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Slovenian Nursing Review

REVIJA ZBORNICE ZDRAVSTVENE IN BABIŠKE NEGE SLOVENIJE -
ZVEZE STROKOVNIH DRUŠTEV MEDICINSKIH SESTER, BABIC IN ZDRAVSTVENIH TEHNIKOV SLOVENIJE

REVIEW OF THE NURSES AND MIDWIVES ASSOCIATION OF SLOVENIA



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OBZORNIK ZDRAVSTVENE NEGE

PREDSTAVITEV, NAMEN IN CILJI

Obzornik zdravstvene nege (Obzor Zdrav Neg) objavlja izvirne znanstvene, pregledne znanstvene in strokovne članke in novice na področju zdravstvene nege, babiške nege in interdisciplinarnih področij zdravstvenih in družbenih ved. Revija objavlja članke, ki v svojih znanstvenih, teoretičnih in filozofskih izhodiščih obravnavajo razvojne paradigme omenjenih področij kot eksperimentalne in neeksperimentalne raziskave, kvalitativne raziskave in pregled literature. Članki obravnavajo zdravstveno nego in druge zdravstvene vede kot znanstveno in strokovno disciplino ter vključujejo ključne dimenzije razvoja stroke kot so teoretični koncepti, modeli, etika in filozofija, klinično delo, krepitev zdravja, razvoj prakse in zahtevnejših oblik dela, izobraževanje, raziskovanje, menedžment, kakovost in varnost, zdravstvena politika idr.

Revija pomembno prispeva k profesionalnemu razvoju zdravstvene nege in babištva ter drugih zdravstvenih ved v Sloveniji, državah Balkana ter državah širše centralne in vzhodno evropske regije, ki jih povezujejo skupne značilnosti razvoja zdravstvene nege v postsocialističnih državah.

Revija ima vzpostavljene mednarodne standarde na področju publiciranja, mednarodni uredniški odbor, širok nabor recenzentov in je prosto dostopna v e-obliki. Članki v Obzorniku zdravstvene nege so recenzirani s tremi zunanjimi anonimnimi recenzijami. Revija objavlja članke v slovenskem in angleškem jeziku in izhaja štirikrat letno.

Zgodovina revije kaže na njeno pomembnost za razvoj zdravstvene in babiške nege na področju Balkana, saj izhaja od leta 1967, ko je izšla prva številka Zdravstvenega obzornika (ISSN 0350-9516), strokovnega glasila medicinskih sester in zdravstvenih tehnikov, ki se je leta 1994 preimenovalo v Obzornik zdravstvene nege. Kot predhodnica Zdravstvenega obzornika je od leta 1954 do 1961 izhajalo strokovno-informacijsko glasilo Medicinska sestra na terenu v izdaji Centralnega higienskega zavoda v Ljubljani.

Obzornik zdravstvene nege indeksirajo: CINAHL (Cumulative Index to Nursing and Allied Health Literature), ProQuest (ProQuest Online Information Service), COBIB.SI (Vzajemna bibliografsko-kataložna baza podatkov), Biomedicina Slovenica, dLib.si (Digitalna knjižnica Slovenije).

SLOVENIAN NURSING REVIEW

INTRODUCTION, PURPOSE AND OBJECTIVES

Published in the Slovenian Nursing Review (Slov Nurs Rev) are the original and review scientific and professional articles and the news on current events in the field of nursing, midwifery and other interdisciplinary health and social sciences. The articles explore the developmental paradigms of the relevant fields in accordance with their scientific, theoretical and philosophical bases, which are reflected in the experimental and non-experimental research, qualitative studies and reviews. The articles consider nursing and other health sciences as scientific and professional disciplines and include the key dimensions of their development such as theoretical concepts, models, ethics and philosophy, clinical practice, health promotion, the development of practice and more demanding modes of health care delivery, education, management, quality and safety, health policy and others.

The articles published in the Nursing Review, which are interdisciplinary oriented, significantly contribute towards the professional development of nursing, midwifery and other health professions in Slovenia, the Balkans, and the countries of the Central and Eastern Europe which share common characteristic of nursing development of post-socialist countries.

The Nursing Review follows the international standards in the field of publishing endorsed by the international editorial board and a critical selection of reviewers. All published articles are available also in electronic form. Before publication the articles in this quarterly periodical are triple-blind peer reviewed. Some original scientific articles are published or translated in the English language.

The history of the magazine clearly demonstrates its impact on the development of nursing and midwifery care in the Balcan area. In 1967 the first issue of the professional periodical of the nurses and nursing technicians Health Review (Slovenian title: Zdravstveni obzornik, ISSN (0350-9516) was published. From 1994 it bears the title The Slovenian Nursing Review. As a precursor to Zdravstveni obzornik, professional-informational periodical entitled a Community Nurse (Slovenian title: Medicinska sestra na terenu) was published by the Central Institute of Hygiene in Ljubljana.

The Slovenian Nursing Review is indexed and abstracted in CINAHL (Cumulative Index to Nursing and Allied Health Literature), ProQuest (ProQuest Online Information Service), COBISS.SI (Slovenian union bibliographic/catalogue database), Biomedicina Slovenica, dLib. si (The Digital Library of Slovenia).

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Leading article/Uvodnik

Getting practice into evidence

S prakso podprti dokazi

Roger Watson

Make sure you read the title correctly as it is more common to see titles that examine 'getting evidence into practice'. I am not just playing with words here; I think we have had at least two decades of calls to close the gap between evidence and practice which assume that the evidence exists and, if it exists, it must be implemented (Watson, 2015). However, 'evidence' is rarely unequivocal and, where the benefits may be small, it is not easy—and probably not worth—convincing those who hold health service budgets to make changes which may or may not be more expensive.

The problem with evidence is that its generation is usually policy driven, either at national level or at whatever organisational level health services are administered across the globe (Watson, 2002). A problem becomes apparent, a public scandal over health care arises, such as at the Mid-Staffordshire Hospital in England (Francis, 2013) or, more commonly, something is costing too much and the search for solutions begins. The assumption is that something can be done about it, driven by the belief that something must be done about it. This is the classic 'top down' approach and it is expedited, usually, by evidence synthesis. If it is by research, such an agenda is set that the academics who take up these projects have little leeway to exercise their imaginations and, actually, make a discovery. In a sense, the answer is 'begged' and if it is not found then the project is deemed to have failed; the very antithesis of science which ensues through curiosity and inquiry.

The problem with the 'top down' approach to evidence implementation is that evidence-driven changes are usually being implemented by people who did not know they had the problem in the first place. If they do not see the sense in the change, then, unless coerced into doing so by micro-management, they will subvert the change anyway; such is the fate of so many good policy driven intentions. Unless frontline nursing

staff and their allied health and medical colleagues see the problem, they will not know that it is being fixed. Unless these frontline staff are asked what problems they face, and they rarely are in my experience, then nobody will know what their problems are. But how does this relate to my title 'Getting practice into evidence'?

By getting practice into evidence I mean that the evidence presented to frontline healthcare workers should address the problems they face. To achieve that they must be given the opportunity to express the problems they face in their clinical work and the evidence - where it exists - should be sought to help them address those problems. In that way, the evidence will be based on practice issues and, thereby, on practice and is more likely to be owned, adopted and implemented. Where the evidence does not exist - and this is remarkably common - then this provides the opportunity for research projects. These are likely to be small scale and not definitive but they will be the first steps in the direction of solving recognised problems and contribute to the body of knowledge and, ultimately, to the evidence base.

Over the past few decades, small scale research seems to have been eschewed in favour of large scale, multi-million euro, multidisciplinary and large team collaborative research. This is clearly an effective strategy for problems which can be addressed this way and the RN4CAST project is an obvious and very successful example (Aiken, et al., 2014). However, while staff-to-patient ratios are an issue for frontline staff, I doubt many are vexed about the proportion of graduate nurses in the profession and, in terms of staff to patient ratios, frontline staff have no control over this. Small scale local research projects are ideal for solving local problems and they should not be dismissed, as so often they are. They can lead to greater things and it is impossible to predict where they will lead.

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However, getting practice into evidence and back again into practice does not happen by accident. Presently, we provide undergraduate nurses and allied health students with training in research and evidence-based practice. This, of course, is essential but it is only part of the solution. At the clinical level there needs to be a commitment and a strategy to ensuring that evidence and practice are linked. Strategy means budgets and personnel and a visible commitment to the cause. Therefore, how many hospitals have a research or evidence-based practice unit - actually concerned with doing research and not, as in so many cases, simply regulating it? How many hospitals have a group related to research and evidence-based practice that includes frontline clinical staff?

I will not end this editorial with a solution, rather I will point you to one excellent example where solutions are being sought which is the Evidence-based Council at Sheffield Teaching Hospitals National Health Service Trust in England (<http://tinyurl.com/z39o2p2>). Here an identifiable and funded group of committed individuals ask what the problems are, help staff to find solutions and then help them to publish those solutions. They also hold annual celebrations of achievement. I consider this an exemplary demonstration of how to bring practice and evidence closer together and if you want to know more, then information is easy to obtain on Google.

Slovenian translation/Prevod v slovenščino

Ste prav prebrali naslov? Pogosteje se namreč srečujemo s prispevki, ki preučujejo »z dokazi podprto prakso« V naslovu se ne poigravam z besedami – že vsaj dve desetletji se pojavljajo zahteve, da se izpolni vrzel med dokazi in klinično prakso, ki predpostavlja, da dokazi obstajajo, in če obstajajo, jih je potrebno v praksi uporabiti (Watson, 2015). Vendar pa so »dokazi« le redko nedvoumni, in kadar so koristi majhne, ni enostavno oziroma ni vredno prepričevati plačnikov zdravstveni storitev, da uvajajo spremembe, ki so (ali morda tudi ne) povezane z večjimi stroški.

Problem dokazov je predvsem to, da njihovo oblikovanje vodi zdravstvena politika na nacionalni ravni ali na ravni organizacij, ki opravljajo zdravstvene storitve v različnih delih sveta (Watson, 2002). Iskanje ustreznih rešitev se lahko prične šele, ko je problem na področju zdravstva v javnosti prepoznani in morda doseže sramotne razsežnosti, kot kaže primer bolnišnice Mid-Staffordshire (Mid-Staffordshire Hospital) v Angliji (Francis, 2013), ali pa največkrat zato, ker je trenutno reševanje problema povezano z velikimi stroški. Predpostavlja se, da je rešitev možno najti zato, ker jo je potrebno najti. To je klasičen pristop »z vrha navzdol«, ki se običajno pospeši s sintezo dokazov. Če to sintezo izvedejo znanstveniki – raziskovalci, imajo pri tem le malo manevrskega

prostora za oblikovanje novih idej in dejanska znanstvena odkritja. Če rezultati ne ustrezajo željam in potrebam, projekt ne bo uspešen, kar predstavlja pravo nasprotje znanosti, ki se razvija na temelju vedoželjnosti in raziskovanja.

Problem pristopa z »vrha navzdol« pri z dokazi podprti praksi je predvsem to, da spremembe, ki jih narekujejo dokazi, izvajajo posamezniki, ki se niti ne zavedajo, da problem obstaja. Če se izvajalci ne zavedajo pomena sprememb, jih ne bodo podpirali in jih bodo izvajali le pod pritiskom neposrednih vodij. Tako pogosto propadejo številne dobre namere zdravstvene politike. Če se v vodstvih zdravstvene nege in povezanih zdravstvenih disciplin problema ne bodo zavedali, tudi ne bodo vedeli, ali je problem rešen. Če vodilnih delavcev ne bomo povprašali, s kakšnimi problemi se soočajo, in to se po mojih izkušnjah le redko zgodi, nihče ne bo vedel, kakšni so ti problemi. In kako se to povezuje z naslovom prispevka »S prakso podprti dokazi«?

Zagovarjam stališče, da bi morali dokazi iz prakse, predstavljeni vodilnim zdravstvenim delavcem, naslavljeni probleme, s katerimi se le-ti soočajo. Zdravstveni delavci bodo učinkovito opravljali svoje delo le, če bodo imeli možnost izraziti probleme, ki jih v klinični praksi zaznavajo. Potrebno je poiskati dokaze (kjer le-ti obstajajo), ki bi omogočili reševanje problemov. Tako bi dokazi temeljili na problemih iz klinične prakse, torej na praksi, kar je lažje privzeti, sprejeti in izvajati. Kjer dokazi ne obstajajo, kar se dogaja izjemno pogosto, se ponujajo možnosti za raziskovanje. Takih raziskovalnih projektov bi bili verjetno manjšega obsega in nedokončni, predstavljali pa bi prvi korak in usmeritev pri reševanju prepoznanih problemov ter prispevali nova spoznanja in končno tudi širitev baze dokazov.

V zadnjih desetletjih se manjše raziskave umikajo večjim multidisciplinarnim raziskovalnim projektom, ki so podprti z večmilijonskimi sredstvi in kjer sodelujejo številni znanstveniki različnih disciplin. To je seveda uspešna strategija za reševanje določenih problemov; kot odličen primer lahko izpostavimo projekt RN4CAST (Aiken, et al., 2014). Čeprav se vodilni zdravstveni delavci zavedajo problema številčnega razmerja med zdravstvenimi delavci in pacienti, pa je manj izražena skrb glede števila diplomiranih medicinskih sester med izvajalci zdravstvene nege oz. števila pacientov na posamezno diplomirano medicinsko sestro, na kar imajo vodilne medicinske sestre le neznamenit vpliv. Z manjšimi raziskovalnimi projekti lahko uspešno rešujemo lokalne probleme, zato jih ni smiselno opuščati, čeprav se danes to žal pogosto dogaja. Rezultati takih raziskovanj so lahko osnova za pomembne spremembe in težko je v celoti predvideti njihovo vrednost.

Zavedati se moramo, da vključevanje prakse v iskanje dokazov in le-teh nazaj v klinično prakso ni samodejen proces. Danes se medicinske sestre in

drugi zdravstveni delavci že v času dodiplomskega izobraževanja usposablajo za raziskovalno delo in z dokazi podprto prakso. To so seveda temelji, vendar le del rešitve. V klinični praksi so potrebni predanost zagotavljanju povezovanja dokazov s prakso in temu ustrezne strategije. Strategije vključujejo financiranje in zagotavljanje kompetentnih zdravstvenih strokovnjakov ter izraženo predanost doseganju teh ciljev. Torej, koliko bolnišnic ima svoje enote, ki se ukvarjajo z raziskovanjem in z dokazi podprto prakso? Koliko bolnišnic dejansko opravlja raziskovalno delo in ga ne le usmerja, kar se v večini primerov dogaja? Koliko bolnišnic v to delo vključuje vodilne medicinske sestre?

V zaključku svojega prispevka namesto rešitev navajam odličen zgled iskanja rešitev. V okviru »Evidence-based Council at Sheffield Teaching Hospitals National Health Service Trust« v Angliji (<http://tinyurl.com/z39o2p2>) deluje skupina neodvisnih, priznanih in predanih strokovnjakov, ki na osnovi ugotovljenih problemov zaposlenim rešitve pomagajo iskati in jih tudi objavljati, vsako leto svoje

dosežke tudi obeležijo. Gre za odličen zgled zblíževanja prakse in dokazov, še več o njem si lahko preberete na spletu.

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Original scientific article/Izvirni znanstveni članek

Comparison of self-esteem and quality of life between residents of old people's home and the elders living at home

Primerjava samospoštovanja in kakovosti življenja stanovalcev v domu za starejše in lastnem domu

Jadranka Pluzarić, Vesna Ilakovac, Danica Železnik

Key words: elderly; housing; physical activity

Ključne besede: starejše osebe; stanovanje; fizična aktivnost

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ABSTRACT

Introduction: Research on self-esteem and quality of life has been so far predominantly focused on younger age groups. The aim of this cross-sectional study was to examine the differences regarding self-esteem and quality of life between the residents of old people's home and the elders living at home.

Methods: A questionnaire used in the survey inquired about socio-demographic data and the respondents' activities. It included the respondents' self-esteem assessment, based on the Rosenberg Self-esteem Scale (RSES), the assessment of quality of life, based on the Satisfaction With Life Scale (SWLS) and the assessment of their functional abilities. The purposive sample included 204 respondents. The research was conducted from November 2012 to March 2013.

Results: The respondents in both groups expressed equal satisfaction with life ($p = 0.846$). The respondents who live in their own home demonstrate higher self-esteem than those who live in old people's home (difference in mean scores of the RSES was 3.4; 95 % CI for the difference from 1.0 to 5.8; t-test for independent samples, $p = 0.005$). Results of the study suggest that the respondents with higher self-esteem are more satisfied with their life ($p = 0.537$, $p < 0.001$).

Discussion and conclusion: Self-esteem has to be recognised as a factor associated with the quality of life and should therefore be included in the care of the elderly. Timely and adequate interventions may prevent the decline in quality of life, which requires adequate training of health personnel and family members, and the public awareness.

IZVLEČEK

Uvod: Veliko raziskav samospoštovanja in kakovosti življenja je namenjenih in usmerjenih v mlajšo populacijo. Namen predstavljene presečne raziskave je bilo raziskati, ali obstaja razlika v samospoštovanju in kakovosti življenja starejših, ki živijo doma, in tistimi, ki živijo v domu za starejše občane.

Metode: Raziskava je bila izvedena s pomočjo vprašalnika, ki je vključeval socialnodemografske podatke, podatke o aktivnosti vprašanih, oceno samospoštovanja, ki je temeljila na Rosenbergovi lestvici samospoštovanja (RSL), oceno kakovosti življenja, ki je temeljila na lestvici zadovoljstva z življenjem (LZŽ), in oceno funkcionalne sposobnosti. Namenski vzorec je vključeval 204 anketirance. Raziskava je potekala od novembra 2012 do marca 2013.

Rezultati: Anketiranci v obeh skupinah so izrazili enako zadovoljstvo z življenjem ($p = 0,846$). Anketiranci, ki živijo v lastni hiši ali stanovanju, imajo višje samospoštovanje kot tisti, ki prebivajo v domovih za starejše občane (povprečna razlika RSES 3,4; 95 % interval zaupanja od 1,0 do 5,8; t-test za neodvisne vzorce, $p = 0,005$). Anketiranci, ki imajo višje samospoštovanje, so bolj zadovoljni z življenjem ($p = 0,537$, $p < 0,001$).

Diskusija in zaključek: V skrb za starejše osebe je potrebno vključiti prepoznavanje njihovega samospoštovanja, da se lahko s pravočasnimi aktivnostmi prepreči zmanjšanje ravnih njihovega kakovosti življenja, kar zahteva ustrezno usposabljanje zdravstvenih delavcev, družin in družbe.

Introduction

The steady increase in life expectancy over the past centuries, attributed to higher standards of living, the improved healthcare and the long-term downtrends in fertility rate, caused that the aged population is currently the fastest growing age group in developed countries. The Republic of Croatia, with the proportion of 17.15 % of people aged 65 and over, belongs to the fourth group of countries with "with the most aged populations", according to the United Nations classification (Tomek-Roksandić & Čulig, 2004).

As life expectancy is rising, it is important that people experience these extra years of life in good health and in good functional state and not in a poor state of health (Železnik, et al., 2011). A review of the literature indicates that high levels of self-esteem, self-efficacy and social support would be elements of strength in the elderly, while, loneliness, depression and anxiety would be among the main elements of vulnerability mentioned in studies on wellbeing in the Third-Age (Gerino, et al., 2015). Functional ability is a critical indicator of quality of life and health in the elderly, sometimes even more important than the presence of a disease. Impaired functional abilities are the best predictor of mortality or of the need for institutional care. Socio-demographic factors, such as old age, female gender, poor social support, single life, lower education and lower income are associated with poorer functional abilities and lower probability of improvement of the decreased functional abilities. Change in one of the functions is associated with the change in general functional ability (Tomek-Roksandić, 2004).

Social activity has been recognised as the most important predictor for maintaining and stimulation of functional ability. Maintenance and stimulation of the social activity can help in self-maintenance – the activities of daily living and improvement of the quality of life of the elderly (Despot Lučanin, 2003). The foundations for healthy and active ageing, the preservation of functional ability and improvement of health in the very old age are established in the earlier years by one's own decisions and positive health behaviour. Non-smoking, appropriate diet, continuous physical, psychological and occupational activities, avoidance of negative health behaviour, are the most important factors in improving health and preserving functional ability in old age (Tomek-Roksandić, 2004). Changes related to ageing and disease affect self-esteem of older persons. In many people, the visible changes associated with ageing and the changed physical appearance may, by themselves, affect self-worth and self-esteem. Orth and colleagues (2010) suggested that changes in socioeconomic status and physical health account for the decline in self-esteem that occurs in old age.

Frequent health problems, physical and economic dependence in conjunction with other losses, effect a

change in the elders' thinking and beliefs about their own abilities and self-esteem. Loss of self-respect and low self-esteem can cause serious problems, such as fear, anxiety, helplessness, hopelessness and depression (Pronk, et al., 2011). Self-esteem is related to better health, less criminal behaviour, lower levels of depression and, overall, greater success in life (Orth, et al., 2010). Epidemiological studies have demonstrated the effects of self-esteem on global health and life expectancy in normal aging. It has also been demonstrated that self-esteem may effect the basal regulation and reactivity of endocrine system as well as the age-related changes in cognitive performance and cognitive decline with aging.

According to Zimmerman and colleagues (2016), chronic exposure to stress has been shown to impact a wide range of health-related outcomes in older adults. Their findings provide evidence of a relationship between a direct indicator of psychological stress and specific hippocampal subfield volumes in elderly individuals.

Quality of life in old age, although associated with physical health and functioning, may not be directly dependent on health factors. Some older people live well despite poor health and vice versa. It has been established that psychological and social collateral factors have an important role in the ageing process (Suhonen, et al., 2005; Železnik, 2014). For no justifiable reason, the recent research on self-esteem and quality of life has been focused mainly on younger population, even though the percentage of elderly people in the general population is steadily increasing. The phenomenon of quality of life is manifold and complex, having many dimensions. The most important aspects of quality of life were for the residents to feel secure in the nursing home, have a place of their own where they could be alone with their thoughts, set their affairs in order and be prepared for death. Furthermore, it mattered to be recognized as an individual with his or her roots in their own respective family and doing meaningful things (Hjaltadóttir & Gústafsdóttir, 2007).

The studies that have dealt with the elderly were related to the pathology of ageing and testing of negative emotional states, but there are very few studies that examine successful ageing. Studies have proved that depression, anxiety, emotional instability, feelings of loneliness, social isolation, low self-esteem, are causes for lower estimation of quality of their life (Suhonen, et al., 2005). However, what makes one elderly person more satisfied and happier is rarely a subject of research.

Aim and objectives

The aim of this research is to examine the perception of self-esteem and quality of life of older people and to ascertain whether there is a difference between

the self-esteem and quality of life of the older people who live in their own home and the residents of old people's homes.

Methods

A quantitative nonexperimental descriptive research was conducted.

Description of the research instrument

The questionnaire used in this cross-sectional study inquired about basic demographics (age, gender, housing, marital status, lifestyle, occupation until retirement, level of education); the activities of the respondents; the assessment of self-esteem, using the Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965); the assessment of quality of life, using the Satisfaction With Life Scale (SWLS) (Diener, et al., 1985), and the assessment of functional ability. Respondents were offered the choice of 16 activities

and four degrees of frequency in these activities (daily, weekly, monthly, yearly). Respondents had the option of free entry of additional activities.

The Rosenberg Self-Esteem Scale is a 10-question scale that is presented with four response choices, ranging from strongly agree to strongly disagree (agree, partly agree, neither agree nor disagree, partially disagree, disagree). The first item included questions 1 through 3 and received a positive score if two or three of its questions were answered positively. Questions 4 and 5 and questions 9 and 10 were aggregated into two other items that were scored positively, if both questions in the item had positive answers. Questions 6 through 8 counted individually formed the final three items. For the negatively worded RSE questions, responses that expressed disagreement and, hence, were consistent with high self-esteem, were considered positive. The chosen items were awarded values from 1 to 5, where in the items of 1, 5, 7, 8 and 10 were encoded in a way that total agreement was assigned value 5, and total disagreement value 1. Answers to the items 2, 3, 4, 6

Table 1: *Sample description*
Tabela 1: *Opis vzorca*

<i>Variables/ Spremenljivke</i>	<i>n (%) of respondents = 204/ n (%) udeležencev = 204</i>		
	<i>In their own home/ V svoji družinski hiši ali stanovanju</i>	<i>In old people's home/ V domu za starejše</i>	<i>Total/ Skupaj</i>
Gender			
Male	19 (18.8)	22 (21.4)	41 (20.1)
Female	82 (81.2)	81 (78.6)	163 (79.9)
Marital status			
Marriage or cohabitation	46 (45.5)	8 (7.8)	54 (26.5)
Single	5 (5.0)	6 (5.8)	11 (5.4)
Divorced	6 (5.9)	20 (19.4)	26 (12.7)
Widow/widower	44 (43.6)	69 (67.0)	113 (55.4)
Lifestyle			
Alone	41 (40.6)	95 (92.2)	136 (66.7)
With a spouse/partner	40 (39.6)	8 (7.8)	48 (23.5)
With a spouse/partner and children	6 (5.9)	0 (0.0)	6 (2.9)
With children	12 (11.9)	0 (0.0)	12 (5.9)
With relatives	2 (2.0)	0 (0.0)	2 (1.0)
Level of education/school education			
Not completed primary school	19 (18.8)	26 (25.2)	45 (22.1)
Primary school	14 (13.9)	26 (25.2)	40 (19.6)
High school	39 (38.6)	42 (40.8)	81 (39.7)
Higher professional school	11 (10.9)	5 (4.9)	16 (7.8)
Faculty, academy	18 (17.8)	4 (3.9)	22 (10.8)

Legend/Legenda: n – number/število; % – percentage/odstotki

and 9 were awarded inverted values, so total agreement was awarded value 1, and total disagreement value 5. The higher RSES score corresponds to greater self-esteem. RSES internal consistency evaluated by the Cronbach alpha coefficient was 0.796.

The Satisfaction With Life Scale (SWLS) contained 5 items with answers which had the same choice as in the Rosenberg's scale wherein the total agreement was awarded value 5, and total disagreement value 1. The higher SWLS score, the higher life satisfaction. Cronbach alpha for SWLS was 0.786.

Assessment of functional ability was based on 12 questions and optional choices: I can do it independently and without difficulties; I can do it independently but with difficulties; I cannot do it independently. The choices were awarded values from 1 to 3, in the way that total independence was awarded value 1, to total dependence value 3, i.e. the higher the score, the lower functional ability. Cronbach alpha was 0.947.

Description of a sample

The research included 204 respondents aged 65 years and over, with preserved cognitive abilities, living in the city of Osijek. Community nurses and nurses who work in old people's homes selected the respondents who participated in the study. More than half of the respondents are widowed and most of them live alone. The majority of the respondents have completed secondary education. Detailed information about respondents is given in Table 1.

Description of the research procedure and data analysis

One part of the survey was carried out in the elders' homes in Osijek, and the second part in old people's homes. The survey was conducted by community nurses, and a structured interview was used. Each respondent had given their written consent to participate in the study and was clearly informed of the objectives, purpose and methods of the research.

Categorical data were presented by absolute and relative frequencies. Numerical data are described as mean and standard deviation. In case of asymmetric distribution of data, the median and the limits of interquartile range were used to assess mean and the variability of numerical data. Internal consistency of used scales was assessed by the Cronbach alpha coefficient. The difference in distribution of categorical variables between the observed groups was tested by χ^2 test, and if necessary, by the Fisher's exact test. Normality of the distribution of the numerical variables was tested by Kolmogorov-Smirnov test. Differences between numerical variables were tested by t-test for independent samples, and in the case of non-compliance, the Mann-Whitney U test was used. Bivariate correlation of total scores was assessed by

Spearman coefficient ρ . All p values are two-sided. The level of significance was set at $p < 0.05$. The statistical program SPSS version 16.0 (SPSS Inc., Chicago, IL, USA) was used for the statistical analysis.

Results

The study included 41 (20.1 %) men and 163 (79.9 %) women. The total of 101 respondents (49.5 %) live in their own homes, and 103 (50.5 %) respondents reside in old people's homes. The age of the respondents ranged from 65 to 96 years. Arithmetic mean of age was 76.8 years, and the standard deviation 7.1 years. Men and women were of the same age (Mann-Whitney U test, $p = 0.234$).

The largest number of respondents ($n = 175$, 85.8 %) daily watch TV, and a large proportion (67.2 %) read newspapers, books or solve crossword puzzles. The vast majority of respondents (77.9 %) take a walk, most of whom (82.4 %) do it on daily basis. Almost half of the respondents workout daily or weekly, and approximately 30 % of them go on a trip or travel. More than one fifth of the respondents (23 %) go to cinema, theatre, exhibitions or concerts at least once a year and a smaller percentage are included in creative workshops (10.8 %), and in cultural or artistic activities (8.8 %). Only two (1.0 %) of the respondents were not involved in any activity.

Assessment scores of the respondents' self-esteem were within the normal range; they were satisfied with their life and had good functional abilities. The arithmetic mean of total RSES score was 37.1 ($s = 8.8$). Median SWLS score was 20 (interquartile range from 13 to 22), with a median total score of functional abilities 14 (interquartile range from 12 to 22).

The respondents who have higher self-esteem are more satisfied with life ($r_s = 0.537$, $p < 0.001$). The improved functional capacity (expressed lower score) is associated with higher self-esteem ($r_s = -0.381$, $p < 0.001$) and greater life satisfaction ($r_s = -0.203$, $p = 0.004$).

Differences between groups of respondents regarding housing

With regard to housing, the shares of male and female respondents in the groups were similar (χ^2 test, $p = 0.650$). The respondents who live in old people's homes were older than those who live in their own homes (mean 80.0 vs. 73.7 years, mean difference 6.3 years, 95 % CI for the difference from 4.5 to 8.1 year; t-test for independent samples, $p < 0.001$). The distribution of marital status of the respondents differed significantly between the groups with respect to the housing (χ^2 test, $p < 0.001$). The majority of respondents who reside in their own homes live in a marriage or cohabitation, while in old people's homes widows/widowers prevail. The vast majority of the respondents (92.2 %) who reside in old people's

homes are single. The distribution of the respondents' lifestyle differed significantly between the groups with respect to the housing (Fisher's exact test, $p < 0.001$). The distribution of the respondents' educational background differed significantly between the groups with respect to the housing (χ^2 test, $p = 0.003$). The share of respondents with a post high school education who live in old people's homes is less than 10 %, while in the group of respondents who live in their own home it is almost three times higher (Table 1).

The respondents who live in their own homes have higher self-esteem than those who reside in old people's homes (mean difference RSES score of 3.4; 95 % CI for the difference from 1.0 to 5.8; t-test for independent samples, $p = 0.005$). The respondents in both groups expressed equal satisfaction with life (Mann-Whitney U test, $p = 0.846$). In the group of the elderly living in their own home, the median of SWLS total score was 19, and in the group of respondents living in old people's homes, the median was 20. The latter residents

Table 2: *Rosenberg's self- esteem scale, satisfaction with life scale and functional ability; total scores according to housing type*

Tabela 2: *Rosenbergova lestvica samospoštovanja, lestvica zadovoljstva z življenjem in funkcionalna sposobnost; skupni rezultati glede na prebivališče/vrsto nastanitve*

Total score/ Skupna ocena	In one's own home/ V svoji družinski hiši ali stanovanju	In old people's home/ V domu za starejše	p
RSES*; mean (standard deviation)	38.8 (8.3)	35.4 (9.0)	0.005*
SWLS†; median (interquartile range)	19 (13-22)	20 (13-22)	0.846§
Functional ability; median (interquartile range)	12 (12-14.5)	17 (14-23)	< 0.001§

Legend/Legenda: * RSES - Rosenberg's self- esteem scale/Rosenbergova lestvica samospoštovanja (RLS);† SWLS - Satisfaction with life scale/lestvica zadovoljstva z življenjem (LZŽ); * t-test for independent samples/t-test za neodvisne vzorce; § Mann-Whitney U test/Mann-Whitneyev U-test

Table 3: *The frequency of the respondents' involvement in the activities requiring increased physical strain according to housing*

Tabela 3: *Pogostost vključitve anketirancev v aktivnosti, ki zahtevajo večjo fizično aktivnost, znotraj skupin anketirancev glede na prebivališče/vrsto nastanitve*

Activities/Aktivnosti	n (%) of respondents involved in activities/ n (%) anketirancev, vključenih v aktivnosti					p*
	Daily/ Dnevno	Weekly/ Tedensko	Monthly/ Mesečno	Yearly/ Letno	Not at all/ Sploh ne	
Exercises for the elderly						
In their own environment	15 (14.9)	49 (48.5)	2 (2.0)	0 (0.0)	35 (34.7)	< 0.001
In old people's home	23 (22.3)	3 (2.9)	3 (2.9)	0 (0.0)	74 (71.8)	
Walking						
In their own environment	61 (60.4)	18 (17.8)	1 (1.0)	0 (0.0)	21 (20.8)	0.090
In old people's home	70 (68.0)	7 (6.8)	2 (1.9)	0 (0.0)	24 (23.3)	
Mountaineering, sailing						
In their own environment	0 (0.0)	0 (0.0)	1 (1.0)	5 (5.0)	95 (94.1)	0.014
In old people's home	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	103 (100.0)	
Dancing, entertainment						
In their own environment	0 (0.0)	0 (0.0)	1 (1.0)	7 (6.9)	93 (92.1)	0.007
In old people's home	0 (0.0)	7 (6.8)	3 (2.9)	2 (1.9)	91 (88.3)	
Trips, journeys						
In their own environment	2 (2.0)	5 (5.0)	17 (16.8)	16 (15.8)	61 (60.4)	< 0.001
In old people's home	0 (0.0)	0 (0.0)	0 (0.0)	21 (20.4)	82 (79.6)	
Gardening						
In their own environment	25 (24.8)	10 (9.9)	4 (4.0)	0 (0.0)	62 (61.4)	< 0.001
In old people's home	0 (0.0)	0 (0.0)	1 (1.0)	0 (0.0)	102 (99.0)	
Sports activities						
In their own environment	1 (1.0)	6 (5.9)	2 (2.0)	0 (0.0)	92 (91.1)	0.001
In old people's home	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	103 (100.0)	

Legend/Legenda: * Fisher's exact test/Fisherjev natančni preizkus; % - percentage/odstotki; n - number/število

Table 4: Frequency of the respondents' involvement in the activities that do not require strenuous physical activity according to housing

Tabela 4: Pogostost vključitve anketirancev v aktivnosti, ki ne zahtevajo večjo fizično aktivnost, znotraj skupin anketirancev glede na prebivališče/vrsto nastanitve

Activity/Aktivnosti	n (%) of the respondents involved in the activities/ n (%) anketirancev, vključenih v aktivnosti					p*
	Daily/ Dnevno	Weekly/ Tedensko	Monthly/ Mesečno	Yearly/ Letno	Not at all/ Sploh ne	
Creative workshops						
In their own environment	4 (4.0)	6 (5.9)	1 (1.0)	1 (1.0)	89 (88.1)	0.833
In old people's home	3 (2.9)	7 (6.8)	0 (0.0)	0 (0.0)	93 (90.3)	
Cultural-artistic activities						
In their own environment	0 (0.0)	4 (4.0)	0 (0.0)	1 (1.0)	96 (95.0)	0.072
In old people's home	3 (2.9)	8 (7.8)	2 (1.9)	0 (0.0)	90 (87.4)	
Reading newspapers, books, solving crossword puzzles						
In their own environment	67 (66.3)	5 (5.0)	0 (0.0)	0 (0.0)	29 (28.7)	0.264
In old people's home	70 (68.0)	1 (1.0)	0 (0.0)	0 (0.0)	32 (31.1)	
Watching TV programs						
In their own environment	90 (89.1)	2 (2.0)	0 (0.0)	0 (0.0)	9 (8.9)	0.422
In old people's home	85 (82.5)	4 (3.9)	0 (0.0)	0 (0.0)	14 (13.6)	
Learning foreign languages, information technology						
In their own environment	3 (3.0)	4 (4.0)	0 (0.0)	0 (0.0)	94 (93.1)	0.500
In old people's home	6 (5.8)	2 (1.9)	0 (0.0)	0 (0.0)	95 (92.2)	
Visits to the cinema, theatre, concerts, exhibitions						
In their own environment	0 (0.0)	1 (1.0)	22 (21.8)	11 (10.9)	67 (66.3)	< 0.001
In old people's home	0 (0.0)	0 (0.0)	0 (0.0)	13 (12.6)	90 (87.4)	
Humanitarian work						
In their own environment	0 (0.0)	6 (5.9)	3 (3.0)	0 (0.0)	92 (91.1)	0.001
In old people's home	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	103 (100.0)	
Political activities						
In their own environment	0 (0.0)	1 (1.0)	0 (0.0)	0 (0.0)	100 (99.0)	0.495
In old people's home	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	103 (100.0)	
Activities in associations/clubs						
In their own environment	0 (0.0)	9 (8.9)	5 (5.0)	1 (1.0)	86 (85.1)	< 0.001
In old people's home	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	103 (100.0)	

Legend/Legenda: * Fisher's exact test/Fisherjev natančni preizkus; % – percentage/odstotki; n – number/število

have a significantly worse functional ability (Mann-Whitney U test, $p < 0.001$). The median of total score of functional abilities in the group of elderly living in their home was equal to the minimum total score of the entire group of respondents, i.e. 12, and in the group of elderly living in old people's homes, the total score of functional abilities was 17 (Table 2).

The frequency of involvement in activities that require strenuous physical activity varies significantly between the two groups of respondents for all activities except for walking (Table 3).

None of the respondents who reside in an old people's home is involved in humanitarian work, political activities and activities in associations. Among other activities that do not require strenuous physical activity, respondents from both groups differ only in frequency and proportion of visits to cultural events (Table 4).

Discussion

The basic characteristics of the respondents in this study, such as age, marital status, lifestyle and distribution of educational attainment are very similar to the characteristics of the population of older persons in other studies (Brajković, 2010). The respondents assessed their self-esteem in the normal range; they are satisfied with life and have good functional capacity. Previous studies that have addressed the subjective quality of life and age, give inconsistent findings and show that the subjective quality of life in function of age may increase, decrease or stay the same. Elderly people can maintain the level of subjective quality of life by lowering their expectations, thus increasing their self-esteem and life satisfaction (Sok, 2010).

Respondents in the current study who have higher self-esteem are more satisfied with life. Improved

functional ability is associated with higher self-esteem and greater life satisfaction. Similar results were obtained in other studies of quality of life of the elderly population which show that functional capacity and high self-esteem are the main predictors of quality of life of older people. According to Gerino and colleagues (2015) self-esteem plays an important role in the perception of one's overall state of health, constituting a factor that would affect the physical and psychological areas of quality of life, and the experiences related to the living environment. Functional capability that enables the fulfilment of basic needs, self-care and participation in activities has a positive impact on the quality of life (Železnik, 2014). Respondents residing in an old people's home were more advanced in age than the residents who live in their own home. The majority of respondents who live in their own home are married or live in cohabitation, while most of the respondents who live in old people's homes are widowed. These results can be explained by the assumption that older people decide to move to a residential facility at a later age, usually after losing their spouse (Železnik, et al., 2011). Social support in this case is a very important and major predictor of life satisfaction and a good indicator of health outcomes, especially in old age (Routasalo, et al., 2006; Pronk, et al., 2011). In the elderly, loneliness would be associated with low quality of life, especially in the mental domain (Dóci, et al., 2003). In fact, as stated in the international literature, loneliness, in connection with the fact that friends' social support, seems to determine the perception of maintaining satisfying social roles (Theeke, 2009; Charles, 2010; Pronk, et al., 2011; Theeke, et al., 2012; Rokach, 2012). Social relationships and health act as predictors of life satisfaction in advanced old age. Life satisfaction measures how people evaluate their life as a whole rather than their current feelings. When asked to rate their general satisfaction with life on a scale from 0 to 10, people across the Organisation for Economic Co-operation and Development (OECD) gave it a 6.5 grade. Life satisfaction is not evenly shared across the OECD however. Some countries – Hungary, Portugal and Turkey – have a relatively low level of overall life satisfaction, with average scores of 5.5 or less. At the other end of the scale, scores reach 7.6 in Norway and Switzerland. Slovenians gave it a 5.7 grade, lower than the OECD average of 6.5 (OECD, 2015).

There is a significant difference in the educational structure of respondents. The share of the respondents with post high school education in the group of the elderly who live in their own home is almost three times higher than those who stay in old people's homes. Assuming that people with less education have less income, this figure can be explained by the fact that life in an old people's home is much cheaper than living in one's own home, which can be a reason for the decision to move to an old people's home. The respondents in

both groups expressed equal satisfaction with life. Only a small number of available studies have dealt with the issue how the move to an old people's home influences their life satisfaction (Netten, et al., 2002). Most of the research deals with the issues how life in old people's homes influences some variables related to satisfaction (e.g.: how living in an old people's home influences the sense of loneliness, the self-assessment of their health status and self-esteem, etc.), but none has explored how it influences life satisfaction itself (Prieto-Flores, et al., 2011). Social relationships and health as predictors of life satisfaction in advanced old age (Brajković, 2010). Quality of life is the individual's perception of his/her health status in relation to social, physical, psychological, economic and spiritual aspects (Gabriel, & Bowling, 2004; Gerino, 2014).

Respondents who live in their own home have higher self-esteem than the respondents who reside in old people's homes. Institutionalization enhances the effects of negative factors associated with self-esteem, such as stigmatization, decreased social interaction and loss of control over the environment (Taft, 1985). Reasons for lower assessment of self-esteem may be the fact that living in an old people's home was a decision made by only a small number of residents. More common causes include poor health, dependency on others, family's inability to take care of a weak person, letting children to live in their home, poor relations within the family, a sense of loneliness and abandonment (Pavot & Diener, 2008; Prieto-Flores, et al., 2011). Kermode and MacLean (2001) reported that older people experienced higher quality of life than people in other age groups. Variables contributing to higher quality of life include good relationships with their partner, with their children, and God.

Respondents residing in old people's homes have a significantly lower functional ability than the respondents who live in their own home. Similar results were obtained in other studies on functional ability as an indicator of the degree of dependence on the assistance of other persons. In older people living in their homes, there are no major limitations in the activities of daily life, but for the residents of old people's homes there are (Železnik, 2014). One of the reasons for accommodation in an old people's home may be a reduced functional ability, however, many studies mention the problem of "learned helplessness" as a result of institutionalisation. Traditionally, care for the elderly in an institution is directed towards working "for individuals". Taking care of the elderly individuals is task-oriented instead of being individualised and tailored to the older persons' needs. Oftentimes, the nurses and other staff in an old people's home take on tasks which could be performed by older people themselves if properly enabled. The elderly should be helped to improve self-care skills and move towards being as independent as possible. The fully compensatory system of providing healthcare

discourages older people to perform activities by themselves which leads them into a state of increasing dependence.

In addition to research that addresses the deterioration in functional ability, lesser-known studies describe the possibility of recovering the lost abilities. People with preserved cognitive and physical functional and self-maintenance capacity become increasingly dependent on caregivers after institutionalisation. The same survey shows that the changed approach to nourishing can improve independence, competence and a sense of personal control along with higher self-esteem (Alaphilippe, 2008; Gothe, et al., 2011). Alaphilippe (2008) notes that the aging process does not necessarily result in self-esteem decrease, regardless of the decline in many areas of mental activity. Some other authors (An, et al., 2008) believe that life satisfaction, self-esteem, and perceived health status were strongly correlated with each other. Living arrangements significantly affected life satisfaction, self-esteem, and perceived health status. Women who live with their married son had the highest life satisfaction and self-esteem and perceived themselves to be healthier in comparison to their counterparts.

There is empirical evidence suggesting that personal autonomy and independence are of special importance in the care of older people, and that addiction is associated with low self-esteem and other mental problems such as depression (Clissett, et al., 2013).

The frequency of involvement in activities that require strenuous physical activity varies significantly across the two groups for all activities except walking. According to available studies, physical activity is significantly associated with the level of self-esteem, better self-assessment of health and quality of life of older persons (Lee, et al., 2010; Železnik, 2010; Gothe, et al., 2011; Železnik, 2012). Although exercise is an established component in the management of many chronic diseases associated with aging, activity levels tend to progressively decline with increasing age, which is a growing public health problem (Železnik, 2014). Given the growing proportion of older adults, these suboptimal levels of physical activity represent an increasing public health problem. Age-specific barriers and motivators unique to this cohort are relevant and must be acknowledged. The identification of reliable predictors of exercise adherence will allow healthcare providers to effectively intervene and change patterns of physical activity in sedentary elderly (Schutzer & Graves, 2004).

Conclusion

The results of the study support previous findings that there is a positive correlation between self-esteem and life satisfaction of the elderly. Self-esteem should be recognised as an important aspect of the adaptive

processes in older adults. The long-stay care services should therefore help the residents to be as self-managing as possible and enable them to achieve their fullest possible potential. The staff in residential care can play a key and pivotal role in the prevention of the elders' disempowerment and consequently lower self-esteem and quality of life. It is therefore of importance that healthcare professionals and family members acquire adequate knowledge and skills to help preserve self-esteem and quality of life of the elderly. Furthermore, adequate educational and promotional strategies should be adopted to heighten the overall awareness of the issue in the general public.

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Original scientific article/Izvirni znanstveni članek

Physical activity of graduated nurses in one-and multiple-shift work

Gibalna aktivnost pri diplomiranih medicinskih sestrah, ki opravljajo enoizmensko in večizmensko delo

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Key words: lifestyle; working hours; free time; nursing care

Ključne besede: življenjski slog; delovni čas; prosti čas; zdravstvena nega

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ABSTRACT

Introduction: Physical activity enables nurses to better control their mental and physical strain at work, which is important for ensuring quality patient treatment. The aim of the research was to study differences in graduate nurses' physical activity in terms of their working hours, motives and obstacles to regular, free-time physical exercising.

Methods: A quantitative survey with two-stage random sampling included 349 graduate nurses employed in the secondary or tertiary levels of healthcare institutions in Slovenia who work one shift (41 %) or multiple shifts (59 %). The data were collected with a questionnaire in 2012 and analysed with a chi-square test, a t-test for independent samples and discriminant analysis.

Results: Graduate nurses with one shift perform physical activity more often ($p < 0.001$) and are more involved in organised physical exercise ($p < 0.001$) than those who work multiple shifts. The motives for one-shift graduate nurses to engage in physical activity are to control stress, a better mood, along with the desire for exercising, moving and relaxation, whereas nurses who work several shifts encounter obstacles due to not exercising regularly, such as work absences, the fact the effects of exercising are not immediately seen, and the lack of free time ($p = 0.025$).

Discussion and conclusion: The research showed that graduate nurses are not sufficiently physically active. Especially those who work multiple shifts are in danger due to the less organised and lower frequency of activities. It is important to promote health in the workplace in various forms, such as active breaks during work hours and sports games for employees and their families.

IZVLEČEK

Uvod: Gibalna aktivnost medicinskim sestram omogoča boljše obvladovanje duševnih in telesnih obremenitev pri delu, kar je pomembno za kakovostno delo s pacientom. Namen raziskave je bil proučiti razlike v gibalni aktivnosti diplomiranih medicinskih sester glede na delovnik ter njihove motive in ovire za redno prostočasno gibalno udejstvovanje.

Metode: Kvantitativna anketna raziskava je s slučajnostnim dvostopenjskim vzorčenjem zajela 349 diplomiranih medicinskih sester, zaposlenih v sekundarnih in terciarnih zdravstvenih zavodih v Sloveniji, z enoizmenskim (41 %) oz. večizmenskim (59 %) delovnikom. Analiza podatkov, zbranih s vprašalnikom v letu 2012, je bila opravljena s testom hi-kvadrat, t-testom za neodvisne vzorce in diskriminanto analizo.

Rezultati: Diplomirane medicinske sestre z enoizmenskim delovnikom se z gibalno aktivnostjo ukvarjajo pogosteje kot tiste z večizmenskim delovnikom ($p < 0,001$) in so v večji meri vključene v organizirane gibalne aktivnosti ($p < 0,001$). Zaposlene z enoizmenskim delovnikom za gibalno aktivnost motivira obvladovanje stresa, boljše razpoloženje, sproščenost, želja po gibanju in sprostitvi, medtem ko zaposlene z večizmenskim delovnikom pri rednem udejstvovanju ovirajo službena zadržanost, izostanek takojšnjega vidnega učinka in pomanjkanje prostega časa ($p = 0,025$).

Diskusija in zaključek: Diplomirane medicinske sestre se z gibalno aktivnostjo ukvarjajo premalo. Zlasti so ogroženi zaposleni z večizmenskim delovnikom zaradi manjše pogostnosti in vključenosti v organizirane oblike gibalnih aktivnosti. Pomembna je promocija zdravja v delovnem okolju v obliki aktivnega odmora med delovnikom in športnih iger za zaposlene in njihove družine.

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Introduction

An ever greater share of the population associates physical activity with a higher level of health as well as with the improvement and maintenance of health (Sila, 2010), regarding it as one of the main recommendations for developing and upholding a healthy lifestyle (Villarruel & Koniak-Griffin, 2007; Atkinson, et al., 2008). Physical activity encompasses various types of body movements that positively affect a person's health and energy consumption (Doupona Topič, 2010). The types that benefit health include sports recreation, work-recreational activities and transport-related movements (Zaletel-Kragelj, 2006) that are intended for the broad population regardless of age, gender, knowledge level and motor abilities (Berčič, et al., 2007). The sufficiency and suitability of physical activity depend on the frequency (number of days per week), intensity (e.g. light, moderate), duration (length of a training unit) and type of motor activity (e.g. aerobic activities, power exercises, flexibility exercises) (Berčič & Sila, 2007).

About two million deaths a year can be attributed to physical inactivity (World Health Organization, 2010). Regular physical activity changes a human body in morphological and functional terms, and this can prevent or slow down the occurrence of some illnesses and ageing as well as increase physical ability. Evidence suggests that an increased level of physical activity can benefit the health of every person, even after a long period of physical inactivity and regardless of their age (Smernice EU o telesni dejavnosti, 2008).

Regular and systematic physical activity is associated with employees' health since it improves their psychophysical abilities, and these in turn increase productivity at work (Karpljuk, et al., 2009). People who are concerned for their health and work performance organise their lives in such a way that they have enough time for free-time activities, helping them to lead a healthy lifestyle (Mlinar, 2007). The better health condition of employees correlates with high productivity and low absence from work (Popham & Mitchell, 2006). Over a period of 4 years, Ravnik and Kocjančič (2015) conducted three gradual ergonomic interventions among industrial workers so as to reduce musculoskeletal disorders and improve their ergonomic status. The study showed a decline in absenteeism, greater satisfaction at work and milder musculoskeletal pain in the employees who participated in the interventions. Important factors for reducing locomotor problems included active breaks during work hours, following the instructions on the manual lifting of loads, carrying out of physical exercises for the spine and employees' higher awareness of their health. In their study Zapka and colleagues (2009) highlighted that the employer should also provide for the physical activity of nurses. Namely, the work of nurses is psychologically and physically

strenuous and they frequently work in multiple shifts. To be able to counteract all the strains of their work, it is important for a nurse to lead a healthy lifestyle and regularly engage in physical activity (Mlinar, 2007).

Mere knowledge that physical activity maintains and improves health does not suffice for regular physical engagement. The fact that people undertake physical activity in their free time is largely a consequence of lifestyle and the related set of personal views and external factors that influence it (Doupona Topič & Sila, 2007). Compared to nurses who work one shift, nurses with a multiple-shift work schedule report their working hours affect the continuity and frequency of their physical activity as well as their social and family lives (Han, et al., 2011). Mlinar (2007) reports that only 31.5 % of nurses with a secondary-school education in the Ljubljana University Medical Centre's intensive care units were regularly physically active. Similar findings were reported by foreign studies conducted in Europe and the USA (McElligott, et al., 2009; Tucker, et al., 2010; Blake, et al., 2011; Malik, et al., 2011), emphasising that nurses' physical activity failed to meet the World Health Organization's recommendations (2010).

Aim and objectives

Based on the findings presented in the theoretical premises, it was established that physical activity is extremely important for nurses' health and work. It can be assumed that an important factor in nurses' physical activity is their working hours; especially a multiple-shift work schedule can be an influential factor leading to less frequent physical activity. The purpose of the empirical study was to investigate the physical activity status of graduate nurses in terms of their working hours and to find methods to motivate graduate nurses to overcome the obstacles and, in line with the World Health Organization's recommendations, devote more attention to regular physical activity (World Health Organization, 2010). The following hypotheses were verified in the study:

H1: There are statistically significant differences in physical activity, in terms of frequency, between graduate nurses working in one or multiple shifts.

H2: There are statistically significant differences in physical activity, in terms of organised physical activity, between graduate nurses working in one or multiple shifts.

H3: Graduate nurses working in one or multiple shifts can be distinguished in terms of the motives for and causes of their physical activity/inactivity.

Methods

A descriptive non-experimental methodology was applied in the study. The data were acquired using the survey technique.

Description of the research instrument

The survey technique was employed to collect the data. The research instrument was a structured written questionnaire. The questionnaire's structure was based on the substance of two studies: "Health-related behavioural style 2008", which was developed and implemented by the CINDI (Countrywide Integrated Noncommunicable Disease Intervention) Ljubljana organisation (Hlastan Ribič, et al., 2010), and "Sport activity and lifestyle of nurses employed in intensive care units of the Ljubljana University Medical Centre", conducted by Mlinar (2007). The questionnaire consisted of a demographic part and 21 questions divided into nine thematic sets: 1) socio-demographic characteristics of the sample; 2) frequency and duration of physical activity; 3) organisation of physical activity (organised training, non-organised training); 4) content and/or type of physical activity; 5) way of spending free time; 6) causes of physical inactivity and motives for movement; 7) assessment of the effects of physical activity on health, well-being and behaviour; 8) opinions about physical activity; and 9) assessment of own health and stress management with physical activity in the workplace. The article presents the results of the first, second, third and sixth thematic sets of the questionnaire. The respondents' socio-demographic characteristics were established by means of relational and ordinal variables. The second thematic set, the frequency of physical activity, was established using ordinal variables with five answers offered in advance. The measured variables in the third and sixth thematic sets of the questionnaire were expressed in the form

of statements and assessed based on a 5-point scale, as follows: 1 – never, 2 – very rarely, 3 – occasionally, 4 – frequently, 5 – always.

Before its implementation, the questionnaire was pilot tested on a sample of graduate nurses ($n = 22$) from the Novo mesto General Hospital. To establish the measurement instrument's reliability, we used the Cronbach alpha coefficient which ranged from 0.710 to 0.876 in some thematic sets of the questionnaire and thus exceeded 0.700, which the literature states is the appropriate reliability level of a measurement instrument (Cencič, 2009).

Description of a sample

The statistical population included graduate nurses employed in public secondary or tertiary healthcare establishments (27 institutions) of the Republic of Slovenia. Two-stage random sampling was employed. In the first stage of the sampling, 15 institutes were randomly selected from among all participating healthcare establishments, and 12 institutes gave their consent for the research. In the second stage of sampling, a sample was created of all graduate nurses employed in healthcare establishments with only one or two intensive care departments. In those healthcare establishments that have several intensive care departments, two intensive care departments were randomly selected, i.e. by drawing lots, from the list of all departments with a multiple-shift work schedule, and two departments with a single-shift work schedule. The research included all graduate

Table 1: *Socio-demographic characteristics of the sample*
Tabela 1: *Socialnodemografske značilnosti vzorca*

<i>Socio-demographic data/Socialnodemografski podatki</i>	<i>n</i>	<i>%</i>
Higher professional education	349	100
One-shift work schedule	143	41.0
Multiple-shift work schedule	206	59.0
	$\bar{x}(s)$	<i>Min–Max</i>
Age (years)	35.7 (9.2)	21–60
Years of service	13.4 (10.3)	1–40
Body mass index	24.3 (3.8)	15.1–41.5
Body mass index:	<i>n</i>	<i>%</i>
Malnutrition < 18.50	9	2.6
Normal weight 18.50–24.99	221	63.3
Overweight 25–29.99	91	26.1
First-stage obesity 30–34.99	22	6.3
Second-stage obesity 35–39.99	5	1.4
Third-stage obesity > 40	1	0.3

Legend/Legenda: *n* – number/število; *%* – percentage/odstotek; \bar{x} – average/povprečje; *s* – standard deviation/standardni odklon; *Min* – minimum/minimum; *Max* – maximum/maksimum

nurses from the selected departments who had given their consent to participate in the research and were present on the day the research was conducted.

The final sample of nurses included in the research consisted of 349 graduate nurses with a one-shift work schedule (41 %) or a multiple-shift work schedule (59%). The sample's socio-demographic characteristics are presented in Table 1. The research included graduate nurses, all women, with an average age of 35.7 years ($s = 9.2$) and average years of service of 13.4 ($s = 10.3$).

Description of the research procedure and data analysis

The surveying was conducted from May 2012 to August 2012, after the participating health-care establishments had given their written consent for the research. The first author of the article conducted the entire data collection, using a personal written approach. The data collection respected the ethical aspects of research involving human subjects, in accordance with the principles of the Helsinki-Tokyo Declaration (World Medical Association, 2013) and the Slovenian Nurses' Code of Ethics (Kersnič & Filej, 2009). Participation in the research was anonymous and voluntary, with an option to withdraw without any consequences. All of the presented results are based on the anonymity of the participating graduate nurses.

The data were processed using the SPSS version 18.0 (SPSS Inc., Chicago, IL). A chi-square test and a t-test for independent samples were applied to establish differences in terms of physical activity between graduate nurses working one shift and graduate nurses working multiple shifts. The multivariate discriminant analysis method was used to explain the differences between the abovementioned groups of graduate nurses regarding the motives for and causes of physical activity/inactivity. Differences at a 5 % and lower risk level ($p < 0.05$) were considered statistically significant.

Results

The study showed that graduate nurses employed in secondary and tertiary healthcare establishments in Slovenia engage irregularly in physical activity in their free time in one-half of the cases, i.e. on weekends (22.9 %) or only a few times a month (20.3 %), or are not physically active at all (3.4 %) (Table 2). One-half of the nurses are physically active at least twice a week (53.3 %), but only 15.2 % of graduate nurses meet the criterion of recommended daily physical activity.

When verifying the first hypothesis, namely that there are statistically significant differences in physical activity, in terms of frequency, between the discussed groups of graduate nurses, the chi-square test confirmed the differences were statistically significant

Table 2: *Frequency of graduate nurses' physical activity and related differences due to their working hours*

Tabela 2: *Pogostnost ukvarjanja diplomiranih medicinskih sester z gibalno aktivnostjo in razlike glede na delovnik*

<i>What is the frequency of your physical activity?/ Kako pogosto se ukvarjate z gibalno aktivnostjo?</i>	<i>n</i>	<i>Shift work/ Delovnik</i>		<i>Total/ Skupaj</i>	<i>Chi-square test/ hi-kvadrat test</i> (<i>p</i>)
		<i>One shift/ Enoizmenski</i>	<i>Multiple shifts/ Večizmenski</i>		
Never	<i>n</i>	2	10	12	29.026 (< 0.001)
	% ratio of frequency	16.7 %	83.3 %	100.0 %	
	% ratio of working hours	1.4 %	4.9 %	3.4 %	
2–3 times a month	<i>n</i>	10	61	71	
	% ratio of frequency	14.1 %	85.9 %	100.0 %	
	% ratio of working hours	7.0 %	29.6 %	20.3 %	
Only during weekends	<i>n</i>	13	67	80	
	% ratio of frequency	16.3 %	83.8 %	100.0 %	
	% ratio of working hours	9.1 %	32.5 %	22.9 %	
2–3 times a week	<i>n</i>	74	59	133	
	% ratio of frequency	55.6 %	44.4 %	100.0 %	
	% ratio of working hours	51.7 %	28.6 %	38.1 %	
Every day	<i>n</i>	44	9	53	
	% ratio of frequency	83.0 %	17.0 %	100.0 %	
	% ratio of working hours	30.8 %	4.4 %	15.2 %	
Total	<i>n</i>	143	206	349	
	% ratio of frequency	41.0 %	59.0 %	100.0 %	
	% ratio of working hours	100.0 %	100.0 %	100.0 %	

Legend/Legenda: n – number/število; % – percentage/odstotek; p – statistical significance/statistična značilnost

($p < 0.001$). Graduate nurses working one shift are more frequently physically active than those working multiple shifts, namely 30.8 % are physically active every day and 51.7 % at least two or three times a week. Two-thirds of graduate nurses working multiple shifts engage in physical activity only on weekends (32.5 %) or several times a month (29.6 %).

As regards the organisation of physical activity (Table 3), the graduate nurses most often indicated they engage in physical activity alone or in a non-organised way ($\bar{x} = 3.4$). Organised physical activity was on average reported very rarely ($\bar{x} = 2.2$). In the assessment of the types of physical activity, the respondents' opinions differed considerably as the standard deviation value exceeded 1 in all types.

The t-test for independent samples was used to verify the second hypothesis, namely that there are statistically significant differences in physical activity, in terms of organised physical activity, between graduate nurses working in one or multiple shifts. The t-test revealed the statistically significantly higher inclusion of graduate nurses with a one-shift work schedule

in sports clubs, sports associations or fitness centres compared to graduate nurses who work multiple shifts ($p < 0.001$). Employees with a one-shift work schedule were statistically significantly more involved in non-organised physical activities with their family members ($p = 0.019$). Graduate nurses with a multiple-shift work schedule prevailed in individual physical activity ($p < 0.001$). No statistically significant differences were established between the studied groups of nurses in terms of engaging in physical activity in the company of friends.

Table 4 shows that the discussed groups of graduate nurses differ most distinctively in terms of their motives for physical activity, which include: to reduce or manage stress (0.671), to improve mood and unwind (0.547), a desire for movement (0.497) and relaxation (0.452). The causes of physical inactivity that clearly distinguish the two groups of graduate nurses include not enough time due to work (-0.583), absence of an immediate visible effect (-0.497) and absence of free time (-0.456). The first four relations are positive while the next three are negative, meaning

Table 3: *Organisation of graduate nurses' physical activity and related differences due to their working hours*

Tabela 3: *Organiziranost ukvarjanja z gibalno aktivnostjo diplomiranih medicinskih sester in razlike glede na delovnik*

What is the organization of your physical activity?/ V kakšni obliki se ukvarjate z gibalno aktivnostjo?	Total/ Skupaj n = 349		One shift/ Enoizmenski n = 143		Multiple shifts/ Večizmenski n = 206		t	p
	\bar{x}	s	\bar{x}	s	\bar{x}	s		
Organised, in a sports club, association, fitness centre	2.2	1.1	3.0	1.0	1.7	0.8	13.090	< 0.001
Non-organised, with friends	2.7	1.1	2.8	1.2	2.7	1.1	0.954	0.341
Non-organised, with my family members	3.1	1.1	3.3	1.1	3.0	1.2	2.349	0.019
I engage in physical activity alone	3.4	1.1	2.7	0.9	3.9	0.9	-12.425	< 0.001

Legend/Legenda: n - number/število; \bar{x} - average/povprečje; s - standard deviation/standardni odklon; t - independent sample t-test/t-test za neodvisne vzorce; p - statistical significance/statistična značilnost

Table 4: *Discriminant analysis of motives for and causes of physical activity/inactivity of graduate nurses who work one or multiple shifts*

Tabela 4: *Diskriminantna analiza motivov in vzrokov za gibalno aktivnost/neaktivnost med diplomiranimi medicinskimi sestrami, ki opravljajo enoizmensko oz. večizmensko delo*

Motives and causes for physical activity/inactivity/ Motivi in vzroki za gibalno aktivnost/neaktivnost	Discriminant function 1 (structure coefficients)/ Diskriminantna funkcija 1 (strukturne uteži)	Canonical correlation coefficient (p)/ Kanonični korelacijski koeficient (p)
Physical activity often helps me reduce stress.	0.671	
The current job does not allow me to engage in physical activity.	-0.583	
Physical activity helps improve my mood and I am more relaxed.	0.547	
I engage in physical activity because I have a desire for movement.	0.497	0.356
I am physically inactive because the effect is not immediately visible.	-0.497	(0.025)*
I am physically inactive because I do not have enough free time.	-0.456	
I engage in physical activity to relax.	0.452	

Legend/Legenda: p - statistical significance/statistična značilnost; * - the share of correctly classified units is 63.5 %/delež pravilno uvrščenih enot je 63,5 %

the importance of the motives for physical activity increases with the performance of one-shift work, whereas the causes of physical inactivity decrease; in the case of a multiple-shift work schedule the causes of physical inactivity increase and the motives for physical activity decrease.

The third hypothesis, in which it was assumed that the groups of graduate nurses differ in terms of their motives for and causes of physical activity/inactivity, was verified with the canonical correlation coefficient (0.356). The coefficient is medium-high and shows that the investigated motives for physical activity and the causes of inactivity distinguish the graduate nurses who work one or multiple shifts with a 63.5% probability. The groups differ statistically significantly ($p = 0.025$) in terms of their motives for and causes of physical activity/inactivity in their free time.

Discussion

It was established that more than one-half of all graduate nurses in our research engaged in physical activity from twice a week to every day. Only one-fifth of them meet the World Health Organization's recommendation (2010), namely, at least 150 minutes of moderate to intense aerobic training per week for adults, with an uninterrupted duration of at least 10 minutes (e.g. 50 minutes three times a week). Less than one-half of the graduate nurses in our research were irregularly physically active, i.e. only on weekends or a few times a week. Conducted in Great Britain, the study by Blake and Harrison (2013) included 540 nurses. They found that, in view of the World Health Organization's recommendations (i.e. at least 30 minutes of moderate to intense physical activity five or six times a week for a positive effect on health), nearly one-half of the nurses were insufficiently physically active, which is comparable with our research. Tucker and colleagues (2010) established in a study conducted in the USA that slightly less than one-half of the surveyed nurses were physically active and that most did not meet the recommendations concerning regular movement. In the abovementioned study, 6 % of those surveyed were completely physically inactive, which was slightly higher than the share of physically inactive subjects in our research (3.4 %).

A comparison of the results for frequency of physical activity showed statistically significant differences between the graduate nurses working one or multiple shifts, whereby graduate nurses with a multiple-shift work schedule dedicate less time to physical activity than graduate nurses working a single shift. The data showing that slightly less than one-third of the graduate nurses with a one-shift work schedule find time for physical activity every day are encouraging. On the other hand, occasional or irregular physical activity prevails among graduate nurses working multiple shifts. Our results differ from

those of the study by Díaz-Sampedro and colleagues (2010), conducted in a Spanish hospital among nurses working multiple shifts. They found that nearly three-quarters of the surveyed nurses were engaged in regular physical activity. Given the obtained results, the first research hypothesis "There are statistically significant differences in physical activity, in terms of frequency, between graduate nurses working in one or multiple shifts" can be accepted.

The graduate nurses in our research most often exercise in the framework of non-organised independent physical activity or with their family members. They rarely take part in organised trainings, and those who do are statistically significantly more often those who work one shift. One-shift nurses are more frequently physically active in the company of their family members, whereas those who work multiple shifts rank independent physical activity in first place. Statistically significant differences between the groups were expected because a multiple-shift work schedule is related with absence from home and thus fewer possibilities for spending family free time together or for engaging in organised physical activities with a fixed timetable. Hypothetically, it may be concluded that the differences between the studied groups stem from the characteristics of the working environment, the available recreational physical activities in connection with working hours, and the place of residence in the case of those deciding to engage in an organised or non-organised type of physical activity. Similar results were reported by Mlinar (2007) whose study revealed that nurses with a multiple-shift work schedule participated statistically significantly less often in organised physical activities than nurses working one shift. Given the results, the second research hypothesis "There are statistically significant differences in physical activity, in terms of organised physical activity, between graduate nurses working in one or multiple shifts" can be accepted.

Research shows that, in terms of the effects on a person's physical and mental health, organised physical activity led by a qualified expert is the highest in quality (Zurc, 2008). An unsettled issue to be answered in future studies is how to encourage nurses with a multiple-shift work schedule to engage in organised physical activities or how to adjust the latter to them. Special attention should be paid to exploring nurses' internal and external motives for engaging in organised physical activity.

The purpose of the third hypothesis was to identify the strongest motives for and causes of physical (in)activity that distinguish between graduate nurses working in one or multiple shifts. Based on the findings, it can be predicted with a 66.6 % level of reliability that, in terms of the causes of physical inactivity, those graduate nurses who work multiple shifts will differ from those working a single shift in the following views: the current job does not allow them to engage in physical activity,

the effect of the physical activity is not immediately visible, and they do not have enough free time. Similar causes of the physical inactivity of nurses working multiple shifts were reported in the study by Mlinar (2007), namely the differences compared to nurses with a one-shift work schedule were seen in the following statements: "multiple-shift work does not permit me", "overfatigue", "lack of leisure time", "the effect is not immediately visible", "I don't feel the urge to engage in physical activity" and "there are no sports facilities in the vicinity". In a study by Han and colleagues (2011), nurses with a multiple-shift work schedule reported that their working hours influenced the low frequency of their physical activity. Similar findings were reported by Malik and colleagues (2011) in a study conducted in England among graduate nurses and nurses with a secondary-school education where the main obstacles to physical activity included a lack of time, overfatigue, a lack of financial resources, and nurses' non-motivation. Given the results obtained from the discriminant analysis, the third research hypothesis "Graduate nurses working in one or multiple shifts can be distinguished in terms of the motives for and causes of their physical activity/inactivity" can be accepted.

The measurement instrument for studying the graduate nurses' physical activity in view of the working hours, which was composed based on previous research, proved to be appropriate for our study in terms of the data collection, while also offering opportunities for improvements in further research on graduate nurses' physical activity. The result of this study is only nurses' descriptive self-assessment of their movement-related behavioural style and not an objective measurement of their actual physical activities. This can serve as a basis for future research that could objectively measure the performed physical activity. The research offers starting points for deliberating on the status of the studied population's physical activity and for considering the possibility of including physical activity in regular working hours with the aim of encouraging nurses, especially those working multiple shifts, to be more physically active so as to maintain and improve their health.

Conclusion

The study found that graduate nurses, particularly those with a multiple-shift work schedule, engage insufficiently in physical activity. As physical activity is necessary to maintain health and ensure the high-quality work of nurses, employees in nursing care should be appropriately motivated, empowered and educated to adopt a more positive attitude to regular physical activity.

Based on the results of our study, we propose preventive trainings on the importance of physical activity for the health of employees in nursing care, especially nurses with a multiple-shift work schedule.

Attention should be paid to adjusting the timetables of organised physical activities for nurses who work multiple shifts. Given the fact that graduate nurses are aware of the importance of physical activity but encounter certain obstacles in their attempt to regularly engage in such activity, it would be worth considering introducing an active break for employees during their working hours as well as different sports events for employees and their families; health institutions would thus boost the level of interest and offer their employees various possibilities for regular and continuous engagement in physical activities. Physical activity in the workplace improves employees' well-being and health and should be an indispensable part of the annual work plan. Physical activity only achieves its purpose when implemented regularly. As our research results show, in the case of nurses this is only feasible if the specifics of their working hours are considered.

Slovenian translation/Prevod v slovenščino

Uvod

Vse večji delež prebivalstva povezuje gibalno aktivnost z višjo ravno zdravstvenega stanja, izboljšanjem in ohranjanjem zdravja (Sila, 2010) ter jo umešča med glavna priporočila za razvoj in vzdrževanje zdravega načina življenja (Villarruel & Koniak-Griffin, 2007; Atkinson, et al., 2008). Gibalno aktivnost predstavljajo najrazličnejše oblike gibanja telesa, ki pozitivno učinkujejo na človekovo zdravje in porabo energije (Doupona Topič, 2010). Med zdravju koristne oblike prištevamo športno rekreacijo, delovno-rekreativne aktivnosti ter transportne oblike gibanja (Zaletel-Kragelj, 2006), ki so namenjene najširšim množicam prebivalstva ne glede na starost, spol, znanje in gibalne sposobnosti (Berčič, et al., 2007). Zadostnost in primernost gibalne aktivnosti opredeljujejo pogostnost (število dni tedensko), intenzivnost (npr. lahka, zmerna), trajanje (dolžina vadbene enote) in vrsta gibalne dejavnosti (npr. aerobne aktivnosti, vaje za moč, vaje za gibljivost) (Berčič & Sila, 2007).

Približno dva milijona smrti na leto lahko pripišemo gibalni neaktivnosti (World Health Organization, 2010). Človeško telo se zaradi redne gibalne aktivnosti morfološko in funkcionalno spremeni, kar lahko prepreči in upočasni pojav nekaterih bolezni in staranja ter poveča fizično zmogljivost. Na voljo so dokazi, da lahko povečana stopnja gibalne aktivnosti tudi po daljšem obdobju nedejavnosti koristi zdravju vsakega človeka ne glede na njegovo starost (Smernice EU o telesni dejavnosti, 2008).

Redno in sistematično gibalno aktivnost povezujemo z zdravjem zaposlenih, saj izboljšuje psihofizične sposobnosti, ki posledično povečujejo delovno

storilnost (Karpljuk, et al., 2009). Osebe, ki so odgovorne za svoje zdravje in delovno uspešnost, si svoje življenje organizirajo tako, da imajo čas za prostočasne dejavnosti, ki jih podpirajo pri oblikovanju zdravega življenjskega sloga (Mlinar, 2007). Boljše splošno zdravje delavcev pa je povezano z visoko produktivnostjo in nižjo stopnjo odsotnosti z dela (Popham & Mitchell, 2006). Ravnik in Kocjančič (2015) sta v obdobju štirih let izvedla tri postopne ergonomske intervencije na delovnem mestu pri zaposlenih v industriji z namenom zmanjšanja mišično-skeletnih težav in izboljšanja ergonomskega statusa. Raziskava je pokazala upad absentizma, večje zadovoljstvo pri delu in manjšo izraženost mišično-skeletnih bolečin pri zaposlenih, ki so bili vključeni v intervencije. Zlasti pomembno vlogo na zmanjšanje lokomotornih težav so imeli aktivni odmori med delom, upoštevanje navodil pravilnega dvigovanja bremen, izvedba gibalnih vaj za hrbtenico ter večja splošna osveščenost zaposlenih o njihovem zdravju. V raziskavi Zapka s sodelavci (2009) opozarja, da bi tudi delodajalec moral poskrbeti za gibalno aktivnost medicinskih sester. Delo medicinskih sester je namreč psihično in fizično naporno, pogosto je njihovo delo tudi večizmensko. Z namenom premagovanja vseh delovnih obremenitev je za medicinsko sestro pomemben zdrav življenjski slog in s tem tudi redna gibalna aktivnost (Mlinar, 2007).

Zgolj védenje, da gibalna aktivnost ohranja in krepi zdravje, še ne zadošča za redno gibalno udejstvovanje. Na to, da se ljudje v svojem prostem času ukvarjajo z gibalno aktivnostjo, v veliki meri vplivata življenjski slog in z njim povezana množica osebnih stališč in zunanjih dejavnikov, ki ga oblikujejo (Doupona Topič & Sila, 2007). V primerjavi medicinskimi sestrami, ki delajo enoizmensko, medicinske sestre, ki opravljajo večizmensko delo, poročajo, da njihov delovnik vpliva na kontinuiteto in pogostnost gibalne aktivnosti ter na družabno in družinsko življenje (Han, et al., 2011). Avtorica Mlinar (2007) poroča, da je redno gibalno aktivnih samo 31,5 % srednješolsko izobraženih medicinskih sester v intenzivnih enotah Kliničnega centra Ljubljana. Do podobnih ugotovitev so prišle tudi tuje raziskave v Evropi in Združenih državah Amerike (McElligott, et al., 2009; Tucker, et al., 2010; Blake, et al., 2011; Malik, et al., 2011), ki izpostavljajo, da gibalna aktivnost medicinskih sester ne dosega priporočil Svetovne zdravstvene organizacije (World Health Organization, 2010).

Namen raziskave in cilji

Na podlagi v teoretičnih izhodiščih predstavljenih spoznanj ugotavljamo, da je gibalna aktivnost izrednega pomena za zdravje in delo medicinskih sester. Predvidevamo, da ima za gibalno aktivnost medicinskih sester pomembno vlogo njihov delovnik; zlasti večizmensko delo lahko predstavlja vplivni

dejavnik manjše pogostnosti gibalne aktivnosti. Namen empirične raziskave je bil zato raziskati stanje gibalne aktivnosti diplomiranih medicinskih sester z vidika delovnika in poiskati načine motiviranja ter premostitve ovir pri diplomiranih medicinskih sestrah, da bi glede na priporočila Svetovne zdravstvene organizacije redni gibalni aktivnosti namenile več pozornosti (World Health Organization, 2010). V raziskavi smo preverjali sledeče hipoteze:

H1: Med enoizmensko in večizmensko zaposlenimi diplomiranimi medicinskimi sestrami obstajajo statistično značilne razlike v gibalni aktivnosti po pogostnosti udejstvovanja.

H2: Med enoizmensko in večizmensko zaposlenimi diplomiranimi medicinskimi sestrami obstajajo statistično značilne razlike v gibalni aktivnosti po organiziranosti udejstvovanja.

H3: Enoizmensko in večizmensko zaposlene diplomirane medicinske sestre se ločujejo po motivih in vzrokih za gibalno aktivnost/neaktivnost.

Metode

Raziskava temelji na opisni neeksperimentalni metodologiji. Podatki so bili zbrani s tehniko anketiranja.

Opis instrumenta

Podatke smo zbirali s tehniko anketiranja. Kot instrument raziskave smo uporabili strukturiran pisni vprašalnik. Pri sestavljanju vprašalnika smo vsebinsko izhajali iz dveh raziskav: »Z zdravjem povezan vedenjski slog 2008«, ki jo je razvila in izvedla organizacija CINDI (Countrywide Integrated Noncommunicable Disease Intervention) Ljubljana (Hlastan Ribič, et al., 2010), ter raziskave »Športna dejavnost in življenjski slog medicinskih sester, zaposlenih v intenzivnih enotah Kliničnega centra v Ljubljani«, ki jo je izvedla Mlinar (2007). Vprašalnik je bil sestavljen iz demografskega dela in 21 vprašanj, skupaj razdeljenih v devet tematskih sklopov, in sicer 1) socialnodemografske značilnosti vzorca, 2) pogostnost in trajanje gibalne aktivnosti, 3) oblike ukvarjanja z gibalno aktivnostjo (organizirana vadba, neorganizirana vadba), 4) vsebina oz. vrsta gibalne aktivnosti, 5) način preživljanja prostega časa, 6) vzroki za gibalno neaktivnost in motivi za gibanje, 7) ocena učinkov gibalne aktivnosti na zdravje, počutje in vedenje, 8) stališča do gibalne aktivnosti ter 9) ocena lastnega zdravstvenega stanja in obvladovanja stresa z gibalno aktivnostjo na delovnem mestu. Članek prikazuje rezultate prvega, drugega, tretjega in šestega tematskega sklopa vprašalnika. Socialnodemografske značilnosti anketirancev smo ugotavljali z razmernostnimi in ordinalnimi spremenljivkami. Drugi tematski sklop, pogostnost gibalne aktivnosti, smo ugotavljali z ordinalnimi spremenljivkami s

petimi ponujenimi odgovori. Merjene spremenljivke v tretjem in šestem tematskem sklopu vprašalnika so bili izražene v obliki trditev in ocenjevane po petstopenjski ocenjevalni lestvici, pri kateri so vrednosti pomenile sledeče: 1 – nikoli, 2 – zelo redko, 3 – občasno, 4 – pogostno, 5 – vedno.

Pred izvedbo smo vprašalnik pilotno testirali na vzorcu diplomiranih medicinskih sester ($n = 22$) v Splošni bolnišnici Novo mesto. Za ugotavljanje zanesljivosti merskega instrumenta smo uporabili koeficient Cronbach alfa, ki je v posameznih tematskih sklopih vprašalnika dosegel vrednosti med 0,710 in 0,876 ter s tem presešel vrednost 0,700, ki v literaturi predstavlja ustrezno stopnjo zanesljivosti merskega instrumenta (Cencič, 2009).

Opis vzorca

Populacijo ali statistično množico so predstavljale diplomirane medicinske sestre, ki so bile v času izvedbe raziskave zaposlene v javnih sekundarnih in terciarnih zdravstvenih zavodih (27 zavodov) Republike Slovenije. Vzorec je bilo slučajnostno dvostopenjsko. Na prvi stopnji vzorčenja je bilo iz seznama vseh vključenih zdravstvenih zavodov slučajnostno izbranih 15 zavodov, soglasje za izvedbo raziskave je dalo 12 zavodov. Na drugi stopnji vzorčenja smo v zdravstvenih zavodih, kjer sta bila le en ali dva intenzivna oddelka, izbrali v vzorec vse zaposlene diplomirane medicinske sestre. V zdravstvenih zavodih z več intenzivnimi oddelki smo iz seznama vseh oddelkov naključno z žrebom izbrali dva intenzivna oddelka z večizmenskimi delom in prav tako

dva oddelka z enoizmenskimi delom. V raziskavo smo vključili vse diplomirane medicinske sestre izbranih oddelkov, ki so dale ustni pristanek za sodelovanje v raziskavi in so bile prisotne na dan izvedbe raziskave.

Končni vzorec v raziskavo vključenih diplomiranih medicinskih sester je predstavljal 349 diplomiranih medicinskih sester, zaposlenih na delovnih mestih z enoizmenskimi delovnikom (41 %) oz. zaposlenih na delovnih mestih z večizmenskimi delovnikom (59 %). Socialnodemografske značilnosti vzorca so prikazane v Tabeli 1. V raziskavi so sodelovale diplomirane medicinske sestre, vse ženskega spola, s povprečno starostjo 35,7 ($s = 9,2$) let in povprečno delovno dobo 13,4 ($s = 10,3$).

Opis poteka raziskave in obdelava podatkov

Izvedba anketiranja je potekala od maja 2012 do avgusta 2012 po pridobitvi pisnih soglasij vključenih zdravstvenih zavodov za izvedbo raziskave. Zbiranje podatkov je v celoti izvedla prva avtorica članka z osebnim pisnim pristopom. Zbiranje podatkov je potekalo z upoštevanjem etičnih vidikov raziskovanja, ki vključujejo raziskave na ljudeh, v skladu z načeli Helsinško-Tokijske deklaracije (World Medical Association, 2013) in Kodeksa etike medicinskih sester in zdravstvenih tehnikov Slovenije (Kersnič & Filej, 2009). Sodelovanje v raziskavi je bilo anonimno in prostovoljno, z možnostjo prekinitve brez posledic. Vsi predstavljeni rezultati temeljijo na anonimnosti vključenih diplomiranih medicinskih sester.

Tabela 1: *Socialnodemografske značilnosti vzorca*
Table 1: *Socio-demographic characteristics of the sample*

<i>Socialnodemografski podatki/Socio-demographic data</i>	<i>n</i>	<i>%</i>
Visoka strokovna izobrazba	349	100
Enoizmenski delovnik	143	41,0
Večizmenski delovnik	206	59,0
	\bar{x} (<i>s</i>)	<i>Min-Maks</i>
Starost v letih	35,7 (9,2)	21–60
Delovna doba v letih	13,4 (10,3)	1–40
Indeks telesne mase	24,3 (3,8)	15,1–41,5
Indeks telesne mase:	<i>n</i>	<i>%</i>
Podhranjenost < 18,50	9	2,6
Normalna teža 18,50–24,99	221	63,3
Prekomerna telesna teža 25–29,99	91	26,1
Debelost 1. stopnje 30–34,99	22	6,3
Debelost 2. stopnje 35–39,99	5	1,4
Debelost 3. stopnje > 40	1	0,3

Legenda/Legend: n – število/number; % – odstotek/percentage; \bar{x} – povprečje/average; s – standardni odklon/standard deviation; Min – minimum/minimum; Maks – maksimum/maximum

Podatke smo obdelali z računalniškim programom SPSS verzija 18.0 (SPSS Inc., Chicago, IL). Za namen ugotavljanja razlik v gibalni aktivnosti med diplomiranimi medicinskimi sestrami z enoizmenskim in diplomiranimi medicinskimi sestrami z večizmenskim delovnikom smo uporabili test hi-kvadrat in t-test za neodvisne vzorce. Za pojasnjevanje razlike med obravnavanima skupinama diplomiranih medicinskih sester glede motivov in vzrokov za gibalno aktivnost/neaktivnost smo uporabili multivariatno metodo diskriminantne analize. Za statistično značilne smo upoštevali razlike na ravni 5% in manjšega tveganja ($p < 0,05$).

Rezultati

Raziskava je pokazala, da se diplomirane medicinske sestre, zaposlene v sekundarnih in terciarnih zdravstvenih zavodih v Sloveniji, z gibalno aktivnostjo v prostem času v polovici primerov ukvarjajo neredno, tj. ob koncu tedna (22,9 %) ali samo nekajkrat mesečno (20,3 %), oziroma sploh niso gibalno aktivne (3,4 %) (Tabela 2). Polovica medicinskih sester pa je gibalno aktivna vsaj dvakrat tedensko (53,3 %), od tega samo 15,2 % diplomiranih medicinskih sester zadosti pogoju priporočene vsakodnevne gibalne aktivnosti.

Pri preverjanju prve hipoteze, s katero smo predvideli, da med obravnavanima skupinama diplomiranih medicinskih sester obstajajo statistično značilne

razlike v gibalni aktivnosti po pogostnosti, je test hi-kvadrat potrdil statistično značilne razlike ($p < 0,001$). Diplomirane medicinske sestre v enoizmenskem delovniku so v primerjavi z večizmenskim delovnikom bolj pogosto redno gibalno aktivne, 30,8 % se jih giblje vsak dan, 51,7 % pa vsaj dvakrat ali trikrat na teden. V dveh tretjinah so diplomirane medicinske sestre z večizmenskim delovnikom navedle, da se z gibalno aktivnostjo ukvarjajo samo ob koncih tedna (32,5 %) ali nekajkrat na mesec (29,6 %).

Glede oblike ukvarjanja z gibalno aktivnostjo (Tabela 3) so diplomirane medicinske sestre najpogosteje odgovorile, da se z gibalno aktivnostjo ukvarjajo same oz. v neorganizirani obliki ($\bar{x} = 3,4$). Organizirano ukvarjanje z gibalno aktivnostjo je bilo v povprečju navedeno kot zelo redko ($\bar{x} = 2,2$). V ocenah posameznih oblik gibalne aktivnosti so bila mnenja anketirancev zelo razpršena, saj je bila vrednost standardnega odklona pri vseh oblikah nad 1.

S t-testom za neodvisne vzorce smo preverjali drugo hipotezo, s katero smo predvideli, da se diplomirane medicinske sestre z enoizmenskim delovnikom statistično značilno bolj pogosto vključujejo v organizirane gibalne aktivnosti. T-test je pokazal statistično značilno večjo vključenost diplomiranih medicinskih sester z enoizmenskim delovnikom v športne klube, športna društva ali fitness centre v primerjavi z diplomiranimi medicinskimi sestrami z večizmenskim delovnikom ($p < 0,001$). Zaposlene

Tabela 2: Pogostnost ukvarjanja diplomiranih medicinskih sester z gibalno aktivnostjo in razlike glede na delovnik
Table 2: Frequency of graduated nurses' physical activity and its differences due to their working hours

Kako pogosto se ukvarjate z gibalno aktivnostjo?/ What is the frequency of your physical activity?	n	Delovnik/Shift-work		Skupaj/ Total	Test hi-kvadrat/ Chi-square test (p)
		Enoizmenski/ One-shift	Večizmenski/ More-shifts		
Nikoli.	2	10	12		
	% razmerje med pogostostmi	16,7 %	83,3 %	100,0 %	
	% razmerje med delovnikoma	1,4 %	4,9 %	3,4 %	
2–3-krat mesečno.	10	61	71		
	% razmerje med pogostostmi	14,1 %	85,9 %	100,0 %	
	% razmerje med delovnikoma	7,0 %	29,6 %	20,3 %	
Samo ob koncih tedna.	13	67	80		
	% razmerje med pogostostmi	16,3 %	83,8 %	100,0 %	
	% razmerje med delovnikoma	9,1 %	32,5 %	22,9 %	29,026
2–3-krat tedensko.	74	59	133		(< 0,001)
	% razmerje med pogostostmi	55,6 %	44,4 %	100,0 %	
	% razmerje med delovnikoma	51,7 %	28,6 %	38,1 %	
Vsak dan.	44	9	53		
	% razmerje med pogostostmi	83,0 %	17,0 %	100,0 %	
	% razmerje med delovnikoma	30,8 %	4,4 %	15,2 %	
Skupaj	143	206	349		
	% razmerje med pogostostmi	41,0 %	59,0 %	100,0 %	
	% razmerje med delovnikoma	100,0 %	100,0 %	100,0 %	

Legenda/Legend: n – število/number; % – odstotek/percentage; p – statistična značilnost/statistical significance

Tabela 3: *Organiziranost ukvarjanja z gibalno aktivnostjo diplomiranih medicinskih sester in razlike glede na delovnik*
 Table 3: *Organisation of graduated nurses' physical activity and its differences due to their working hours*

V kakšni obliki se ukvarjate z gibalno aktivnostjo? What is the organization of your physical activity?	Skupaj/ Total n = 349		Enoizmenski/ One-shift n = 143		Večizmenski/ More-shifts n = 206		t	p
	\bar{x}	s	\bar{x}	s	\bar{x}	s		
Organizirano v športnem klubu, društvu, fitnessu.	2,2	1,1	3,0	1,0	1,7	0,8	13,090	< 0,001
Neorganizirano s prijatelji.	2,7	1,1	2,8	1,2	2,7	1,1	0,954	0,341
Neorganizirano v krogu družine.	3,1	1,1	3,3	1,1	3,0	1,2	2,349	0,019
Z gibalno aktivnostjo se ukvarjam sam/a.	3,4	1,1	2,7	0,9	3,9	0,9	-12,425	< 0,001

Legenda/Legend: n – število/number; \bar{x} – povprečje/average; s – standardni odklon/standard deviation; t – t-test za neodvisne vzorce/independent-sample T test; p – statistična značilnost/statistical significance

Tabela 4: *Diskriminantna analiza motivov in vzrokov za gibalno aktivnost/neaktivnost med diplomiranimi medicinskimi sestrami, ki opravljajo enoizmensko oz. večizmensko delo*

Table 4: *Discriminant analysis of motives and causes for physical activity/inactivity of graduated nurses who work one shift and more shifts*

Motivi in vzroki za gibalno aktivnost/neaktivnost/ Motives and causes for physical activity/inactivity	Diskriminantna funkcija 1 (strukturne uteži)/ Discriminant function 1 (structure coefficients)	Kanonični korelacijski koeficient/ Canonical correlation coefficient (p)
Gibalna aktivnost ima pogost učinek na zmanjšanje stresa.	0,671	
Trenutna služba mi gibalne aktivnosti ne dopušča.	-0,583	
Z gibalno aktivnostjo sem bolj razpoložen/a, sproščen/a.	0,547	
Z gibalno aktivnostjo se ukvarjam zaradi želje po gibanju.	0,497	0,356 (0,025)*
Sem gibalno neaktiven/a, ker ni takojšnjega vidnega učinka.	-0,497	
Sem gibalno neaktiven/a, ker imam premalo prostega časa.	-0,456	
Z gibalno aktivnostjo se ukvarjam zaradi sprostivne.	0,452	

Legenda/Legend: p – statistična značilnost/statistical significance; * – delež pravilno uvrščenih enot je 63,5 %/the percentage of correctly classified units is 63.5 %

z enoizmenskim delovnikom so bile statistično značilno v večji meri vključene tudi v neorganizirane gibalne aktivnosti v krogu svoje družine ($p = 0,019$). Diplomirane medicinske sestre z večizmenskim delovnikom pa so prevladovale v samostojni gibalni aktivnosti ($p < 0,001$). Pri ukvarjanju z gibanjem v družbi prijateljev med proučevanima skupinama ni bilo ugotovljenih statistično značilnih razlik.

Tabela 4 prikazuje, da se obravnavani skupini diplomiranih medicinskih sester najbolj izrazito ločujeta po motivih za gibalno aktivnost zaradi zmanjševanja oziroma obvladovanja stresa (0,671), boljšega razpoloženja, sproščenosti (0,547), želje po gibanju (0,497) in sprostivni (0,452). Vzroki za gibalno neaktivnost, ki vidno ločujejo obravnavani skupini diplomiranih medicinskih sester, pa so službena zadržanost (-0,583), izostanek takojšnjega vidnega učinka (-0,497) in pomanjkanje prostega časa (-0,456). Prve štiri povezave so pozitivne, naslednje tri so negativne, kar pomeni da z vključenostjo v enoizmenski delovnik narašča pomen motivov za gibalno udejstvovanje in upadajo vzroki za gibalno neaktivnost, medtem ko z vključenostjo v večizmenski

delovnik naraščajo vzroki za gibalno neaktivnost in upadajo motivi za gibalno aktivnost.

Tretjo hipotezo, v kateri smo predvideli, da se obravnavani skupini diplomiranih medicinskih sester ločujeta po motivih in vzrokih za gibalno aktivnost/neaktivnost, smo preverjali s kanoničnim korelacijskim koeficientom (0,356). Koeficient je srednje visok in kaže, da proučevani motivi za gibalno aktivnost in vzroki za neaktivnost s 63,5% verjetnostjo ločujejo med enoizmensko in večizmensko zaposlenimi diplomiranimi medicinskimi sestrami. Skupini sta glede motivov in vzrokov za gibalno aktivnost/neaktivnost v prostem času statistično značilno različni ($p = 0,025$).

Diskusija

Ugotovili smo, da se več kot polovica vseh diplomiranih medicinskih sester v naši raziskavi posveča gibalni aktivnosti od dvakrat na teden do vsak dan. Od tega pa jih samo ena petina zadosti priporočilom Svetovne zdravstvene organizacije (World Health Organization, 2010), ki za odrasle priporoča najmanj 150 minut zmerne do intenzivne

aerobne vadbe na teden, z neprekinjenim trajanjem najmanj 10 minut (npr. trikrat na teden po 50 minut). Slaba polovica diplomiranih medicinskih sester je bila v naši raziskavi neredno gibalno aktivna, tj. samo ob koncih tedna ali nekajkrat na mesec. V raziskavi Blake & Harrison (2013), ki je bila izvedena v Veliki Britaniji, je sodelovalo 540 medicinskih sester. Ugotovili so, da je glede na priporočila Svetovne zdravstvene organizacije (za pozitiven učinek na zdravje je potrebnih vsaj 30 minut zmerne do intenzivne gibalne aktivnosti pet ali več dni na teden) slaba polovica medicinskih sester premalo gibalno aktivnih, kar je primerljivo z našo raziskavo. Tudi Tucker s sodelavci (2010) v svoji raziskavi, izvedeni v Združenih državah Amerike, ugotavlja, da je gibalno aktivna slaba polovica anketiranih medicinskih sester, ki večinoma ne dosegajo priporočil glede rednega gibanja. V navedeni raziskavi je bilo 6 % anketiranih gibalno povsem neaktivnih, kar je malenkost višje od v naši raziskavi ugotovljenega deleža neaktivnih (3,4 %).

Pri primerjavi rezultatov pogostnosti gibalne aktivnosti smo med enoizmensko in večizmensko zaposlenimi diplomiranimi medicinskimi sestrami ugotovili statistično značilne razlike, pri čemer diplomirane medicinske sestre z večizmenskim delovnikom gibalni aktivnosti posvetijo manj časa kot diplomirane medicinske sestre z enoizmenskim delovnikom. Razveseljiv je podatek, da je med enoizmensko zaposlenimi diplomiranimi medicinskimi sestrami, nekaj manj kot tretjina takih, ki vsak dan najdejo čas za gibalno aktivnost. Na drugi strani pa pri večizmensko zaposlenih diplomiranih medicinskih sestrah prevladuje občasna oz. neredna gibalna aktivnost. Naši rezultati se razlikujejo od raziskave Díaz-Sampedro s sodelavci (2010), ki so jo izvedli med medicinskimi sestrami z večizmenskim delovnikom v španski bolnišnici. Ugotovili so, da se skoraj tri četrtine anketiranih medicinskih sester redno ukvarja z gibalno aktivnostjo. Glede na dobljene rezultate lahko prvo raziskovalno hipotezo, ki se je glasila »Med enoizmensko in večizmensko zaposlenimi diplomiranimi medicinskimi sestrami obstajajo statistično značilne razlike v gibalni aktivnosti po pogostnosti udeleževanja«, sprejmemo.

Diplomirane medicinske sestre v naši raziskavi se najpogosteje gibljejo v neorganizirani samostojni obliki ali pa v krogu svoje družine. Redkeje se vključujejo v organizirane gibalne vadbe, pri čemer statistično značilno prednjačijo zaposlene z enoizmenskim delovnikom. Enoizmensko zaposlene so tudi bolj pogosto gibalno aktivne v krogu svoje družine, medtem ko večizmensko zaposlene na prvo mesto postavljajo samostojno gibalno aktivnost. Dobljene statistično značilne razlike med skupinama smo pričakovali, saj je večizmenski delovnik povezan z odsotnostjo od doma in tako tudi z manj možnostmi za skupno družinsko preživljanje časa ali za vključevanje v organizirane gibalne aktivnosti, ki imajo določen

stalen urnik izvajanja. Hipotetično lahko sklepamo, da razlike med proučevanima skupinama izhajajo iz značilnosti delovnega okolja, iz ponudb prostočasnih gibalnih aktivnosti glede na delovnik in iz kraja bivanja pri odločanju za ukvarjanje z organizirano ali neorganizirano obliko gibalne aktivnosti. Podobne rezultate so dobili v raziskavi Mlinar (2007), kjer so se večizmensko zaposlene medicinske sestre statistično značilno manj pogosto udeleževale organiziranih vadb kot medicinske sestre z enoizmenskim delovnikom. Glede na dobljene rezultate lahko drugo raziskovalno hipotezo, ki se je glasila »Med enoizmensko in večizmensko zaposlenimi diplomiranimi medicinskimi sestrami obstajajo statistično značilne razlike v gibalni aktivnosti po organiziranosti udeleževanja«, sprejmemo.

Raziskave kažejo, da je z vidika učinkovanja na posameznikovo telesno in duševno zdravje najbolj kakovostno organizirano gibanje, ki poteka pod vodstvom za to usposobljenega strokovnjaka (Zurc, 2008). Tu ostaja odprto vprašanje, namenjeno prihodnjim raziskavam, na kakšen način spodbuditi oziroma prilagoditi organizirane oblike vadb večizmensko zaposlenim medicinskimi sestram. Posebno pozornost velja v tem okviru nameniti tudi proučevanju notranjih in zunanjih motivov medicinskih sester za udeležbo v organiziranih gibalnih aktivnostih.

S tretjo hipotezo smo želeli preveriti, kateri so najmočnejši motivi in vzroki za ukvarjanje oziroma neukvarjanje z gibalno aktivnostjo, ki ločujejo enoizmensko in večizmensko zaposlene diplomirane medicinske sestre. Na osnovi dobljenih ugotovitev lahko z dvotretjinsko zanesljivo gotovostjo napovemo, da se bodo zaposlene diplomirane medicinske z večizmenskim delovnikom glede na vzroke neukvarjanja z gibalno aktivnostjo od zaposlenih z enoizmenskim delovnikom ločile po naslednjih stališčih: da jim trenutna služba ne dopušča gibalnega udeleževanja, da ni opaziti takojšnjega vidnega učinka gibalne aktivnosti in da jim primanjkuje prostega časa. Podobne razloge za gibalno neaktivnost medicinskih sester z večizmenskim delovnikom je v svoji raziskavi navedla tudi avtorica Mlinar (2007), in sicer so bile ugotovljene razlike z zaposlenimi z enoizmenskim delovnikom v trditvah: »večizmensko delo mi ne dopušča«, »preutrujenost«, »pomanjkanje prostega časa«, »ni takojšnjega vidnega učinka«, »ne čutim potrebe po fizičnem naporu« in »v bližini ni športnih objektov«. V raziskavi Han s sodelavci (2011) so medicinske sestre z večizmenskim delovnim časom poročale, da njihov delovni urnik vpliva na manjšo pogostnost gibalne aktivnosti. Do podobnih ugotovitev so v svoji raziskavi, izvedeni med diplomiranimi in srednješolsko izobraženimi medicinskimi sestrami v Angliji, prišli tudi Malik s sodelavci (2011), kjer so se kot osrednje ovire za gibalno aktivnost pokazali pomanjkanje časa, preutrujenost, pomanjkanje

finančnih sredstev in nemotiviranost medicinskih sester. Glede na dobljene rezultate diskriminante analize lahko tretjo raziskovalno hipotezo, ki se je glasila »Enoizmensko in večizmensko zaposlene diplomirane medicinske sestre se ločujejo po motivih in vzrokih za gibalno aktivnost/neaktivnost«, sprejmemo.

Merski instrument za proučevanje gibalne aktivnosti diplomiranih medicinskih sester glede na delovni čas, ki smo ga sestavili na osnovi dosedanjih raziskav, se je izkazal za ustreznega z vidika zbiranja podatkov v naši raziskavi in hkrati ponuja priložnosti za izboljšave za prihodnje raziskave proučevanja gibalne aktivnosti diplomiranih medicinskih sester. Z izvedeno raziskavo smo dobili le opisno samooceno medicinskih sester o njihovem gibalnem vedenjskem slogu in ne objektivno izmerjene dejanske gibalne aktivnosti. To ponuja priložnost za nadgradnjo v prihodnjih raziskavah, s katerimi bi objektivno merili izvedeno gibalno aktivnost. Raziskava nudi izhodišča za premislek o stanju gibalne aktivnosti na proučevani populaciji in proučitev možnosti za vključitev gibalne aktivnosti v redni delovni čas in s tem spodbujanje medicinskih sester, zlasti z večizmenskim delovnim časom, da bi bile bolj gibalno aktivne za ohranjanje in krepitev lastnega zdravja.

Zaključek

Z raziskavo smo ugotovili, da se diplomirane medicinske sestre, zlasti tiste, ki opravljajo večizmensko delo, z gibalno aktivnostjo ukvarjajo premalo. Ker je gibalna aktivnost nujno potrebna za zdravje in kakovostno delo medicinskih sester, je zaposlene v zdravstveni negi nujno potrebno motivirati, opolnomočiti in zdravstveno vzgojiti za oblikovanje bolj pozitivnega odnosa do redne gibalne aktivnosti.

Na osnovi rezultatov naše raziskave predlagamo preventivno izobraževanje o pomenu gibalne aktivnosti za zdravje pri zaposlenih v zdravstveni negi, zlasti medicinskih sester z večizmenskim delovnim časom. Pozornost velja usmeriti tudi v prilagoditev urnika organiziranih vadb za medicinske sestre z večizmenskim delovnikom. Glede na to, da se diplomirane medicinske sestre zavedajo pomena gibalne aktivnosti, vendar imajo določene ovire za redno gibalno udejstvovanje, bi bilo dobro razmisliti o organizaciji aktivnega odmora za zaposlene med delovnim časom in o organizaciji športnih dogodkov za zaposlene ter njihove družine, s katerimi bi zdravstveni zavodi dvignili raven zanimanja in možnosti za redno in kontinuirano gibalno udejstvovanje med svojimi zaposlenimi. Gibalna aktivnost na delovnem mestu prispeva k boljšemu počutju in zdravju delavcev in bi morala biti sestavni del letnega načrta dela. Gibalna aktivnost doseže svoj namen namreč šele takrat, ko jo izvajamo redno. Le-to pa je pri medicinskih sestrah, kot kažejo rezultati naše raziskave, izvedljivo šele z upoštevanjem tudi značilnosti delovnega časa.

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Izvirni znanstveni članek/Original scientific article

Kakovost problemov, obravnavanih pri problemskem učenju: ocena študentov zdravstvene nege

The quality of problems used in problem-based learning: the nursing students' assessment

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Ključne besede: evalvacija; zdravstvena nega; problemi; študenti

Key words: evaluation; nursing; problems; students

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IZVLEČEK

Uvod: Z vpeljavo problemskega učenja se je spremenil kontekst učenja. Z uporabo kakovostnih problemov v okviru problemskega učenja se spodbuja kritično mišljenje, skupinske interakcije, uporaba teorije v praksi. Namen raziskave je bil ugotoviti oceno študentov zdravstvene nege glede kakovosti problemov, obravnavanih v okviru problemskega učenja.

Metode: Uporabljeno je bilo kvantitativno neeksperimentalno raziskovanje, podatki so bili zbrani s tehniko anketiranja. V raziskavi je sodelovalo 196 študentov zdravstvene nege. Za obdelavo podatkov je bila uporabljena deskriptivna statistika, t-test in korelacijska analiza. Statistično značilnost smo preverjali na ravni 5% tveganja.

Rezultati: Povprečne ocene vseh trditev, ki so se nanašale na oceno kakovosti problemov, obravnavanih v okviru problemskega učenja, so bile visoke ($\bar{x} > 4$ od 5). Glede na način študija zdravstvene nege (redni, izredni študij) ($t = -1,333, p = 0,558$) in spol ($t = 0,236, p = 0,354$) ne prihaja do razlik v oceni kakovosti obravnavanih problemov. Ugotovljene so bile razlike v oceni kakovosti obravnavanih problemov glede na zaposlenost v zdravstvu ($t = 2,109, p = 0,04$) ter pozitivna šibka povezanost ($r = 0,190, p = 0,002$) med starostjo in oceno kakovosti obravnavanih problemov.

Diskusija in zaključek: Raziskava pokaže visoko oceno kakovosti problemov, obravnavanih v okviru problemskega učenja, s čimer se pri študentih spodbuja samousmerjeno učenje, povečuje zanimanje za učno enoto in izboljšujejo motivacija za delo, komunikacijske spretnosti ter kritično razmišljanje. Nadaljnje raziskave bi bilo smiselno usmeriti v spremljanje vpliva problemskega učenja na učne izide ter uvedbo problemskega učenja v vse učne enote v okviru študija zdravstvene nege.

ABSTRACT

Introduction: With problem-based learning the context of learning has changed. The use of problem-based learning promotes critical thinking, group interaction, and the use of theory in practice. The purpose of the research was to determine the nursing students' assessment regarding the quality of problems used in the context of problem-based learning.

Methods: The study employed methods of quantitative non-experimental research and a survey data collection. A total of 169 nursing students participated in the study. The data were processed by descriptive statistics, t-test and correlation analysis. The statistical significance was tested at a 5% risk level.

Results: The average of all items which were related to the assessment of the quality of problems in the context of the problem-based learning was high ($\bar{x} > 4$ out of 5). Depending on the mode of study ($t = -1.333, p = 0.558$) and gender ($t = 0.236, p = 0.354$), there is no difference in the quality of self-assessment of problems within the problem-based learning. The findings of the study show that there is a statistically significant difference in self-assessment of the quality of problems in the context of the problem-based learning with regard to the employment in nursing ($t = 2.109, p = 0.04$) and that there is a weak positive correlation ($r = 0.190, p = 0.002$) between the age and the self-assessment of the quality of problems in the present problem-based learning.

Discussion and conclusion: Research results reveal high average values of the quality of problems used in the problem-based learning, which result in positive encouragement of students for self-directed learning, increased interest in a learning unit, improved motivation, better communication skills and critical thinking. Further research would be needed to explore the impact of problem-based learning on learning outcomes and the introduction of problem-based learning in all learning units of the nursing study programme.

Uvod

Problemsko učenje (angl. Problem-based learning – PBL) je bilo prvič uporabljeno v poznih šestdesetih letih dvajsetega stoletja pri izobraževanju zdravnikov v Kanadi. Od takrat se uporablja v različnih dodiplomskih in podiplomskih programih kot aktivna metoda učenja (Al Kloub, et al., 2014), ki temelji na uporabi strukturiranih problemov za učenje (Hmelo Silver & Barrows, 2015). Z uporabo problemskega učenja se spreminja kontekst učenja, saj spodbuja kritično mišljenje, skupinske interakcije in uporabo teorije v praksi (Kong, et al., 2014; Martyn, et al., 2014) ter prevzemanje odgovornosti za lastno učenje (Hmelo Silver & Barrows, 2006). Kritično mišljenje je treba razumeti kot spretnost, ki se je učimo z razvojem logičnega in doslednega razmišljanja (Borglin, 2012) in ki vključuje tako kognitivne kot vedenjske komponente (Paul, 2012) ter velja za enega od najpomembnejših konceptov v izobraževanju (Azizi-Fini, et al., 2015). Nekateri avtorji (Hwang & Kim, 2006; Schmidt, et al., 2009; Niemer, et al., 2010) navajajo, da je pri učnih enotah, ki v svoj učni načrt vključujejo problemsko učenje, učinkovitost učenja večja. Zaradi problemskega učenja imajo študenti in diplomanti boljše sposobnosti medsebojnega sodelovanja, bolje povezujejo teorijo s prakso, manjši je osip študentov med študijem, študenti študij prej zaključijo in kakovost učnih programov ocenjujejo višje v primerjavi s študenti, ki so študirali na tradicionalen način. Problemsko učenje združuje več kognitivnih procesov, ki spodbujajo pridobivanje znanja in razumevanje naučenih vsebin (Loyens, et al., 2012). Obravnavanje kompleksnih problemov, ki se uporabljajo pri problemskem učenju, vključuje številne funkcije, ki spodbujajo visoko stopnjo kognitivnih procesov (Loyens, 2014).

Metoda učenja se izvaja v manjših skupinah, da izkoristimo predhodno znanje študentov in povečamo pomembnost uporabljenih konceptov. Učitelj pri problemskem učenju je spodbujevalec, mentor ali vodnik, ki pomaga študentu pri učenju ter usmerja k reševanju problemov s samostojnim učenjem, skupinskim delom, analizo literature in iskanjem informacij po internetu (Hmelo Silver & Barrows, 2006; Hmelo Silver & Barrows, 2008). Vloga učitelja se manjša s sposobnostjo študentovega vključevanja samorefleksije, razmišljanja, usmerjanja ustreznih vprašanj in komentarjev pri reševanju problemov v okviru problemskega učenja (Lu, et al., 2010).

Za uspešno problemsko učenje so ključnega pomena visoko kakovostni oblikovani problemi (Munshi, et al., 2008), ki imajo elemente odprtosti, privlačnosti, ustreznosti in razumljivosti (Kim, et al., 2006). Le-ti morajo ustrezati ravni študentovega predhodnega znanja, spodbujati samostojno učenje ter motivirati za študij (Azer, 2007). Zato je, kot navaja Chan (2008), pomembno zavedanje, da učitelji na uspešnost študentov vplivajo s svojim strokovnim znanjem in osebnostnimi lastnostmi. Saj kot

ugotavljajo Thammasitboon in sodelavci (2007), problemsko učenje bistveno izboljša komunikacijo s pacientom, ter kot navajata Sangestani in Mahnaz (2013), tudi kritično mišljenje, samostojno učenje, samoocenjevanje, timsko delo ter aplikacijo v prakso.

Problem, uporabljen pri problemskem učenju, predstavlja organizacijski okvir za pridobivanje novega strukturiranega znanja (Jones, 2008). Različni avtorji (Schmidt, et al., 2007; Loyens, et al., 2012) navajajo, da je pri oblikovanju problema treba upoštevati štiri faze problemskega učenja. Študenti v prvi fazi aktivirajo predznanje in z razpravljanjem v skupini predlagajo možne razlage ali rešitve. Če je njihovo znanje pomanjkljivo, se oblikujejo učna vprašanja, ki vodijo v študentovo nadaljnje samostojno učenje. Druga faza je torej obdobje samostojnega učenja, ko študenti proučujejo literaturo, povezano z učnimi vprašanji. Tretja faza je faza poročanja, ko se posamezne ugotovitve predstavijo skupini. V četrti fazi pa se na osnovi diskusije in kritične analize oblikujejo rešitve problema. Dobro oblikovani problemi problemskega učenja spodbujajo razmišljanje, so strukturirani, odprti, večajo zanimanje za predmet, so realni in skladni s študentovimi izkušnjami (Hmelo Silver & Eberbach, 2012), študentom zagotavljajo povratne informacije o njihovem znanju (Kapur & Kinzer, 2007) ter so osnova za interaktivno reševanje ob podpori usposobljenega učitelja (Walker & Leary, 2009). AlHaqwi (2014) poudarja, da na uspešnost pri problemskem učenju vplivajo poleg izbire problemov tudi strokovno znanje učitelja in njegove organizacijske ter komunikacijske sposobnosti.

Namen in cilji

Namen raziskave je bil ugotoviti mnenje študentov zdravstvene nege o kakovosti problemov, obravnavanih v okviru problemskega učenja. Predvidevali smo, da obstajajo razlike v oceni kakovosti obravnavanih primerov glede na demografske značilnosti študentov. Zanimalo nas je, v kolikšni meri obstajajo razlike v oceni kakovosti obravnavanih problemov glede na spol, starost, način študija in zaposlenost študentov v zdravstveni negi. V ta namen smo si zastavili naslednji hipotezi:

H1: V oceni kakovosti primerov, obravnavanih pri problemskem učenju, prihaja do statistično pomembnih razlik glede na spol, način študija in zaposlenost študentov v zdravstvu.

H2: Med starostjo študentov in oceno kakovosti problemov, obravnavanih pri problemskem učenju, obstaja pozitivna povezanost.

Metode

Za izvedbo raziskave smo uporabili deskriptivno metodo dela in kvantitativno neeksperimentalno metodologijo raziskovanja.

Opis instrumenta

Uporabljen je bil vprašalnik z 18 trditvami, ki so se nanašale na oceno kakovosti problemov, obravnavanih v okviru problemskega učenja. K tem trditvam smo dodali še eno, ki se je nanašala na splošno oceno kakovosti obravnavanih problemov, ter demografske podatke (spol, starost, način študija, zaposlenost v zdravstvu). Za proučevanje kakovosti problemov, obravnavanih v okviru problemskega učenja, smo uporabili že uporabljen vprašalnik (Munshi, et al., 2008). Z njim smo ocenjevali kakovost obravnavanih problemov z vidika šestih kategorij: spodbujanje razmišljanja in analize, spodbujanje samousmerjenega učenja, usmerjanje k študiju predvidene vsebine, večanje zanimanja za učno enoto, povezanost z bodočim poklicem in ustreznost stopnji predhodnega znanja. Vsaka izmed proučevanih kategorij je vsebovala tri trditve, do katerih so se anketirani opredeljevali s stopnjo strinjanja po petstopenjski Likertovi lestvici (1 – »nikakor se ne strinjam«, 2 – »ne strinjam se«, 3 – »nisem opredeljen/a«, 4 – »strinjam se« in 5 – »popolnoma se strinjam«). Koeficient zanesljivosti (Cronbach α) za uporabljeni vprašalnik je znašal 0,948.

Opis vzorca

Raziskavo smo izvedli med študenti zdravstvene nege Univerze v Mariboru na Fakulteti za zdravstvene vede. Anketirali smo študente 1. in 2. letnika rednega in izrednega študija. Razdelili smo 198 vprašalnikov, vrnjenih je bilo 196, kar je predstavljalo 99 % odziv. Povprečna starost anketirancev je bila 21,23 let (starost med 19 in 42 let). Sodelovalo je 196 študentov, od tega jih je bilo 22 (11,2 %) moškega spola in 174 (88,8 %) ženskega spola. Med sodelujočimi je bilo 146 (74,5 %) študentov rednega in 47 (25,5 %) izrednega študija, trije sodelujoči načina študija niso označili. 18 (9,3 %) anketiranih je že zaposlenih v zdravstvu, medtem ko 176 (90,7 %) anketiranih ni zaposlenih v zdravstvu, dva anketiranca zaposlitve v zdravstvu nista potrdila oz. zanikala.

Opis poteka raziskave in obdelave podatkov

Pred izvedbo raziskave smo pridobili pisni soglasji vodstva Univerze v Mariboru Fakultete za zdravstvene vede in Komisije za etična vprašanja s področja zdravstvene nege Univerze v Mariboru Fakultete za zdravstvene vede (2510-4/2014). Na podlagi pridobljenih soglasij je raziskava potekala v študijskem letu 2013/2014 in študijskem letu 2014/2015 pri učnih enotah Zdravstvena nega žensk z ginekologijo in porodništvom ter Obvladovanje bolnišničnih okužb. Anketirani so bili seznanjeni z namenom in cilji raziskave. Sodelovanje v raziskavi je bilo prostovoljno, zagotovljena je bila anonimnost, saj so podatki interpretirani le v sumarni obliki. Za obdelavo

podatkov smo uporabili statistični računalniški program SPSS verzija 20.0 (SPSS, Chicago, IL, USA). Uporabili smo deskriptivno statistiko, t-test za ugotavljanje razlik med skupinama ter korelacijsko analizo za ugotavljanje povezave med proučevanima spremenljivkama. Statistično značilnost smo preverjali na ravni 5% tveganja ($p < 0,05$).

Rezultati

Iz Tabele 1 je razvidno, da so povprečne ocene vseh trditev visoke ($\bar{x} > 4$ od 5). Ugotovili smo, da je najnižjo oceno prejela trditev »Scenariji problemov so upoštevali študentovo okolje in kulturo« ($\bar{x} = 4,18$, $s = 0,833$), najvišjo oceno pa trditev »Problemi so bili v jasni povezavi z bodočim poklicem« ($\bar{x} = 4,69$, $s = 0,573$). Med kategorijami kakovosti problemov, obravnavanih v okviru problemskega učenja, je najvišjo oceno prejela kategorija »povezanost z bodočim poklicem v realističnem kontekstu« ($\bar{x} = 4,60$, $s = 0,511$).

V nadaljevanju smo s t-testom ugotavljali oceno kakovosti obravnavanih problemov glede na način študija (redni/izredni) in ugotovili, da pri nobeni od proučevanih kategorij »spodbujanje razmišljanja in analize« ($t = -0,286$, $p = 0,101$), »spodbujanje samousmerjenega učenja« ($t = -0,721$, $p = 0,472$), »usmerjanje k študiju predvidene vsebine« ($t = -0,604$, $p = 0,546$), »večanje zanimanja za učno enoto« ($t = -0,071$, $p = 0,944$), »povezanost z bodočim poklicem v realističnem kontekstu« ($t = -0,990$, $p = 0,324$) in »ustreznost stopnji predhodnega znanja« ($t = -0,742$, $p = 0,191$) ne prihaja do statistično pomembnih razlik glede na način študija.

S t-testom smo ugotavljali še statistično značilne razlike glede na zaposlitev v zdravstvu, ter ugotovili, da prihaja do statistično pomembnih razlik v oceni kakovosti obravnavanih primerov v naslednjih treh kategorijah: »usmerjanje k študiju predvidene vsebine« ($t = 3,226$, $p = 0,004$), »povezanost z bodočim poklicem v realističnem kontekstu« ($t = 3,989$, $p < 0,001$) in »ustreznost stopnji predhodnega znanja« ($t = 2,978$, $p = 0,017$). Prav tako smo s t-testom ugotovili statistično pomembno razliko ($t = 2,573$, $p = 0,017$) v skupni oceni kakovosti obravnavanih problemov glede na to, ali so študenti zaposleni v zdravstvu ali ne. Hkrati smo z raziskavo želeli ugotoviti tudi, kakšna je lastna splošna ocena študentov o kakovosti problemov, obravnavanih v okviru problemskega učenja, in ugotovili, da je njihova splošna ocena prav tako visoka ($\bar{x} = 4,39$, $s = 0,569$), kot je bila skupna ocena vseh trditev ($\bar{x} = 4,38$, $s = 0,569$) v okviru uporabljenega vprašalnika.

Nato smo s t-testom želeli ugotoviti še, ali prihaja do statistično pomembnih razlik v lastni splošni oceni študentov glede na spol, način študija ter zaposlenost v zdravstvu, ter s korelacijsko analizo preveriti povezanost med starostjo in oceno kakovosti obravnavanih primerov (Tabela 2).

Tabela 1: Ocena kakovosti problemov, obravnavanih v okviru problemskega pristopa učenja
 Table 1: Quality assessment of problems discussed in the context of the problem-based learning

<i>Trditve in kategorije kakovosti obravnavanih problemov/ Statements and categories regarding the quality of problems used</i>	\bar{x}	<i>s</i>
Problemi so bili za razpravo dovolj jasni.	4,34	0,809
Problemi so dali optimalne napotke za razpravo.	4,28	0,801
Problemi so vsebovali primerne spodbudne namige za razpravo.	4,28	0,783
<i>Spodbujanje razmišljanja in analize</i>	4,30	0,708
Problemi so študente spodbujali k formulaciji lastnih vprašanj.	4,36	0,754
Problemi so študente spodbujali k iskanju ustrezne literature.	4,42	0,790
Problemi so študente spodbujali k produktivni razpravi.	4,46	0,719
<i>Spodbujanje samousmerjenega učenja</i>	4,41	0,658
Problemi so naslavljali cilje ene ali več učnih enot.	4,31	0,763
Problemi so spodbujali interdisciplinarnost.	4,35	0,787
Problemi so spodbujali posvetovanje z literaturo, povezano z učno enoto.	4,33	0,776
<i>Usmerjanje k študiju predvidene vsebine</i>	4,33	0,669
Scenariji problemov so večali študentovo zanimanje za učno enoto.	4,44	0,830
Scenariji problemov so upoštevali študentovo okolje in kulturo.	4,18	0,833
Scenariji problemov so bili študentom privlačni.	4,31	0,804
<i>Večanje zanimanja za učno enoto</i>	4,31	0,726
Problemi so bili v jasni povezavi z bodočim poklicem.	4,69	0,573
Osnovni znanstveni koncepti so bili predstavljeni v kontekstu kliničnih problemov.	4,47	0,660
Problemi so se navezovali na pacienta in ne samo na bolezen.	4,61	0,585
<i>Povezanost z bodočim poklicem v realističnem kontekstu</i>	4,60	0,511
Problemi so bili prilagojeni predznanju študentov.	4,20	0,853
Problemi so bili povezani z že predelano literaturo.	4,21	0,850
Pred uvedbo problemskega pristopa učenja so bili študenti delno seznanjeni z znanjem, potrebnim za rešitev problemov.	4,29	0,725
<i>Ustreznost stopnji predhodnega znanja</i>	4,37	0,650
Splošna ocena kakovosti obravnavanih problemov	4,39	0,569

Legenda/Legend: \bar{x} – povprečje/average; *s* – standardni odklon/standard deviation

Tabela 2: Rezultati t-testa in korelacijske analize
 Table 2: Results of the t-test and correlation analysis

<i>Spremenljivke/ Variables</i>	<i>Število anketiranih/ Number of respondents</i>	<i>Delež anketiranih (%)/ Proportion of respondents (%)</i>	\bar{x}	<i>p</i>
Spol				
Moški	22	11,2	4,40	0,354*
Ženske	174	88,8	4,37	
Način študija				
Redni	146	74,5	4,33	0,558*
Izredni	47	25,5	4,50	
Zaposlenost zdravstvu				
Da	18	9,3	4,67	0,040*
Ne	176	90,7	4,35	
Starost				
Minimum	19	/	4,17	0,002**
Maksimum	42	/	5,00	
Povprečna starost	21,2	/	/	/

Legenda/Legend: * – uporaba t-testa/t-test use; ** – uporaba korelacijske analize/use of correlation analysis; *p* – statistična značilnost pri 0,05 ali manj/statistically significant at 0.05 or less

Tudi pri splošni oceni študentov glede kakovosti problemov, obravnavanih v okviru problemskega učenja, smo ugotovili, da prihaja do statistično značilne

razlike ($t = 2,109$, $p = 0,040$) v oceni le med študenti glede na zaposlenost ali nezaposlenost v zdravstvu. Nismo pa ugotovili statistično značilnih razlik v splošni

oceni kakovosti obravnavanih problemov glede na spol ($t = 0,236$, $p = 0,354$) in način študija ($t = -1,333$, $p = 0,558$), zato prve zastavljene hipoteze nismo potrdili. V nadaljevanju smo ugotovili še, da prihaja do šibke, vendar statistično značilne povezanosti med starostjo študentov in splošno oceno kakovosti obravnavanih problemov ($r = 0,190$, $p = 0,002$) in s tem potrdili drugo zastavljeno hipotezo.

Diskusija

Povprečne ocene proučevanih kategorij problemskega učenja so visoke, kar nakazuje na uporabo kakovostno oblikovanih problemov z jasno opredeljenimi raziskovalnimi vprašanji. Kljub relativno visokim ocenam izpostavimo, da so najvišje ocene prejele trditve v okviru kategorije »povezanost z bodočim poklicem v realističnem kontekstu«, najnižje ocene pa so prejele trditve v okviru kategorije »spodbujanje razmišljanja in analize«. Strinjamo se z nekaterimi avtorji (Schmidt, et al., 2007; Loyens, et al., 2012), da je treba pri oblikovanju problemov upoštevati vse faze reševanja, ter z Rogal in Snider (2008), ki navajata, da učenje na podlagi kakovostno oblikovanih problemov pomaga študentom razvijati kritično mišljenje za reševanje problemov v kliničnih okoljih in zapolnjuje vrzel med teorijo in prakso. Dokazana je pozitivna povezanost med kritičnim mišljenjem in reševanjem problemov (Choi, et al., 2014). Sposobnost kritičnega mišljenja je predpogoj za uspešno reševanje simuliranih problemov v času izobraževanja ter kasneje za varno in učinkovito klinično prakso (Hendricson, et al., 2006; Pitt, et al., 2015). Avtorji Tiwari s sodelavci (2006) in Yuan s sodelavci (2008) so ugotovili povišanje uporabe kritičnega mišljenja pri vsebinah, katerih študij po metodi problemskega učenja traja vsaj eno leto.

Različni avtorji (Ozturk, et al., 2008; Yuan, et al., 2008) ugotavljajo, da samousmerjeno učenje spodbuja kritično mišljenje, kar povečuje sposobnosti za ocenjevanje pacientovih potreb in načrtovanje aktivnosti zdravstvene nege. Kategorija »spodbujanje samousmerjenega učenja«, je druga najvišje ocenjena kategorija. V okviru te kategorije sta najvišje ocenjeni trditvi, ki se nanašata na spodbujanje študentov k iskanju ustreznih literature in produktivni razpravi. Chan (2008) in Azer (2009) izpostavljata, da mora učitelj zagotoviti učinkovito skupinsko dinamiko s spodbujanjem aktivnega vključevanja študentov ter samostojnim in sodelovalnim učenjem. Vloga učitelja pri problemskem učenju je spodbuditi razpravo ter oceniti napredek in obseg dela, ki ga je prispeval študent (Schmidt, et al., 2007; Loyens, et al., 2012). Raziskave (Chikotas, 2009; Shuler, 2012; Cheng, et al., 2014) so pokazale, da se informacije, pridobljene z učenjem na podlagi reševanja problemov, prav zaradi samoučenja ohranijo dlje, hkrati se razvijajo spretnosti, ki omogočajo hitro prilagajanje situacijam v kliničnem okolju. Lekalakala Mokgele (2010) izpostavi predvsem

težave pri študentih prvega letnika, ki se s problemskim učenjem srečajo prvič.

Visoko je ocenjena tudi kategorija »usmerjanje k študiju predvidene vsebine«, s čimer študenti nakazujejo na prepoznavanje pomembnosti upoštevanja ciljev učne enote, spodbujanje interdisciplinarnosti ter spodbujanje posvetovanja z literaturo. Strinjamo se z Dillard in Siktberg (2009), ki navajata, da morajo visokošolski zavodi v današnjem hitro spreminjajočem se svetu izvajati številne spremembe za uspešno soočanje z izzivi prihodnosti ter upoštevati predvsem kakovost programa za vse bolj raznoliko populacijo študentov. Mnogi avtorji (Giddens & Brady, 2007; Brandon & All, 2010; Giddens, et al., 2012; Hardin & Richardson, 2012) ugotavljajo, da večina prenovljenih učnih načrtov s področja zdravstvene nege vključuje sodobne metode poučevanja.

Pri kategoriji »večanje zanimanja za učno enoto« je bila najvišje ocenjena trditev, ki se nanaša na povečanje študentovega zanimanja, iz česar izhaja, da so uporabljeni problemi študentom predstavljali izziv. Çinar in sodelavci (2010) navajajo, da učinkovite strategije reševanja problemov temeljijo na znanju, ki se pričakuje od študentov zdravstvene nege. Rotgans in Schmidt (2014) pa poudarjata, da prav pomanjkanje znanja, izkušenj in razumevanja za reševanje problemov, obravnavanih v okviru problemskega učenja, povečujejo zanimanje za predmet.

Z analizo kategorije »povezanost z bodočim poklicem v realističnem kontekstu« smo ugotovili, da so vse trditve v tej kategoriji visoko ocenjene. Tudi nekateri drugi avtorji (Otting & Zwaal, 2006; Rotgans & Schmidt, 2011; Loyens, et al., 2012) izpostavljajo, da morajo problemi temeljiti na realnih problemih in pojavih in biti zastavljeni tako, da je njihovo reševanje za študente zanimivo ter da nakazuje jasno povezavo z učno enoto. Na pomen uporabe realnih problemov nakazuje tudi statistično pomembna razlika v oceni povezanosti problemov problemskega učenja z bodočim poklicem glede na zaposlitev oz. nezaposlitev v zdravstvu. Študenti, ki so v zdravstvu že zaposleni, ocenjujejo, da so za profesionalno znanje izkušnje pomembnejše kot način študija. Lekalakala Mokgele (2010) ugotavlja, da se študenti zdravstvene nege na problemsko učenje v malih skupinah odzivajo različno, odvisno od predhodnih metod poučevanja, izobrazbe in letnika študija. Tudi mi smo v raziskavi zaznali pozitivno šibko povezanost med starostjo in oceno kakovosti obravnavanih primerov.

Do statistično pomembnih razlik prihaja v kategoriji »ustreznost stopnji predhodnega znanja« le glede na zaposlitev študentov, kar nakazuje na pomembnost uporabe problemov, ki ustrezajo stopnji predznanja študentov. Smiselno bi bilo uvesti pripravljalne delavnice v okviru učnega načrta, kjer bi učitelji dobili boljši vpogled v študentovo predznanje o učnih vsebinah in metodi problemskega učenja.

Omejitev raziskave vidimo v tem, da je bila raziskava

izvedena na priložnostnem vzorcu v eni izobraževalni instituciji in le pri dveh predmetih, zato rezultatov ne moremo posploševati. Vzorec ni reprezentativen, saj v raziskavo niso bili vključeni študenti vseh letnikov visokošolskega študijskega programa zdravstvene nege, prav tako v raziskavo niso bile vključene učne enote, kjer problemsko učenje ni del učnega načrta. Kljub temu rezultati kažejo na potrebo po nadaljnem raziskovanju zaradi spremljanja vpliva problemskega učenja na učne izide ter na potrebo po uvedbi problemskega učenja v vse učne enote.

Zaključek

Študenti zdravstvene nege kakovost problemov, obravnavanih pri problemskem učenju, ocenjujejo zelo visoko. Ta metoda učenja poleg učenja dejstev pri študentih spodbuja samousmerjeno učenje, povečuje zanimanje za učno enoto, izboljšuje motivacijo za delo, komunikacijske spretnosti in kritično razmišljanje. Prav kritično razmišljanje pa je spretnost, ki je predpogoj za uspešno reševanje simuliranih problemov. Za uspešno problemsko učenje so ključnega pomena visoko kakovostno oblikovani problemi z elementi odprtosti, privlačnosti, razumljivosti in ustreznosti ravni predznanja študentov. V raziskavi ugotavljamo, da imajo študenti brez izkušenj v zdravstvu zaradi pomanjkanja predhodnega znanja včasih težave pri reševanju problemov problemskega učenja. Tako je nujno, da pri pripravi in oblikovanju problemov problemskega učenja načrtujemo stopnjo oz. težavnost problema, ki se ujema s predhodnim znanjem in delovnimi izkušnjami študentov. Pri tem uporabimo strategije učenja s ciljem zmanjšati razkorak med teoretičnimi koncepti in prakso zdravstvene nege ter preiti od tradicionalnih k aktivnim oblikam poučevanja.

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Samoocena usposobljenosti študentov zdravstvene nege na podlagi ICN-ovih kompetenc

Self-assessment of nursing students' competence based on ICN framework of competences

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Ključne besede: klinično usposabljanje; kompetence; izobraževanje

Key words: clinical practice; competences; education

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Članek je nastal na osnovi
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*Analiza zahtevanih in doseženih
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IZVLEČEK

Uvod: Klinično usposabljanje študentov zdravstvene nege je ključnega pomena. Pomembno je, da so diplomanti usposobljeni za samostojno, humano, odgovorno in avtonomno izvajanje zdravstvene nege. Namen raziskave je bil ugotoviti usposobljenost študentov na rednem in izrednem študiju zdravstvene nege za samostojno izvajanje zdravstvene nege.

Metode: Izvedena je bila deskriptivna opazovalna raziskava. Podatki so bili zbrani z delno strukturiranim vprašalnikom na vzorcu 134 študentov tretjega letnika študijskega programa prve stopnje Zdravstvena nega. Raziskava je potekala od januarja do marca 2012. Za analizo sta bili uporabljeni deskriptivna statistika in bivariatna analiza (test hi-kvadrat, t-test).

Rezultati: Statistično pomembne razlike v samooceni usposobljenosti med študenti rednega in izrednega študija so se pokazale pri etični praksi ($\bar{x}_R=3,6$, $\bar{x}_{IZR}=3,5$, $t=2,63$, $p=0,010$) in pravni praksi ($\bar{x}_R=3,3$, $\bar{x}_{IZR}=3,1$, $t=2,69$, $p=0,008$). Ugotovljena je bila manj kot 80% usposobljenost pri kompetencah »redno pregledujem in popravljam negovalni načrt v sodelovanju z drugimi člani negovalnega tima in pacienti« ($\chi^2=0,27$, $p=0,654$) in »delegiram naloge glede na usposobljenost, strokovno znanje in izkušnje« ($\chi^2=1,793$, $p=0,181$).

Diskusija in zaključek: Raziskava je pokazala, da so študenti najboljše usposobljeni za medpoklicno zdravstveno varstvo, izboljševanje kakovosti in nadaljnje izobraževanje. Raziskavo bi bilo treba opraviti vsako študijsko leto ob zaključku tretjega letnika.

ABSTRACT

Introduction: Clinical practice is crucial in nursing education. It is important that graduates have gained professional competences to perform independent, humane, responsible and autonomous nursing care. The purpose of this study was to determine whether the full-time and part-time nursing students have acquired adequate competences to independently perform nursing tasks and interventions.

Methods: A descriptive observational method was employed. A semi-structured questionnaire was completed by 134 third-year nursing students. The survey was conducted between January and March 2012. The collected data were processed and analysed by descriptive and bivariate statistics (chi-square test, t-test).

Results: Statistically significant differences in self-assessment of competences among full-time and part-time students were identified in the cluster of ethical practice competences ($\bar{x}_R=3,6$, $\bar{x}_{IZR}=3,5$, $t=2,63$, $p=0,010$) and legal practice ($\bar{x}_R=3,3$, $\bar{x}_{IZR}=3,1$, $t=2,69$, $p=0,008$). Competences with ratings less than 80% were identified in the competences "regularly reviews and revises the nursing care plan in collaboration with other members of the nursing team and patients" ($\chi^2=0,27$, $p=0,654$) and "delegating tasks to others according to their professional abilities, knowledge and experience" ($\chi^2=1,793$, $p=0,181$).

Discussion and conclusion: Findings of this study reveal that the students demonstrate highest level of competence in inter-professional competences of healthcare, quality improvement and continuing education. It is suggested that similar surveys are repeated among the third-year students at the end of the academic year.

Uvod

Študijski program prve stopnje Zdravstvena nega v je Republiki Sloveniji zasnovan v skladu z Direktivo Evropskega parlamenta in Sveta 2005/36/ES (Directive, 2005) o priznavanju poklicnih kvalifikacij ter Direktivo 2013/55/EU Evropskega parlamenta in Sveta (Directive, 2013). Okvir kompetenc o izobraževanju, ki so osnova za oblikovanje študijskih programov zdravstvene nege, predpisuje Mednarodni svet medicinskih sester oziroma International Council of Nurses (ICN) (2005), ki zajema tri področja, in sicer: poklicno, etično in pravno prakso; zagotavljanje zdravstvene nege in upravljanje; razvoj poklica (Aleksander & Runciman, 2003). Spremembe pri usposabljanju medicinskih sester je prinesla tudi Bolonjska deklaracija (Collins & Hewer, 2014), ki za doseganje ciljev bolonjskega procesa določa smernice za učni načrt, na katerem temelji usposabljanje bodočih medicinskih sester. Kompetence zdravstvene nege, ki so bile razvite v skladu z bolonjskim procesom, so: vrednote in vloga zdravstvene nege; klinična praksa in sprejemanje odločitev, veščine, intervencije in aktivnosti v zdravstveni negi; znanje in kognitivne sposobnosti; komunikacija in medosebni odnosi ter vodenje, upravljanje in timsko delo (Salminen, et al., 2010). Kajander Unkuri in sodelavci (2013) pa so opredelili osem področij kompetenc v zdravstveni negi, in sicer: profesionalne in etične vrednote; veščine in intervencije v zdravstveni negi; komunikacija; znanje in kognitivne sposobnosti; ocenjevanje in izboljševanje kakovosti; profesionalni razvoj; vodenje, management, timski pristop in raziskovanje.

Pri izobraževanju medicinskih sester se pogosto uporablja koncept kompetence. Ob tem je treba poudariti, da so definicije kompetence še vedno nejasne in protislovne (Cowan, et al., 2007; Axley, 2008; Butler, et al., 2011). Avtorji najpogosteje opredeljujejo kompetenco z vidika splošnih, vedenjskih in celostnih pristopov (Watson, et al., 2002; Hartigan, et al., 2010; Garside & Nhemachena, 2013). ICN definira kompetenco kot raven učinkovite uporabe znanja, spretnosti in presoje (International Council of Nurses, 2005). Zabalegui in sodelavci (2006) opredelijo kompetence kot dejavnike, ki so dinamična kombinacija atributov, sposobnosti in vedenja, Meretoja in Leino-Kilpi (2003) pa kot funkcionalno primernost in sposobnost povezovanja znanja, spretnosti, stališč in vrednot v določenih situacijah v praksi.

Izobraževanje medicinskih sester poudarja potrebo po upoštevanju splošnih ICN-kompetenc za medicinske sestre (Directive, 2005) in formalne kvalifikacije, opredeljene v kompetenčnem okviru (Directive, 2013; European Federation of Nurses, 2015). Pri tem ima usposabljanje študentov zdravstvene nege v kliničnem okolju izjemno pomembno vlogo (Watson, et al., 2002; Myrick, et al., 2011; Wu, et al., 2016), saj se od

diplomanta pričakuje in zahteva, da bo popolnoma samostojno, suvereno in odgovorno opravljal delo diplomirane medicinske sestre oziroma diplomiranega zdravstvenika. Razvoj kompetenc v kliničnem okolju je tako kompleksen izziv (Bergjan & Hertel, 2013). Študentu omogoča razvijanje in utrjevanje strokovnih kompetenc (Myrick & Yonge, 2005; Bergjan & Hertel, 2013), njegove osebnosti in profesionalnega potenciala, pomaga pri vključevanju v profesionalno prakso ter razvija odgovornost in usposobljenost za delo, spodbuja kritično razmišljanje in privzgaja razumsko mišljenje (Myrick, et al., 2010). Pomembno je vključevanje študenta v klinično okolje v sodelovanju z izkušeno medicinsko sestro – mentorico (Myrick, et al., 2011). Usposobljenost študentov zdravstvene nege je ključna v povezavi s strokovnimi standardi, varnostjo pacientov in kakovostno zdravstveno nego (Kajander Unkuri, et al., 2013). Orodja in metode, ki se uporabljajo za oceno usposobljenosti študentov, morajo biti zato natančno definirani in določeni (Levett-Jones, et al., 2011; Zhang, et al., 2015; Wu, et al., 2016) ter morajo temeljiti na sistematičnem razvoju ter preverjanju zanesljivosti in veljavnosti na velikih vzorcih (Yanhua & Watson, 2011).

V članku je predstavljena samoocena usposobljenosti študentov zdravstvene nege za samostojno, suvereno in odgovorno opravljanje poklica medicinske sestre oziroma diplomiranega zdravstvenika.

Namen in cilji

Namen raziskave je bil ugotoviti samooceno usposobljenosti študentov študijskega programa prve stopnje Zdravstvena nega za samostojno izvajanje kompetenc s področja zdravstvene nege. Ugotoviti smo želeli, ali obstajajo razlike v usposobljenosti med študenti rednega in izrednega študija. V ta namen smo si zastavili hipotezi:

H1: Predvidevamo, da je vsaj 80 % študentov podalo samooceno, da so usposobljeni za samostojno izvajanje kompetenc s področja zdravstvene nege po ICN-kompetencah.

H2: Predvidevamo, da ni statistično pomembnih razlik v samooceni usposobljenosti samostojnega izvajanja ICN-kompetenc s področja zdravstvene nege med študenti rednega in izrednega študija.

Metode

Za izvedbo raziskave smo uporabili presečno opazovalno raziskavo.

Opis instrumenta

Podatke smo zbrali z delno strukturiranim vprašalnikom, ki smo ga pripravili na osnovi ICN-ovih kompetenc za diplomirano medicinsko sestro (Aleksander & Runciman, 2003). Prvi del vprašalnika

je zajemal sociodemografske podatke, ugotavljanje strokovne predizobrazbe in razloge za študij. V drugem delu vprašalnika nas je zanimala usposobljenost študentov zdravstvene nege za samostojno izvajanje ICN-kompetenc. Prvi del vprašalnika je zajemal 14 vprašanj zaprtega tipa, drugi del pa 54 trditev. Posamezna trditev je pomenila določeno ICN-kompetenco. Na kompetence prvega področja se je nanašalo 16 trditev, 31 trditev je zajemalo drugo področje kompetenc, sedem trditev se je nanašalo na tretje področje ICN-ovih kompetenc. Tri glavna področja ICN-kompetenc, ki jih je zajemal drugi del vprašalnika, so: prvo področje kompetenc, imenovano poklicna, etična in pravna praksa, je bilo razdeljeno na podpodročja: odgovornost, etična praksa in pravna praksa. Drugo področje ICN-kompetenc, imenovano zagotavljanje zdravstvene nege in upravljanje, je zajemalo dve podpodročji: ključna načela prakse in vodenje ter upravljanje zdravstvene nege. Tretje področje ICN-kompetenc, imenovano poklicni in osebni razvoj, je zajemalo podpodročja: poudarjanje poklica, dvig kakovosti in nadaljnje izobraževanje. Anketiranci so se opredelili s pomočjo štiristopenjske Likertove lestvice (Jamieson, 2004), pri čemer je 1 pomenilo »nikakor nisem usposobljen«, 2 »nisem usposobljen«, 3 »sem usposobljen«, 4 »zelo sem usposobljen«. Notranjo zanesljivost vprašalnika smo ugotavljali z uporabo koeficienta Cronbach alfa (α). Cronbach α za celoten vprašalnik je znašal 0,898, za prvo področje 0,739, za podpodročje ključna načela prakse 0,957, za podpodročje vodenje in upravljanje zdravstvene nege pa 0,898. Koeficient Cronbach α za tretje področje ICN-kompetenc je bil 0,924. Notranja zanesljivost vprašalnika po posameznih področjih je bila sprejemljiva, saj so bile vrednosti nad 0,700 (Polit & Beck, 2004).

Opis vzorca

Raziskavo smo izvedli med študenti tretjih letnikov redne in izredne oblike študija študijskega programa Zdravstvena nega prva stopnja. Uporabili smo namensko vzorčenje. Od 176 razdeljenih vprašalnikov, kolikor je bilo vpisanih študentov v tretji letnik študija, smo dobili vrnjenih 134, z realizacijo vzorca 76,14 %. Med njimi je bilo 110 (82,1 %) anketirancev ženskega spola, 24 (17,9 %) moškega spola. Na redno obliko študija je bilo vpisanih 80 (59,7 %) anketiranih študentov, 54 (40,3 %) anketiranih študentov se je izobraževalo izredno. Predhodno izobrazbo s področja zdravstvene nege je imelo 116 (86,6 %) študentov, 12 študentov (9 %) je končalo gimnazijo, 6 (4,5 %) študentov je končalo drugo srednjo šolo.

Opis poteka raziskave in obdelave podatkov

Pred izvedbo raziskave smo pridobili pisno soglasje visokošolske institucije. Raziskava je potekala od

januarja do marca 2012. Vprašalnike so študenti izpolnjevali na kliničnih in seminarskih vajah pri učni enoti Zdravstvena nega na kirurškem področju in Zdravstvena nega kirurškega bolnika s kirurgijo. Anketiranci so bili predhodno seznanjeni z namenom in cilji raziskave. Sodelovanje v raziskavi je bilo prostovoljno in anonimno. Pridobljene podatke smo statistično obdelali s programom SPSS verzija 20.0 (SPSS, Chicago, IL, USA). Uporabili smo opisno statistiko in osnovne statistične parametre, s katerimi smo ugotavljali statistično pomembne razlike med posameznimi spremenljivkami. Za primerjavo usposobljenosti študentov za samostojno izvajanje kompetenc s področja zdravstvene nege smo uporabili hi kvadrat test (χ^2 test). Za ugotavljanje razlik med študenti na rednem in izrednem študiju smo uporabili t-test. Statistično značilnost smo preverjali na ravni 5% tveganja ($p < 0,05$).

Rezultati

Rezultati samoocene študentov o usposobljenosti s področja ICN-kompetenc poklicne, etične in pravne prakse kažejo, da je raven usposobljenosti študentov visoka. Med vsemi ocenjevanimi kompetencami s področja poklicne, etične in pravne prakse le za trditev »prepoznavam in se odzovem na kršitve zakonov, ki se nanašajo na prakso zdravstvene nege in/ali kodeks zdravstvene nege« delež usposobljenih študentov ni statistično značilen ($\chi^2 = 0,366$, $p = 0,545$). Najvišjo samooceno usposobljenosti študentov je dobila trditev »spoštovanje pacientove pravice do zasebnosti«, kjer so se vsi študenti ocenili kot zelo usposobljeni. Med ICN-kompetencami s področja zagotavljanja zdravstvene nege in upravljanja so študenti pri 20 od 31 ocenjevanih kompetenc ocenili svojo usposobljenost z več kot 90 %. Rezultati kažejo, da so študenti pri dveh kompetencah na področju zagotavljanja zdravstvene nege in upravljanja ocenili usposobljenost pod 80 %. To sta kompetenci »redno pregledujem in popravljam negovalni načrt v sodelovanju z drugimi člani negovalnega tima in pacienti« ($\chi^2 = 0,2$, $p = 0,654$) ter »delegiram naloge glede na usposobljenost, strokovno znanje in izkušnje« ($\chi^2 = 1,793$, $p = 0,181$). Rezultati samoocene usposobljenosti podpodročja kompetenc – ključna načela prakse so pokazali slabšo usposobljenost pri kompetencah (Tabela 1).

Za kompetenco »oblikujem obsežen negovalni načrt, ki temelji na negovalnih diagnozah, ugotovitvah in oceni članov tima« nismo dokazali, da je delež usposobljenih študentov statistično pomembno večji ($\chi^2 = 1,57$, $p = 0,210$) od pričakovanih 80 %. Za kompetenco »skrbim za natančno izvedbo negovalnega načrta« delež usposobljenih študentov ni statistično pomembno ($\chi^2 = 3,61$, $p = 0,057$) večji od pričakovanih 80 %. Prav tako ni delež usposobljenih študentov statistično značilno večji ($\chi^2 = 2,16$, $p = 0,142$) od pričakovanih 80 % pri kompetenci »kažem

Tabela 1: *Kompetence z najnižjo samooceno usposobljenosti*Table 1: *Competences with the lowest self-assessment score*

<i>Področje/Podpodročje/Trditve</i> <i>Area/Subarea/Statement</i>	<i>Neusposobljen/</i> <i>Not competent</i>		<i>Usposobljen/</i> <i>Competent</i>		χ^2	<i>P</i>
	<i>n</i>	<i>%</i>	<i>n</i>	<i>%</i>		
<i>Poklicna etična in pravna praksa – pravna praksa</i>						
Prepoznavam in se odzivam na kršitve zakonov, ki se nanašajo na prakso zdravstvene nege in/ali kodeks zdravstvene nege.	24	17,9	110	82,1	0,366	0,545
<i>Zagotavljanje zdravstvene nege in upravljanje – ključna načela prakse</i>						
Oblikujem obsežen negovalni načrt, ki temelji na negovalnih diagnozah, ugotovitvah in oceni članov tima.	21	15,7	113	84,3	1,569	0,210
Redno pregledujem in popravljam negovalni načrt v sodelovanju z drugimi člani tima in pacienti.	29	21,6	105	78,4	0,226	0,635
Skrbim za natančno izvedbo negovalnega načrta.	18	13,4	116	86,6	3,612	0,057
Kažem razumevanje nacionalnih politik zdravstvenega in socialnega varstva.	20	14,9	114	85,1	2,157	0,142
Aktivno sodelujem pri promociji zdravja in preprečevanju bolezni.	20	14,9	114	85,1	2,157	0,142
<i>Zagotavljanje zdravstvene nege in upravljanje – vodenje in upravljanje zdravstvene nege</i>						
Delegiram naloge glede na usposobljenost, strokovno znanje in izkušnje.	33	24,6	101	75,4	1,793	0,181

Legenda/Legend: n – število/number; % – odstotek/percentage; χ^2 – hi-kvadrat test/chi-square test; p – statistična značilnost pri 0,05 ali manj/statistical significance at 0.05 or less

razumevanje nacionalnih politik zdravstvenega in socialnega varstva«. Kot statistično neznačilen ($\chi^2 = 2,16$, $p = 0,142$) je delež usposobljenih študentov pri kompetenci »aktivno sodelujem pri promociji zdravja in preprečevanju bolezni«. Rezultati usposobljenosti za tretje področje ICN-kompetenc, to je poklicnega in osebnega razvoja, kažejo, da je delež usposobljenih študentov statistično značilno večji od 80 %. Ugotovili smo, da je pri vseh, razen pri eni ocenjevani ICN-kompetenci na tretjem področju ocena usposobljenosti višja od 90 %.

Za ugotavljanje statistično pomembne razlike v pridobljenih kompetencah med študenti na rednem in izrednem študiju Zdravstvena nega smo uporabili t-test. Za prvo področje ICN-kompetenc poklicna, etična in pravna praksa – podpodročje odgovornost

in etična praksa – smo ugotovili, da se imajo študenti na rednem študiju za statistično pomembno bolj usposobljeni kot študenti na izredni obliki študija. Statistično pomembne razlike v samooceni usposobljenosti med študenti na rednem in izrednem študiju smo ugotovili tudi pri podpodročju pravna praksa, in sicer v prid študentom na rednem študiju (Tabela 2). Rezultati so pokazali višje povprečne vrednosti pri študentih na rednem študiju na vseh treh podpodročjih.

Na področju ICN-kompetenc »zagotavljanje zdravstvene nege in upravljanje«, pri podpodročjih ključna načela prakse, »ključna načela prakse – načrtovanje«, »ključna načela prakse – izvajanje«, rezultati ne kažejo statistično pomembnih razlik v usposobljenosti med študenti na rednem in

Tabela 2: *Usposobljenost za področje »poklicna etična in pravna praksa« glede na način študija*Table 2: *Competence for the field "Professional ethical and legal practice" according to the form of study*

<i>Poklicna, etična in</i> <i>pravna praksa/</i> <i>Professional, ethical</i> <i>and legal practice</i>	<i>Način študija/</i> <i>Mode of study</i>	<i>n</i>	\bar{x}	<i>s</i>	<i>t</i>	<i>p</i>
Odgovornost	Redno	80	3,6	0,36	3,297	0,012
	Izredno	54	3,3	0,52		
Etična praksa	Redno	80	3,6	0,37	2,63	0,010
	Izredno	54	3,5	0,42		
Pravna praksa	Redno	80	3,3	0,57	2,688	0,008
	Izredno	54	3,1	0,61		

Legenda/Legend: n – število/number; \bar{x} – povprečje/mean value; s – standardni odklon/standard deviation; t – test/test; p – statistična značilnost pri $p < 0,05$ /statistical significance at $p < 0.05$

izrednem študiju (Tabela 3). Rezultati kažejo najvišje povprečne vrednosti pri študentih na rednem študiju na podpodročjih ključna načela – izvajanje ($\bar{x}_R = 3,5$) in ključna načela – terapevtska komunikacija ($\bar{x}_R = 3,6$). Najnižje povprečne vrednosti so se pokazale pri študentih na izrednem študiju, pri podpodročjih ključna načela – ocenjevanje ($\bar{x}_{IZR} = 3,0$) in ključna

načela – načrtovanje ($\bar{x}_{IZR} = 3,0$). Statistično pomembne razlike v usposobljenosti študentov na rednem in izrednem študiju se kažejo pri podpodročjih ključna načela – ocenjevanje, ključna načela – vrednotenje, ključna načela – terapevtska komunikacija in ključna načela – promocija zdravja (Tabela 3).

Tabela 3: *Usposobljenost za podpodročje »zagotavljanje zdravstvene nege in upravljanje – ključna načela prakse« glede na način študija*

Table 3: *Competence for the subfield "Nursing care provision and management – key principles of care" according to the mode of study*

<i>Ključna načela prakse/ Key principles of practice</i>	<i>Način študija/ Mode of study</i>	<i>n</i>	<i>\bar{x}</i>	<i>s</i>	<i>t</i>	<i>p</i>
Ključna načela prakse	Redno	80	3,3	0,51	1,856	0,066
	Izredno	54	3,2	0,49		
Ključna načela prakse – ocenjevanje	Redno	80	3,3	0,49	3,168	0,002
	Izredno	54	3,0	0,59		
Ključna načela prakse – načrtovanje	Redno	80	3,2	0,61	1,874	0,063
	Izredno	54	3,0	0,70		
Ključna načela prakse – izvajanje	Redno	80	3,5	0,48	1,065	0,289
	Izredno	54	3,4	0,51		
Ključna načela prakse – vrednotenje	Redno	80	3,3	0,51	2,652	0,009
	Izredno	54	3,1	0,66		
Ključna načela prakse – terapevtska komunikacija in odnosi	Redno	80	3,6	0,42	2,747	0,007
	Izredno	54	3,3	0,56		
Ključna načela prakse – promocija zdravja	Redno	80	3,3	0,52	2,463	0,015
	Izredno	54	3,1	0,56		
Ključna načela prakse – skupaj	Redno	80	3,4	0,41	2,803	0,006
	Izredno	54	3,2	0,46		

Legenda/Legend: n – število/number; \bar{x} – povprečje/mean value; s – standardni odklon/standard deviation; t – test/test; p – statistična značilnost pri $p < 0,05$ /statistical significance at $p < 0,05$

Tabela 4: *Usposobljenost za podpodročje »zagotavljanje zdravstvene nege in upravljanje – vodenje in upravljanje zdravstvene nege« glede na način študija*

Table 4: *Competence for the subfield "Nursing care provision and management – leadership and management" according to the form of study*

<i>Vodenje in upravljanje/ Leadership and management</i>	<i>Način študija/ Form of study</i>	<i>n</i>	<i>\bar{x}</i>	<i>s</i>	<i>t</i>	<i>p</i>
Varno okolje	Redno	80	3,4	0,62	2,236	0,027
	Izredno	54	3,2	0,77		
Medpoklicno zdravstveno varstvo	Redno	80	3,3	0,67	1,078	0,283
	Izredno	54	3,2	0,68		
Delegiranje in supervizija	Redno	80	3,2	0,66	1,277	0,204
	Izredno	54	3,1	0,65		
Skupaj	Redno	80	3,3	0,57	1,779	0,077
	Izredno	54	3,1	0,57		

Legenda/Legend: n – število/number; \bar{x} – povprečje/mean value; s – standardni odklon/standard deviation; t – test/test; p – statistična značilnost pri $p < 0,05$ /statistical significance at $p < 0,05$

Razlike v samooceni usposobljenosti med študenti na rednem in izrednem študiju pri ICN-kompetencah na podpodročju medpoklicno zdravstveno varstvo ($\bar{x}_R = 3,3$, $\bar{x}_{IZR} = 3,2$), delegiranje in supervizija ($\bar{x}_R = 3,2$, $\bar{x}_{IZR} = 3,1$) niso statistično značilne. Rezultati so pokazali, da so le na podpodročju ICN-kompetenc varno okolje razlike v samooceni usposobljenosti študentov statistično pomembne (Tabela 4).

Statistično pomembne razlike v usposobljenosti med študenti na rednem in izrednem študiju na podpodročju ICN-kompetenc poklicnega in osebnega razvoja – poudarjanje poklica ($t = 1,779$, $p = 0,077$) nismo našli. Pri drugih podpodročjih so razlike v

usposobljenosti med študenti na rednem in izrednem študiju, kot je razvidno s Tabele 5, statistično pomembne.

Prve hipoteze, da je vsaj 80 % študentov podalo samooceno, da so usposobljeni za samostojno izvajanje kompetenc s področja zdravstvene nege po ICN-kompetencah, na podlagi rezultatov ne moremo potrditi.

Tudi hipotezo, da ni statistično pomembnih razlik v samooceni usposobljenosti izvajanja ICN-kompetenc s področja zdravstvene nege med študenti na rednem in izrednem študiju, moramo na podlagi dobljenih rezultatov zavrtni.

Tabela 5: Usposobljenost za področje »poklicni in osebni razvoj« glede na način študija

Table 5: Competence for the filed "Professional and personal development" according to the mode of study

<i>Poklicni in osebni razvoj/ Professional and personal development</i>	<i>Način študija/ Mode of study</i>	<i>n</i>	\bar{x}	<i>s</i>	<i>t</i>	<i>p</i>
Poudarjanje poklica	Redno	80	3,3	0,57	1,779	0,077
	Izredno	54	3,1	0,57		
Izboljševanje kakovosti	Redno	80	3,4	0,52	2,097	0,038
	Izredno	54	3,2	0,77		
Nadaljevalno izobraževanje	Redno	80	3,5	0,52	2,378	0,019
	Izredno	54	3,2	0,64		
Skupaj	Redno	80	3,4	0,47	2,781	0,006
	Izredno	54	3,2	0,61		

Legenda/Legend: n – šteto/number; \bar{x} – povprečje/mean value; s – standardni odklon/standard deviation; t – test/test; p – statistična značilnost pri $p < 0,05$ /statistical significance at $p < 0,05$

Diskusija

Z raziskavo smo želeli ugotoviti usposobljenost študentov Zdravstvene nege na prvi stopnji za samostojno izvajanje zdravstvene nege.

Predvidevali smo, da ne bo statistično pomembnih razlik v usposobljenosti med študenti na rednem in izrednem študiju. Ugotovili smo, da so se študenti na rednem študiju pri posameznih podpodročjih ICN-kompetenc ocenili za bolj usposobljene kot študenti, vpisani na izredni študij. Tako moramo našo hipotezo, da ni statistično pomembnih razlik v usposobljenosti med študenti na rednem in izrednem študiju, zavrtni. Statistično pomembne razlike pri samooceni usposobljenosti študentov so se pojavile pri podpodročjih ICN-ovih kompetenc: odgovornost, etična in pravna praksa, ključna načela prakse ter vodenje in upravljanje. V nasprotju z našo raziskavo Filej in Skela - Savič (2009) ugotavljata, da so se študenti na izrednem študiju pri kompetencah pravna praksa in promocija zdravja ocenili kot bolj usposobljeni v primerjavi s študenti na rednem študiju. Razlike v usposobljenosti med študenti na rednem in izrednem študiju zdravstvene nege, v prid slednjih, ugotavljajo tudi Lee-Hsieh in sodelavci (2003). Rezultate naše

raziskave lahko pojasnimo z večjo samokritičnostjo študentov na izrednem študiju, saj so običajno zaposleni, že imajo klinične izkušnje in so morda zato bolj realni pri ugotavljanju svoje usposobljenosti. Razlaga za ugotovljene podatke v naši raziskavi je lahko tudi dejstvo, da se študenti na rednem študiju morda prehitro zadovoljijo z osvojenimi veščinami in spretnostmi ter se imajo zato za bolj usposobljene kot njihovi kolegi na izrednem študiju.

Pomembna je ugotovitev, da so se študenti ocenili kot najbolj usposobljeni pri kompetencah medpoklicnega zdravstvenega varstva, izboljševanja kakovosti in nadaljnega izobraževanja. Lahko sklepamo, da se študenti zdravstvene nege zavedajo pomena vseživljenjskega učenja in sledijo razvoju stroke zdravstvene nege. Podobno kot v naši raziskavi tudi Lofmark in sodelavci (2006) ugotavljajo visoko usposobljenost na področju etične prakse in načrtovanja. Primerjava med obema raziskavama tudi pokaže, da so študenti v naši raziskavi visoko ocenili usposobljenost za nadaljnje izobraževanje, medtem ko Lofmark in sodelavci (2006) poročajo o slabši usposobljenosti.

Podatki so pokazali, da gre pri posameznih pridobljenih kompetencah med študenti na rednem

in izrednem študiju za statistično pomembne razlike, kar zahteva našo dodatno pozornost. V prihodnjih raziskavah bo treba s kvalitativnimi metodami raziskovanja natančno preučiti vzroke za take razlike. Predvsem zato, ker so razlike očitne pri kompetencah, kjer teh ne bi pričakovali. Področje poklicne, etične in pravne prakse je v zdravstveni negi izjemnega pomena, zato razlike v usposobljenosti med študenti lahko kažejo na različno raven praktičnega in/ali teoretičnega znanja. Razlike v usposobljenosti študentov zdravstvene nege smo ugotovili pri kompetencah na področju terapevtske komunikacije in promocije. Tudi Cheng in Liou (2013) ugotavljata, da bi morali imeti študenti zdravstvene nege več možnosti razvijanja komunikacijskih sposobnosti. Ta podatek nas spodbuja k iskanju vzrokov, zakaj je samoocena usposobljenosti pri študentih na izrednem študiju statistično pomembno višja kot pri študentih na rednem študiju. Morda je vzrok v prepričanju, da študenti, ki so izbrali izredni študij, že imajo delovne izkušnje v zdravstveni negi in da te večšine že obvladajo. Znano je, da lahko imajo študenti visoko dojetje ravni njihove usposobljenosti pred vstopom v delovno razmerje (Lakanmaa, 2012) in da se samoocena usposobljenosti sčasoma zniža (Kajander Unkuri, et al., 2013). Vsekakor je treba študentu omogočiti individualno razvijanje sposobnosti terapevtske komunikacije. Uporaba terapevtske komunikacije je učinkovita pri vzpostavljanju odnosa medicinska sestra – pacient, ki spodbuja odgovornost in sodelovanje pacienta v procesu zdravstvene nege (Rosenberg & Gallo-Silver, 2011), diplomant pa mora obvladati tehnike terapevtske komunikacije na različne odzive pacienta (Webster, 2014).

Povezovanje teoretičnih znanj in kliničnih veščin (Hengameh, et al., 2015) je ključni element študijskega programa, potreben za razvijanje kompetenc in doseganje visoke usposobljenosti za izvajanje zdravstvene nege. Pri izobraževanju medicinskih sester je zato praktično usposabljanje ključnega pomena. Študenti potrebujejo za razvijanje kliničnega znanja in spretnosti (Cant, et al., 2013) ob sebi izkušeno diplomirano medicinsko sestro. Samoocenjevanje kliničnega usposabljanja naj zato postane pomemben del izobraževanja diplomiranih medicinskih sester.

Raziskava je bila izvedena samo na eni visokošolski instituciji in na namenskem vzorcu, zato rezultatov ni mogoče posploševati. Prav tako je lahko vprašljiva objektivnost študentov (Cant, et al., 2013). Kljub temu rezultati kažejo potrebo po nadaljnjem raziskovanju z namenom zagotavljanja kompetentnih diplomantov zdravstvene nege. Raziskava nakazuje tudi potrebo po preverjanju spretnosti, veščin (Farra, et al., 2015) in usposobljenosti študentov za kompetentno izvajanje zdravstvene nege. Tako lahko visokošolska ustanova na podlagi evalvacij usposobljenosti pripravi spremembe in predloge za izboljšave študijskega programa.

Zaključek

Raziskava med študenti tretjih letnikov študijskega programa prve stopnje Zdravstvena nega na eni od izbranih visokošolskih institucij je pokazala, da so ti usposobljeni za izvajanje kompetenc zdravstvene nege v okviru, ki jih je oblikovala ICN. Z raziskavo smo ugotovili, da so študenti na rednem študiju ocenili svojo usposobljenost bolje kot študenti na izrednem študiju. Predlagamo, da postane sprotno in letno preverjanje usposobljenosti študentov Zdravstvene nege na prvi stopnji smernica za refleksijo študentovega profesionalnega razvoja in podlaga za posodabljanje učnih pristopov v izobraževanju medicinskih sester.

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Original scientific article/Izvirni znanstveni članek

Expert opinions about the use of comprehensive nutrition protocol in practice for obesity prevention

Mnenje strokovnjakov o uporabi celostnega prehranskega protokola v praksi pri preprečevanju debelosti

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Key words: obesity; nutrition assessment; protocol; dietitians; decision support techniques

Ključne besede: debelost; prehranska ocena; protokol; dietetiki; tehnike za podporo odločanju

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ABSTRACT

Introduction: Obesity is associated with a number of chronic diseases. The research aimed to determine the effectiveness of nutrition assessment when using a comprehensive nutrition protocol at primary health service.

Methods: A real life situation was analysed for the positive and negative factors in the newly formed comprehensive nutritional protocol. These factors were identified by a group decision-making and a SWOT Analysis (Strengths, Weaknesses, Opportunities and Treats) and subsequently numerically evaluated with the Analytic Hierarchy Process method which included expert opinions.

Results: According to experts, the most important factors justifying the introduction of the protocol in practice are "equal treatment for all subjects" and "precisely prepared manual", followed by "individual treatment" and "health status improvements". The two most important negative factors are "dependence on other professionals" and "subjects will not be able to follow the protocol".

Discussion and conclusion: Expert opinions favour the introduction of nutrition protocol in clinical practice to ensure equal treatment of all subjects, and enhance obesity prevention with the accompanying detailed instructions. For this reason, further research should address the foundation of dietetic counselling services at the primary level of healthcare, so that physicians could refer obese people to individual nutritional therapy, which may reduce the prevalence of obesity.

IZVLEČEK

Uvod: Debelost je povezana s številnimi kroničnimi boleznimi. Analizirana je bila situacija v realnem okolju, to je zdravstvenemu timu na primarni ravni, v primeru, če bi natančno opisan celostni prehranski protokol za obravnavo debelosti vneljali v prakso.

Metode: Z opravljenim skupinskim odločanjem v fokusni skupini in orodjem SPIN (Slabosti, Prednosti, Izzivi in Nevarnosti) so bili definirani pozitivni in negativni dejavniki na novo oblikovanega celostnega prehranskega protokola, ki so bili nato z metodo analitičnega hierarhičnega procesa, ki vključuje mnenje ekspertov, numerično ovrednoteni.

Rezultati: Ugotovljeno je bilo, da sta po mnenju ekspertov najpomembnejša dejavnika, ki vplivata na prednosti uvedbe prehranskega protokola v prakso, »enakovredna obravnava vseh preiskovancev« in »natančno pripravljena navodila«. Poleg tega sta pozitivna dejavnika še »individualna obravnava« in »izboljšanje zdravstvenega stanja ljudi«. Dva najpomembnejša negativna dejavnika sta »odvisnost od drugih strokovnjakov« in prepričanje, da »preiskovanci ne bodo zmogli slediti protokolu«.

Diskusija in zaključek: Mnenje strokovnjakov je pokazalo potrebo po prehranskem protokolu v klinični praksi, ki bi zagotovil enakovredno obravnavo vseh preiskovancev ter z natančno pripravljenimi navodili, izboljšal uspešnost pri preprečevanju debelosti. Nadaljnje delo bi bilo smiselno usmeriti v vzpostavitev prehranskih posvetovalnic na primarni ravni zdravstvenega sistema, kjer bi lahko zdravniki napolili osebe z debelostjo na individualno prehransko obravnavo, kar bi lahko zmanjšalo prevalenco debelosti.

Introduction

Obesity is associated with many chronic diseases. Due to the rapid increase in the prevalence of overweight and obesity and high costs of treatment, it is necessary to determine how to effectively treat this condition. Long-term positive energy balance leads to obesity, and negative energy balance is one of the most important actions in weight loss (Hamer & Mishra, 2010). Dietitians are experts who can be included in a medical team and the nutrition care process can reduce the prevalence of obesity (AND, 2006; Lau, et al., 2007; NICE, 2014). The role of a dietician is well known and dietitians have already been included in the obesity management treatments (Lacey & Pritchett, 2003; Johns, et al., 2014; Raynor & Champagne, 2016). A dietician uses a nutritional protocol, a formal description of the tasks and procedures to be used during nutritional therapy. The American Academy of Nutrition and Dietetics suggests the following steps in the nutrition care process: nutrition assessment, nutrition diagnosis, nutrition intervention, nutrition

monitoring and evaluation (Lacey & Pritchett, 2003). Individual steps are interrelated and have different roles. A carefully prepared protocol is an important tool used by dietetics professionals to provide individual nutrition care in the process of treating obesity and changing behavioural risk factors. Dietitians, working in a multidisciplinary team, are clinically and cost effective in the management of overweight and obesity (BDA, 2016, p. 1). In Slovenia, the situation is still fairly uncertain as there are no established positions for dietitians. The Health Insurance Institute of Slovenia does not cover the costs of nutritional therapy, even though the Resolution on the National Program on Nutrition and Physical Activity for Health 2015 – 2025 considers a dietitian an important member of the healthcare team (Ministry of Health, 2015). The study programme in Dietetics was introduced in Slovenia in the year 2007. There are approximately 100 graduate dietitians and 13 masters in dietetics. The profession of dietitian is a regulated profession in the Republic of Slovenia (Ministry of Health, 2016), but it is still rarely a member of a health team. At the primary healthcare

Table 1: *Obesity prevention nutrition protocol (Bizjak, 2016, p. 44)*

Tabela 1: *Celostni prehranski protokol pri preprečevanju debelosti (Bizjak, 2016, p. 44)*

<i>Sequence of tasks/ Zaporedje dejavnosti</i>	<i>Description of activity/ Opis dejavnosti</i>	<i>Performers/ Izvajalci</i>
1	Precise written instructions for subjects on the day of measurement	Physician or dietitian
2	Resting metabolic rate measurement (RMR), using indirect calorimetry	Dietitian and subject
3	Height, waist and hip measurements	Dietitian or nurse and subject
4	Body mass and body composition, using bioelectrical impedance analysis	Dietitian or nurse and subject
5	Blood pressure measurement	Nurse and subject
6	Venous blood samples for biochemical analysis	Nurse and subject
7	Biochemical and hormonal analysis (glucose, triglycerides, total cholesterol, low-density lipoprotein (LDL cholesterol), high-density lipoprotein (HDL cholesterol), C-reactive protein (CRP), adipokines)	Laboratory
8	Lunch break for fasting subjects	Subject
9	Food history	Dietitian and subject
10	Survey questionnaires: dietary habits questionnaire, food list, binge eating questionnaire	Dietitian and subject
11	Lumbar and flexor endurance test	Dietitian, nurse and subject
12	Instructions for food record and recording physical activity	Dietitian and subject
13	Recording food and physical activity	Subject
14	Data analysis and calculation – part 1	Dietitian
15	Food frequency questionnaire (FFQ)	Dietitian and subject
16	Food record overview	Dietitian and subject
17	Nutritional counselling - general	Dietitian and subject
18	Data analysis and calculation – part 2	Dietitian
19	Data input in DEXi - model	Dietitian
20	Determining the date of consultation	Dietitian
21	Individual plan preparation	Dietitian
22	Individual dietary counselling	Dietitian and subject

Legend/Legenda: DEXi - a computer programme for multi-attribute decision making/računalniški program za večparametrsko odločanje.

level there are no dietitians at all. In Slovenia the CINDI workshops conducted programmes for the prevention of cardiovascular disease, which promote healthy eating (Hlastan Ribič & Maučec Zakotnik, 2013). However, these programmes are not designed to treat individuals and dietitians are not included.

A comprehensive protocol for the prevention of obesity "Obesity prevention nutrition protocol", developed by Bizjak (2016), was first used in Slovenia in a group of 48 people (subjects). The author emphasises that all the activities from protocol must be performed in order to carry out a high quality nutritional intervention (Table 1) when used in primary healthcare services. This article aims to assess positive and negative factors of the implementation of dietitians' work in the medical team, using a comprehensive nutritional protocol in treating obesity.

Aims and objectives

The aim of the research was to determine the advantages, opportunities, weaknesses and threats of comprehensive nutrition protocol when used in practice, based on expert opinions. The present study explored the complex issues which could be resolved with the expert knowledge and addressed the following research questions: (a) Is the introduction of a dietitian specialist in primary level health teams feasible? (b) What are the advantages and threats of internal and external environment, if the obesity prevention nutrition protocol were introduced in practice?

Methods

A qualitative research method was employed in the study. The data were collected using semi-structured interviews in five facilitated group discussions.

Description of the research instrument

The data were collected through focus groups, organised for research purposes and monitored by a researcher. The facilitator encouraged the group to discuss complex questions and generate information on participants' views. It was noted that experts can create a real-life situation (van Steenkiste, et al., 2002). Five open-ended questions were framed for discussion and data collection. Strengths, Weaknesses, Opportunities and Treats (SWOT) analysis is a tool for analysing external and internal environments - strengths, weaknesses, opportunities and threats. In order to analyse the usefulness, the internal and external environment must be analysed. The internal environment includes strengths and weaknesses that can influence a person's activity. Opportunities are external circumstances that enable the achievement of the objectives and threats are those factors in the external environment that may hinder the

achievement of the desired objectives (Whalley, 2010). The SWOT-matrix in this study is based on the factors identified by our expert group. Since SWOT analysis does not provide numerical results to determine the importance of individual factors that could effect the introduction of dietitian protocol into practice, a new model was developed. The latter combined the SWOT factors with Analytic Hierarchy Process (AHP), with numerically evaluated results. The AHP is a method that can help in assessing quantitative and qualitative criteria in complex decision operations (Saaty, 2007). It is a multicriteria decision-making technique that may express the general decision operation by decomposing a complicated problem into a multilevel hierarchical structure of the objectives, criteria and alternatives. The essence of the AHP-method is a comparison of all the elements in pairs, at the same level in the decision-tree. A series of complex questions, to which we do not have exact answers, are provided to the relevant professionals, assuming that experts can well predict a real situation (van Steenkiste, et al., 2002). A scale 1 to 9 scale was used for a comparison of all the elements in pairs at the same level (SWOT-factors/categories) in the decision-tree (Table 2). On the basis of personal knowledge, experts expressed the difference between the compared parameters (Figure 1).

Description of a sample

Competent and experienced professionals in the field of nutrition counselling - dietetics and health were invited to participate in the preparation of the dietetics study program and integration of the profession among health workers at the national level. The experts are university teachers of dietetics, mostly doctoral degree holders. There are fewer than ten dietetics experts in Slovenia who can carry out the processes in the nutritional protocol, four out of which were selected ($n = 4$) by convenience. Two of them are members of the Slovenian Association of Nutritionists and Dietitians and the European Federation of Association of Dietitians, with extensive experience from the relevant field.

Description of the research procedure and data analysis

The study was approved by the National Medical Ethics Committee on January 6th, (56/08/11 bis). Factor identification that composes the SWOT-matrix was followed by pairwise comparison of all the criteria. The experts determined which comparative criterion makes a major contribution to an individual factor, and what is the difference between the compared criteria. We obtained pairwise comparisons estimates, which were further used to calculate the utility functions at individual levels of the decision tree.

Figure 1: Example of a questionnaire for the evaluation of SWOT-matrix with paired comparison of factors
 Slika 1: Primer vprašalnika parnih primerjav SPIN-dejavnikov

Analysis of threats of nutritional protocol

Evaluate the importance of various factors in the threats of introduction of a nutritional protocol:

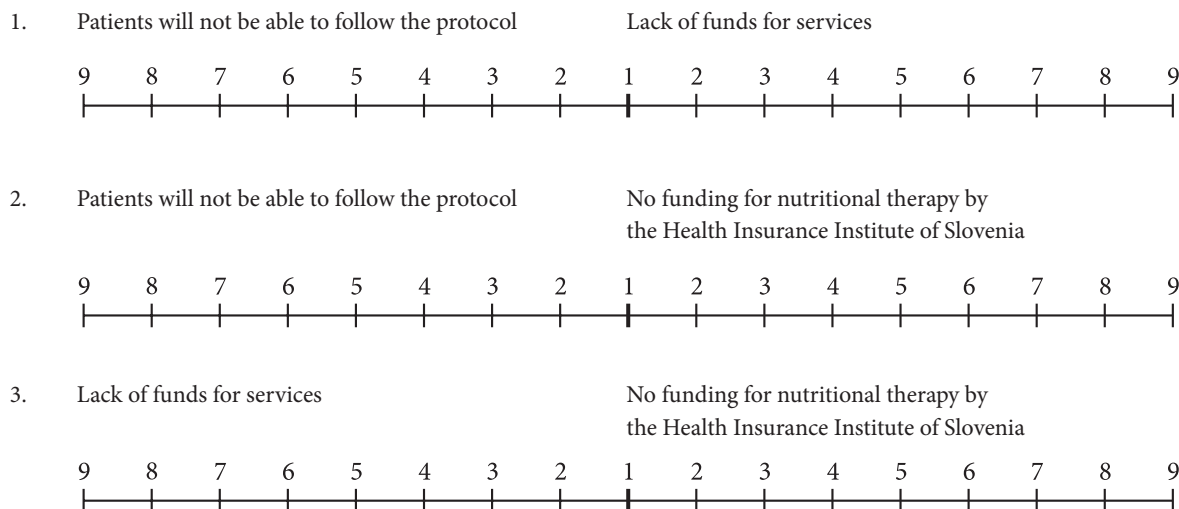


Table 2: Scale of relative comparisons (Saaty, 1994, p. 73)

Tabela 2: Lestvica relativnih primerjav (Saaty, 1994, p. 73)

Importance a_{ij} / Pomembnost a_{ij}	Definition/ Opredelitev	Explanation/ Razlaga
1	Equal importance	Criteria i and j contribute equally to the objective
2	Slight	
3	Slight difference in importance	Criteria i and j slightly favour one over the other
4	Medium	
5	Medium difference in importance	Criteria i and j moderately favour one over the other
6	Big	
7	Big difference of importance	Criteria i and j strongly favour one over the other
8	Very big	
9	Absolute difference of importance	Criteria i and j are on the highest possible order of difference of importance of one over the other

Legend/Legenda: a_{ij} – value obtained when comparing criterion i with criterion j /ocena ki jo dobimo, ko primerjamo kriterij i , s kriterijem j

If the criterion i is assessed and compared with j , using the evaluation a_{ij} , the inverse score $1/a_{ij}$ is a measure of the opposite comparison. Pairwise comparison results can be shown by a square and reciprocal matrix. We used the Geometric Mean Method (GMM) (Grošelj, 2013) in the AHP group assessment method, which combines individual assessments into an aggregated pairwise matrix.

The estimated values are entered into the matrix with pairwise comparisons, given as the matrix A (Lipušček, et al., 2003). The matrix of pairwise comparisons A is a square, positive reciprocal matrix in which the diagonal values are equal to 1 and the

symmetric values are inverse. If $CR < 0.1$, the data in the pairwise comparisons matrix are harmonized and reliable results may be expected in a multi-attribute decision-making model (Saaty, 2007).

Results

The experts highlighted the difference between the compared parameters and formed the assessment criteria in relation to all categories of the SWOT-matrix. By means of SWOT analysis, the strengths, opportunities, weaknesses and threats of the newly formed nutrition protocol were identified (Table 3).

Table 3: SWOT factors of comprehensive nutritional protocol in obesity prevention

Tabela 3: SPIN dejavniki celostnega prehranskega protokola pri preprečevanju debelosti

Strengths (S)/Prednosti (P)	Weaknesses (W)/Slabosti (S)
meticulously prepared manual individual treatment equal treatment for all subjects shorter response times lower costs of treatment	dependency on other experts lack of interest of the management for nutritional therapy implementation lack of funding for equipment and analysis there are no established posts for dietitians in primary healthcare
Opportunities (O)/Izzivi (I)	Threats (T)/Nevarnosti (N)
integration and cooperation in various disciplines reducing the cost of treatment health status improvements implementation of the Resolution on the National Programme on Nutrition and Physical Activity for Health 2015 - 2025 objectives (Ministry of Health, 2015)	subjects will not be able to follow the protocol lack of funds for services no funding for nutritional therapy by the Health Insurance Institute of Slovenia

Table 4: Aggregated matrix - geometric mean of all the experts' assessments

Tabela 4: Skupna matrika - geometrijska sredina ocen vseh deležnikov

	Strengths/Prednosti	Opportunities/Izzivi	Weaknesses/Slabosti	Threats/Nevarnosti
Strengths/ Prednosti	1	1.57	3.72	2.91
Opportunities/ Izzivi	0.64	1	0.64	2.71
Weaknesses/ Slabosti	0.27	1.57	1	1.19
Threats/ Nevarnosti	0.34	0.37	0.84	1

Table 5: Importance of categories and factors in nutrition protocol establishment

Tabela 5: Pomembnost kategorij in dejavnikov za uvedbo prehranskega protokola

SWOT categories/ Kategorija SPIN	Group rating/ Ocena skupine	SWOT factors/ Dejavniki SPIN	Factor priority within the group/ Ocena posameznih dejavnikov	Overall priority/ Skupna ocena
Strengths/ Prednosti	0.441	Meticulously prepared manual	0.254	0.112
		Individual treatment	0.245	0.108
		Equal treatment for all subjects	0.312	0.138
		Shorter response times	0.113	0.050
		Lower costs of treatment	0.076	0.034
Weaknesses/ Slabosti	0.195	Dependence on other professionals	0.361	0.070
		Lack of interest of the management for nutritional therapy implementation	0.248	0.048
		Lack of funding for equipment and analysis	0.247	0.048
		There are no established working places for dietitians in primary healthcare	0.144	0.028
Opportunities/ Izzivi	0.239	Integration and cooperation among various disciplines	0.230	0.055
		Reducing the cost of treatment	0.224	0.054
		Health status improvements	0.428	0.102
		Implementation of Resolution on the National Programme on Nutrition and Physical Activity for Health 2015 - 2025 objectives (Ministry of Health, 2015)	0.118	0.028
Threats/ Nevarnosti	0.125	Subjects will not be able to follow the protocol	0.534	0.067
		Lack of funds for services	0.195	0.024
		No funding for nutritional therapy by the Health Insurance Institute of Slovenia	0.271	0.034

The AHP-group method was performed with aggregation of individual ratings that are equally important. For an overall assessment, GMM was used to calculate the geometric mean of all the experts' assessments and an aggregation pairwise comparisons matrix was prepared (Table 4).

The data in the pairwise comparisons matrix are consistent ($CR = 0.09$). The importance of individual SWOT categories was determined as shown in Table 5.

The analysis based on the expert opinion reveals that the primary factors contributing to the nutritional benefits of the introduction of the protocol in practice are "equality of treatment of all subjects" and "carefully prepared instructions", followed by "individual treatment" and "improving the health status of people".

Discussion

Using a SWOT-AHP model, we analysed our comprehensive nutritional protocol. The basic aim of the model was to establish strategies for the introduction of innovations such as those observed by other authors (Görener, et al., 2012). The introduction of a protocol into practice requires research strategies. Using SWOT - analysis, the positive aspects (strengths and opportunities) and negative aspects (weaknesses and threats) of a designed comprehensive nutritional protocol for the prevention of obesity were analysed. When drawing up the decision tree, we considered all the relevant factors that may affect the application of a comprehensive nutritional protocol for the prevention of obesity in a very complex situation in Slovenia where a dietitian is rarely a member of multidisciplinary healthcare team. In such situation it should be observed that patients are individuals and that the quantity of food they consume cannot be determined unless the value of resting metabolic rate is identified (Nieman, et al., 2003; St-Onge, et al., 2004). Thus, in the present comprehensive nutrition protocol, the measurement of resting metabolic rate is the basis for the preparation of a nutritional plan from which a health professional can design individual menus and manage energy balance. Due to accurately prepared protocol all patients go through the same protocol, providing equal treatment for all. We have prepared a work protocol that could be included in the primary level of the health service, including a dietitian in the multidisciplinary healthcare team. Using SWOT - AHP analysis, numerical values for individual factors were calculated. Further on, the values using a group method to define decision utility functions were synthesized. Based on the experts' opinions, pairwise comparisons were evaluated for utility functions calculated at individual levels of the AHP decision tree. In addition, we determined which of the compared criteria makes a major contribution to an individual factor and the difference between the compared criteria. According to the experts, the

most important factors that affect the nutritional benefits of the introduction of the protocol into practice are "equal treatment for all subjects" and "precisely prepared manual". Table 5 shows that positive effects dominate. In addition to the "equal treatment for all subjects" and "precisely prepared manual", "individual treatment" and "health status improvements" are also positive factors. The first two negative factors are in the fifth and sixth place: "dependence on other professionals" and "subjects will not be able to follow the protocol".

Limitations of the study

This study was designed for the Slovenian environment and situation that applies to nutritional treatment in Slovenia. This should be taken into consideration when interpreting the results.

Conclusion

The article demonstrates there is a need for nutritional protocols that will ensure equal treatment for all subjects. Nutritional therapy in Slovenia is still in the developing process. Individual treatment usually depends on an expert's assessment decision instead on the evidence-based guidelines. The access to nutritional counselling information is sometimes based solely on the patient engagement. Therefore, precisely prepared manual which establishes equal treatment for all subjects is needed. This will then facilitate the work of individual experts and enable them to devote time to individual diet plan treatment and focus on the goals of improving patients' health. However, introduction of innovations is consequently faced with challenges. Dietitians must work together with other experts from various professional fields. Implementation of nutritional therapy depends on the exchange of information and collaboration of these experts. Changing behavioural factors is a demanding task for patients. Unfortunately, the current situation in Slovenia does not allow dietitians to be part of the medical team at the primary level. So individual nutritional treatment is not a part of a diet it therapy for overweight or obese people, although is well known that proper diet can reduce risk factors of non-communicable chronic diseases. Our proposition is to establish dietetic counselling services at the primary healthcare level allowing physicians to refer obese people to nutritional therapy. Further research could focus on the evaluation of potential financial benefits of dietitians' work on the cost of medical treatment in Slovenia. We assume that in Slovenia, as well as elsewhere, the dietitians' collaboration in a healthcare team can reduce the prevalence of obesity and the cost of treatments of non-communicable chronic diseases.

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Strokovni članek/Professional article

Uživanje alkohola med študenti zdravstvene nege Alcohol consumption among nursing students

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Ključne besede: mladostnik;
alkohol; adolescenca

Keywords: adolescent; alcohol;
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IZVLEČEK

Uvod: Pitje alkoholnih pijač je med mladostniki v Sloveniji in tudi drugod po svetu zelo velik problem. Največ mladih pije alkoholne pijače predvsem v obdobju adolescence. Namen raziskave je bil predstaviti uživanje alkohola med študenti zdravstvene nege, ki je tudi sicer vse pogostejši problem v sodobnem načinu življenja. **Metode:** Anketiranje je potekalo v prvi polovici leta 2015 med študenti rednega študija zdravstvene nege I. stopnje. V raziskavi je sodelovalo 217 študentov. Uporabljeno je bilo priložnostno vzorčenje. Uporabili smo osnovno deskriptivno statistiko in kvantitativno raziskovalno metodologijo s pomočjo strukturiranega vprašalnika.

Rezultati: Med anketiranimi se je v izbiri najpogostejših alkoholnih pijač pokazala statistično pomembna razlika ($p = 0,000$) glede na spol, saj moški posegajo bolj po pivu, ženske bolj po žganih pijačah. Prav tako je razlika po spolu prisotna v opitosti, saj so bili moški v zadnjih 30 dneh pred anketiranjem statistično značilno bolj pogosto opiti kot ženske ($p = 0,000$).

Diskusija in zaključek: Iz rezultatov raziskave je razvidno, da več kot polovica anketiranih študentov zdravstvene nege tvegano pije alkoholne pijače. Raziskava nakazuje, da bolj tvegano pijejo študenti moškega spola. Pridobljeni podatki nakazujejo potrebo po obsežnejši raziskavi o uživanju alkohola med slovenskimi študenti.

ABSTRACT

Introduction: Alcohol use during adolescence and young adulthood remains a prominent public health problem in Slovenia as well as worldwide. Early onset of drinking is a risk factor for lifetime alcohol-related problems and usually co-occurs with a range of other risky behaviours. The aim of the study was to investigate the prevalence of alcohol consumption among nursing students, which continues to be widespread among today's adolescents and college students.

Methods: The survey was conducted from January to June of 2015 among full-time nursing undergraduate students. The convenience sample consisted of 217 participants. A structured questionnaire was used as a research instrument along with the basic descriptive statistics and quantitative research method.

Results: Statistically significant gender-related differences were established ($p = 0.000$). The drinking data collected show that male participants are most likely to drink beer while women participants usually drink spirits or liqueurs. A statistically significant gender-related difference was identified also in the number of occasions participants got intoxicated by alcohol in the period of 30 days preceding the survey ($p = 0.000$).

Discussion and conclusion: According to the research findings, a good half of the respondents indulge in risky drinking, with male students prevailing. The data obtained indicate the need for an extensive research on alcohol consumption among Slovenian students.

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Uvod

Pitje alkoholnih pijač je precej velik slovenski problem, še posebej med mladostniki (Makivič, et al., 2012). Večina mladih pije alkohol v enem izmed najbolj občutljivih obdobj svojega življenja – adolescenci (Kastelic & Mikulan, 2004). V svetu je alkohol šesti najpomembnejši vzrok za obolenost in prezgodnjo umrljivost, medtem ko je v Evropi celo tretji oziroma prvi med mladimi. Približno četrtnina vseh smrti pri mladih od 15. do 29. leta starosti je povezana z alkoholom (Ministrstvo za zdravje, 2007). Mladi največkrat pijejo alkohol zaradi užitka, dobrega počutja, saj se tako bolje zabavajo, so bolj sproščeni, odprti, pogumni in komunikativni (Ramovš & Ramovš, 2007; Berčič, 2011). Zelo velik vpliv na pitje alkohola pri mladih imajo mladostniške skupine, kjer alkohol predstavlja vstopnico v različne skupnosti, v katerih mladi preživljajo svoj prosti čas in kjer lahko zavrnitev pitja alkohola privede do nelagodja ter občutka manjvrednosti (Ramovš & Ramovš, 2007; Židanik, 2007; Berčič, 2011).

V Sloveniji je bil leta 2003 sprejet Zakon o omejevanju porabe alkohola, ki striktno določa prepoved prodajanja alkoholnih pijač osebam, mlajšim od 18 let (Zakon o omejevanju porabe alkohola, 2003). S tem zakonom skuša Slovenija mladim omejiti dostop do alkoholnih pijač ter posledično preprečevati tvegano opijanje in prekomerno pitje alkoholnih pijač (Boben, et al., 2014). Glavna prednostna naloga na področju preprečevanja prekomernega pitja alkoholnih pijač po vsej Evropi je zmanjševanje škode zaradi uživanja alkohola med mladimi (Hughes, et al., 2011). Razširjenost nezdravega uživanja alkohola med mladimi se povečuje in je rastoč svetovni pojav v mnogih državah (Višnjič, et al., 2015; Dumbili, 2015).

Svetovna poraba alkohola je bila leta 2010 v povprečju 6,2 litra čistega alkohola na osebo v starosti 15 let ali več, kar pomeni 13,5 gramov čistega alkohola dnevno (World Health Organization, 2014). Slovenija se tako po porabi kot po posledicah tveganega in škodljivega pitja alkoholnih pijač uvršča v sam vrh v Evropi (Boben, et al., 2013). Kljub temu, da se alkohol na splošno ne dojema kot strupena psihoaktivna snov, s potencialom ustvarja zasvojenost in je postal ena izmed najpomembnejših nevarnosti za zdravje v svetu. Javnozdravstveni problemi, povezani z uživanjem alkohola, so dosegli alarmantne razsežnosti, ki izhajajo iz telesnih, duševnih, socialnih in ekonomskih posledic (Rassool, 2011). Tvegano in škodljivo pitje alkoholnih pijač je v Sloveniji zelo pomembna zdravstvena, socialna in ekonomska tematika, ki se dotika vseh starostnih skupin prebivalstva.

Pitje alkoholnih pijač je dobro raziskano med osnovnošolci in srednješolci, medtem ko je malo podatkov o pitju alkohola med študenti (Kolšek & Klemenc Ketiš, 2015). V Sloveniji je bilo do sedaj izvedenih malo raziskav o uživanju alkohola med študenti zdravstvene nege. Raziskava na Fakulteti za vede o zdravju je pokazala,

da študentje zdravstvene nege, predvsem študentje rednega študija, alkohol pijejo bolj tvegano kot študentke (Bogataj & Plazar, 2013). Podobno je raziskava na višje- in visokošolskih zavodih v gorenjski regiji, med katerimi je bila tudi Visoka šola za zdravstveno nego Jesenice, pokazala, da študentje pogosteje pijejo alkoholne pijače in se tudi pogosteje opijajo kot študentke (Pivač, 2013). Na Univerzi v Ljubljani izvedena raziskava, ki je vključevala študente različnih fakultet, tudi Zdravstvene fakultete, je pokazala, da je verjetnost za škodljivo in tvegano pitje večja pri študentih moškega spola, kadilcih in študentih z izkušnjami z drogo (Biščak Hafner, et al., 2014). V letih 2011/2012 je Nacionalni inštitut za javno zdravje izvedel raziskavo o uporabi drog, tobaka in alkohola med slovenskim prebivalstvom v starosti od 15 do 64 let. Raziskava je pokazala, da so anketiranci v starostni skupini od 15 do 24 let (učenci, dijaki, študentje) v primerjavi z ostalo anketirano populacijo pogosto posegali po alkoholu in se tudi pogosteje opijali (Lavtar, et al., 2014).

Španska raziskava, izvedena med študenti zdravstvene nege na Univerzi Castilla-La Mancha, je pokazala, da je verjetnost za tvegano uživanje alkohola večja pri ženskah in tistih študentih, ki so mlajši od 21 let, so kadilci in ki živijo izven svoje družine (Rabanales Sotos, et al., 2015). Brazilska raziskava, izvedena med študenti zdravstvene nege na Zvezni univerzi Bahia, pa je pokazala, da študentje višjih letnikov alkohol uživajo pogosteje kot bruci (Pires, et al., 2015).

Namen in cilji

Namen raziskave je bil predstaviti uživanje alkohola med študenti zdravstvene nege. Cilj izvedene raziskave je bil pridobiti podatke o pogostosti uživanja alkoholnih pijač med študenti prvega, drugega in tretjega letnika rednega študija zdravstvene nege 1. stopnje na Fakulteti za zdravstvene vede v Mariboru. Glede na namen in cilj raziskave smo zastavili sledeče hipoteze:

H1: Obstaja razlika v izbiri najpogostejših alkoholnih pijač glede na spol.

H2: Obstaja razlika v opitosti v zadnjih 30 dneh glede na spol.

H3: Obstaja razlika v pogostosti uživanja alkohola med študenti glede na letnik študija.

Metode

Uporabljena je bila deskriptivna metoda dela. Izvedena je bila kvantitativna raziskava. Podatke smo zbirali s tehniko pisnega anketiranja.

Opis instrumenta

Strukturirani vprašalnik je bil sestavljen na osnovi pregleda literature. Vprašalnik je vključeval 22 vprašanj, od tega je bilo 21 vprašanj zaprtega in eno vprašanje odprtega

tipa. Na začetku vprašalnika so bila postavljena splošna demografska vprašanja o anketiranih (spol, starost), o letniku šolanja, sledila so vprašanja o pogostosti uživanja alkohola v zadnjem mesecu, tednu, količina popitih pijač, plačilo pijač, čas pitja pijač, zabava s pijačami, dostopnost pijač, mešanje pijač, opitost in ozaveščenosti študentov o škodljivih posledicah pitja alkohola. Pri posledicah je bilo na voljo več možnih odgovorov.

Vprašanje o vzrokih pitja alkoholnih pijač je bilo povzeto po avtorjih Ramovš & Ramovš (2007) in Berčič (2011), medtem ko je bilo vprašanje o negativnih posledicah pitja alkoholnih pijač povzeto po naslednji literaturi: Židanik (2007), Sporočilo v steklenici (2008), Kolšek (2011a), Kolšek (2011b) in Kolšek & Jenko (2012). Test zanesljivosti instrumenta Cronbachov koeficient alfa ni bil izračunan. Pilotna študija ni bila narejena.

Opis vzorca

V študijskem letu 2014/2015 je bilo na rednem študiju Fakultete za zdravstvene vede v Mariboru vpisanih 293 študentov, na tej populaciji je bilo izvedeno priložnostno vzorčenje. Anketni vprašalnik so izpolnjevali študentje, ki so bili na dan razdeljevanja vprašalnikov prisotni pri študijskih obveznostih. Vrnjenih in pravilno izpolnjenih ter nato v analizo sprejetih je bilo 217 vprašalnikov – realizacija vzorca je bila 74 %. V raziskavi so sodelovali študenti rednega študija prvega, drugega in tretjega letnika študijskega programa Zdravstvena nega 1. stopnja. Sodelujoči študentje so bili stari od 19 do 26 let, povprečna starost anketirancev je bila 21 let. V raziskavi je sodelovalo 185 (85 %) žensk in 32 (15 %) moških.

Opis poteka raziskave in obdelave podatkov

Raziskavo smo izvedli aprila 2015 med študenti rednega študija zdravstvene nege 1. stopnje, za kar smo pridobili soglasje vodstva fakultete. S predavatelji smo se po spletni pošti dogovorili za termine anketiranja na fakulteti. Na dan anketiranja so bili študentje seznanjeni o namenu raziskave, zaupnosti podatkov oz. zagotovljeni anonimnosti anketirancev in možnosti, da lahko sodelovanje v raziskavi tudi zavrnejo. Sledil je pregled vrnjenih vprašalnikov, njihova obdelava in grafični prikaz rezultatov s programom Microsoft Excel 2010. Hipoteze smo preverili s testom hi-kvadrat, za kar smo uporabili računalniški program SPSS verzija 20 (SPSS Inc., Chicago, IL, USA). Statistično značilnost smo določili pri vrednosti $p < 0,05$.

Rezultati

Z raziskavo o uživanju alkohola med študenti zdravstvene nege smo ugotovili, da največ žensk posega po žganih pijačah, najmanj po vinu, medtem

ko največ moških posega po pivu in najmanj po žganih pijačah (Tabela 1).

Tabela 1. Najpogosteje zaužite alkoholne pijače med anketiranci
Table 1. Most commonly consumed alcoholic beverages by the respondents

Po katerih alkoholnih pijačah najpogosteje posegate?/Which are the most commonly consumed alcoholic beverages?	Spol/ Gender	
	Moški/ Male n (%)	Ženski/ Female n (%)
Ne pijem	3 (10 %)	23 (13 %)
Po pivu	17 (53 %)	34 (18 %)
Po vinu	10 (31 %)	57 (31 %)
Po žganih pijačah	2 (6 %)	71 (38 %)
Skupaj	32 (100 %)	185 (100 %)

Legenda/Legend: n – število/number; % – odstotek/percentage

Iz Tabele 2 je razvidno, da je bilo v zadnjih 30 dneh pred anketiranjem največ žensk opitih enkrat, najmanj pa tri- ali večkrat, medtem ko je bilo največ moških opitih tri- ali večkrat, najmanj pa enkrat.

Tabela 2. Opitost v zadnjih 30 dneh med anketiranci
Table 2. Alcohol intoxication of respondents in the period of 30 days preceding the survey

Kolikokrat ste bili opiti v zadnjih 30 dneh?/How many times were you drunk in the last 30 days?	Spol/ Gender	
	Moški/ Male n (%)	Ženski/ Female n (%)
Tri- ali večkrat	13 (40 %)	20 (11 %)
Dvakrat	7 (22 %)	31 (17 %)
Enkrat	6 (19 %)	52 (28 %)
Nikoli	6 (19 %)	82 (44 %)
Skupaj	32 (100 %)	185 (100 %)

Legenda/Legend: n – število/number; % – odstotek/percentage

Iz Tabele 3 je razvidno, da največ študentov prvih, drugih in tretjih letnikov pije alkohol občasno.

Hipotezo 1 smo potrdili ($p = 0,000$, $\chi^2 = 22,600$), saj smo s pomočjo testa hi-kvadrat ugotovili, da med študenti zdravstvene nege obstajajo statistično značilne razlike v izbiri najpogostejših alkoholnih pijač glede na spol (Tabela 4).

Prav tako smo potrdili hipotezo 2, saj smo s pomočjo testa hi-kvadrat ugotovili, da med študenti zdravstvene nege obstajajo statistično značilne razlike ($p = 0,000$, $\chi^2 = 21,648$) v opitosti v zadnjih 30 dneh (pred anketiranjem) glede na spol (Tabela 4).

Hipoteze 3 nismo potrdili, saj smo s pomočjo testa hi-kvadrat ugotovili, da med študenti zdravstvene nege ni statistično značilnih razlik ($p = 0,191$, $\chi^2 = 8,623$) v pogostosti uživanja alkohola glede na letnik študija (Tabela 4).

Tabela 3. Pogostost uživanja alkohola glede na letnik študija
Table 3. Frequency of alcohol consumption by study year

Kako pogosto pijete alkoholne pijače?/How often do you drink alcoholic beverage?	Letnik/Grade		
	Prvi/First n (%)	Drugi/Second n (%)	Tretji/Third n (%)
Ne pijem	3 (5 %)	11 (13 %)	12 (16 %)
Občasno	38 (66 %)	46 (54 %)	37 (50 %)
Zmerno	14 (24 %)	17 (20 %)	20 (27 %)
Pogosto	3 (5 %)	11 (13 %)	5 (7 %)
Skupaj	58 (100 %)	85 (100 %)	74 (100 %)

Legenda/Legend: n – število/number; % – odstotek/percentage

Tabela 4. Uživanje alkohola med študenti zdravstvene nege
Table 4. Alcohol consumption among nursing students

Hipoteza/Hypothesis	Test/Test	V	df	p
Obstaja razlika v izbiri najpogostejših alkoholnih pijač glede na spol.	Pearsonov hi-kvadrat	22,600 ^a	3	0,000
	Razmerje verjetnosti	23,212	3	0,000
Obstaja razlika v opitosti v zadnjem mesecu oziroma v zadnjih 30 dneh glede na spol.	Pearsonov hi-kvadrat	21,648 ^a	3	0,000
	Razmerje verjetnosti	18,589	3	0,000
Obstaja razlika v pogostosti uživanja alkohola glede na letnik študija.	Pearsonov hi-kvadrat	8,623 ^a	6	0,191
	Razmerje verjetnosti	9,049	6	0,171

Legenda/Legend: V – vrednost/value; df – prostorska stopnja/degrees of freedom; p – statistična značilnost/statistical significance

Diskusija

V raziskavi o uživanju alkohola med študenti zdravstvene nege Fakultete za zdravstvene vede v Mariboru je sodelovalo 74 % v študijskem letu 2015/2016 redno vpisanih študentov zdravstvene nege.

Hipotezo o razliki v izbiri najpogostejših alkoholnih pijač glede na spol (H1) smo potrdili. Ugotovili smo, da ženske v večji meri posegajo po žganih pijačah, moški po pivu. Iz različnih domačih in tujih raziskav je razvidno, da študentje večinoma posegajo po žganih pijačah. Raziskava, izvedena v Avstraliji leta 2010, poroča, da so študentje različnih fakultet v starosti od 18 do 24 let najpogosteje posegali po žganih pijačah (Reavley, et al., 2011). Raziskava, izvedena na Poljskem leta 2011, je pokazala, da so študentje zdravstva v starosti od 18 do 27 let najpogosteje posegali po pivu (Kowalczyk, et al., 2012). Raziskava, izvedena v študijskem letu 2012/2013 v Španiji, poroča, da so študentje zdravstvene nege v starosti od 17 do 23 let in več najpogosteje posegali po žganih pijačah (Rabanales Sotos, et al., 2015). Tudi slovenska raziskava, izvedena leta 2012 na Gorenjskem, poroča, da so študentje zdravstvene nege v starosti od 18 do 24 let in več najpogosteje posegali po žganih pijačah (Pivač, et al., 2014).

Potrjena je bila tudi hipoteza o razliki v opitosti v zadnjih 30 dneh (pred anketiranjem) glede na spol (H2). Ugotovili smo, da so bile ženske v zadnjih 30 dneh

pred anketiranjem opite v povprečju enkrat, medtem ko moški tri- ali večkrat. Iz različnih domačih in tujih raziskav je razvidno, da so bili študentje v zadnjih 30 dneh pred anketiranjem opiti vsaj enkrat. To kažeta dve raziskavi: ameriška (Združene države Amerike) iz leta 2006, poroča, da je največji delež (76,9 %) študentov različnih fakultet v starosti od 17 do 19 let in več v zadnjih 30 dneh pred anketiranjem bil opit vsaj enkrat ali več (Boekeloo, et al., 2011); slovenska raziskava iz leta 2012, izvedena na Gorenjskem, poroča, da je največji delež (35,7 %) študentov zdravstvene nege v starosti od 18 do 24 let in več v zadnjih 30 dneh pred anketiranjem bil opit enkrat ali dvakrat (Pivač, 2013). Vzrok za opijanje lahko iščemo v celotni družbi, ki alkohol obravnava in tolerira kot nekaj vsakdanjega (Ramovš & Ramovš, 2007; Židanik, 2007; Berčič, 2011). Alkohol predstavlja najbolj razširjeno in dostopno psihoaktivno snov med mladimi tako v svetu kot pri nas (Knavs, et al., 2012; Pivač, et al., 2014). Starostna meja prvega pitja alkohola se v Sloveniji iz leta v leto niža (Auer, 2002; Boben-Bardutzky, et al., 2009).

Tretje hipoteze o razliki v pogostosti uživanja alkohola pri študentih glede na letnik študija nismo potrdili. Ugotovili smo, da v vseh treh letnikih študentje zdravstvene nege uživajo alkohol občasno. Rezultati iz različnih raziskav kažejo, da študentje ne pretiravajo s prekomernim pitjem alkohola. Francoska raziskava iz leta 2011 je pokazala, da je 45 % študentov zdravstva pilo alkohol 2–4-krat na mesec (Gignon, et al., 2015); rezultati brazilske raziskave iz leta 2011 so pokazali, da je največ

(26 %) študentov zdravstvene nege pilo alkohol enkrat na mesec (Pires, et al., 2015); poljska raziskava iz leta 2012 je podala rezultate, da je največ (48,72 %) študentov zdravstva pilo alkohol enkrat na teden (Fałkowski, et al., 2013); medtem ko so rezultati španske raziskave v študijskem letu 2012/2013 pokazali, da je največ (49,2 %) študentov zdravstvene nege pilo alkohol 2–4-krat na mesec (Rabanales Sotos, et al., 2015). Slovenska raziskava iz leta 2012, izvedena na Gorenjskem, pa je pokazala, da je največ (28,4 %) študentov zdravstvene nege v starosti od 18 do 24 let in več alkohol pilo nekajkrat na leto, ob posebnih priložnostih (Pivač, et al., 2014).

Pri interpretaciji rezultatov je potrebna previdnost zaradi manjšega, priložnostnega in po spolu neuravnoteženega vzorca, neuporabe že validiranih instrumentov in vključenosti le ene institucije, zato rezultatov ne moremo posploševati. V bodoče bi veljalo razmisliti o širitvi raziskave na vse zdravstvene fakultete v Sloveniji, saj bi s tem dobili bolj jasno sliko o tveganem uživanju alkohola med slovenskimi študenti zdravstvene nege.

Zaključek

Uživanje alkohola med študenti rednega študija zdravstvene nege 1. stopnje na izbrani fakulteti je po rezultatih raziskave skrb vzbujajoče. Iz podatkov je razvidno, da študentje zdravstvene nege pijejo alkoholne pijače tvegano. Manj tvegano pitje Kolšek (2011a) opredeljuje kot pitje do take meje, da leto, tudi če traja več let, najverjetneje ne povzroči zdravstvene škode. Rezultati raziskave nakazujejo potrebo po obsežnejši raziskavi o uživanju alkohola med slovenskimi študenti zdravstvene nege.

Med študenti zdravstvene nege je potrebno delovanje v smeri promocije zdravja in zdravstvene vzgoje za preprečevanje in zmanjševanje uživanja alkohola. V podporo zdravstvenovzgojnim vsebinam se lahko organizirajo različna predavanja ali učne delavnice na temo alkohol med študenti, pripravijo preventivni promocijski materiali kot npr. različne zloženke, ki svarijo pred tveganim pitjem alkohola.

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NAVODILA AVTORJEM

Splošna načela

Članek naj bo napisan v slovenskem ali angleškem knjižnem jeziku, razumljivo in jedrnato, dolg naj bo največ 5000 besed za kvantitativno in do 7000 besed za kvalitativno zasnovane raziskave. Število besed se nanaša na besedilo članka in ne vključuje naslova, izvlečka, tabel, slik in seznama literature. Avtorji naj uporabijo MS-Wordovo predlogo, ki je dostopna na spletni strani uredništva. Vsi članki, ki so uvrščeni v uredniški postopek, so recenzirani s tremi anonimnimi recenzijami. Revija objavlja le izvirna, še neobjavljena znanstvena in strokovna dela. Za trditve v članku odgovarja avtor oziroma avtorji, če jih je več (v nadaljevanju avtor), zato mora le-ta biti podpisan s celotnim imenom in priimkom, treba je navesti strokovne naslove in akademske nazive avtorja. Če je članek napisan v angleškem jeziku, morajo biti v angleškem jeziku zapisani tudi strokovni naslovi in akademski nazivi. Avtor mora pri oddaji članka dosledno upoštevati navodila glede standardizirane znanstvene opreme, videza in tipologije dokumentov ter navodil v zvezi z oddajo članka. Članek bo uvrščen v nadaljnjo obravnavo, ko bo pripravljen v skladu z navodili uredništva.

Če članek objavlja raziskavo na ljudeh, naj bo v podpoglavju metod *Opis poteka raziskave in obdelave podatkov* razvidno, da je bila raziskava opravljena skladno z načeli Helsinško - Tokijske deklaracije, opisan naj bo postopek pridobivanja dovoljenj za izvedbo raziskave. Eksperimentalne raziskave, opravljene na ljudeh, morajo imeti soglasje komisije za etiko bodisi na ravni ustanove ali več ustanov, kjer se raziskava izvaja, bodisi na nacionalni ravni.

Naslov članka, izvleček, ključne besede, tabele (opisni naslov in legenda, ter slike (opisni podnaslov in legenda) morajo biti v slovenščini in angleščini. Kadar je članek napisan v angleščini, morajo biti naslov, izvleček in ključne besede objavljeni v slovenščini. Skupno število slik in tabel naj bo največ pet. Tabele in slike naj bodo v besedilu članka na ustreznem mestu. Za prikaz rezultatov v tabelah, slikah in besedilu je potrebno uporabljati statistične simbole, ki jih avtor najde na spletni strani revije, poglavje Navodila. Na vsako tabelo in sliko se mora avtor v besedilu sklicevati. Uporaba sprotnih opomb pod črto ni dovoljena.

Opredelitev tipologije

Uredništvo razvrsti posamezni članek po veljavni tipologiji za vodenje bibliografij v sistemu COBISS (Kooperativni online bibliografski sistem in servisi) (dostopno na: http://home.izum.si/COBISS/bibliografije/Tipologija_slv.pdf). Tipologijo lahko predlagata avtor in recenzent, končno odločitev sprejme glavni in odgovorni urednik.

Metodološka struktura članka

Naslov, izvleček in ključne besede naj bodo v slovenščini in angleščini. Naslov naj bo skladen z vsebino članka in dolg največ 120 znakov. Oblikovan naj bo tako, da je iz njega razviden uporabljen raziskovalni dizajn. Če sledi naslovu podnaslov, naj bosta ločena s podpičjem. Navedenih naj bo od tri do šest ključnih besed, ki natančneje opredeljujejo vsebino članka in ne nastopajo v naslovu. Izvleček naj bo strukturiran, vsebuje naj 150–200 besed. Napisan naj bo v tretji osebi. V izvlečku se ne citira.

Strukturirani izvleček naj vsebuje naslednje strukturne dele:

Uvod (Introduction): Navesti je treba ključna spoznanja dosedanjih raziskav, opis raziskovalnega problema, namen raziskave, v katerem so opredeljene ključne spremenljivke raziskave.

Metode (Methods): Navesti je treba uporabljen raziskovalni dizajn, opisati glavne značilnosti vzorca, instrument raziskave, zanesljivost instrumenta, kje, kako in kdaj so se zbirali podatki, s katerimi metodami so bili obdelani in analizirani rezultati.

Rezultati (Results): Opisati je treba najpomembnejše rezultate raziskave, ki odgovarjajo na raziskovalni problem in namen raziskave. Pri kvantitativnih raziskavah je treba navesti vrednost rezultata in raven statistične značilnosti.

Diskusija in zaključek (Discussion and conclusion): Razpravljati je treba o ugotovitvah raziskave, navesti se smejo le zaključki, ki izhajajo iz podatkov, pridobljenih pri raziskavi. Navesti je treba tudi uporabnost ugotovitev in izpostaviti pomen nadaljnjih raziskav za boljše razumevanje raziskovalnega problema. Enakovredno je treba navesti tako pozitivne kot negativne ugotovitve.

Struktura izvirnega znanstvenega članka (1.01)

Izvirni znanstveni članek je samo prva objava originalnih raziskovalnih rezultatov v takšni obliki, da se raziskava lahko ponovi ter ugotovitve preverijo. Revija objavlja znanstvene raziskave, za katere zbrani podatki niso starejši od pet let ob objavi članka v reviji.

Uvod: V uvodu opredelimo raziskovalni problem, in sicer v kontekstu znanja in dokazov, v katerem smo ga razvili. Pregled obstoječe literature mora utemeljiti potrebo po naši raziskavi in je osnova za oblikovanje namena in ciljev raziskave, raziskovalnih vprašanj oz. hipotez in izbranega dizajna raziskave. Uporabimo znanstvena spoznanja in koncepte aktualnih mednarodnih in domačih raziskav, ki so objavljena kot primarni vir in niso starejša od deset let oziroma pet let, če je raziskovalni problem dobro raziskan. Obvezno je citiranje in povzemanje spoznanj raziskav. Na koncu opredelimo namen in cilje raziskave. Priporočamo

zapis raziskovalnih vprašanj (kvalitativna raziskava) oz. hipotez (kvantitativna raziskava).

Metode: V uvodu metod navedemo izbrano raziskovalno paradigmo (kvantitativna, kvalitativna) in uporabljeni dizajn izbrane paradigme. Podpoglavja metod so: *opis instrumenta*, *opis vzorca*, *opis poteka raziskave in opis obdelave podatkov*.

Pri *opisu instrumenta* navedemo: opis sestave instrumenta, kako smo oblikovali instrument, spremenljivke v instrumentu, merske značilnosti (veljavnost, zanesljivost, objektivnost, občutljivost). Navedemo avtorje, po katerih smo instrument povzeli, ali navedemo literaturo, po kateri smo ga razvili. Pri kvalitativni raziskavi opišemo tehniko zbiranja podatkov, izhodiščna vprašanja, morebitno strukturo poteka zbiranja podatkov, kriterije veljavnosti in zanesljivosti tehnike zbiranja podatkov.

Pri *opisu vzorca* navedemo: opis populacije, iz katere smo oblikovali vzorec, vrsto vzorca, kolikšen je bil odziv vključenih v raziskavo, opis vzorca po demografskih podatkih (spol, izobrazba, delovna doba, delovno mesto ipd.). Pri kvalitativni raziskavi opredelimo še možnosti vključitve in izbrani način vključitve v raziskavo, vrsto vzorca, velikost vzorca in pojasnimo zasičenost vzorca.

Pri *opisu poteka raziskave in obdelave podatkov* navedemo: etična dovoljenja za izvedbo raziskave, dovoljenja za izvedbo raziskave v organizaciji, predstavimo potek izvedbe raziskave, zagotovila za anonimnost vključenih ter prostovoljnost pri vključitvi v raziskavo, obdobje zbiranja podatkov in kraj zbiranja podatkov, način zbiranja, uporabljene metode analize podatkov, natančno navedemo statistične metode, program in verzijo programa statistične obdelave, meje statistične značilnosti. Pri kvalitativni raziskavi natančno opišemo celoten potek raziskave, način zapisovanja, zbiranja podatkov, število izvedb (opazovanj, intervjujev ipd.), trajanje izvedb, sekvence, transkripcijo podatkov, korake analize obdelave, tehnike obdelave podatkov, in interpretacije podatkov ter receptivnost raziskovalca.

Rezultati: Rezultate prikažemo besedno oz. v tabelah in slikah ter pazimo, da izberemo le en prikaz za posamezen rezultat in da se vsebina ne podvaja. V razlagi rezultatov se osredotočamo na statistično značilne rezultate in tiste, ki so nas presenetili. Rezultate prikazujemo glede na stopnjo zahtevnosti statistične obdelave. Pri prikazu rezultatov v tabelah in slikah je potrebna pojasnitev vseh uporabljenih kratic v legendi pod tabelo ali sliko. Rezultate prikažemo po postavljenih spremenljivkah, odgovorimo na raziskovalna vprašanja oz. hipoteze. Pri kvalitativnih raziskavah prikažemo potek oblikovanja kod in kategorij, za vsako kodo predstavimo eno do dve reprezentativni izjavi vključenih v raziskavo, ki najbolj predstavita oblikovano kodo. Naredimo shematični prikaz dobljenih kod in iz njih razvitih kategorij ter sodbo.

Diskusija: V diskusiji ugotovitve raziskave navajamo na besedni način (številčnih rezultatov ne navajamo). Nizamo jih po posameznih spremenljivkah in z vidika postavljenih raziskovalnih vprašanj oz. hipotez, ki jih ne ponavljamo, temveč nanje besedno odgovarjamo. Rezultate v razpravi pojasnimo z vidika razumevanja, kaj lahko iz njih razberemo, razumemo in kako je to primerljivo z rezultati drugih raziskav in kaj to pomeni za strokovno delo – uporabnost raziskave. Pri tem smo odgovorni in etični ter rezultate pojasnjujemo z vidika spoznanj naše raziskave in z vidika spoznanj, ki so preverljiva, splošno znana in primerljiva z vidika drugih raziskav. Pazimo na posploševanje rezultatov in se pri tem zavedamo omejitev raziskave tako z vidika instrumenta, vzorca in poteka raziskave. Upoštevamo načelo preverljivosti in primerljivosti. Oblikujemo rdečo nit razprave kot smiselne celote, komentiramo pričakovana in nepričakovana spoznanja raziskave. Na koncu razprave navedemo priporočila, ki so plod naše raziskave, navedemo področja, ki jih nismo raziskali, pa bi bilo pomembno, ali pa smo jih, pa naši rezultati ne dajejo ustreznih pojasnil. Navedemo omejitve raziskave.

Zaključek: Na kratko povzamemo ključne ugotovitve izvedene raziskave, povzamemo predloge za prakso, predlagamo možnosti nadaljnjega raziskovanja obravnavanega problema.

Članek naj se zaključi s seznamom literature, ki je bila citirana ali povzeta v članku.

Struktura preglednega znanstvenega članka (1.02)

V kategorijo preglednih znanstvenih raziskav sodijo: sistematični pregled literature, pregled literature, analiza koncepta, razpravni članek (v nadaljevanju pregledni znanstveni članek). Revija objavlja pregledne znanstvene raziskave, za katere je bilo zbiranje podatkov končano največ tri leta pred objavo članka v reviji.

Pregledni znanstveni članek je pregled najnovejših raziskav o določenem predmetnem področju z namenom povzemati, analizirati, evalvirati ali sintetizirati informacije, ki so že bile publicirane. Znanstvena spoznanja niso le navedena, ampak tudi razložena, interpretirana, analizirana, kritično ovrednotena in predstavljena na znanstvenoraziskovalen način. Na osnovi kvantitativne obdelave podatkov predhodnih raziskav (metaanaliza) ali kvalitativne sinteze (metasinteza) rezultatov predhodnih raziskav prinaša nova spoznanja in koncepte za nadaljnje raziskovalno delo. Struktura preglednega znanstvenega članka je enaka kot pri izvornem znanstvenem članku.

V **uvodu** predstavimo znanstveno, konceptualno ali teoretično izhodišče, kot vodilo pregleda literature. Končamo z utemeljitvijo, zakaj je pregled potreben, zapišemo namen, cilje in raziskovalno vprašanje.

V **metodah** natančno opišemo uporabljen

raziskovalni dizajn pregleda literature. Podpoglavja metod so: *metode pregleda, rezultati pregleda, ocena kakovosti pregleda in opis obdelave podatkov*. Metode pregleda vključujejo razvoj, testiranje in izbor iskalne strategije, vključitvene in izključitvene kriterije za uvrstitev v pregled, raziskane podatkovne baze, časovno obdobje iskanja objav, vrste objav z vidika hierarhije dokazov, ključne besede, jezik. *Rezultati pregleda* vključujejo število dobljenih zadetkov, število pregledanih raziskav, število vključenih raziskav in število izključenih raziskav (tabelarni prikaz). *Ocena kakovosti pregleda in opis obdelave podatkov* vključuje oceno uporabljenega pristopa in dobljenih rezultatov ter kakovost vključenih raziskav, uporabljene kriterije za dokončni nabor uporabljenih zadetkov, način obdelave podatkov.

Rezultate prikažemo tako, da uporabimo diagram poteka raziskave skozi faze pregleda, pri izdelavi si lahko pomagamo z mednarodnimi standardi za prikaz rezultatov pregleda literature (primer PRISMA for systematic review). Naredimo analizo kakovosti vključenih raziskav z vidika uporabljenih raziskovalnih metod. Jasno naj bo razvidno, katere vrste raziskav glede na hierarhijo dokazov so vključene v pregled literature. Rezultate prikažemo besedno, v tabelah in slikah, navedemo ključna spoznanja glede na raziskovalni dizajn. Pri kvalitativni sintezi uporabimo kode in kategorije kot rezultat pregleda kvalitativne sinteze. Pri kvantitativni analizi opišemo uporabljene statistične metode obdelave podatkov iz vključenih znanstvenih del.

V **diskusiji** v prvem delu odgovorimo na raziskovalno vprašanje, nato komentiramo ugotovitve pregleda literature, kakovost vključenih raziskav, svoje ugotovitve primerjamo z rezultati drugih primerljivih raziskav, razvijemo nova spoznanja, ki jih je doprinesel pregled literature, njihovo teoretično, znanstveno in praktično uporabnost, navedemo omejitve raziskave, uporabnost v praksi in priložnosti za nadaljnje raziskovanje.

V **zaključku** poudarimo doprinos izvedenega pregleda, opozorimo na morebiten prepad v znanju in razumevanju, izpostavimo pomen bodočih raziskav, uporabnost pridobljenih spoznanj in priporočila za prakso/raziskovanje/izobraževanje/management, pri čemer upoštevamo omejitve raziskave. Izpostavimo teoretični koncept, ki bi lahko usmerjal raziskovalce v prihodnosti.

Struktura strokovnega članka (1.04)

Strokovni članek je predstavitev že znanega, s poudarkom na uporabnosti rezultatov izvornih raziskav in širjenju znanja. Struktura strokovnega članka je enaka strukturi izvirnega znanstvenega članka, v kolikor gre za pregled literature pa strukturi preglednega znanstvenega članka. V njem predstavljamo raziskave, ki obogatijo že obstoječe

vedenje o strokovnem problemu, pri čemer pa nismo usmerjeni v podajanje novega znanja in znanstvenih dokazov, temveč v uporabnost rezultatov za izboljšave v strokovnem delu.

Navajanje literature

Vsako trditev, teorijo, uporabljeno metodologijo, koncept je treba potrditi s citiranjem. Avtorji naj uporabljajo *harvardski sistem* (Anglia 2008) za navajanje avtorjev v besedilu in seznamu literature na koncu članka. Za navajanje avtorjev v **besedilu** uporabljamo npr.: (Pahor, 2006) ali Pahor (2006), kadar priimek vključimo v poved. Če sta avtorja dva, priimeka ločimo z »&«: (Stare & Pahor, 2010). V besedilu navajamo *do dva avtorja*: (Rhodes & Pearson, 2006). Če je avtorjev več navedemo le prvega in dopišemo, et al. (Chen, et al., 2007). Če navajamo več citiranih del, jih ločimo s podpičji in jih navedemo po kronološkem zaporedju, od najstarejšega do najnovejšega, če je med njimi v istem letu več citiranih del, jih razvrstimo po abecednem vrstnem redu (Bratuž, 2012; Pajntar, 2013; Wong, et al., 2014). Kadar citiramo več del istega avtorja, izdanih v istem letu, je treba za letnico dodati malo črko po abecednem redu: (Baker, 2002a, 2002b).

Kadar navajamo sekundarne vire, uporabimo »cited in« (Lukič, 2000 cited in Korošec, 2014). Če pisec članka ni bil imenovan oz. je delo anonimno, v besedilu navedemo *naslov* dodamo Anon., ter letnico objave: *The past is the past* (Anon., 2008). Kadar je avtor organizacija oz. gre za korporativnega avtorja, zapišemo ime korporacije (Royal College of Nursing, 2010). Če ni leta objave, to označimo z »no date« (Smith, n. d.). Pri objavi fotografij navedemo avtorja (Foto: Marn, 2009; vir: Cramer, 2012). Za objavo fotografij, kjer je prepoznavna identiteta posameznika, moramo pridobiti dovoljenje te osebe ali staršev, če gre za otroke.

V **seznamu literature** na koncu članka navedemo avtorje po abecednem redu in *vsa v besedilu citirana ali povzeta dela* (in samo ta!). Citiranje in povzemanje v besedilu ter navajanje v seznamu na koncu članka morajo biti skladni! Sklicujemo se le na objavljena dela. Kadar je avtorjev več in smo v besedilu navedli le prvega ter dodali et al., v seznamu navedemo prvih šest avtorjev in dodamo et al., če je avtorjev več kot šest. V seznamu literature si bibliografski opisi sledijo v abecednem zaporedju, velikost črk 12, z enojnim razmikom, levo poravnano ter 12 pik prostora za referencami/paragraph spacing.

Citirane strani navajamo pri citiranju v besedilu, če dobesedno navajamo citirano besedilo (Ploč, 2013, p. 56) ter v seznamu literature za članke, prispevke na konferencah ...). Če citiramo več strani iz istega dela, strani navajamo ločene z vejico (npr. pp. 15–23, 29, 33, 84–86). Če je citirani prispevek dostopen na spletu, na koncu bibliografskega zapisa navedemo »Available

at:« ter zapišemo URL- ali URN-naslov ter v oglatem oklepaju dodamo datum dostopa [glej primere].

Primeri navajanja literature v seznamu

Citiranje knjige:

Hoffmann Wold, G., 2012. *G. Basic geriatric nursing*. 5th ed. St. Louis: Elsevier/Mosby, pp. 350–356.

Pahor, M., 2006. *Medicinske sestre in univerza*. Domžale: Izolit, pp. 73–80.

Ricci Scott, S., 2007. *Essentials of maternity, newborn and women's health nursing*. 2nd ed. Philadelphia: Lippincott Williams & Wilkins, pp. 32–36.

Citiranje poglavja oz. prispevka iz knjige, ki jo je uredilo več avtorjev:

Berryman, J., 2010. Statewide nursing simulation program. In: Nehring, W.M. & Lashley, F.R. eds. *High-fidelity patient simulation in nursing education*. Sudbury (Mass.): Jones and Bartlett, pp. 115–131.

Kanič, V., 2007. Možganski dogodki in srčno-žilne bolezni. In: Tetičkovič, E. & Žvan, B. eds. *Možganska kap – do kdaj?* Maribor: Kapital, pp. 33–42.

Citiranje knjige, ki jo je uredil eden ali več avtorjev:

Borko, E., Takač, I., But, I., Gorišek, B. & Kralj, B. eds., 2006. *Ginekologija*. 2. dopolnjena izd. Maribor: Visoka zdravstvena šola, pp. 269–276.

Robida, A. ed., 2006. *Nacionalne usmeritve za razvoj kakovosti v zdravstvu*. Ljubljana: Ministrstvo za zdravje, pp. 10–72.

Citiranje članka iz revij (v drugem primeru dostopnega tudi na spletu):

Cronenwett, L., Sherwood, G., Barnsteiner, J., Disch, J., Johnson, J., Mitchell, P., et al., 2007. Quality and safety education for nurses. *Nursing Outlook*, 55(3), pp. 122–131.

Papke, K. & Plock, P., 2004. The role of fundal pressure. *Perinatal Newsletters*, 20(1), pp. 1–2. Available at: http://www.idph.state.ia.us/hpcdp/common/pdf/perinatal_newsletters/progeny_may2004.pdf [5. 12. 2012].

Pillay, R., 2010. Towards a competency-based framework

for nursing management education. *International Journal of Nursing Practice*, 16(6), pp. 545–554.

Snow, T., 2008. Is nursing research catching up with other disciplines? *Nursing Standard*, 22(19), pp. 12–13.

Citiranje anonimnega dela (avtor ni naveden):

Anon., 2008. The past is the past: wasting competent, experienced nurses based on fear. *Journal of Emergency Nursing*, 34(1), pp. 6–7.

Citiranje dela korporativnega avtorja:

United Nations, 2011. *Competencies for the future*. New York: United Nations, p. 6.

Citiranje članka iz suplementa revije in suplementa številke revije:

Halevey, D. & Vemireddy, M., 2007. Is a target hemoglobin A1c below 7 % safe in dialysis patients? *American Journal of Kidney Diseases*, 49(2 Suppl 2), pp. S12–S154.

Regehr, G. & Mylopoulos, M., 2008. Maintaining competence in the field: learning about practice, through practice, in practice. *The Journal of Continuing Education in the Health Professions*, 28(Suppl 1), pp. S19–S23.

Rudel, D., 2007. Informacijsko-komunikacijske tehnologije za oskrbo bolnika na daljavo. *Rehabilitacija*, 6(Suppl 1), pp. 94–100.

Citiranje prispevka iz zbornika referatov:

Skela-Savič B., 2008. Teorija, raziskovanje in praksa v zdravstveni negi – vidik odgovornosti menedžmenta v zdravstvu in menedžmenta v visokem šolstvu. In: Skela-Savič, B., Kaučič, B.M. & Ramšak Pajk, J. eds. *Teorija, raziskovanje in praksa – trije stebri, na katerih temelji sodobna zdravstvena nega: zbornik predavanj z recenzijo*. 1. mednarodna znanstvena konferenca, Bled 25. in 26. september 2008. Jesenice: Visoka šola za zdravstveno nego, pp. 38–46.

Štemberger Kolnik, T. & Babnik, K., 2012. Oblikovanje instrumenta zdravstvene pismenosti za slovensko populacijo: rezultati pilotske raziskave. In: Železnik, D., Kaučič, B.M. & Železnik, U. eds. *Inovativnost v koraku s časom in primeri dobrih praks: zbornik predavanj z recenzijo*. 2. znanstvena konferenca z mednarodno udeležbo s področja zdravstvenih ved, 18. september 2012. Slovenj Gradec: Visoka šola za zdravstvene vede, pp. 248–255.

Wagner, M., 2007. Evolucija k žensko osredičeni obporodni skrbi. In: Drglin, Z. ed. *Rojstna mašinerija: sodobne obporodne vednosti in prakse na Slovenskem*. Koper: Univerza na Primorskem, Znanstveno-raziskovalno središče, Založba Annales, Zgodovinsko društvo za južno Primorsko, pp. 17–30.

Citiranje diplomskega in magistrskega dela, ter doktorske disertacije:

Ajlec, A., 2010. *Komunikacija in zadovoljstvo na delovnem mestu kot del kakovostne zdravstvene nege: diplomsko delo*

univerzitetnega študija. Kranj: Univerza v Mariboru, Fakulteta za organizacijske vede, pp. 15–20.

Rebec, D., 2011. *Samoocenjevanje študentov zdravstvene nege s pomočjo video posnetkov pri poučevanju negovalnih intervencij v specialni učilnici: magistrsko delo*. Maribor: Univerza v Mariboru, Fakulteta za zdravstvene vede, pp. 77–79.

Kolenc, L., 2010. *Vpliv sodobne tehnologije na profesionalizacijo poklica medicinske sestre: doktorska disertacija*. Ljubljana: Univerza v Ljubljani, Fakulteta za družbene vede, pp. 250–258.

Citiranje zakonov, kodeksov, pravilnikov:

Zakon o pacientovih pravicah (ZPacP), 2008. Uradni list Republike Slovenije št. 15.

Zakon o preprečevanju nasilja v družini (ZPND), 2008a. Uradni list Republike Slovenije št. 16.

Zakon o varstvu osebnih podatkov (uradno prečiščeno besedilo) (ZVOP-1-UPB1), 2007. Uradni list Republike Slovenije št. 94.

Kodeks etike medicinskih sester in zdravstvenih tehnikov Slovenije, 2010. Uradni list Republike Slovenije št. 40.

Pravilnik o licencah izvajalcev v dejavnosti zdravstvene in babiške nege Slovenije, 2007. Uradni list Republike Slovenije št. 24.

Citiranje zgoščenk (CD-ROM):

International Council of Nurses, 2005. *ICNP version 1.0: International classification for nursing practice*. [CD-ROM]. Geneva: International Council of Nurses.

Sima, Đ. & Požun, P., 2013. *Zakonodaja s področja zdravstva*. [CD-ROM]. Ljubljana: Društvo medicinskih sester, babic in zdravstvenih tehnikov.

NAVODILA ZA PREDLOŽITEV ČLANKA

Članek je potrebno oddati v e-obliki preko spletne strani revije. Revija uporablja Open Journal System (OJS), dostopno na: <http://obzornik.zbornica-zveza.si/>. Avtor mora natančno slediti navodilom za oddajo članka in izpolniti vse zahtevane rubrike. Pred oddajo članka naj avtor članek pripravi v naslednjih ločenih dokumentih.

– **Naslovna stran**, ki vključuje: naslov članka, avtorje v vrstnem redu, kot morajo biti navedeni v članku, popolne podatke o vseh avtorjih (ime, priimek, dosežena stopnja izobrazbe, habilitacijski naziv, zaposlitev, e-naslov) in pri oddaji označiti, kdo je korespondenčni avtor. Če je članek napisan v angleščini, morajo biti tako zapisani tudi vsi podatki o avtorjih. Navedi je potrebno prispevek vsakega soavtorja pri pisanju članka. Vsak soavtor članka

mora sodelovati vsaj v dveh strukturalnih delih članka (IMRAD). Vsak soavtor bo ob oddaji članka prejel elektronsko sporočilo na svoj e-naslov, da je članek oddan, in če ni soavtor članka, bo pozvan, da uredništvu odgovori na poslano elektronsko pošto. V sistem je vključena e-izjava o avtorstvu. Navedeno naj bo morebitno financiranje raziskave in raziskovalna skupina, v kolikor niso vsi člani skupine avtorji članka. Navedi je treba, ali članek vključuje del rezultatov večje raziskave, ali je nastal v okviru diplomskega, magistrskega ali doktorskega dela (v tem primeru je prvi avtor vedno študent) in morebitne zahvale. Dokument se pošlje v enem izmed formatov, ki jih prepozna urejevalnik besedil MS Word, in en izvod v formatu PDF (portable document format).

– **Glavni dokument**, ki je anonimiziran in vključuje naslov članka (obvezno brez avtorjev in kontaktnih podatkov), izvleček, ključne besede, besedilo članka, tabele, slike in literaturo.

Obseg članka: članek naj vsebuje največ 5000 besed za kvantitativno in do 7000 besed za kvalitativno zasnovane raziskave. V ta obseg se ne štejejo izvleček, tabele, slike in seznam literature. Število besed članka je potrebno navesti v dokumentu »Naslovna stran«.

Za **oblikovanje besedila članka** naj velja naslednje: velikost strani A4, dvojni razmik med vrsticami, pisava Times New Roman, velikost črk 12 pt in širina robov 25 mm. Obvezna je uporaba oblikovne predloge za članek (Word), dostopne na spletni strani Obzornika zdravstvene nege.

Tabele naj bodo označene z arabskimi zaporednimi številkami. Imeti morajo vsaj dva stolpca ter opisni naslov (*nad tabelo*), naslovno vrstico, morebitni zbirni stolpec in zbirno vrstico ter legendo uporabljenih znakov. V tabeli morajo biti izpolnjena vsa polja, obsegajo lahko največ 57 vrstic. Za njihovo oblikovanje naj velja naslednje: velikost črk 11, pisava Times New Roman, enojni razmik, pred in za vrstico 0,5 točke prostora, v prvem stolpcu in vseh stolpcih z besedilom leva poravnava, v stolpcih s statističnimi podatki sredinska poravnava, vmesne pokončne črte pri prikazu neizpisane. Uredništvo si pridružuje pravico, da preobsežne tabele, v sodelovanju z avtorjem, preoblikuje.

Slike naj bodo oštevilčene z arabskimi zaporednimi številkami. Podpisi k slikam (*pod sliko*) in legende naj bodo v slovenščini in angleščini, pisava Times New Roman. Izraz slika uporabimo za grafe, sheme in fotografije. Uporabimo le dvodimenzionalne grafične črno-bele prikaze (lahko tudi šrafure) ter resolucijo vsaj 300 dpi (dot per inch), če so slike v dvorazsežnem koordinatnem sistemu, morata obe osi (x in y) vsebovati označbe, katere enote/mere vsebujeta.

Članki niso honorirani. Besedil in slikovnega gradiva ne vračamo, kontaktni avtor prejme objavljeni članek v formatu PDF.

Sodelovanje avtorjev z uredništvom

Članek mora biti pripravljen v skladu z navodili in oddan prek spletne strani revije na <http://obzornik.zbornica-zveza.si/>, to je pogoj, da se članek uvrsti v uredniški postopek. Če uredništvo presodi, da članek izpolnjuje kriterije za objavo v Obzorniku zdravstvene nege, bo poslan v zunanjo strokovno (anonimno) recenzijo. Recenzenti prejmejo besedilo članka brez avtorjevih osebnih podatkov, članek pregledajo glede na postavljene kazalnike in predlagajo izboljšave. Avtor je dolžan izboljšave pregledati in jih v največji meri upoštevati ter članek dopolniti v roku, ki ga določi uredništvo. V kolikor avtor članka ne vrne v roku, se članek zavrne. V kolikor avtor katere od predlaganih izboljšav ne upošteva, mora to pisno pojasniti. Po zaključenem recenzijem postopku uredništvo članek vrne avtorju, da popravke odobri, jih upošteva in pripravi čistopis. Čistopis uredništvo pošlje v jezikovni pregled.

Avtor prejme prvi natis v korekturo s prošnjo, da na njem označi vse morebitne tiskovne napake, ki jih označi v PDF-ju prvega natisa. Spreminjanje besedila v tej fazi ni sprejemljivo. Korekture je treba vrniti v treh delovnih dneh, sicer uredništvo meni, da se avtor s prvim natisom strinja.

NAVODILA RECENZENTOM

Recenzentovo delo je odgovorno in zahtevno. S svojimi predlogi in ocenami recenzenti prispevajo k večji kakovosti člankov, objavljenih v Obzorniku zdravstvene nege. Od recenzenta, ki ga uredništvo neodvisno izbere, se pričakuje, da bo odgovoril na vprašanja, ki so postavljena v obrazcu OJS in ugotovil, ali so trditve in mnenja, zapisani v članku, verodostojni in ali je avtor upošteval navodila za objavlanje. Recenzent mora poleg znanstvenosti, strokovnosti in primernosti vsebine za objavo v Obzorniku zdravstvene nege članek oceniti metodološko ter uredništvo opozoriti na pomanjkljivosti. Ni potrebno, da se recenzent ukvarja z lektoriranjem, vendar lahko

opozori tudi na jezikovne pomanjkljivosti. Posebej mora biti recenzent pozoren, ali je naslov članka jase, ali ustreza vsebini; ali izvleček povzema bistvo članka; ali avtor citira (naj)novjšo literaturo in ali citira znanstvene raziskave avtorjev, ki so pisali o isti temi v domačih revijah; ali se avtor izogiba avtorjem, ki zagovarjajo drugačna mnenja, kot so njegova; ali navaja tuje misli brez citiranja; ali je citiranje literature ustrezno, ali se v besedilu navedena literatura ujema s seznamom literature na koncu članka. Dostopno literaturo je potrebno preveriti. Oceniti je treba ustreznost slik ter tabel, preveriti, če se v njih ne ponavlja tisto, kar je v besedilu že navedeno. Recenzentova dolžnost je opozoriti na morebitne nerazvezane kratice. Recenzent mora biti še posebej pozoren na morebitno plagiatorstvo in krajo intelektualne lastnine.

S sprejetjem recenzije se recenzent zaveže, da jo bo oddal v predpisanem roku. Če to ni mogoče, mora takoj obvestiti uredništvo. Recenzent se obveže, da vsebine članka ne bo nedovoljeno razmnoževal ali drugače zlorabil. Recenzije so anonimne: recenzent je avtorju neznan in obratno. Recenzent bo v pregled prek sistema OJS prejel le vsebino članka brez imena avtorja. V sistemu OJS recenzent poda svoje strokovno mnenje v recenzijem obrazcu. Če ima recenzent večje pripombe, jih kot utemeljitev za sprejem ali morebitno zavrnitev članka na kratko opiše oz. avtorju predlaga nadaljnje delo, pri čemer upošteva njegovo integriteto. Zaradi večje preglednosti in lažjih dopolnitev s strani avtorja lahko recenzent svoje pripombe in morebitne predloge vnese v besedilo članka, pri tem uporabi možnost, ki jo ponuja MS Word – sledi spremembam (Track changes). Recenzent mora biti pozoren, da pred uporabo omenjene možnosti prikrije svojo identiteto (sledil spremembam, spremeni ime/Track changes, change user name). Recenzentsko verzijo besedila članka z vključenimi anonimiziranimi predlogi nato recenzent naloži v sistem OJS in omogoči avtorju, da predloge dopolnitev vidi. Končno odločitev o objavi članka sprejme uredniški odbor.

Posodobljeno: 15. 3. 2016

Citirajte kot:

Obzornik zdravstvene nege: navodila avtorjem in recenzentom, 2016. Available at: <http://www.obzornikzdravstvenenege.si/Navodila.aspx> [15. 3. 2016].

MANUSCRIPT SUBMISSION GUIDELINES

General policies

The manuscript should be written clearly and succinctly in a standard Slovene or English language and conform to acceptable language usage. Its length must not exceed 5000 words for quantitative and 7000 for qualitative research articles, excluding the title, abstract, tables, pictures and literature. The authors should use the MS Word template, accessible at the editorial website. All articles considered for publication in the Slovenian Nursing Review will have been subjected to an external, triple-blind peer review. Manuscripts are accepted for consideration by the journal with the understanding that they represent original material, have not been published previously and are not being considered for publication elsewhere. Individual authors bear full responsibility for the content and accuracy of their submissions. In submitting a manuscript, the authors must observe the standard scientific research paper components, the format and typology of documents, and submission guidelines. The manuscript must be accompanied by the authorship statement, a copy of which is available on the journal website. The statement must be undersigned by the author and all co-authors in the order in which each is listed in the authorship of the article. The manuscript will not be submitted to editing process before the statement has been received by the editorial office. The latter should also be notified of the designated corresponding author (with their complete home and e-mailing address, telephone number), who is responsible for communicating with the editorial office and other authors about revisions and final approval of the proofs. The title page should include the manuscript title and the full names of the authors, their highest earned academic degrees, and their institutional affiliations and status. The manuscript is eligible for editorial and reviewing process if it is prepared according to the uniform requirements set forth by the editorial committee of the Slovenian Nursing Review.

If the article publishes human subject research, it should be evident from the methodology chapter that the study was conducted in accordance with the Declaration of Helsinki and Tokyo. All human subject research including patients or vulnerable groups, health professionals and students requires review and approval by the ethical committee on institutional or national level prior to subject recruitment and data collection.

The title of the article, abstract and key words, tables (descriptive subtitle and legend), illustrations (charts, diagrams, signed photographs) must be submitted in Slovene and English. When the article is written in English, the title, the abstract and the key words

must be translated into Slovene. The total of five data supplements per manuscript is allowed and their copyright must be obtained prior to publication.

Tables and other data supplements should adequately accompany the text. The results presented in tables and other data supplements should be presented in symbols as required by the journal, available at the journal website, chapter Guidelines. The authors should refer to each of these supplements in the text. The use of footnotes and endnotes is not allowed.

Typology of articles

The editors reserve the right re-classify the article in a topic category that may be more suitable than originally submitted. The classification follows the adopted typology of documents/works for bibliography management in COBISS (Cooperative Online Bibliographic System and Services) accessible at: http://home.izum.si/COBISS/bibliografije/Tipologija_eng.pdf). Reclassification can be suggested by the author or reviewer, the final decision rests with the editor-in-chief and the managing editor.

Methodological structure of an article

The title, the abstract and the key words should be written in the Slovene and English language. A concise but informative title should convey the nature, content and research design of the paper. It must not exceed 120 characters. If the title is followed by a subtitle, a semicolon should be placed in between. Up to six key words separated by a semicolon and not included in the title, define the article content and reflect the article's core topic or message. Articles must be accompanied by an abstract of no more than 150-250 words written in the third person. Abstracts accompanying articles must be structured and should not include references.

A structured abstract is an abstract with distinct, labelled sections for rapid comprehension. It is structured under the following headings:

Introduction: This section states the main question to be answered, and indicates the exact objective of the paper and the major variables of the study.

Methods: This section provides an overview of the research or experimental design, the research instrument, the reliability of the instrument, methods of data collection, and analysis indicating where, how and when the data were collected.

Results: This section briefly summarizes and discusses the major findings. The information indicated in this section should be directly connected to the research question and purpose of the study. In quantitative studies it is necessary to state the statistical validity and statistical significance of the results.

Discussion and conclusion: This section states the conclusions and discusses the research findings drawn from the results obtained. Presented in this section are

also limitations of the study and the implications of the results for practice and relevant further research. Both, the positive and the negative research findings should be adequately presented.

Structure of an Original Scientific Article (1.01)

An original scientific article is only the first-time publication of original research results in a way that allows the research to be repeated, and the findings checked. The research should be based on the primary sources which are not older than five years at the time of the publication of the article.

Introduction: In the introductory part the research problem is defined within the context of knowledge and evidence it was developed. The literature review on the topic provides a rationale behind the work and identifies a problem highlighted by the gap in the literature. It frames a purpose and aims for a study, research questions or hypotheses as well as the method of investigation (a research design, sample size and characteristics of the proposed sample, data collection and data analysis procedures). The research should be based on the primary sources of the recent national and international research which are not older than ten or five years respectively, if the topic of has been widely researched. Citation of sources and references to previous research findings is obligatory. Finally, the research intentions and purposes are stated. Recommended is also the framing of research questions (qualitative research) and hypotheses (qualitative research) to investigate or guide the study.

Method: This section states the chosen paradigm (qualitative, quantitative) and outlines the research design. It usually includes sections on research design; sample size and characteristics of the proposed sample; description of research process; and data collection and data analysis procedures.

The *description of the research instrument* includes information about the construction of the instrument, the mode of instrument development, instrument variables and measurement properties (validity, reliability, objectivity, sensitivity). Appropriate citations of the literature used in research development should be included. In qualitative research, a technique of data collection should be given along with the preliminary research questions, a possible format or structure of data collection and process, the criteria of validity and reliability of data collection.

The *description of a sample* defines the population from which the sample has been drawn, the type of the sample, the response rate of the participants, the respondents' demographics (gender, educational level, length of work experience, post currently held, and the like). In qualitative research, the category of sampling technique and the inclusion criteria are also defined and the sample size saturation is explained.

The *description of the research procedure and data analysis* includes ethical approvals to conduct a research, permission to conduct a research in an institution, description of the research process, guarantee of anonymity and voluntariness of the research participants, period and place of data collection, method of data collection and analysis, statistical methods, statistical analysis software and programme version, limits of statistical significance. A qualitative research should include a detailed description of modes of data collection and recording, number and duration of observations, interviews and surveys, sequences, transcription of data, steps in the data analysis and interpretation, and receptiveness of a researcher.

Results: This section presents the research results descriptively or in numbers and figures. A table is included only if it presents new information. Each finding is presented only once so as to avoid repetition and duplication of the content. Explanation of the results is focused on statistically significant or unexpected findings. The results are presented according to the level of statistical complexity. All abbreviations used in figures and tables should be provided with explanatory captions in the legend below the table or figure. The results are presented according to the variables, answering all the research questions or hypotheses. In qualitative research, the development of codes and categories should also be presented, including one or two representative statements of participants. A schematic presentation of the codes and ensuing categories are given.

Discussion: The discussion section analyses the data descriptively (numerical data should be avoided) in relation to specific variables from the study. The results are analysed and evaluated in relation to the original research questions or hypotheses. The discussion part integrates and explains the results obtained and relates them with those of previous studies in order to determine their significance and applicative value. Ethical interpretation and communication of research results is essential to ensure the validity, comparability and accessibility of new knowledge. The validity of generalisations from results is often questioned due to the limitations of qualitative research (sample representativeness, research instrument, research proceedings). The principles of reliability and comparability should be observed. The discussion includes comments on the expected and unexpected findings and the areas requiring further or in-depth research as indicated by the study results. The limitations of the research should be clearly stated.

Conclusion: Summarised in this section are the author's principal points and transfer of new findings into practice. The section may conclude with specific further research proposals grounded on the substantive content, conclusions and contributions of the study, albeit limitations cited.

- The article concludes with the following statements:
- whether the article publishes results of a larger study;
 - whether the article was based on the diploma work, master's thesis or doctorate dissertation; in this case the student is always listed as the first author;
 - whether the research was financially supported; in this case the sponsors and other participating researchers must be included at the end of the text;
 - personal acknowledgements. The article concludes with a list of all the published works cited or referred to in the text of the paper.

Structure of a Review Article (1.02)

Included in the category of review scientific research are: literature review, concept analyses, discussion based articles (also referred to as a review article). The Slovenian Nursing Review publishes review scientific research, the data collection of which has been concluded maximum three years before the publication of an article.

A review article is an overview of the latest works in a specific subject area, the works of an individual researcher or a group of researchers with the purpose of summarising, analysing, evaluating or synthesising the information that has already been published. Research findings are not only described but explained, interpreted, analysed, critically evaluated and presented in a scientific research manner. A review article brings either qualitative data processing of the previous research findings (meta-analyses) or qualitative syntheses of the previous research findings (meta-syntheses) and thus provides new knowledge and concepts for further research. The organizational pattern of a review article is similar to that of the original scientific article.

The **introduction** section defines the scientific, conceptual or theoretical basis for the literature review. It also states the necessity for the review along with the aims, objectives and the research question.

The **method** section accurately defines the research methods by which the literature search was conducted. It is further subdivided into: review methods, the results of the review, the quality assessment of the review and the description of data processing.

Review methods include the development, testing and search strategy, predetermined criteria for the inclusion in the review, the researched data bases, limited time period of published literature, types of publications according to hierarchy of evidence, key words and language.

The *results of the review* include the number of hits, the number of reviewed research works, the number of included and excluded sources consulted.

The *quality assessment of the review and the description of data processing* include the assessment of the research approach and the data obtained as well

as the quality of included research works, the final criteria to include or exclude the sources of evidence consulted and the data processing method.

The **results** are presented in the form of a diagram of all the research stages of the review. The international standards for the presentation of the literature review results may be used for this purpose (e.g. PRISMA for systematic review). The results should include a quality analysis of the sources included from the view point of the research methods used. It should be evident which studies are included in the review according to hierarchy of evidence. The results are presented verbally and visually, the main findings concerning the research design should also be included. In qualitative synthesis the codes and categories are used as a result of the qualitative synthesis review. In quantitative analysis, the statistical methods of data processing of the used scientific works are described.

The first section of the **discussion** answers the research question which is followed by the author's observations on literature review findings, the quality of the research works included. The author evaluates the review findings in relation to the results from other comparable studies. The discussion chapter identifies new perspectives and contributions of the literature review, their theoretical, scientific and practical applicability. It also defines research limitations and points the way forward for applicability of the review findings and further research.

The **conclusion** section emphasises the contribution of the literature review conducted, it sheds light on any gaps in previous research, it identifies the significance of further research, the translation of new knowledge and recommendations into practice, research, education, management by taking into consideration the research limitations. It also pinpoints theoretical concept which may guide or direct further research.

Structure of a Professional Article (1.04)

A professional article is a presentation of what is already known, with the emphasis on the applicability of original research results and the dissemination of knowledge. The organisational structure of a professional article is similar to that of an original scientific article, in the case of literature review it follows the structure of review article. It presents the research results which upgrade the current knowledge on the topic. No new knowledge or scientific evidence is presented, it is, however, focused on the applicability of the results with the aim to improve the existing professional practice.

Literature Citation

In academic writing the authors are required to acknowledge the sources from which they draw their

information, including all statements, theories or methodologies applied. The authors should follow the *Harvard referencing system (Anglia 2008)* for in-text citations and in the reference list at the end of the paper. **In-text citations** or parenthetical citations are identified by the authors' surname and the publication year positioned within parenthesis immediately after the relevant word and before the punctuation mark: (Pahor, 2006). If a citation functions as a sentence element, the author's surname is followed by the year of publication within parenthesis: Pahor (2006). In case of two authors, their surnames are separated by an "&": (Stare & Pahor, 2010). *Up to two authors* only are given in the text: (Rhodes & Pearson, 2006). If there are *more than two authors*, only the first author's last name is noted followed by et al. (Chen, et al., 2007). Several references are listed in the chronological sequence of publication, from the most recent to the oldest. If several references were published in the same year, they are listed in alphabetical order. Semicolon is used to separate each author: (Bratuž, 2012; Pajntar, 2013; Wong, et al., 2014). In citing works by the same author published in the same year, a lower case letter after the date must be used to differentiate between the works: (Baker, 2002a, 2002b).

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Kanič, V., 2007. Možganski dogodki in srčno-žilne bolezni. In: Tetičkovič, E. & Žvan, B. eds. *Možganska kap – do kdaj?* Maribor: Kapital, pp. 33–42.

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Pillay, R., 2010. Towards a competency-based framework for nursing management education. *International Journal of Nursing Practice*, 16(6), pp. 545–554.

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Citing from published conference proceedings:

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Štemberger Kolnik, T. & Babnik, K., 2012. Oblikovanje instrumenta zdravstvene pismenosti za slovensko populacijo: rezultati pilotske raziskave. In: Železnik, D., Kaučič, B.M. & Železnik, U. eds. *Inovativnost v koraku s časom in primeri dobrih praks: zbornik predavanj z recenzijo. 2. znanstvena konferenca z mednarodno udeležbo s področja zdravstvenih ved, 18. september 2012*. Slovenj Gradec: Visoka šola za zdravstvene vede, pp. 248–255.

Wagner, M., 2007. Evolucija k žensko osredičeni obporodni skrbi. In: Drglin, Z. ed. *Rojstna mašinerija: sodobne obporodne vednosti in prakse na Slovenskem*. Koper: Univerza na Primorskem, Znanstveno-raziskovalno središče, Založba Annales, Zgodovinsko društvo za južno Primorsko, pp. 17–30.

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Rebec, D., 2011. *Samoocenjevanje študentov zdravstvene nege s pomočjo video posnetkov pri poučevanju negovalnih intervencij v specialni učilnici: magistrsko delo*. Maribor: Univerza v Mariboru, Fakulteta za zdravstvene vede, pp. 77–79.

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