period as referred to year 2018 to compare the trend of publication increase among different categories as well as ratios between references referring to 'social' and 'nursing'.

RESULTS

Results obtained from PubMed database reveal the increase in publications in all categories, however relative increase of publications found under keyword 'social' is much higher. In 1998, number of publications referring to 'social' issues was lower compared to 'nursing' issues (80%), however in 2018 the number of publications referring to 'social' issues almost doubled the number of publications referring to 'nursing' (187%) (Tab. 1).

In publications with keywords 'nursing care' and 'social care' the relative increase of publications is also higher in 'social care' category. However the number of 'social care' publications reached 57% of 'nursing care' publications (Tab. 2).

■ Tab. 1. Number of publications in years 1998, 2003, 2008, 2013 and 2018 and relative ratios showing increase of publications in this 15 year period; search with keywords 'nursing', 'social', 'nursing AND social'

Keyword	Number of publications					Relative ratios				
	Year	1998	2003	2008	2013	2018	2018/1998	2018/2003	2018/2008	2018/2013
Nursing		15290	15148	18092	22010	31153	2.04	2.06	1.72	1.42
Social		12332	16367	24934	35901	58268	4.72	3.56	2.34	1.62
Nursing & social		1321	1754	2739	2892	5599	4.24	3.19	2.04	1.94
Relative social vs. nursing		0.80	1.08	1.38	1.63	1.87				

Source: Pub Med, 2.5.2019

■ Tab. 2. Number of publications in years 1998, 2003, 2008, 2013 and 2018 and relative ratios showing increase of publications in this 15 year period; search with keywords 'nursing care', 'social care', 'nursing care AND social care'

Keyword	Number of publications					Relative ratios				
	Year	1998	2003	2008	2013	2018	2018/1998	2018/2003	2018/2008	2018/2013
Nursing care		14486	14111	16805	20139	29868	2.06	2.12	1.78	1.48
Social care		3942	4822	6793	9640	16928	4.29	3.51	2.49	1.76
Nursing care & social care		697	980	1537	1598	3197	4.59	3.26	2.08	2.00
Relative social care vs. nursing care		0.27	0.34	0.40	0.48	0.57				

Source: Pub Med, 2.5.2019

Interdisciplinarity of research in nursing: the crossing of health, biomedical and social sciences

■ Tab. 3. Number of publications in years 1998, 2003, 2008, 2013 and 2018 and relative ratios showing increase of publications in this 15 year period; search with keywords 'nursing care AND elderly', 'social care AND elderly', 'nursing care AND social care AND elderly'

Keyword	Number of publications					Relative ratios				
	Year	1998	2003	2008	2013	2018	2018/1998	2018/2003	2018/2008	2018/2013
Nursing care & elderly		2968	3698	4774	6009	8478	2.86	2.29	1.78	1.41
Social care & elderly		1195	1664	2570	3871	5330	4.46	3.20	2.07	1.38
Nursing care & social care & elderly		276	391	623	676	1173	4.25	3.00	1.88	1.74
Relative social care AND elderly vs. nursing care AND elderly		0.40	0.45	0.54	0.64	0.63				

Source: Pub Med, 2.5.2019

The similar trends can be observed also in number of publications with keywords 'nursing care' and 'social care' and 'elderly' (Tab. 3). The publications referring to elderly population have even higher ratio of social care vs. nursing care (up to 63% over the years) (Tab. 2 and 3).

DISCUSSION

The analysis showed that the number of scientific publications considering social and social care aspect is growing relatively faster in comparison to those addressing nursing and nursing care, especially when addressing elderly population. In last five-year period, growth of references related to both nursing and social aspects (nursing & social; nursing care & social care; nursing care & social care & elderly) have the highest increase ratio. This is revealing the trend of integration of these two fields in practice and research, which is in accordance with described needs of integrated care [24,25] and with WHO justification of integration of health and social care [23].

The reason for integration of health and social care is better organisation and quality of service and consequently better outcomes of care services to improve the health status of individuals and society as a whole.

Development of study programmes should follow the needs of the society so that universities will educate professionals that will be able to tackle emerging problems and issues. There are already some master study programmes across Europe that are focusing on integration of health and social care, such as Health and Welfare at Mälardalen University in Sweden (https://www.mdh.se/forskning/inriktningar/2.736?l=en_UK), Long Term and Chronic Conditions Management at Swansea University in UK (<https://www.swansea.ac.uk/postgraduate/taught/humanandhealthsciences/long-term-chronic-conditions-management/>) and Integrative Health and Social Care at University of Derby in Ireland (<https://www.derby.ac.uk/online/health-social-community-work-courses/integrative-health-and-social-care-msc-online/>). Following these examples and initiatives of relevant national professionals, at University of Novo mesto Faculty of Health Sciences a master study programme Integrative health and social care has been developed and started engaging students in study year 2018/2019 (https://fzv.uni-nm.si/en/2nd_cycle/integrated_health_and_social_care/).

Also involvement of students in the research projects, dealing with relevant health and social care issues can significantly contribute to gaining required competences.

CONCLUSIONS

The obtained publication data are reflecting the current trends of integration of health and social care services in practice and research. Interdisciplinary study programmes as well as engagement of students into relevant research projects are important for the efficient and quality development of care services.

REFERENCES

1. Nursing Definition. International Council of Nurses (ICN). 2019. Obtained 27.7.2019 from <https://www.icn.ch/nursing-policy/nursing-definitions>.
2. WHO Constitution. World Health Organisation. 2019. Obtained 27.7.2019 from <https://www.who.int/about/who-we-are/constitution>.
3. Vos et al. Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet*. 2012; 380(9859):2163-96. doi: 10.1016/S0140-6736(12)61729-2.
4. Nightingale F. 1859. Notes on Nursing. <https://ia800905.us.archive.org/9/items/notesonnursingnigh00nigh/notesonnursingnigh00nigh.pdf>
5. Carnevale FA. Interdisciplinarity and nursing research: opportunities and challenges. *Revista Brasileira de Enfermagem*. 2014; 67(6):881-885. <https://dx.doi.org/10.1590/0034-7167.2014670603>
6. Rafols I, Porter AL, Leydesdoff L. Science Overlay Maps: A New Tool for Research Policy and Library Management. *Journal of the American society for information science and technology*. 2010; 61(9):1871 - 1887.
7. Choi BC, Pak AW. Multidisciplinarity, interdisciplinarity and transdisciplinarity in health research, services, education and policy: 1. Definitions, objectives, and evidence of effectiveness. *Clin Invest Med*. 2006;29(6):351-364.
8. Oliveira MA de Campos. Interdisciplinarity in Nursing education and research. *Revista da Escola de Enfermagem da USP*. 2012;46(2):01-02. <https://dx.doi.org/10.1590/S0080-62342012000200001>
9. Kovačev AN, Zalete M. Identiteta starostnikov in njene značilnosti. *Posvetovanje Celostna obravnava starostnikov*. Ljubljana, 24. november 2006, Rugelj D. Ljubljana: Visoka šola za zdravstvo.
10. Tolson D, Rolland Y, Andrieu S. International Association of Gerontology and Geriatrics: a global agenda for clinical research and quality care in nursing homes. *Journal of the American Medical Directors Association*. 2011;12(3): 184 - 189.
11. Daviglius ML, Bell CC, Berrettini W. NIH state-of-the-science conference statement: Preventing Alzheimer's disease and cognitive decline. *NIH consensus and state-of-the-science statements*. 2010; 27(4): 1 - 30.
12. Topinkova E, Sqadari A, Haas T. Urinary incontinence in patients in long-term institutional care. Results of an international study in 8 countries. *Casopis lekaru českých*, 1997; 136(18): 555 - 558.
13. Tolson D, Morley JE, Rolland Y, Vellas B. Advancing nursing home practice: the International Association of Geriatrics and Gerontology Recommendations. *Geriatrics nursing*. 2011; 32(3): 195 - 197.
14. Tolson D, Morley JE, Rolland Y, Vellas B. Improving nursing home practice: an international concern. *Nursing older people*. 2011; 23(9): 20 - 21.

15. Keighley T. Globalization, decision making and taboo in nursing. *International Nursing Review*. 2012; 59(2): 181 - 186.
16. Groeneweg R, Haanstra T, Bolman CAW, et al. Treatment success in neck pain: The added predictive value of psychosocial variables in addition to clinical variables. *Scand J Pain*. 2017; 14:44-52. doi: 10.1016/j.sjpain.2016.10.003
17. Gochbauer H, Valdes-Rodriguez R, Cardwell L, Anolik RB. The Psychosocial Impact of Atopic Dermatitis. *Adv Exp Med Biol*. 2017;1027:57-69. doi: 10.1007/978-3-319-64804-0_6.
18. Schreiner P, Yilmaz B, Rossel JB, et al. Swiss IBD Cohort Study Group.(2019). Vegetarian or gluten-free diets in patients with inflammatory bowel disease are associated with lower psychological well-being and a different gut microbiota, but no beneficial effects on the course of the disease. *United European Gastroenterol J*. 2019; 7(6):767-781. doi: 10.1177/2050640619841249.
19. Husni ME, Merola JF, Davin S. The psychosocial burden of psoriatic arthritis. *Semin Arthritis Rheum*. 2017;47(3):351-360. doi: 10.1016/j.semarthrit.2017.05.010.
20. Morley JE, Caplan G, Cesari M, et al. International survey of nursing home research priorities. *J Am Med Dir Assoc*. 2014; 15(5):309-12. doi: 10.1016/j.jamda.2014.03.003. Epub 2014 Apr 3.
21. Fagerberg I, Gilje F. A comparison of curricular approaches of care of the aged Swedish and US nursing programs. *Nurse education in practice*. 2007; 7(6): 358-364.
22. Reed J, Richardson E, Marais S, Moyle W. Older people maintaining well-being: an International Appreciative Inquiry study. *International journal of older people nursing*. 2008;3(1): 68 - 75.
23. WHO. Integrated health services - what and why. 2008. Obtained 27.7.2019 from https://www.who.int/healthsystems/technical_brief_final.pdf
24. Contandriopoulos D, Duhoux A, Roy B, et al. Integrated Primary Care Teams (IPCT) pilot project in Quebec: a protocol paper. *BMJ open*. 2015;5(12): e010559. doi:10.1136/bmjopen-2015-010559
25. Dixon J, Knapp M. Whose job? The staffing of advance care planning support in twelve international healthcare organizations: a qualitative interview study. *BMC palliative care*. 2018;17(1):78. doi:10.1186/s12904-018-0333-1
26. Integrirana oskrba v občini Krško „MOST“. (b.d.), CSD Posavje. Obtained 29.7.2019 from http://www.ds-rs.si/sites/default/files/dokumenti/ds_etc_izzivi_na_podroczju_dolgotrajne_oskrbe_2019_02.pdf.

Manuscript received: 02.08.2019

Manuscript accepted: 02.10.2019