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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

Ljubljana 2015 Letnik 49 Številka 1
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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 novosti 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), 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 Balcans, 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, COBISS.SI (Slovenian union bibliographic/catalogue database), Biomedicina Slovenica, dLib. si (The Digital Library of Slovenia).

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Leading article/Uvodnik

'Mercy killing': when is it justified, and what is the nurse's ethical responsibility?

Smrt iz milosti: njena utemeljenost in etična odgovornost medicinske sestre

Alice Kiger

A recent suspected incident of euthanasia at a hospital in Ljubljana (RTV SLO, 2015) has highlighted important questions about the ethics of such acts. That incident was reported as a deliberate intervention to bring about death, namely the administration of lethal drugs to an elderly patient who was unconscious following a stroke and it was apparently not performed at the patient's request. If this was the case, such an act of euthanasia would be *active* and *non-voluntary* (Butts & Rich, 2005, p. 235). It has been referred to in the media as 'unlawful' (Slovenian Press Agency, 2015), but beyond that, its moral status is of ethical concern. Two key questions nurses need to consider are these: 1) was the act ethically justifiable? and 2) what is the nurse's responsibility in such a case?

Ethical justification

An argument in support of the act could be constructed along the lines of beneficence and non-maleficence (Butts & Rich, 2005, pp. 12-13). If the patient had no hope of recovery and might spend further weeks or months in discomfort, living a life devoid of value, ending that life would be an act of kindness (it would be beneficent) and would prevent needless pain and suffering (it would be non-maleficent). Such an argument assumes, of course, that the physician can accurately predict that there is no chance of recovery, and (since the patient is unconscious and cannot speak for himself) that the physician knows that the patient's potential quality of life, if he did survive, would be such that he (the patient) would prefer death.

It is generally considered acceptable for physicians to prescribe an analgesic strong enough to relieve severe pain, even if the dose may hasten death – the *doctrine of double effect* (Johnstone, 2008, p. 278). This justification hinges on the intent of the physician, which must be to relieve pain, not to cause death, although it is accepted that death may occur as a by-product. This does not seem to have been the case in the recent incident, because it was reported that potassium as well as morphine was injected, so death was the evident intention.

In response to the contention that the act was nonetheless beneficent and non-maleficent, one could counter with the principle of Kant's categorical imperative (Kuhse & Singer, 2006, p. 4). According to this, we must only carry out acts if we would wish the maxim that supports them to be a universal law – in other words, we would be happy for the same act to be carried out in all similar situations. In the present case, this would mean we would think it was right to administer lethal drugs whenever an elderly patient is unconscious following stroke. It is unlikely that we would concede this maxim; its absurdity is evident. Another counter-argument might be to cite the principle of autonomy, according to which the patient has the right to decide such matters for himself. It appears that in the recent case the patient himself had not expressed a wish for euthanasia. It seems highly risky to accept that a physician has the right to decide to kill a patient because he/she thinks the patient may not recover an ideal quality of life, even with the potential concurrence of the family, who could not accurately predict the patient's potential future condition themselves and could only rely on the judgement of the physician.

One route to resolving this quandary is to take the decision out of the hands of an individual doctor, such as by requiring other physicians or suitably qualified professionals (who do not know the patient and can be more objective) to agree to the decision, or by having in place an ethical committee to which the matter can be referred for a decision.

The nurse's responsibility

Whether or not the decision itself is justified, there remains the issue of the nurse's role. How this

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is viewed depends, at least in part, on the view of society regarding the place of nurses, as well as the view of the nursing community about its own place. In most Western countries, nursing is in the process of establishing its identity as a profession, though the rate of progress varies among countries. One hallmark of a profession is accountability. In its web pages (Nursing and Midwifery Council, 2015a), the United Kingdom (UK) Nursing and Midwifery Council (NMC) states, "Accountability is integral to professional practice (…) [Nurses] need to be able to justify the decisions they make." The 2008 NMC Code states, "As a professional, you are personally accountable for actions and omissions in your practice, and must always be able to justify your decisions." (A new edition of the NMC Code will come into effect on 31st March 2015 (Nursing and Midwifery Council, 2015b). Curiously, the word 'ethics' has been removed from the title and is mentioned in the body of the Code only in relation to advertising and publishing.) The Code of the International Council of Nurses states, "The nurse carries personal responsibility and accountability for nursing practice" (International Council of Nurses, 2012, p. 3). The statements from these Codes leave little doubt: the nurse who carries out a procedure she/he believes to be wrong has breached her/his professional duty, is accountable for that action and must take responsibility for its consequences. This means it is not sufficient to say, in justification, "It's not my fault – the doctor ordered it."

In a country where nursing is not yet universally acknowledged to be a profession, and in which physicians expect nurses to implement orders unquestioningly, it might be argued that nurses carry less responsibility for such an act. However, even as long ago as 1955, in the United States of America, Harmer and Henderson stated in their classic nursing textbook that "professional loyalties should never take precedence over the welfare of the patient" (Harmer & Henderson, 1955, p. 105). This implies that if the nurse believes an action to be detrimental to the patient's interest, she/he should refuse to carry it out. The *Code of Ethics for Nurses and Nurse Assistants of Slovenia* (Nurses and Midwives Association of Slovenia, 2005) supports this view. Under Principle V, it states, "In their professional practice, the nurse is independent and autonomous and has a responsibility to their own conscience, their patients and society" (p. 12), and under Principle VI, "The nurse adheres to the principles of professional conduct and refuses any procedure that could, in their professional and ethical opinion, be unethical and harmful for the patient" (p. 13). In the recent reported case in Ljubljana, it appears that the nurse believed the administration of the lethal drugs to be wrong, and questioned the physician, but administered them anyway.

This suggests the question: what should this nurse have done? It is easy to reply, 'She should have refused', but that may not be easy when such a circumstance arises. Pressure from the physician, who may see himself as superior and believe that he should be obeyed, may be difficult to resist. A nurse in such a situation needs to be confident of appropriate support. This implies an ethical responsibility on the part of nursing management and the hospital itself. What policies are in place to cover such circumstances? What are the attitudes of persons in leading positions? What mechanisms are in place for nurses to rely on?

Turning to the literature for helpful evidence, it is interesting to note that although much has been written about some aspects of euthanasia, there is little about the nurse's obligation, and right, to refuse to carry out a physician's order for 'mercy killing' drugs if the nurse believes it to be wrong. Considerable attention in recent literature is devoted to issues surrounding physician-assisted suicide and 'advance directives' (*active voluntary euthanasia*) (van Bruchem-van de Scheur, et al., 2008; Bartels & Otlowski, 2010), and to issues regarding the treatment of disabled or terminal infants (Catlin, et al., 2008; Jotkowitz, et al., 2008; Manninen 2008). There is also attention given to specific incidents in which nurses themselves have decided to carry out acts of euthanasia, such as the case of Mary Rose Robaczynski, a nurse in Baltimore, USA, who disconnected ventilators of patients in an intensive care unit (Hendricks, 1979, p. 1). Some of the scant existing literature regarding nurses' carrying out physicians' orders for euthanasia focuses on the role of nurses under National Socialism in Germany, such as the excellent and sobering article by Hoskins (2005) in *Nursing Ethics*. An article by Inghelbrecht and colleagues (2010) reports a study of the participation of nurses in carrying out active euthanasia that was sometimes voluntary but sometimes non-voluntary; however, it focuses on the legality of the nurse's actions and does not mention whether nurses had reservations about their actions or what their views were about the justifiability of the euthanasia.

Thus there appears to be a gap in the literature, both of research investigating nurses' experiences, opinions, education, etc., in this realm, and of cogent critical discussion of the philosophical and ethical foundations of the relevant issues. This may reflect a lack of attention on the part of the nursing profession and its leaders, of nurses themselves, of hospital administrators, and others in positions of influence. It suggests that much more needs to be done to educate practicing nurses, their managers, the institutions within which they work, and the societal organizations that regulate them, to ensure that nurses and those who support their work are aware of and knowledgeable about the issues, and can rely with confidence on having access to the right resources when they are needed. It is foolish, and unfair to the communities we serve, to wait for drastic events to occur before we give sufficient attention to these vital matters.

Slovenian translation/Prevod v slovenščino

Nedavni primer suma evtanazije v ljubljanski bolnišnici (RTV SLO, 2015) je v ospredje postavil pomembna vprašanja o etiki takih dejanj. Pri primeru je šlo za zavestno posredovanje z namenom povzročiti smrt, natančneje za dajanje smrtonosnih odmerkov zdravil starejšemu bolniku, nezavestnemu po kapi, pri čemer leto ni bila bolnikova prošnja. Evtanazija bi lahko bila torej *aktivna* in *neprostovoljna* (Butts & Rich, 2005, pp. 235). V medijih so jo sicer označevali za »nezakonito« (Slovenian Press Agency, 2015), vendar gre pri moralnem statusu dejanja za etično vprašanje. Medicinske sestre si morajo odgovoriti na ključni vprašanji: Ali je bilo dejanje etično upravičeno? in Kakšna je v tem primeru odgovornost medicinske sestre?

Etična upravičenost

Argument v prid takega dejanja bi lahko temeljil na načelih dobrodelnosti in neškodovanja (Butts & Rich, 2005, pp. 12–13). Če ni upanja za ozdravitev in bi bolnik več tednov ali mesecev živel v neudobju, njegovo življenje pa bi bilo brez vrednosti, je končanje takega življenja dejanje iz dobrote (je »dobrodelno«), ki prepreči nepotrebno bolečino in trpljenje (je neškodovalno). V skladu s takšnim argumentom zdravnik pravilno predvideva, da ni možnosti za ozdravitev in (ker je bolnik nezavesten in ne more izražati svoje volje) da bi bila v primeru preživetja bolnikova kakovost življenja takšna, da bi sam raje izbral smrt.

Načeloma velja za sprejemljivo, da zdravnik predpiše za lajšanje močne bolečine dovolj močan analgetik, čeprav z odmerkom lahko pospeši smrt – to imenujemo *doktrina dvojnega učinka* (Johnstone, 2008, p. 278). Ta utemeljitev je osnovana na zdravnikovi nameri lajšanja bolečine, in ne povzročitve smrti, čeprav velja, da smrt lahko nastopi kot stranska posledica. Zdi se, da v nedavnem primeru ni bilo tako, saj sta bila vbrizgana tako morfij kot kalij, zato je očitno, da je bila smrt povzročena namerno.

Trditvi, da je bilo dejanje kljub temu dobrodelno in neškodljivo, lahko nasproti postavimo Kantovo načelo *kategoričnega imperativa* (Kuhse & Singer, 2006, p. 4). V skladu s tem načelom lahko tako delujemo samo, če želimo, da bi maksima delovanja veljala kot načelo splošne zakonodaje – z drugimi besedami: če bi želeli, da se isto dejanje zgodi v vseh podobnih situacijah. V konkretnem primeru to pomeni, da bi se nam zdelo pravilno dajati smrtonosne odmerke zdravil, kadar koli je ostareli bolnik nezavesten po kapi. Najbrž se s tako maksimo ne bi strinjali, saj je njena absurdnost očitna. Drugi protiargument je lahko načelo *avtonomije*, v skladu s katerim ima pacient sam pravico odločati o takih stvareh. Zdi se, da v tem primeru pacient ni izrazil želje po evtanaziji. Zelo tvegano bi bilo zagovarjati stališče, da ima zdravnik pravico *ubiti* bolnika, ko misli, da le-ta ne bo imel več idealne kakovosti življenja, pa četudi ob soglasju bolnikove družine, saj bližnji sorodniki ne morejo natančno predvideti bolnikovega možnega stanja v prihodnosti in so glede tega odvisni od zdravnikove presoje.

Eden od možnih načinov razrešitve kočljivega položaja je, da odločanja ne prepustimo posameznemu zdravniku, temveč da se mora z njegovo odločitvijo strinjati več drugih zdravnikov ali primerno izobraženih strokovnjakov (ki pacienta ne poznajo in so tako lahko bolj objektivni) oz. da se odločitev o tem poveri za to pristojnemu odboru za etiko.

Odgovornost medicinske sestre

Ne glede na upravičenost odločitve je vloga medicinske sestre še vedno problematična. Pogled na to je vsaj deloma odvisen od družbenega pogleda na položaj medicinskih sester ter pogleda medicinskih sester na svoj položaj. V večini zahodnih držav si zdravstvena nega prizadeva vzpostaviti svojo strokovno poklicno identiteto, pri čemer je stopnja napredka v različnih državah različna. Ena od ključnih lastnosti poklica je odgovornost. Svet zdravstvene nege in babištva (Nursing and Midwifery Council – NMC) iz Združenega kraljestva na svojih spletnih straneh (Nursing and Midwifery Council, 2015a) navaja: »Odgovornost je sestavni del opravljanja poklica /…/. Medicinske sestre morajo biti sposobne upravičiti svoje odločitve.« Svetov (Nursing and Midwifery Council) kodeks iz leta 2008 določa: »Kot strokovnjaki ste osebno odgovorni za dejanja in opustitve dejanj med opravljanjem poklica in morate biti vedno sposobni upravičiti svoje odločitve.« Nova izdaja kodeksa bo začela veljati 31. marca 2015 (Nursing and Midwifery Council, 2015b). Nenavadno je, da besede »etika« ni več v naslovu in je omenjena samo v besedilu kodeksa v povezavi z oglaševanjem in objavami. Kodeks Mednarodnega sveta medicinskih sester navaja: »Medinska sestra ima osebno in zunanjo odgovornost v povezavi z izvajanjem zdravstvene nege« (International Council of Nurses, 2012, str. 3). Besedilo v kodeksih ne pušča dvoma: medicinska sestra, ki izvaja po njenem mnenju neprimeren postopek, krši svojo poklicno dolžnost in je za to dejanje odgovorna ter mora prevzeti odgovornost za posledice. To pomeni, da kot utemeljitev lastnega dejanja ni dovolj navesti: »Ni moja krivda – zdravnik je tako naročil.«

V državi, v kateri zdravstvena nega kot stroka še ni univerzalno priznana in kjer zdravniki pričakujejo, da bodo medicinske sestre brez ugovorov izvajale ukaze, bi lahko rekli, da ima medicinska sestra manj odgovornosti za tako dejanje. Toda že davnega leta 1955 sta v Združenih državah Amerike Harmer in Henderson v svojem standardnem učbeniku o zdravstveni negi navedli, da »poklicna zvestoba nikoli

ne sme imeti prednosti pred dobrobitjo pacienta« (Harmer & Henderson, 1955, p. 105). To pomeni, da če medicinska sestra misli, da dejanje pacientovim interesom škoduje, mora izvedbo takega dejanja zavrniti. *Kodeks etike medicinskih sester in zdravstvenih tehnikov* (Nurses and Midwives Association of Slovenia, 2005) se sklada s tem stališčem. Načelo V pravi: »Medicinska sestra je pri opravljanju svojega poklica v okviru svoje strokovne usposobljenosti samostojna in neodvisna ter za svoje delo odgovorna pred svojo vestjo, pacientom in družbo.« (p. 12), nadalje načelo VI navaja: »Medicinska sestra upošteva načela strokovnega ravnanja in odkloni vsakršen poseg, ki bi po njenem strokovnem in etičnem prepričanju in vesti lahko bil neetičen ali za pacienta škodljiv.« (p. 13). Zdi se, da je bila pri nedavnem primeru medicinska sestra prepričana, da je dajanje smrtonosnih zdravil napačno, in o tem vprašala zdravnika, vendar jih je kljub temu dala.

Poraja se vprašanje, kaj bi ta medicinska sestra morala narediti. Odgovor, da bi morala poseg zavrniti, je sicer preprost, vendar to morda v določenih okoliščinah ni preprosto storiti. Pritisku zdravnika, ki se ima za njej nadrejenega in je prepričan, da ga je treba ubogati, se je morda težko upreti. Medicinska sestra v takem položaju mora biti prepričana, da ima ustrezno podporo. To pomeni, da imata vodstvo medicinskih sester in uprava bolnišnice etično odgovornost. Kakšna načela delovanja veljajo v takih okoliščinah? Kakšen je odnos oseb na vodilnih položajih? Na kakšne mehanizme se lahko zanesejo medicinske sestre?

Ko pregledamo literaturo, da bi našli informativne primere, z zanimanjem opazimo, da o dolžnostih medicinske sestre in njeni pravici zavrniti izvajanje zdravnikovega ukaza za po njenem mnenju neupravičen »uboj iz usmiljenja« ni veliko napisanega, čeprav je veliko napisanega o drugih vidikih evtanazije. Precej pozornosti je namenjene temam, ki se tičejo samomora z zdravniško pomočjo in »vnaprejšnjih navodil« (*aktivna prostovoljna evtanazija*) (van Bruchem-van de Scheur, et al., 2008; Bartels & Otlowski, 2010), in vprašanjem, ki se tičejo zdravljenja invalidnih ali na smrt bolnih majhnih otrok (Catlin, et al., 2008; Jotkowitz, et al., 2008; Manninen, 2008). Poleg tega so obravnavani tudi posamezni primeri, v katerih so se medicinske sestre same odločile, da bodo izvedle evtanazijo, med drugimi tudi primer Mary Rose Robaczynski, medicinske sestre iz Baltimora v Združenih državah Amerike, ki je odklopila ventilatorje pacientov na oddelku za intenzivno nego (Hendricks, 1979, p. 1). Del zelo omejene obstoječe literature o tem, kako medicinske sestre izvajajo zdravnikove ukaze za evtanazijo, se osredotoča na vlogo medicinskih sester v obdobju nacionalsocializma v Nemčiji, na primer odličen trezno napisan članek v *Nursing Ethics* (Hoskins, 2005). Inghelbrecht s sodelavci (2010) navaja raziskavo o sodelovanju medicinskih sester pri izvajanju aktivne evtanazije, ki je bila včasih prostovoljna, včasih pa neprostovoljna, vendar se osredotoča na legalnost dejanj medicinskih sester in ne omenja, ali so imele medicinske sestre zadržke in kakšni so bili njihovi pogledi na upravičenost evtanazije.

V literaturi je torej razviden primanjkljaj raziskav o izkušnjah, mnenjih, izobraževanju ipd. na tem področju ter strnjene kritične razprave o filozofskih in etičnih temeljih teh tem. Morda je to odraz pomanjkanja pozornosti združenj medicinskih sester in njihovih vodij, samih medicinskih sester, vodstev bolnišnic in drugih, ki so na vplivnih položajih. Očitno je treba pri izobraževanju medicinskih sester, njihovih vodij, ustanov, v katerih delajo, in stanovskih organizacij, ki urejajo njihovo delovanje, narediti še veliko več, da bodo medicinske sestre in tisti, ki podpirajo njihovo delo, te teme poznali, da bodo o njih poučeni in da bodo imeli dostop do zanesljivo pravih virov, ko jih bodo potrebovali. Nespametno in nepravično do skupnosti, ki jim služimo, je, da čakamo na drastične dogodke, preden tem pomembnim temam posvetimo dovolj pozornosti.

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Original scientific article/Izvirni znanstveni članek

Dietary habits and physical activity patterns among Slovenian elderly: cross-sectional survey with cluster analysis

Prehranske in gibalne navade slovenskih starostnikov: presečna anketna raziskava z metodo razvrščanja v skupine

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Key words: lifestyle; elderly (≥ 65 years); aging factors; hierarchical cluster analysis; health promotion

Ključne besede: življenjski slog; starostniki (≥ 65 let); dejavniki staranja; razvrščanje v skupine z metodo hierarhičnega združevanja; promocija zdravja

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ABSTRACT

Introduction: Physical activity and a healthy diet are significant predictors of healthy ageing-they help the elderly maintain their physical and mental health, and prevent chronic diseases.

Methods: The data for the empirical quantitative survey were collected on the sample of 218 elderly community-dwelling participants (aged 65 years or more), using a structured questionnaire for self-reporting. Data analyses were proceed by the bivariate statistics, and multivariate hierarchical cluster analysis.

Results: Most respondents reported good dietary habits (83.1 %) and a satisfactory physical activity level (60.5 %). On average, the elderly eat 3-4 meals per day (59.8 %) and engage in physical activity at least three times a week (58.6 %), with interventions lasting 15 minutes or more (84.4 %) and non-organized activities were prevailing (96.2 %). Ward's method yielded three clusters with homogenous dietary and physical activity patterns: 'Health Consciousness' (30.8 %), 'Being At Risk' (42.7 %) and 'Special Requirements' (26.5 %).

Discussion and conclusion: In the future, special attention should be placed on the elderly group with special dietary and physical activity requirements. Additional studies on representative samples are required for a comprehensive investigation into the lifestyle behaviours of elderly individuals.

IZVLEČEK

Uvod: Gibalna aktivnost in prehranske navade sta ključna dejavnika zdravega staranja, ki starostnikom omogočata vzdrževati telesno in duševno zdravje ter jih varujeta pred pojavom kroničnih bolezni.

Metode: Podatki za empirično kvantitativno anketno raziskavo so bili zbrani na vzorcu 218 starostnikov, stanujočih na svojem domu (starih 65 let ali več), z uporabo strukturiranega vprašalnika za samoporočanje anketirancev. Analiza podatkov je bila narejena z bivariatno statistiko in multivariatno metodo razvrščanja v skupine s hierarhičnim združevanjem.

Rezultati: Glavnina anketirancev je navedla, da ima dobre prehranske navade (83,1 %) in ustrezno raven gibalne aktivnosti (60,5 %). Starostniki povprečno na dan zaužijejo tri do štiri obroke (59,8 %) in so vsaj trikrat na teden gibalno aktivni (58,6 %), in sicer 15 minut (84,4 %) in v neorganizirani obliki (96,2 %). Wardova metoda je pokazala tri skupine starostnikov s homogenimi vzorci prehranskih in gibalnih navad: »v skrbi za zdravje« (30,8 %), »ogroženi« (42,7 %) in »s posebnimi potrebami« (26,5 %).

Diskusija in zaključek: V prihodnje je potrebno posebno pozornost posvetiti skupini starostnikov s specifičnim prehranskim in gibalnim režimom. Za kompleksno proučevanje življenjskega sloga starostnikov so potrebna prihodnja raziskovanja na reprezentativnih vzorcih.

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Introduction

Life expectancy has been associated with an absence of disease and having one's needs met (Tourlouki, et al., 2009). Previous research examining successful ageing to identify and evaluate factors associated with elderly health status revealed physical activity and a healthy diet as significant predictors of healthy ageing - they help the elderly maintain their physical and mental health, prevent unwanted lifestyle behaviour such as tobacco use and alcohol consumption, and prevent chronic non-communicable diseases such as cancer, cardiovascular diseases, chronic respiratory diseases, orthopaedic conditions and diabetes (Hirvensalo, et al., 2000; World Health Organization, 2003; Maynard, et al., 2005; Denny, 2008; Gandy, 2009; Schneider, et al., 2009; Tourlouki, et al., 2009; Barnett, et al., 2012; Kavčič, et al., 2012). In Slovenia, previous research on a sample of 558 elderly persons aged 58-90 years revealed that physical activity regimens and healthy nutrition are, in the elderly, typically used as strategies for restoring previous health levels (Kavčič, et al., 2012).

Available research evidence confirms unhealthy diet as a major public health threat (World Health Organization, 2003). As people age, their dietary patterns undergo certain changes. In her study, Hlastan-Ribič (2008) discussed four groups of factors that influence food consumption patterns in the elderly: physiological, psychological, economic and social factors. Some of the most frequent signs of nutritional intake changes associated with ageing include a declining sense of taste, a decrease in the ability to detect thirst, difficulty with chewing due to loss of teeth and dental decay, use of medication, and adherence to dietary regimens necessary for treatment and prevention of diseases which may easily result in a one-sided, poorly balanced diet (Denny, 2008). For these reasons, elderly individuals are at risk of malnutrition which results in a weakened immune system and the onset of disease (Denny, 2008; Kavčič, et al., 2012). In Finland, Nykänen and colleagues (2013) found that 15 % of community-dwelling persons aged 75 years or older suffered from possible malnutrition. Previous study results revealed that 50 % of older individuals have inadequate diets (Maynard, et al., 2005).

In addition to a healthy diet, it has been established that physical activity is the other key element and 'secret' for achieving longevity (Tourlouki, et al., 2009). In the elderly, physical activity positively affects the ability to maintain and improve mental and physical health, well-being and independence. In contrast, mobility difficulties and immobility represent the two main predictors of decline in health and death. In their research, Hirvensalo and colleagues (2000) studied the interaction of physical inactivity as a predictor of mobility impairment, dependence and mortality among 1109 independently living elderly persons from Jyväskylä, Finland, aged 65-84 years at baseline. They found that mobility impairment was the greatest single predictor of dependence and mortality. Inversely, regular physical activity may reduce the risk for mortality even in mobility-impaired people. Barnett and colleagues (2012) demonstrated that a decline in physical activity was particularly pronounced among retirees from lower occupational groups, especially manual workers, who preferred to continue with physically active pursuits rather than engaging in recreational physical activity following retirement.

Several methodological approaches have been used for assessing dietary habits and physical activity patterns among the elderly. Schneider and colleagues (2009) highlights the value of multivariate cluster analysis as an innovative method in lifestyle. According to Schneider and colleagues (2009) cluster analysis is employed to segregate the subjects according to distinct behaviours and to identify health-related behaviour patterns. Thus, complex health patterns and risk groups can be identified.

Aim and objective

The aim of our study was to determine the possible existence of clusters of elderly individuals aged 65 years or over with similar dietary and physical activity patterns which differentiated from other clusters. The study objectives were:

- to examine the dietary habits and physical activity patterns among the participating elderly;
- to investigate the relation of dietary habits and physical activity patterns among the participating elderly according to socio-demographic differences in gender, age, educational level and area of residence;
- to identify clusters with homogeneous patterns of dietary and physical activity habits.

Methods

An empirical quantitative research design using a structured questionnaire was employed. Our research was part of the broader research and development project, 'Intergenerational cooperation in health promotion', which received funding from the Ministry of Health of the Republic of Slovenia for the period 2009-2010 (Zurc & Skela-Savič, 2011).

Description of the research instrument

A structured questionnaire titled 'Intergenerational cooperation in health promotion: Questionnaire for respondents aged 65 years or more — dietary and physical activity patterns' was developed based on literature (Hirvensalo, et al., 2000; Denny, 2008; Gandy,

2009). The questionnaire included the following three sections: socio-demographic factors (five questions), physical activity patterns (ten questions), and dietary habits (nine questions). All questions were closed-ended.

Prior to administration, the questionnaire was pilot tested on a convenience sample of members from a local centre for retired people. Following pilot testing, minor adjustments were made to simplify the wording of some questions and to improve the format by making the questions more transparent. Cronbach's alpha value for internal consistency of the questionnaire was 0.802, indicating that the collected data were reliable.

Description of a sample

A non-randomized convenience sample of elderly community-dwelling individuals from the Gorenjska and Central Slovenia regions was recruited for the research. In their home towns, Faculty of Health Care Jesenice students visited accessible participants in a home setting, where the surveys were conducted.

The sample population consisted of 218 elderly individuals (56.9 % females and 43.1 % males). In age group distribution, almost half of the participating elders (44.5 %) belonged to the 65-70 year group, followed by the 71-76 year group (29.8 %), 77-82 year group (17.0 %), 83-88 year group (6.9 %), and, finally, the group with those over the age of 89 (1.8 %). Regarding educational levels, most participants had a primary school education (37.5 %) or a three-year vocational school degree (36.1 %), followed by a four-year secondary school degree (20.8 %) and, in 5.6 % of cases a higher-education degree. In terms of the area of residence, over half of the participants (52.8 %) came from a rural area, followed by urban areas and suburban areas in 26.1 % and 21.1 % of cases, respectively.

Description of the research procedure

The surveys were conducted in the home settings of the participating elderly from October through December 2009. All data collections were conducted by the Faculty of Health Care Jesenice students enrolled in the first-cycle nursing programme.

The study was conducted according to the guidelines laid down in the Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects and in the Slovenian Nurses' Code of Ethics. The collection and protection of personal data was performed in accordance with the provisions of the Personal Data Protection Act of the Republic of Slovenia (Zakon o varstvu osebnih podatkov, 2007). Data collection was implemented in accordance with the principles of research ethics on an anonymous and voluntary basis.

Description of data analysis

The obtained data were analysed using SPSS version 20.0 (SPSS Inc., Chicago, Illinois, USA). Descriptive statistics calculations were carried out for all variables. For computing significant differences in dietary habits and physical activity patterns among the elderly according to selected socio-demographic factors a bivariate statistical comparison was employed such as chi-square test, an independent samples *t*-test, and one-way ANOVA. To establish clusters of the elderly with homogenous dietary and physical activity patterns, multivariate cluster analysis - specifically, hierarchical cluster analysis - was used (Ward's method, Euclidean distance, dendrogram) (Ferligoj, 2011). The differences between obtained clusters were tested with one-way ANOVA. $p \leq 0.05$ was set as the level of statistical significance.

Results

Among the elderly aged 65 years or more, the majority (83.1 %) self-reported having good dietary habits, and only 16.9 % claimed their dietary habits were poor (Table 1). Four meals (30.5 %) or three meals (29.3 %) per day prevailed, with a meal lasting, on average, 10-20 minutes (52.1 %) or 20-30 minutes (30.5 %). Results further indicate that the participating elders prefer meat (18.8 %), vegetables (17.8 %), potatoes (16.8 %) and fruit (16.1 %), but not sweets (5.5 %) or fish and seafood (5.4 %). In terms of average fluid intake per day, one in two respondents (49.1 %) reported drinking 1-2 litres of fluid per day, and more than one in three (37.3 %) reported their daily fluid intake as half a litre to one litre per day. Of the 23 participants (13.9 %) who reported following a special diet, one in two (52.3 %) adhered to a diabetic diet, followed by a low cholesterol diet (26.1 %), a high-protein diet (8.7 %), a low-fat, low-salt and low-sugar diet, a gout diet and a gastric diet (8.7 %).

Regarding dietary habits among the elderly, the bivariate statistical analysis revealed significant differences for all four socio-demographic factors (Table 1). With respect to educational level, the elders with a primary school education or a four-year secondary school degree expressed a significantly higher conviction that diet was connected with health compared to their counterparts with a vocational school degree ($p = 0.043$). Male participants indicated a preference for meat, potatoes and sweets, unlike female participants, who preferred vegetables. The results were significant, at a level of below 1 %. A preference for vegetables ($p = 0.001$) and fruit ($p = 0.021$) emerged among the elderly living in rural areas. Participants with higher education reported a significantly higher preference for pasta ($p = 0.004$) and fish/seafood ($p = 0.012$).

Table 1: *Dietary habits among the elderly according to socio-demographic differences in gender, age, educational level and area of residence*
Tabela 1: *Prehranske navade starostnikov glede na socialnodemografske razlike spol, starost, izobrazba in okolje bivanja*

Dietary habits/ Prehranske navade	**Number (%) of respondents/ Število (%) udeležencev**	**Gender/Spol**	**Age/ Starost**	**Educational level/ Nivo izobrazbe**	**Area of residence/ Bivalno okolje**
Opinion of dietary habits		χ^2 (*p*)	χ^2 (*p*)	χ^2 (*p*)	χ^2 (*p*)
I don't have good eating habits	22 (16.9)	1.103 (0.294)	3.412 (0.332)	2.851 (0.415)	5.480 (0.065)
I have good eating habits	108 (83.1)				
Diet is connected with health					
I disagree	2 (1.3)	1.525 (0.217)	6.534 (0.088)	8.125 (0.043)	1.245 (0.537)
I agree	154 (98.7)				
What foods do you prefer to eat?					
Meat	105 (18.8)	16.401 (0.001)	1.680 (0.641)	4.419 (0.220)	0.614 (0.736)
Vegetables	100 (17.8)	7.065 (0.008)	3.729 (0.292)	2.711 (0.438)	20.299 (0.001)
Potatoes	94 (16.8)	8.123 (0.004)	2.230 (0.526)	0.632 (0.889)	5.936 (0.051)
Fruit	90 (16.1)	3.260 (0.071)	4.181 (0.243)	2.596 (0.458)	7.690 (0.021)
Dairy products	69 (12.3)	3.037 (0.219)*	12.800 (0.046)*	3.196 (0.784)*	6.495 (0.165)*
Pasta	41 (7.3)	0.139 (0.709)	7.162 (0.067)	13.123 (0.004)	2.844 (0.241)
Sweets	31 (5.5)	8.877 (0.003)	1.794 (0.616)	4.463 (0.216)	0.553 (0.759)
Fish and seafood	30 (5.4)	1.326 (0.250)	1.919 (0.589)	10.966 (0.012)	0.209 (0.901)
Special diet requirements					
No	143 (86.1)	2.528 (0.112)	0.749 (0.862)	6.534 (0.088)	2.911 (0.233)
Yes	23 (13.9)				
Food purchase location					
Shopping centre	112 (69.2)	2.002 (0.368)	15.869 (0.014)*	7.205 (0.302)*	9.508 (0.050)
Farmers' market	8 (4.9)				
Homegrown	42 (25.9)				
Average food cost per month					
Less than 100 EUR	79 (48.2)	1.043 (0.594)	5.654 (0.463)*	9.041 (0.171)*	6.562 (0.161)
100-150 EUR	74 (45.1)				
Over 150 EUR	11 (6.7)				
Number of meals per day		***t (p)***	***F (p)***	***F (p)***	***F (p)***
Two	25 (15.0)	1.632 (0.105)	0.793 (0.499)	0.728 (0.537)	2.862 (0.060)
Three	49 (29.3)				
Four	51 (30.5)				
Five	42 (25.1)				
Average meal time					
Less than 10 min	20 (12.0)	0.744 (0.458)	1.420 (0.239)	2.391 (0.071)	1.002 (0.369)
10-20 min	87 (52.1)				
20-30 min	51 (30.5)				
More than 30 min	9 (5.4)				
Fluid intake per day					
Less than half a litre	6 (3.7)	-1.043 (0.299)	4.692 (0.004)	2.856 (0.039)	0.942 (0.392)
Half a litre to 1 litre	60 (37.3)				
1-2 litres	79 (49.1)				
Over 2 litres	16 (9.9)				

*Legend/Legenda: χ^2(p) – chi-square test/test hi-kvadrat; t(p) – independent samples t-test/t-test za neodvisne vzorce; F(p) – one-way ANOVA/enofaktorska analiza variance; * – Chi-square test is accepted with reservation: more than 20 percent of cells had an expected count of less than 5 and the minimum expected count was less than 1./Rezultat testa hi-kvadrat se sprejema z zadržkom: več kot 20,0 % celic je imelo pričakovano frekvenco manjšo od 5 in najmanjša pričakovana frekvenca je bila manjša od 1*

Table 2: *Physical activity patterns among elderly according to socio-demographic differences in gender, age, educational level and area of residence*
Tabela 2: *Gibalna aktivnost starostnikov glede na socialnodemografske razlike spol, starost, izobrazba in okolje bivanja*

Physical activity patterns/ Gibalne aktivnosti	**Number (%) of respondents/ Število (%) udeležencev**	**Gender/ Spol**	**Age/ Starost**	**Educational level/ Nivo izobrazbe**	**Area of residence/ Bivalno okolje**
Frequency of PA (at least 30 min)		***t (p)***	***F (p)***	***F (p)***	***F (p)***
1-2 times a week	51 (31.5)	1.324 (0.187)	0.413 (0.744)	1.210 (0.308)	2.053 (0.132)
3-4 times a week	45 (27.8)				
Every day	50 (30.8)				
Physically inactive	16 (9.9)				
Duration of single PA intervention					
Less than 15 min	24 (15.6)	-0.073 (0.942)	0.292 (0.831)	2.025 (0.113)	0.052 (0.949)
15-30 min	69 (44.8)				
30-60 min	34 (22.1)				
More than 60 min	27 (17.5)				
Self-evaluation of sufficient PA to remain healthy		χ^2 ***(p)***	χ^2 ***(p)***	χ^2 ***(p)***	χ^2 ***(p)***
I am not physically active enough	64 (39.5)	0.742 (0.389)	1.106 (0.776)	5.399 (0.145)	1.284 (0.526)
I am physical active enough	98 (60.5)				
PA form					
Non-organized PA: individual, with friends or family members	150 (96.2)	0.300 (0.584)	13.309 (0.004)	1.490 (0.685)	0.772 (0.680)
Organised PA with professional supervision	6 (3.8)				
PA mode					
Walking	104 (51.7)	1.026 (0.311)	0.842 (0.839)	2.306 (0.511)	1.029 (0.598)
Garden work	62 (30.9)	4.909 (0.027)	5.054 (0.168)	2.644 (0.450)	7.714 (0.021)
Hiking	16 (7.9)	1.035 (0.309)	11.060 (0.011)	9.546 (0.023)*	5.144 (0.076)
Dancing	9 (4.5)	/	/	/	/
Bicycling	7 (3.5)	/	/	/	/
Swimming	3 (1.5)	/	/	/	/
PA during the times of day					
Before 8 a.m.	20 (12.6)	6.546 (0.162)	19.561 (0.076)*	13.943 (0.304)*	8.910 (0.350)*
8-12 a.m.	75 (47.5)				
12-4 p.m.	41 (25.9)				
4-8 p.m.	20 (12.6)				
After 8 p.m.	2 (1.3)				
PA environment					
Outdoors	152 (93.8)	0.844 (0.358)	6.966 (0.073)*	0.803 (0.849)*	3.938 (0.140)
Indoors	10 (6.2)				
Sports equipment used					
Bicycle	29 (38.2)	2.930 (0.403)*	9.467 (0.395)*	9.515 (0.391)*	2.398 (0.880)*
Nordic walking poles	36 (47.4)				
Ball	3 (3.9)				
Elastic band, gymnastics bars	4 (5.3)				
Working tools	2 (2.6)				
Stationary bicycle	2 (2.6)				
Reasons for physical inactivity					
Lack of time	3 (13.0)	5.433 (0.143)	6.082 (0.732)*	7.341 (0.290)*	5.947 (0.429)*
Illness	12 (52.2)				
Lack of motivation	3 (13.0)				
Lack of company	5 (21.8)				

Continues/Se nadaljuje

Encouragement for PA					
Friends	22 (15.6)				
Family members	65 (46.1)				
Health care professionals	18 (12.8)	11.312 (0.023)	8.776 (0.722)	8.869 (0.714)*	8.268 (0.408)
Centre for retired people	11 (7.8)				
Self-motivation	25 (17.7)				

*Legend/Legenda: $\chi^2(p)$ – chi-square test/test hi-kvadrat; t(p) – independent samples t-test/t-test za neodvisne vzorce; F(p) – one-way ANOVA/enofaktorska analiza variance; * – Chi-square test is accepted with reservation: more than 20 percent of cells had an expected count of less than 5 and the minimum expected count was less than 1./Rezultat testa hi-kvadrat se sprejema z zadržkom: več kot 20,0 % celic je imelo pričakovano frekvenco manjšo od 5 in najmanjša pričakovana frekvenca je bila manjša od 1.; PA – physical activity/gibalna aktivnost; / – Statistical significance could not be computed due to low frequency./Zaradi nizke frekvence izračun testa statistične značilnosti ni bil možen*

Further, a significant negative correlation was established between a preference for dairy products and older age ($p = 0.046$). Regarding fluid intake per day, a significant negative correlation for age ($p = 0.004$) and a significant positive correlation for educational level ($p = 0.039$) were computed. Finally, food purchasing locations differed significantly according to age ($p = 0.014$) and area of residence ($p = 0.050$), with advanced age and residence in a rural area correlating negatively with purchasing food at shopping centres and positively with producing home-grown foods.

More than half of the elderly (60.5 %) self-reported having sufficient level of physical activity to remain healthy (Table 2). Similarly, 58.6 % of participants reported engaging in physical activity three times a week or more. One in ten participants ($n = 16$) reported being sedentary. Primarily, the duration of a single physical activity intervention was 15-30 minutes (44.8 %), followed by 30-60 minutes (22.1 %). Non-organised physical activity was the most frequent form of physical activity (96.2 %), performed either individually or with friends and family. In terms of popularity, walking was the preferred physical activity mode among the elderly (51.7 %). Thus, the outdoor natural environment was the overwhelmingly favoured environment for conducting physical activity (93.8 %). Commonly reported reasons for physical inactivity were illness (52.2 %) and lack of company (21.8 %). Most of the encouragement for physical activity came from family members (46.1 %).

Bivariate statistical comparison revealed significant differences among the elderly for all four socio-demographic factors (Table 2). In terms of physical activity mode, a preference for gardening was noted in female elders ($p = 0.027$) and participants residing in rural areas ($p = 0.021$), whereas hiking was preferred by younger ($p = 0.011$) and more educated elders ($p = 0.023$).

Table 3: *Means ($\bar{x}$) and standard deviations (s) for elderly dietary and physical activity variables for each separate Ward's hierarchical cluster*

Tabela 3: *Povprečne vrednosti ($\bar{x}$) s standardnimi odkloni (s) spremenljivk prehranskih in gibalnih navad starostnikov po posameznih skupinah, pridobljenih z Wardovo metodo hierarhičnega združevanja v skupine*

PA patterns-dietary habits/ Gibalna aktivnost in prehranske navade	**Total sample** $\bar{x}$ *(s)*	**CLU1** $\bar{x}$ *(s)*	**CLU2** $\bar{x}$ *(s)*	**CLU3** $\bar{x}$ *(s)*	***F (p)***
Opinion of dietary habits	1.83 (0.38)	2.00 (0.00) +	2.00 (0.00) +	1.42 (0.50) --	58.012 (<0.001)
Diet is connected with health	1.99 (0.11)	2.00 (0.00)	2.00 (0.00)	1.94 (0.25)	2.889 (0.060)
Number of meals per day	2.67 (1.01)	2.89 (0.92) +	2.54 (0.93)	2.68 (1.14)	1.312 (0.273)
Average meal time	3.29 (0.79)	3.47 (0.61) +	3.20 (0.70)	3.16 (0.78)	2.151 (0.121)
Fluid intake per day	2.65 (0.71)	2.89 (0.62) +	2.58 (0.61)	2.61 (0.62)	2.922 (0.058)
Special diet requirements	1.14 (0.35)	1.00 (0.00)	1.02 (0.14)	1.42 (0.50) +	25.373 (<0.001)
Average food cost per month	1.57 (0.61)	1.78 (0.64) +	1.38 (0.49) -	1.90 (0.65) ++	9.145 (<0.001)
Self-evaluation of sufficient PA to remain healthy	1.60 (0.49)	2.00 (0.00) ++	1.48 (0.51)	1.52 (0.51)	18.070 (<0.001)
Frequency of PA	2.80 (0.99)	3.53 (0.65) ++	2.58 (0.73) -	2.97 (0.98) +	15.285 (<0.001)
Duration of single PA intervention	2.42 (0.96)	3.31 (0.75) ++	2.16 (0.68) -	2.32 (0.95)	24.534 (<0.001)
PA form	1.04 (0.19)	1.00 (0.00)	1.00 (0.00)	1.16 (0.37)	8.057 (0.001)
Sum of mean deviations in cluster based on total sample mean		+2.87	-1.06	+0.10	

Legend/Legenda: F(p) – one-way ANOVA/enofaktorska analiza variance; PA – physical activity/ gibalna aktivnost; CLU – cluster/skupina

A negative association at the 1 % level of statistical significance was established between advanced age and inclusion in organised physical activities. Regarding gender, significant differences were revealed in encouragement for physical activity ($p = 0.023$), with females receiving encouragement mainly from friends, family members and centres for retired people, unlike male elders, who mainly received encouragement from family members and health care professionals.

Three major, distinct clusters of elderly participants emerged in a dendrogram of Ward's hierarchical cluster analysis, according to their dietary habits and physical activity patterns (Table 3). The results of variable means for each cluster were ranked on a four-point scale according to the deviation from the total sample mean (Ferligoj, 2011): ++ deviation from the mean > 0.30, + deviation from the mean > 0.15, - deviation from the mean < 0.15, -- deviation from the mean < 0.30).

Cluster 1 was characterised by above-average scores in almost all variables, with the sum of mean deviations exceeding the total sample mean by 2.87 points (Table 3). Overwhelmingly higher than average scores were computed in self-reported sufficient physical activity to remain healthy, frequency of physical activity, and duration of single physical activity intervention. Moreover, the elders grouped into cluster 1 were characterised by a higher than average score in the opinion of dietary habits, the number of meals per day, the average meal time, fluid intake per day, and the average food cost per month. In addition, the elders in cluster 1 did not have any special diet requirements, and they expressed a strong conviction that diet was connected with good health. Thus, cluster 1 was named 'Health Consciousness'.

In contrast, cluster 2 was characterised by below-average scores in almost all variables, with the sum of mean deviations falling short of the total sample mean by 1.06 points (Table 3). In particular, elders grouped in cluster 2 came in below the average in food cost per month, the frequency of physical activity, and the duration of single physical activity intervention. Contrary to their actual dietary habits, the elders in cluster 2 self-reported an above-average opinion of dietary habits and an opinion that diet was connected with good health. Based on these characteristics, cluster 2 was named 'Being At Risk'.

Finally, approximately a quarter of participating elders (26.5 %) was grouped in cluster 3 (Table 3). Above-average results in cluster 3 were reported for the average food cost per month, special diet requirements and frequency of physical activity, whereas the opinion of dietary habits was overwhelmingly below average. This cluster is characterised by special diet requirements influencing diet-related health efforts of corresponding elderly participants, which is why this cluster was named 'Special Requirements'.

Self-reported good dietary habits were significantly higher in clusters 1 and 2 compared to cluster 3 (Table 3). The 'Special Requirements' cluster was characterised by significantly higher adherence to special diet requirements, the average food cost per month, and participation in organised sports or physical activity. Regarding the frequency of physical activity and duration of single physical activity intervention, significantly higher scores were found in cluster 1 compared to other clusters.

Discussion

The results of our research were, compared with other similar studies (Hirvensalo, et al., 2000; Maynard, et al., 2005; Denny, 2008; Hlastan-Ribič, 2008; Gandy, 2009; Tourlouki, 2009; Barnett, et al., 2012), particularly outstanding in terms of the prevailingly good dietary habits and physical activity patterns of the elderly. Most participants reported having the recommended 3-4 meals per day, and their average meal time was also appropriate. However, we should not disregard the 15 % of elders who have only two meals per day — this group is at higher risk for malnutrition, identified by Nykänen and colleagues (2013). Overall, meat was the preferred food type in both male and female participants. A preference for fish was associated with a higher educational level, whereas elders from rural areas reported a preference for fruit and vegetables. Our findings are compatible with results of a previous study conducted by Tourlouki and colleagues (2009) regarding a high preference for meat in the elderly and a negative correlation between fish consumption and advanced age, possibly as a result of limited financial resources. This was pointed out by the authors of this Mediterranean diet study as fish tend to be a more expensive food choice.

The results for physical activity levels of participating elders revealed that out of the 60 % elders who reported having sufficient level of physical activity, only half of them met the levels of daily physical activity recommended by the World Health Organization (2010) and the American College of Sports Medicine (Nelson, et al., 2007), according to their self-reported physical activity levels. Nevertheless, over three quarters of participating elderly met the World Health Organization (2010) recommendations for single physical activity intervention duration of at least 10 minutes. In contrast, 10 % of participants reported being physically inactive. The expected outcomes for these groups of elderly, compared to their peers who engage in physical activity on a regular basis, include more rapid ageing processes, a decline in overall physical functions, and a loss of motor abilities (Hirvensalo, et al., 2000). Accordingly, accessible organised physical activity should be made available during that time. Only 4 % of elderly reported participating in organised physical activity.

Ward's hierarchical cluster analysis yielded three

major separate clusters of elders aged 65 years or more with homogeneous dietary habits and physical activity patterns. Cluster 1 ('Health Consciousness') was characterised by good dietary habits and regular physical activity patterns. In contrast, cluster 2 ('Being At Risk') was characterised by below-average scores for dietary habits and physical activity patterns, but participants grouped in this cluster nevertheless self-reported having good dietary and physical activity habits. Cluster 3 was characterised by special diet requirements and the resulting higher average food cost per month. These findings are compatible with previous research results by Schneider and colleagues (2009), who employed cluster analysis on a sample of German elderly aged 50-70 years. Here, five homogenous clusters of elderly with distinct health behaviour patterns were identified. The first cluster was 'No risk behaviours' and is comparable to our cluster 1 ('Health Consciousness'). The second and third clusters, 'Physically inactive' and 'Fruit and vegetable avoiders' are comparable to our cluster 2 ('Being At Risk').

A limitation in generalising our results is using a non-randomized convenience sample of elderly individuals, as reflected in the socio-demographic sample structure which is dominated by younger elderly aged 65-76 years, elderly with a primary school education or secondary school education, and those living at home. Thus, our empirical survey makes generalisation of results difficult, but it is the first Slovenian study employing cluster analysis to identify significant dietary habits and physical activity patterns among the elderly. It therefore contributes to the understanding and knowledge of behaviour patterns in old age. To understand the stability and change dimensions of dietary habits and physical activity patterns throughout the old age period, a greater number of elderly adults aged over 77 years would have to be included in the survey and a longitudinal study on a representative sample would have to be conducted again on the elderly of different age groups.

Conclusion

In our study, three homogenous dietary and physical activity patterns among the elderly were found. These provide useful starting points for planning targeted health promotion programmes aimed at different groups of the elderly. Special attention should be given to the 'being at risk' elderly group characterised by the elderly group with special dietary and exercise regimen requirements.

Future research in this area calls for a comprehensive investigation on lifestyle behaviours among the elderly in connection with multiple risk factors on representative population samples. Appropriate policies, targeted health promotion and educational programmes, and a supportive setting can all significantly contribute to better dietary and physical activity habits among Slovenian elderly, and, consequently, improve and maintain their overall health.

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Original scientific article/Izvirni znanstveni članek

Nursing students' perceptions of knowledge: an international perspective

Pojmovanje znanja pri študentih zdravstvene nege: mednarodna perspektiva

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Key words: nursing knowledge; education; students' perspective; Slovenia; Sweden

Ključne besede: znanje za zdravstveno nego; izobraževanje; vidik študentov; Slovenija; Švedska

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ABSTRACT

Introduction: Nursing education in Europe is undergoing the development toward greater comparability under the Bologna process. Based on our mutual experiences from teaching in Slovenia and Sweden, the students' perspectives on knowledge and nursing practice became an issue. The aim was to explore Slovenian and Swedish undergraduate nursing students' perceptions of knowledge needed for future practice.

Methods: A qualitative study design was applied. A questionnaire with open ended questions was used to collect opinions of 174 nursing students from the University of Ljubljana, Slovenia, and 109 nursing students from the University of Umeå, Sweden. Textual data were analysed using qualitative content analysis.

Results: Four subcategories were identified, related to the content of knowledge: knowledge about 'bodies and diseases', about 'people and communication'; and to its purpose: 'to do nursing' and 'to be a nurse'. The main theme, 'integration', indicated the students' awareness of the complexity of their future work and the need for a wide integrated knowledge.

Discussion and conclusion: There were more similarities than differences between the Slovenian and Swedish students included in the study. The students were aware of the complex responsibilities and expressed the need for integrating various competences. Interprofessional education should become a constitutive part of nursing education programmes.

IZVLEČEK

Uvod: Izobraževanje za zdravstveno nego se v okviru bolonjske prenove na evropski ravni razvija v smeri večje primerljivosti. Izkušnje s poučevanjem v Sloveniji in na Švedskem so v ospredje postavile tudi pomen vidika študentov, njihovo pojmovanje znanja in prakse zdravstvene nege. Namen prispevka je raziskati, kako slovenski in švedski študenti dodiplomskega študija zdravstvene nege pojmujejo znanje, ki ga potrebujejo za delo na področju zdravstvene nege.

Metode: Izvedena je bila kvalitativna raziskava. Z vprašalnikom, ki je vseboval vprašanja odprtega tipa, so bila pridobljena mnenja 174 študentov zdravstvene nege z Univerze v Ljubljani in 109 študentov zdravstvene nege s švedske University of Umeå. Tekstovno gradivo je bilo obdelano s kvalitativno analize vsebine.

Rezultati: Prepoznane so bile štiri podkategorije. V povezavi z vsebino znanja sta bili analitično oblikovani podkategoriji »telo in bolezni« ter »ljudje in komunikacija«. V povezavi z namenom sta bili prepoznani podkategoriji »izvajati zdravstveno nego« in »biti medicinska sestra«. Glavna tema, »integracija«, je nakazala, da se študenti zavedajo kompleksnosti bodočega dela in potrebe po širokem integriranem znanju.

Diskusija in zaključek: Med vključenimi slovenskimi in švedskimi študenti je bilo več podobnosti kot razlik. Študenti so se zavedali kompleksnosti odgovornosti in so izrazili potrebo po integraciji različnih kompetenc. Medpoklicno izobraževanje bi moralo postati konstitutivni del izobraževalnih programov za zdravstveno nego.

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Introduction

The Bologna Declaration was the starting point in the process of adapting higher education in Europe to the advances in scientific knowledge and in society, and has had a great impact all over Europe (European Ministers of Education, 1999). Different countries in Europe have, in various ways, tried to include the intentions of the Bologna Declaration in their educational systems.

Salminen and colleagues (2010) underlined the need for harmonizing nursing education but also pointed out that differences between countries in Europe presented challenges for the future, such as the development of cross-cultural collaboration and clinical learning environments as well as the role of patients and teacher education. The process of harmonization includes the need to reflect on the concept of nursing education and its planned outcome, the knowledge for nursing practice.

Based on experiences from visiting both countries, Slovenia and Sweden, during the last decade, and from teaching and sharing experiences with colleagues during our stays, we became interested in differences and similarities in nursing concepts. Exploring students' views on their education and the future profession from an international perspective became an issue. Therefore we start by outlining the way nursing knowledge is developed during nursing education, and how nursing education is provided in Slovenia and Sweden.

Nursing knowledge

Nursing knowledge is the basis for practice and therefore it is important for the quality of nursing care. Carper's (1978) seminal article describing four patterns of knowing in nursing, empirical, aesthetic, ethical and personal knowing, has been further elaborated by several authors. Robinson and Vaughan (1993) described empirical knowledge as embedded in scientific research, based on the assumption that knowledge is developed through hypothesis testing. As nurses work with people, knowledge of different disciplines is relevant for them. However, in practice, the high insecurity due to lack of knowledge and autonomy, and nurses often sticking to the rules even when those limit the effectiveness of care, might be one of the main reasons for causing routinisation of nursing care. Personal knowledge is about knowing of one's self, about integrity and trust and understanding of one's own role in relation to the patient. Nurses' invasion of patients' personal space and their breaking of cultural taboos regarding bodily functions demands special preparedness not addressed enough in nursing education (Robinson & Vaughan 1993).

Mantzoukas and Jasper (2007) found five distinct types of nursing knowledge that nurses used in practice: personal practice knowledge, theoretical, procedural, ward cultural knowledge and reflexive knowledge. They claimed that ward cultural knowledge and procedural knowledge reflect the rule-based descriptive knowledge of the early days, theoretical knowledge and personal practice knowledge reflect the explanatory dualist knowledge of the later development, and reflexive knowledge reflects the critical and integrative knowledge of the post-modern phase.

Preparing nursing students for their professional career means preparing them for demanding challenges in a changing society. Several studies were performed in order to define and describe the knowledge needed for nurses and hence for nursing students to acquire. Bonis (2009) delineated the evolution of the concept of knowing in nursing in a literature review covering a period of thirty years. The author argued that knowing in nursing refers to a unique personal type of knowledge constructed of objective knowledge interfaced with the individual's subjective perspective on personal experience.

A study aiming to elucidate registered nurses' experiences of knowledge use in work situations was performed by Skår (2009). The study illuminates experiences related to coping with frequent changes and complexity in work situations. According to this study, a challenge for nursing education is to help students understand these interpretative modes of knowledge use and to develop personal abilities. Bengtsson and Ohlsson (2010) stressed the importance of coordinating superficial knowledge with in-depth learning, and applying theoretical knowledge in practice. In another study aiming to identify predictors of knowledge, attitudes, use and future use of evidence-based practice among baccalaureate nursing students, Brown and colleagues (2010) concluded that clinically well-prepared nursing students with high confidence in clinical decision-making are most likely to use evidence-based practice.

Nursing education is a total experience: it involves not only classroom learning, but also learning in clinical settings. Precepting nurses are important for nursing students in the professional socialization process. Carlsson and colleagues (2010) found that nursing was mediated by the precepting nurses as the medical-technical, the administrative and the caring role. Preceptors taught students to reflect on what they could do independently as nurses, and they tried to verbalize their practical knowledge to make theory explicit and to contextualize it to students.

Nursing education in Slovenia and Sweden

In Slovenia, nursing education takes place both at the secondary school level and in the post-secondary education. The majority of the diploma level students would have finished secondary nursing education and

they would have already some experience in nursing care. Nurse education at the postsecondary level, following the Bologna regulations introduced between 2007 and 2009, consists of 180 ECTS. It is supposed to provide nursing students with knowledge and competences which will enable them to start practicing nursing in different health care settings. Competences expected from a diploma level (professional degree) nurse include knowledge and skills for independent practice, ability to understand and use knowledge, to make decisions, to communicate and to acquire knowledge independently. The competences also include the ability to integrate the knowledge from related disciplines and apply it to nursing, so the curriculum combines core nursing courses with supportive courses from medical, natural and social sciences. Those supportive courses, taught by the university teachers from relevant fields, amount to one third of the curriculum (Visokošolski strokovni študijski program Zdravstvena nega, 2009).

In Sweden, higher education has been following the Bologna process since 2007 (Government bill 2004/05: 162). To become a registered nurse one needs to complete a three-year full-time study at the university level, graduating with a professional degree and a Bachelors' degree in nursing based on national goals for both degrees, each university may develop additional local goals in their curricula. The Swedish students in this study follow a curriculum that includes nursing, research-based theory and practice, including communication, environment and ethics in nursing based on a specific concept of nursing. Anatomy, physiology, pharmacology, pathology and medical treatments are taught by university teachers from these disciplines (Syllabus Nursing Programme, 2007; Lundman & Sandman, 2009).

Aim and objectives

As studies reflecting the students' perspectives are scarce, the aim of this study was to explore the Slovenian and Swedish undergraduate nursing students' perceptions of knowledge needed for future nursing practice. So, our research question was: How do students describe knowledge they think they will need in nursing practice? The purpose of the study was to identify elements of students' perceptions and their structure.

Methods

A qualitative descriptive approach was used in order to obtain the students' perceptions expressed in their own words. This approach is useful when the aim is to describe a phenomenon in order to understand its dimensions and structure. Sandelowski (2000; 2010) who directed attention to this method, warned against the general view of descriptive research as a lower level form of inquiry and against researchers' habit of claiming methods they are really not using (like phenomenology, grounded theory, ethnography or a narrative study). The goal of a qualitative descriptive study is to provide a comprehensive summary of events in the everyday terms of those events, which is not theory-based, but can provide useful starting point for further development of hypotheses and theories, as Neergaard and colleagues (2009) argue in their clear and concise overview of its potential benefits, strengths and weaknesses together with examples of use.

Description of the research instrument

A questionnaire with three open ended questions was developed and administered. The question, "You are in the beginning/end of your education. Please, describe what you think today about what knowledge you will need as a registered nurse", is in the focus of this paper. The answers were provided in writing.

Description of a sample

The study included the first and final year nursing students who were recruited from a three-year BSc programme at the University of Umeå in northern Sweden, and from a three year Diploma level programme at the University of Ljubljana in Slovenia. It was a purposeful sample of students who were present during lectures.

In Slovenia 174 students participated in the study. Most of the first-year students (n = 99) were 19 years old, only nine of all Slovenian participants were over 25 years old. Most of the Slovenian third-year students (n = 75) were 22 years old. Approximately two thirds of the students had completed secondary school for nursing assistants before entering the nursing programme. In Sweden 109 students participated in the study. The majority of Swedish students were older, only a few of the first-year students (n = 61) were 19, and 25 of all participants were 25 or older. With a few exceptions, the Swedish students had completed a general secondary education preparing for higher education before entering the programme.

Description of the research procedure and data analysis

Permission for collecting the data was given by the Head of the Department of Nursing, Umeå University and the Dean of the Faculty of Health Sciences, University of Ljubljana. The data were collected during non-compulsory teaching sessions at both universities simultaneously in October 2009 (the first-year students) and in January 2010 (the third-year students). The students were informed in advance about the purpose of the study, the procedure for data collection, and their participation was voluntary. They were also told that they could leave the rooms any time or just not hand in the questionnaires. The questionnaires were anonymous.

The authors were not present and an appointed person, not involved in the study, distributed and collected the questionnaires. Each participant could spend as much time as they needed for filling in the questionnaire.

Within the framework of the qualitative descriptive method, the data were analysed using thematic qualitative content analysis inspired by Hsieh and Shannon (2005). The method was chosen in order to fulfil the aim and was familiar to authors. The answers were written in the Slovene and Swedish languages so the initial reading was done separately by two authors (MP and EL). The first impressions were shared and discussed and further ideas for the interpretation process were developed. The text was read through line by line and subcategories were constructed. Subcategories were then organised into categories and finally an overall theme was formulated. The analytic process was performed in English. It is the communication language of the authors, but two of them are to a certain level familiar with the each other's language and could study the data obtained to capture the important points of the content. Further, a random sample of the answers was translated into English, translations were discussed and reflected upon, so the authors were familiar with all the data. All interpretations were read, reread and discussed between the two authors during regular Skype meetings until the consensus was reached. At the end, the results and interpretation were independently considered also by the third author (BD) to obtain a second opinion.

Results

The presentation of the findings is organized following the steps of the research process. Each subcategory of the findings is illustrated by quotations. To assure anonymity, quotations are coded - letters mean country (SI= Slovenia, SW= Sweden), numbers refer to the study year (1= year one, 3= year three) and the interview number. Table 1 summarizes the main findings from subcategories to the key theme. Category 'content' was constructed by joining subcategories related to bodies, diseases, people and communication.

Bodies and diseases

Areas of knowledge related to topics like anatomy, physiology and various medical topics including medical treatments were mentioned by students in both countries, more frequently by the first-year students.

"As a nurse I will need knowledge about basic structure of the human body, procedures I will use at my work, about diseases – process and treatment, functioning of the human body." (SI-1-92)

"...how the human body functions, how you in the best way help someone, when it does not function - so, knowledge in pathology." (SW-3-39)

People and communication

It seemed important to the students to have knowledge about differences between individuals and how to communicate in various situations with patients, relatives and co-workers. The first-year students emphasized its importance more frequently than the third-year students.

"I will need knowledge how to communicate professionally, to express myself correctly and not offend somebody." (SI-1-9)

"Communication is very important, you must know a lot about it, both regarding communication with co-workers and also with patients." (SI-3-22)

"I want to be good at encountering patients and relatives, understand their perspectives." (SW-1-58)

"I need to be a skilled communicator to get through to physicians, and direct enrolled nurses and be sure that relatives and patients take in all the information I give them." (SW-3-21)

Category 'purpose' was analytically constructed by joining subcategories related to nursing practice and professional identity.

To perform nursing

All students were aware of hands-on skills needed, procedures and treatments they have to learn to be able to perform professional work properly, to organize work and help patients.

"Knowledge how to intervene quickly and conscientiously and keep calm in situation of crisis." (SI-1-59)

"How to work with another human being, how to come close to them, how to develop empathy ... all other technical knowledge come with experience and exercise." (SI-3-37)

"Practical knowledge about blood samples, catheters etc., how to organise. How to contact different authorities. Ethical thinking, how to treat patients and co-workers ... how to perform in a situation of crisis."(SW-3-3)

Table 1: *Summary of the findings*
Tabela 1: *Povzetek rezultatov*

Theme	**Integration**			
Categories	**Content**		**Purpose**	
Subcategories	Bodies and diseases	People and communication	To perform nursing	To be a nurse

"I need knowledge about how to find and read research, because I need that to keep myself updated, which is demanded of me as a registered nurse." (SW-3-38)

To be a nurse

Students described their concerns about how to become good nurses, the first-year students less often than the third-year ones. They expressed the need for personal development as well as professional knowledge within various fields.

"Nurses need to have a human relation to people, I mean that she talks to people as everybody would wish to be talked to." (SI-1-94)

"I will need knowledge to be self-confident at my work. I am not sure that I will have that when I graduate." (SI-3-55)

"To be able to gain new knowledge over time during your work. To be curious and receptive for changes but also to assess them in relation to experiences. To be sure that new knowledge is peer-reviewed, evidence-based, how the research is performed and on what groups, if it is applicable to my patient." (SW-3-10)

"I hope to continue reflecting on ethical issues and encounters. It will be important to think critically, to reflect on one's actions to be able to improve all the time." (SW-3-8)

Integration

Integration, as an overall theme, was formulated as a final interpretation. Students often mentioned the complexity of caring situations and patients' needs, and expressed the need for 'integration' of various types and contents of knowledge and skills. 'Integration' applies to answers that see nursing knowledge as a new quality, growing out from a mixture of natural and social sciences background, combined with practical, communicative, collaborative and leadership skills. Slovenian students, more often than Swedish students, asserted that knowledge is developed not only during undergraduate education but also through professional practice and life-long learning. 'Integration' is connected both to the content and purpose. Regarding purpose (illustrated above) the differences were detected between the first and the third-year students, the latter seemed to be more concerned with how to become good nurses. The reason might be that such concerns come to the front when one is getting closer to work independently and to becoming a responsible professional who is expected to integrate skills such as self-confidence, lifelong learning, critical thinking and ethical (self)reflection. Regarding content there were differences between the Slovenian and Swedish students: the Slovenian students more often mentioned several academic fields as their knowledge background than the Swedish students, and they also frequently used the expression the 'width' of knowledge.

"Great knowledge, in various fields ... depending on where you will be working. I need knowledge and a holistic perspective of patients from both a nursing and a medical perspective." (SW-3-9)

"... to identify needs of care, covering the whole person; physically, psychologically, socially, spiritually, through all these dimensions interacting to achieve best possible health. Practical knowledge is needed to deliver individual care...to evaluate and reflect on situations." (SW-3-2)

"Practical, social and theoretical competences. Being able to perform nursing interventions based on knowledge in a good practical way, with a good treatment and the psychological competence." (SW-1-29)

"Knowledge from natural sciences will serve me as the basis for practice, and knowledge from social sciences – especially ethics, psychology and sociology will give me a kind of width and will help me establish relationships with patients and in the health care team." (SI-1-21)

"As a graduate nurse one needs to have knowledge from all fields of health care and also general knowledge. On this basis, she will know how to learn about individual patients and how to express and argue for her perspective and observations." (SI-3-11)

"Knowledge that will enable me to understand why something is as it is, why a process develops as it does and not differently." (SI-1-21)

Discussion

Our main finding was that the students described knowledge they think they will need in nursing practice as an entity that will enable them to face complex situations. We will discuss findings by following the interpretation process, addressing 'content' and 'purpose' in the first step and then highlighting 'integration'. Where applicable, the differences between Slovene and Swedish as well as the first and the third-year students will be exposed. By Slovene and Swedish students, we refer to the students included in our study, although nursing is a regulated profession and similarities in the curriculum outline could be expected to be substantive across all nursing educational programmes in Slovenia and Sweden.

All students listed similar topics regarding both 'content' as well as 'purpose' of nursing knowledge. Regarding 'content', knowledge about 'bodies and diseases' as well as 'people and communication' were included in most of the answers. The general organisation of students' answers generated an assumption about a 'common nursing knowledge culture'. However, the emphasis on the width of knowledge, on the importance of general knowledge and knowledge from other fields in order to perform nursing was more pronounced in the Slovenian students' answers. The differences between the first and the third-year students were proved to be greater in Sweden than in Slovenia. The Slovenian students wrote more confidently about

knowledge they will need already in the first year, while the Swedish students seemed to grasp the complexity of the profession more clearly at the end of their studies. It might be a consequence of differences in entry requirements to the programme in the two countries. Most Slovenian students had, similar to other central European countries like Germany and Austria (Spitzer & Perrenoud, 2006), completed secondary nursing education and might have acquired a nursing identity even before entering the programme. In Sweden nursing education is offered only at the university level. Hence, for the Swedish students entering the programme it was their first encounter with nursing and nursing care, and they might have problems with seeing themselves as future nurses, especially in the beginning of the programme. If we relate this to Safadi and colleagues (2011) and Apesoa-Varano (2007) we can assume that the change towards professional perception of nursing would start for the Swedish students in the beginning of the university programme. For the Slovenian students this process was already on-going.

Regarding 'purpose', the Swedish students more often dwelt on the theme of 'how to be a nurse', and the Slovenian on 'how to do nursing'. In students' answers the historical professional development might be reflected. In the Swedish context it seems that the holistic perspective from the beginning of the last century is replaced with fragmentation (Lindahl, et al., 2007), which could explain why students in this study request integration. In the past 'doing' was important, while today the demands are different and 'being' is more in focus. If we look at our findings from the perspective of Mantzoukas and Jasper's (2007) typology of knowledge that nurses use in practice, it is clear that the answers of the young students in this study, with limited clinical experience, emphasized mostly theoretical, personal and procedural knowledge and much less ward cultural and reflexive knowledge. The Slovenian students less frequently stated their concerns about being a nurse. The differences between the south and the north of Europe might be an explanation for the differences in students' ways of reasoning (Pahor & Rasmussen, 2009).

During the interpretation process it became obvious that the issue of 'integration', although significant to both national groups, was much more pronounced by the Slovenian students. We can assume that these differences result from different structures of the curricula. The Swedish programme, based on nursing science and additional medical topics (Syllabus Nursing Programme, 2007), is the result of the development of nursing science in Sweden which has produced theoretical basis for nursing research and university teaching. The local Swedish nursing programme in this study is based on the concept of nursing developed from research within various fields, including nursing. In this concept, various fields are already integrated in the concept of nursing practice, which is presented by nurse academic teachers as well as other specialists within the medical faculty (Lundman & Sandman, 2009). Slovenia has experienced a different developmental process. The Slovenian programme is more interdisciplinary and wider based (Visokošolski strokovni študijski program Zdravstvena nega, 2009). The need for nurse professors and nurse academic teachers is significant also in Slovenia, but other experts take part in the nursing education (like health lawyers, physicists, psychologists, microbiologists etc.) on a larger scale than in Sweden. This might also be an advantage, bringing to future nurses the width of knowledge they often mentioned in their answers as a prerequisite to good nursing care.

Addressing differences between the Slovenian and the Swedish programmes, many questions remain open. If we relate to Lipscomb (2011) and Rolfe (2010) ideas that nursing research should be more interdisciplinary, this might apply to education as well. Integrative thinking as an outcome of nursing education is mentioned in literature, emphasizing that students should be exposed to many kinds of activities in order to achieve this growth (Dickieson, et al., 2008). The requirements for evidence-based nursing today call for well-educated nurses who can provide research-based nursing care. Also, collaborative skills enabling nurses to work effectively within an interdisciplinary healthcare team can be importantly enhanced by interprofessional education (Reeves, et al., 2013), which should therefore be an integral component of a nursing study programme.

Nursing knowledge could be described as a kind of a journey, constantly creating understanding of complex situations (James, et al., 2010). The journey through the 'caringscapes' (McKie, et al., 2002) is not easy, and it is not clear what kind of luggage nurses need when undertaking it in different countries (Pahor, 2003). According to Binding and colleagues (2010), reflective writing and 'seeing the other' seem to help students relate more confidently to patients, and accordingly integrate theoretical knowledge with bedside work. This is in line with what our students emphasized; the difficulties of 'the journey' towards providing good care and the need for relevant 'tools' in order to be professional nurses. This is a challenge for nursing education across countries.

Methodological considerations

This is a cross-sectional study where the same cohort was not followed, so it is not possible to evaluate a process of change from year one to year three. Even though the authors thoroughly considered language issues, there might be a loss of meaning in translations. As the answers were not very extensive, we had no difficulty with understanding and therefore we find the process satisfactory.

We are aware of cultural issues in the national as well as the educational contexts. Words and expressions

may be used and understood in different ways. Students might be more or less extensive in writing due to expectations and traditions. There might be an authority issue and the students might have been trying to please and therefore gave answers they thought were expected as their teachers were responsible for the study.

Conclusion

At this level of analysis, the similarities between the Slovenian and Swedish participants seem to surpass the differences. As mentioned in the introduction, the educational backgrounds of Slovenian and Swedish students differ. This might explain for some of the differences – Slovenian students seem to be more aware of the challenges of their future profession due to their experiences in nursing care. Also the curriculum at the Ljubljana University includes more knowledge about natural and social sciences, taught in separate courses by experts in those fields.

The so called semi-professions do not yet have a robust theoretical base of their own and they need to rely upon theories of other academic fields (Brante, 2010). This might not be a deprivation but it might point to an expert of the future, not educated only within the limits of their own discipline, but with insights into a vast territory of health-related relevant knowledge. As Lipscomb (2011) pointed out, nurses' engagement with wider academic knowledge could not but improve their preparedness to perform nursing. In this context interprofessional education where experts from different fields learn with, from and about each other to deliver better health care (CAIPE, 2002), gains its full significance and should become an integral educational experience of every nursing student.

What remains an open question for further discussion and research is the integration of various sources into a body of nursing knowledge. More research is needed to understand whether nursing knowledge should be offered as an integrated whole or as a multifaceted entity to be integrated by the students later during practice, or, hopefully, already during a reflective educational experience.

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Original scientific article/Izvirni znanstveni članek

Specializations in nursing: the students' perspective

Specializacije v zdravstveni negi: pogled študentov

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Key words: nurse specialist; specialist knowledge; post-graduate education

Ključne besede: diplomirana medicinska sestra specialistka; specialistična znanja; podiplomsko izobraževanje

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ABSTRACT

Introduction: In Slovenia, nursing students and professionals do not yet have the possibility for specialized career development. The aim of the study is to determine the students' plans for their career development and their views on nursing specialization.

Methods: Data were collected via an online questionnaire ($\alpha = 0.82$). The sample included students from three faculties in Slovenia that offer nursing programmes. 385 questionnaires were returned. Data analysis was performed with the SPSS software (version 20.0): *t*-test, ANOVA, Pearson's correlation and factor analysis.

Results: 258 (67 %) of respondents would continue their studies. The specializations most often identified are: urgent medical assistance (20 %), anaesthesiology and intensive therapy (14 %) and surgical care (11 %) and so forth. Older students choose reasons that are linked more to nursing, while younger students choose reasons that are linked more to medicine. It is more characteristic of men to put an emphasis on economic reasons for developing specializations ($t = 0.552$, $p = 0.011$). Students in a more senior year ($F = 2.407$, $p = 0.041$) or with a higher average grade put an emphasis on reasons for specializations that are linked to nursing.

Discussion and conclusion: Students view specializations as necessary to ensure a sustainable health care system in Slovenia and as an option for continuing their studies.

IZVLEČEK

Uvod: V Sloveniji študentom in zaposlenim v zdravstveni negi karierni razvoj na področju specializacij še ni omogočen. Namen raziskave je ugotoviti načrte študentov za njihov karierni razvoj in njihov odnos do specializacij v zdravstveni negi.

Metode: Podatki so bili zbrani s spletnim vprašalnikom ($\alpha = 0{,}82$). V vzorec so bili vključeni študentje treh fakultet, ki izvajajo program zdravstvene nege v Sloveniji. Vrnjenih je bilo 385 vprašalnikov. Analiza podatkov je bila narejena s SPSS (verzija 20.0): *t*-test, ANOVA, Pearsonova korelacija in faktorska analiza.

Rezultati: Za nadaljevanje študija bi se odločilo 258 (67 %) anketirancev. Najbolj prepoznane specializacije so nujna medicinska pomoč (20 %), anesteziološka zdravstvena nega in intenzivna terapija (14 %) in zdravstvena nega kirurškega bolnika (11 %). Starejši študentje se odločajo za razloge, ki so bolj povezani z zdravstveno nego, mlajši študentje za razloge, ki so močneje povezani z medicino. Za moške je bolj značilno, da pri razvoju specializacij dajejo večji pomen ekonomskim razlogom ($t = 0{,}552$, $p = 0{,}011$). Študentje višjih letnikov ($F = 2{,}407$, $p = 0{,}041$) in študentje z višjo povprečno oceno ($F = 3{,}222$, $p = 0{,}023$) v ospredje odločanja za specializacije postavljajo razloge, ki so povezani z negovanjem.

Diskusija in zaključek: Študentje vidijo specializacije kot nujnost za zagotavljanje vzdržnega zdravstvenega sistema pri nas in kot možnost lastnega nadaljnjega študija.

The article was written based on the graduation thesis of Martin Sever, titled *Attitude of nursing students towards specializations in health care* (2014)./ Članek je nastal na osnovi diplomskega dela Martina Sever *Odnos študentov zdravstvene nege do specializacij v zdravstveni negi* (2014).

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Introduction

The economic and social crisis, altered demographical structure of the populace, increased occurrence of chronic illnesses and so on strongly affect both the organisation of the health care system and nursing around the world (Požun & Skela Savič, 2011). Due to the altered structure of the populace and its health care needs and other factors, new opportunities for nursing are also arising (Rod, 2009). In certain countries, specializations in nursing can be considered the response of nursing to the changed needs of the beneficiaries of the health care system.

The development of postgraduate specialist knowledge in the field of nursing started relatively early, in the 1960s and 1970s in the United States, Canada and Great Britain, as a response to the shortage of doctors, the changing demographic structures of the populace (an aging population and thereby an increase in patients with chronic illnesses), the growing needs of the populace for affordable health care services, the constantly growing health care costs etc. Throughout history, specializations in nursing developed also due to fast technological advancements and the expansion of professional knowledge, based on scientific foundations (Pask, 2011). In certain countries, specializations in nursing thus became an important and indispensable part of the health care system (Delamaire & Lafortune, 2010).

In countries where specializations in nursing have already been established, experts have been proving for some time now that specialist knowledge significantly and positively impacts the development of nursing and health care as a whole, as well as contributes to better and safer treatment of patients (Brown & Grimes, 1995; Bryant-Lukosius, et al., 2004; Delamaire & Lafortune, 2010; Pulcini, et al., 2010). Numerous studies are therefore focusing on measuring the efficiency of graduate nurses with specialist knowledge, with the aim of proving their usefulness and significance in everyday clinical practice (Horrocks, et al., 2002; Delamaire & Lafortune, 2010; Pulcini, et al., 2010). Patients that come into direct contact with graduate nurses have a smaller chance of being admitted to hospital and are more likely to receive treatment based on clinical guidelines and evidence (Grothier, 2012). A study by Horrocks and colleagues (2012), carried out in Great Britain, even shows that a patient's results in primary health care, reviewed by a graduate nurse with specialist knowledge, are equal to doctors' results, with patients even displaying increased satisfaction in most areas. Furthermore, when it comes to transferring tasks and duties from doctors to graduate nurses at the primary level, the study shows that graduate nurses with specialist knowledge in primary health care achieve health results for patients that are comparable to those of doctors when it comes to diagnostic precision and health condition evaluation. In countries where specializations were developed in the second half of the previous century, studies proved very early on that graduate nurses with specialist knowledge also spend more time on the medical treatment of patients, which affects the patients' satisfaction (Brown & Grimes 1995; Horrocks, et al., 2002). Lower treatment expenses, shorter periods of hospitalization, lower readmission rates and increased satisfaction with the patient's medical treatment were recorded with patients that were treated by a graduate nurse with specialist knowledge in areas such as neonatology, geriatrics or obstetrics and certain others (Bryant-Lukosius, et al., 2004). And especially worth emphasising, it was determined that graduate nurses with specialist knowledge play a key role from the standpoint of long-term financial sustainability of the health care system by providing quality, evidence-based nursing (Grothier, 2012).

In Slovenia, Starc and colleagues (2009) have determined that the offer of nursing specializations by European Union Member States and the Anglo-Saxon world is extensive and difficult to review. There is no uniformity in the definitions, regulations and manner of education in the field of specializations. Specialized programmes and certain modules (i.e. prescribing medication) are carried out by higher education institutions and various associations. Specialist knowledge in the field of nursing can thus be obtained in psychiatric nursing, district nursing, oncological nursing, palliative nursing, nursing for patients with dementia, pediatric nursing etc. The International Council of Nurses, which issues guidelines and recommendations for the development of nursing, prepared a broad array of nursing specializations already in 1992. It proposed that specializations be prepared in major nursing fields, such as geriatric nursing, public health, pediatric nursing, psychiatric nursing, health care for women and children, district nursing, internal medicine nursing, surgical nursing, etc. (International Council of Nurses, 2009). In Great Britain, graduate nurses with specialist knowledge have thus been carrying out preventive checks and screenings for various illnesses, taking on various duties in the field of health promotion, health counselling, guidance for patients with chronic illnesses, patient follow-up and re-examinations after conclusion of treatment, and carrying out various interventions in accordance with treatment guidelines. They are active on both the primary and the secondary level of health care (Dubois & Singh, 2009).

Despite good practices around the world and the proven advantages of graduate nurses with specialist knowledge, postgraduate specialist training for graduate nurses in Slovenia has not yet been developed. In Slovenia, professionals in nursing and students do not yet have the possibility for specialized career development after concluding their studies, though discussions to this end have been going on for some

time now (Bregar, et al., 2013; Lokar, 2013; Skela-Savič, 2013). Despite nursing being exposed to great burdens as a consequence of demographic changes, an aging population, increased public awareness, organisational changes in the health care system and imbalances in the strategic development of health care so far (Poplas Susič & Marušič, 2011), the development of specializations and the significance of an increased role of graduate nurses has not been enabled in Slovenia. One of the major problems in Slovenia is the demographic situation, meaning that were the current increase in the share of older inhabitants and the increasing share of patients with chronic illnesses to continue, or the existing demographic trends to continue, the pressure on nursing will continue to grow, placing an increasing burden on health care finances (Starc, 2004). We can therefore state that this also creates room for developing specializations in nursing, among other things (Pajnkihar & Jakl, 2013).

Due to all these reasons, it is logical and necessary for developed societies and health care service providers to prepare for the increased demand for health care services. It is sensible and wise to organise health care so that it is financially sustainable in the long term without a decline in quality. That is why we have already launched certain activities in the field of nursing. Based on the opinions and wishes expressed by the domestic professional public, we have formulated a broad selection of specializations, some of which are already being prepared (Vilar & Ažman, 2011; Kadivec, et al., 2011; Horvat, et al., 2013). These opinion surveys included employed professionals in nursing. Students were not involved in these discussions. That is why our study focused on undergraduate and postgraduate nursing students. We posed a research questions regarding the students' attitude towards nursing specializations, as it is the students that will be inquiring after education in the future. Seeing as we are aware of the future demand for health care services, it is important that we are also aware of the students' preferences regarding postgraduate knowledge, as we can then direct their preferences with an appropriate approach during their studies.

Aim and objective

The aim of the study was to determine and get to know the career development plans of students of select health care faculties in Slovenia, or whether they identify specializations as a logical continuation of their education. The study aimed to answer the following research questions:

- Which are the areas in health care where undergraduate and postgraduate students of nursing most identify the need for specializations?
- To what degree do the students agree that with additional specialist knowledge, they could take on certain competencies of the doctors?
- Why are specializations in nursing required, according to the students' opinion?
- Which factors are linked to the students' attitude towards specializations?

Methods

The study was based on the descriptive method of empirical research. We used a non-experimental quantitative research method. We used an anonymous structured survey questionnaire to gather data.

Description of the research instrument

We composed the questionnaire based on a review of domestic and foreign literature on specializations in nursing (Bryant-Lukosius, et al., 2004; Pulcini, et al., 2009; Starc, et al., 2009; Delamaire & Lafortune, 2010; Vilar, 2011; Skela-Savič, 2013). We decided on online surveying, which is why we entered the questionnaire into the 1KA online survey website. The questionnaire contained 20 closed-ended questions in two sets. The first set of nine questions contained demographic data about the respondent: gender, age, year and type of studies and previous education, and certain other questions. The second set contained various statements regarding the students' opinions on nursing specializations, which students answered according to the Likert scale from 1 to 5, meaning: 1 – I completely disagree, 2 – I disagree, 3 – I partially agree, 4 – I agree, 5 – I completely agree. To analyse the reliability of each set of questions, we used the Cronbach alpha test. In each individual set, Cronbach's alpha was over 0.8, proving the high reliability of the questionnaire (Cencič, et al., 2009).

Description of a sample

The study included full-time and part-time students of the first, second and third years and senior undergraduates of nursing at the Faculty of Health Care Jesenice (FZJ), the Faculty of Health Sciences in Ljubljana (UL ZF) and the University of Primorska Faculty of Health Sciences (UP FVZ), and full-time and part-time postgraduate students of the first and second years of nursing at the above-mentioned faculties. We used a non-probability convenience sampling technique. A total of 1333 questionnaires were sent out via the faculties' databases. A total of 385 questionnaires were completed in full, which amounts to a sample response rate of 29 %. The description of the sample can be found in Table 1.

The first year of undergraduate nursing studies was attended by 56 (15 %) students, the second by 113 (32 %), the third by 98 (28 %), and 90 (25 %) respondents were senior undergraduates. The first year of postgraduate nursing studies (master's degree) was attended by 8 (29 %) students, and the second

Table 1: *Description of the sample*
Tabela 1: *Opis vzorca*

Demographic and other data related to the studies/Demografski in drugi s študijem povezani podatki	***n***	**%**
Gender/Spol		
Male/Moški	52	14
Female/Ženske	333	86
Type of studies/Vrsta študija		
Full- time/Redni	255	66
Part- time/Izredni	130	34
Level of studies/Stopnja študija		
Undergraduate studies/ Dodiplomski študij	357	93
Postgraduate studies/ Podiplomski študij	28	7
Which faculty do you attend?/ Katero fakulteto obiskujete?		
FZJ	153	40
UL ZF	148	38
UP FVZ	84	22

Legend/Legenda: n – number of respondents/število anketirancev; % – proportion of respondents/odstotek anketirancev; FZJ – Faculty of Health Care Jesenice/Fakulteta za zdravstvo Jesenice; UL ZF – University of Ljubljana, Faculty of Health Sciences/ Univerza v Ljubljani, Zdravstvena fakulteta; UP FVZ – University of Primorska Faculty of Health Sciences/Univerza na Primorskem, Fakulteta za vede o zdravju

by 20 (71 %). The students' grade-point average was 7.8. The average age of the respondents was 27 years (s = 7). The highest level of education attained by the students so far was as follows: 258 (68 %) with a finished secondary school of nursing, 37 (9 %) with a finished other secondary technical school, 52 (13 %) with a finished grammar school and 38 (10 %) with the obtained education at an institution of higher education or above.

Description of the research procedure and data analysis

We obtained study approval from FZJ, ZF and FVZ beforehand. We informed respondents in advance of the aim of the study and that participation in the study is voluntary and anonymous. The study took place in the period from July 22. 2013 to Septembre 16. 2013. The student office at each faculty was tasked with sending out the questionnaire, thus sending the questionnaire to all students whose e-mail addresses were in the student office's database. The expected and planned response rate of the sample was lower than is characteristic of electronic surveying, due to the fact that the survey was implemented during the summer holidays. However, we repeatedly sent a reminder to the contact persons or study year representatives to send the questionnaire to the students again. In October 2013, we organised all of the obtained data with the aid of the Microsoft Office Word 2007 and Microsoft Office Excel 2007 software and analysed them statistically with the SPSS 20 software (IBM; SPSS Inc., Chicago, IL, USA). We presented the results of the statistical software with the aid of figures and tables. When interpreting the results, we used the t-test, ANOVA, Pearson's correlation and factor analysis. Differences were considered for statistically significant data where the level of statistical significance was $p < 0.05$.

Results

In addition to the demographic data (Table 1), the first set of questions in the questionnaire asked the students about their wishes regarding continued career development in nursing. A total of 258 (67 %) respondents would continue studies in the field of nursing. 107 (28 %) respondents expressed doubts about continuing their studies. 156 (41 %) respondents would continue their studies in a narrower specialized field, while 60 (15 %) would continue it in a nursing master's degree programme (only undergraduate students were responding). 113 (30 %) respondents would take a job in nursing without continuing their studies, 27 (7 %) would continue their studies in a different master's degree programme, 26 respondents were not yet considering career development, and 3 (1 %) students would leave the profession and look for employment in another field.

Below we present the results of the study according to individual study questions.

In which health care areas do undergraduate and postgraduate students of nursing see the most need for specializations?

First and foremost, 67 students (20 %) recognised the need for specializations in emergency medical assistance. 49 students (14 %) recognized the need for specializations in nursing in anaesthesiology and intensive therapy. 39 students (11 %) would choose a specialization in surgical nursing. 33 students (10 %) would choose a specialization in paediatric nursing. In fifth place, 32 students (9 %) would choose a specialization in district nursing. In sixth place, 30 students (8 %) would choose a specialization in psychiatric nursing. The remaining specializations are as follows: 22 students (6.5 %) opted for public health and health promotion, 16 students (4.7 %) for oncology nursing, 15 students (4.4 %) for internal medicine nursing, 10 students (2.8 %) for palliative care, 8 students (2.4 %) for nursing of the elderly. The least sought-after specializations were the following specializations: 7 students (2 %) for nursing in occupational, traffic and sports medicine, 5 students (1.4 %) for nursing of patients suffering from chronic diseases, 5 students (1.4 %) for hospital hygiene and infections, and 2 students (0.6 %) for enterostomal therapy.

To what degree do students believe that they would be able to take over certain competences of doctors with additional specialist knowledge?

Students were asked to rate the statements on a Likert scale with a range of 1 to 5 (1 - not important, 2 - somewhat important, 3 - important, 4 - very important, 5 - the most important).

The majority of competences have an average of above 3, i.e. were graded as 'important' in the questionnaire. The competences graded above 4, i.e. very important, are: a higher degree of expertise for the implementation of health care, health education and health promotion, and the management of patients with chronic diseases. In the middle, i.e. between 3.7 and 3, we find the following competences: referrals for examinations (X-ray) and laboratory tests (blood, urine), carrying out minor surgical procedures, e.g. administering stitches, prescribing therapeutic appliances, independent medical history review, patient referrals to other experts, implementation of preventive tests (ultrasound, endoscopy), authority to receive and discharge a patient to/from hospital. At the bottom of the list (with a grade of under 3) we find competences such as: deciding on diagnostic procedures, prescribing medication, the authority to give medical diagnoses.

According to students, why are specializations in nursing necessary?

The respondents were asked to rate the statements on a Likert scale with a range of 1 to 5 (1 – I completely disagree, 2 – I disagree, 3 – I partially agree, 4 – I agree, 5 – I completely agree). The respondents were provided with 10 statements. The development of new technologies and the need for advanced skills was above the rest, with an average of above 4, followed by reasons such as: due to an increasingly burdened health care system, due to the increase in the number of chronic patients, and due to the increased demand for health services. In the middle, i.e. with an average of between 3.6 and 4, we find answers such as: due to the life-span of chronic patients. Lastly, with an average of 3.6 or less, we find economic factors: so that doctors are more accessible and to lessen the burden placed on them, to decrease the cost of nurses, due to the greater cost of medical treatment for the elderly because of changes in the demographic structure (an increase in the number of older people), and due to rising life expectancy.

Using factor analysis (the rotation method), we wanted to determine whether the link between the observed variables (the responses of students to the statements about why specializations are required) can be explained by a smaller number of indirectly observed variables or factors, through which we may then investigate the attitude of students to specializations. We verified the suitability of the correlation matrix for factor analysis by using the Kaiser-Mayer-Olkin test (KMO-test), which has a value of 0.836 (the recommended limit is above 0.5), and Bartlett's test, which is statistically significant. The results of both tests indicate that the use of factor analysis is suitable.

Table 2: *Factor analysis of variables*
Tabela 2: *Faktorska analiza spremenljivk*

Arguments why specialization are needed/ Trditve zakaj so specializacije potrebne	**Factor 1/ Faktor 1**	**Factor 2/ Faktor 2**	**Factor 3/ Faktor 3**
Due to changes in the demographic structure/ Zaradi spremenjene demografske strukture prebivalstva	0.828	/	/
Due to rising life expectancy/Zaradi višanja življenjske dobe	0.806	/	/
Due to increasing number of chronic patients/ Zaradi naraščanja števila pacientov s kronično boleznijo	0.763	/	/
Due to prolonged survival of chronic patients/ Zaradi daljšega preživetja pacientov s kronično boleznijo	0.735	/	/
Due to the higher medical costs of elderly care/ Zaradi višjih stroškov zdravstvene obravnave starejših	0.682	/	/
Due to increased demand of health services/ Zaradi povečanega povpraševanja po zdravstvenih storitvah	/	0.755	/
Due to the fast evolving technology and the need for advanced skills of nurses/ Zaradi hitro razvijajoče se tehnologije in potreb po naprednih znanjih medicinskih sester	/	0.732	/
Due to an increasingly burdened health system/ Zaradi čedalje bolj obremenjenega zdravstvenega sistema	/	0.730	/
In order to decrease the cost of nurses /Ker bodo medicinske sestre cenejša delovna sila	/	/	0.842
Doctors would be more accessible and less burdened/Ker bodo zdravniki bolj dostopni in razbremenjeni	/	/	0.786

Legend/Legenda: Factor 1/Faktor 1 – demographic reasons/demografski razlogi; Factor 2/Faktor 2 – reasons due to health system burden/razlogi obremenjenosti zdravstvenega sistema; Factor 3/Faktor 3 – economic reasons/ekonomski razlogi

By using factor analysis, we identified three factors among the statements about the students' view of the necessity of specializations. The three factors accounted for 66.57 % of the total variance, with the communalities of individual variables all above 0.50 (which is a prerequisite) and the majority of them (out of a total of ten variables) greater than 0.6, on the condition that their own value is greater than 1.

With the first factor – *demographic reasons*, we account for 32.54 % of the variance. With the second factor – *reasons due to health system burden*, we account for 19.81 % of the variance. With the third factor – *economic reasons*, we account for 14.21 % of the variance (Table 2).

Which factors are significant in relation to the students' attitudes towards specializations?

Below we will examine the significance of various factors, such as gender, age, year of study and the significance of the students' grade-point average for each individual factor.

Gender

The significance of gender was examined using a *t*-test for independent samples. The only factor that exhibited statistical relevance was *Economic reasons*. We can conclude that on average, male students list economic reasons for the development of specializations in nursing more often than female students ($t = 0.552$, $p = 0.011$).

Age

In examining the significance of age on individual factors, we utilised Pearson's correlation, where we found a weak and positive correlation with the first factor *demographic reasons* ($r = 0.354$, $p = 0.018$) and a weak and negative correlation with the second factor *reasons due to health system burden* ($r = -0.322$, $p = 0.034$). This means that older students attribute greater significance to *demographic reasons* for specializations and see less sense in the development of specializations due to *the increasingly burdened health care system.*

Year of study

To assess the importance of the year of study, we used the ANOVA test, which was used to determine whether there are statistically significant differences in the responses of students to the factors according to the respondent's year of study (first-, second- and third-year students and senior undergraduate students; the latter category also includes all postgraduate students). There were statistically significant differences in the responses of students for each year of study only in relation to the first factor - demographic reasons ($F = 2.407$, $p = 0.041$). Figure 1 shows that senior students attribute greater importance to the necessity of specializations to provide high quality care for the elderly and care for patients with chronic disease.

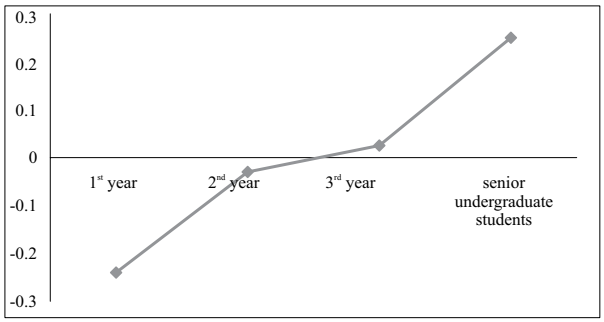


Figure 1: *The importance of the year of study on factors – Demographic reasons*
Slika 1: *Vpliv letnika študija na faktor demografski razlogi*

The significance of the grade-point average

The significance of the students' grade-point average on individual factors was established with an ANOVA test. The students were divided into four groups, according to their grade-point average (from 6.0 to 6.9; from 7.0 to 7.9; from 8.0 to 8.9; from 9.0 to 10.0). The ANOVA test established that there are statistically significant differences among answers in relation to the importance of students' grade-point average on the factor – *economic reasons* ($F = 3.222$, $p = 0.023$). From Figure 2 we can conclude that the higher the average score, the lower the score of the need for specializations to make doctors more accessible and to lessen the burden placed on them and to decrease the cost of nurses.

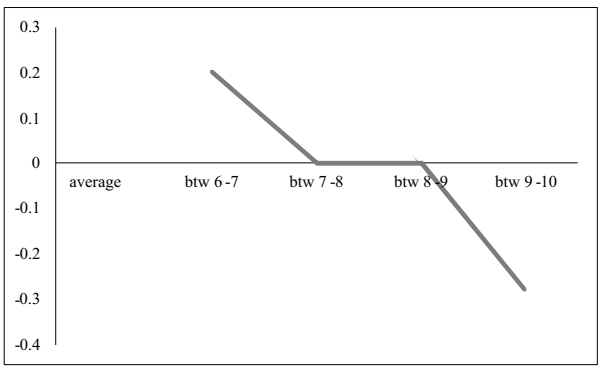


Figure 2: *Importance of ratings on the factor - accessibility of doctors and to decrease the cost of nurses*
Slika 2: *Pomen ocene faktorja dostopnost in razbremenitev zdravnikov zaradi diplomiranih medicinskih sester/zdravstvenikov kot cenejše delovne sile v zdravstvu*

The importance of the decision on the continuation of education

We divided the students into three groups, based on their answers (no desire to continue, desire to continue, strong desire to continue). Statistically significant differences between groups occurred with the second factor – an increasingly burdened health system (F = 3.664, p = 0.027). We conclude that the more students want to continue their studies, the more significance they see in the development of specializations to address the issue of an increasingly burdened health system (increased demand for health services, the burden on the health system and the development of new technologies).

Discussion

This study established that students are open to further career development in the direction of specializations. However, we can say that in Slovenia, we have not yet reached a point where specializations would be recognized within the health care system. In Slovenia, nursing professionals and students are not yet able to advance their careers in the area of specializations, though discussions to this end have been going on for some time now (Bregar, et al., 2013; Lokar, 2013). Additionally, professional associations and institutions of higher education in the field of health care are increasingly emphasising and promoting the development of specializations, modelled on other countries (Požun & Skela-Savič, 2011; Skela-Savič & Klemenc, 2011). We have established that students see numerous reasons that speak in favour of specializations within nursing, such as demographic reasons, reasons due to the increasing burden on the health care system and economic reasons. Most of the students included in the research see further career development in continuing their education in the field of nursing, a large part of whom wish to undertake specialization studies of nursing, in contrast to a survey in which employed nurses were asked about the possibility of furthering their education, which they were less inclined to do (Altman, 2011). It is important to emphasise that the majority of our respondents would like to continue their specialization studies full-time. This information is important because we assume that medical faculties and higher schools are to a large extent also financially dependent on the tuition paid by part-time students. Likewise, Skela-Savič (2013) draws attention to the increasingly truncated fiscal policy of the state, which affects the development of health care and higher education and the training of employees, and makes it difficult to finance new programs. It is encouraging that the majority of students wish to further their careers, also in the form of a master's degree in the field of nursing. Studying at the graduate level of the Bologna process - a master's degree in nursing - is also important because most other countries and the International Council of Nurses require this level of education to be able to engage in specialized forms of nursing (International Council of Nurses, 2005; Delamaire & Lafortune, 2010). Additionally, a master's degree in nursing is significant because it substitutes a university degree in nursing, which is not yet available in Slovenia (Skela-Savič & Klemenc, 2011).

Among the range of specializations available to the students in the survey, the most frequently selected option was urgent medical assistance. Among the top choices we also find anaesthesiology, intensive therapy and surgical nursing, from which we assume that students want specializations where medicine and nursing care are increasingly intertwined and which require numerous medical and technical interventions. This can perhaps be explained by the fact that the surveyed students are young individuals looking to work and specialize in areas that are more intertwined with medicine, so as to obtain more references, which also gives them a better chance for further employment in other areas or even abroad. Similarly, Vilar (2011) states that the development of specializations is particularly important where nursing and medicine are intertwined. On the other hand, we can assume that if we had chosen to survey employed graduates of nursing, i.e. older members of the profession, specialized areas of nursing that we believe to be less stressful and more strongly related to the changing demographic structure of the population, would most likely be more prominent. This is confirmed by our results that older students place greater importance on demographic reasons, i.e. nursing of the elderly. A survey conducted for the Chamber of Nursing and Midwifery of Slovenia by Vilar and Ažman (2011) established the opposite of our findings. In their survey, respondents mostly opted for nursing in occupational, traffic and sports medicine, community nursing, psychiatric nursing, gerontological nursing, and specialization in hospital hygiene. In our opinion, the different results of the two surveys can also be explained by the selection of the sample of respondents by the Chamber, which did not include direct providers of nursing, and whose sample size was small.

The students included in the research are aware of the fact that specializations in nursing are needed due to the development of new technologies and the need for advanced skills, the increase in the number of patients with chronic illnesses, longer life-spans, an increasingly burdened health care system and the increased demand for health care services. Nevertheless, the respondents do not find specializations which are distinctly associated with changes in the demographic structure (e.g. gerontological nursing) to be interesting, as they did not select specializations related to this factor. Pask (2011) notes that specializations developed as a result of rapidly-developing sophisticated technology and the expansion of scientific knowledge. In our

case we assume that this answer correlates with the respondents' young age or that they are more accustomed to technology than older nursing professionals, as they grew up during a time of especially rapid technological development. Once again it is worth stressing that nursing for the elderly rises alongside the respondents' age and their year of study. However, in our opinion, it is worrying that we do not know how to get more young people interested during their studies in areas which will be very salient in the future, as it is expected that care for the elderly and consequently age-related problems will only increase. Additionally, certain international authors have argued that gerontology is one of the less desirable fields for health care professionals and that further activities are necessary to recruit them into this field (Brown, et al., 2008; Shen & Xiao, 2012; Grymonpre, et al., 2013).

The literature suggests that the development of specialist skills in nursing began in the 1960s and 1970s in the United States, Canada and Great Britain as a response to the shortage of doctors, the changing demographic structures of the populace (an aging population and thereby an increase in patients with chronic illnesses), the growing needs of the populace for affordable health care services, the constantly growing health care costs etc. (Delamaire & Lafortune, 2010). Our survey established that older students and senior students are more susceptible to demographic reasons (care for the elderly), which can be explained by the influence of certain academic courses (nursing for the elderly with gerontology and rehabilitation). Male respondents placed greater importance on economic considerations (to decrease the cost of nurses, increase the accessibility of doctors), but we are unable to account for these differences at this point. The economic reasons for the development of specializations are more prevalent with students who have a lower grade-point average, which can most likely be explained by the fact that those who are more successful in their studies have a greater appreciation for nursing. Delamaire and Lafortune (2010) list economic reasons as the main motivator that could foster the development of specialized nursing. Students that wish to continue their education are leaning more towards the second factor, which details the reasons for the increasing burden placed on the health care system. All of the above speaks in favour of the supposition that students view their studies as a gateway to the nursing profession, and not so much in the sense of substituting a doctor. We also believe that they do not underestimate their work in terms of costs.

The respondents mostly hold the opinion that a nurse with a degree and specialized knowledge contributes to the higher quality and safety of nursing. Specializations will allow them further career development, which is very important to the respondents, i.e. students. In several European Union countries (Poland, Cyprus, Ireland, Czech Republic) they believe that the development of specialist skills in nursing also serves to encourage nurses to pursue postgraduate education and thus by improving their career opportunities, it makes it easier to keep them from moving to another country, since more and more nurses are moving to other countries, where they have better conditions for employment and career development (Aiken & Cheung, 2008; Delamaire & Lafortune, 2010).

The importance of the development of specializations exhibits great importance in the fields where nursing and medicine are intertwined. The respondents are aware of the fact that specializations must be developed alongside the changing needs in Slovenia, which has been stressed repeatedly at the annual conference *Moja kariera - Quovadis – My career*, organized by the Faculty of Health Care Jesenice, and which has been proven for some time by the Organisation for Economic Co-operation and Development (Delamaire & Lafortune, 2010).

Contrary to expectations, results show that students do not put an emphasis on competencies that are in the domain of doctors, e.g. prescribing medication, giving diagnoses, discharging patients, but rather place an emphasis on competencies that are more related to nursing, some of which they are already implementing. However, we can say that this appears to be in conflict with the range of specializations most often selected by the respondents – they demand more medical and technical interventions.

Limitations of the study

We encountered certain obstacles when conducting the survey. The expected and planned response rate of the sample was lower than is characteristic of electronic surveying, due to the fact that the survey was implemented during the summer holidays. We used opportunity sampling, which prevents generalization of the results to the population of nursing students. We also included first-year students in the survey, who in our opinion have not yet fully formed their career paths.

Conclusion

For the students included in the survey, career development in the form of specializations in nursing is important and is something that they want to do. In terms of the preferred areas of specialization, the respondents expressed a preference for fields associated with medicine and those that include more medical and technical interventions. However, it should be noted that different factors such as gender, age, year of study, grade-point average and decisions about further education in the field of nursing played a part in the attitude of students towards

specializations. More successful students, those that are older and senior students, and those who wish to continue their education place a greater importance on specializations that are more closely connected with nursing and prioritize nursing. The desire for certain additional competences also shows that rather than placing an emphasis on medical knowledge, they value greater expertise in the field of nursing, health education, promotion of health, and the management of patients with chronic illnesses. Nonetheless, the development of specializations in nursing will benefit users as well, as they will receive treatment of higher quality and safety.

According to the aim and objectives of the research, we can conclude that we have succeeded in defining the attitude of students to the development of specialized nursing. Specializations in nursing and the development of postgraduate skills are also important for the sustainability of the health system, but health policy makers do not allow for equal development of all professions in the health care system. We also believe that students allow for the possibility that due to positioning and well-paid jobs, the medical lobby would not allow for the diffusion of certain competences of doctors to certified nurses. However, we must be careful and deliberate in the development of specialized nursing, in order to avoid unemployment for nurses that specialize in a narrow specialist field. Moreover, we must not forget that the key mission of nursing care is nursing, by which we offer the patient human warmth in the process of medical treatment, as well as establish a genuine relationship and understanding – something that is not provided by other, more technically-oriented professions in the health care system.

Slovenian translation/Prevod v slovenščino

Uvod

Ekonomsko-socialna kriza, spremenjena demografska struktura prebivalstva, večja incidenca kroničnih bolezni ipd. po svetu močno vplivajo tako na organizacijo sistema zdravstvenega varstva kot tudi na zdravstveno nego (Požun & Skela-Savič, 2011). Zaradi spremenjene strukture prebivalstva in njegovih potreb po zdravstvenih storitvah ter drugih dejavnikov se pojavljajo nove priložnosti tudi za zdravstveno nego (Rod, 2009). Specializacije v zdravstveni negi so lahko v nekaterih državah odgovor zdravstvene nege na spremenjene potrebe uporabnikov sistema zdravstvenega varstva.

Razvoj podiplomskih specialističnih znanj na področju zdravstvene nege se je začel relativno zgodaj, tj. v 60. in 70. letih prejšnjega stoletja, v Združenih državah Amerike, Kanadi in Veliki Britaniji, in sicer kot odraz pomanjkanja zdravnikov, spremenjenih demografskih struktur prebivalstva (vse več starejših in s tem pacientov s kronično boleznijo), zaradi večjih potreb prebivalstva po dostopnosti zdravstvenih storitev, zaradi nenehnega zviševanja stroškov v zdravstvu ipd. Skozi zgodovino so se specializacije v zdravstveni negi razvile tudi zaradi hitro razvijajoče se visoke tehnologije in širjenja strokovnega znanja, temelječega na znanstvenih ugotovitvah (Pask, 2011). V nekaterih državah so specializacije v zdravstveni negi tako postale pomemben in nepogrešljiv del zdravstvenih sistemov (Delamaire & Lafortune, 2010).

V državah, kjer so specializacije v zdravstveni negi že stalnica, strokovnjaki že dalj časa z raziskavami dokazujejo, da specialistična znanja pomembno in pozitivno vplivajo na razvoj zdravstvene nege in zdravstvenega varstva v celoti ter prispevajo h kakovostnejši in varnejši zdravstveni obravnavi pacienta (Brown & Grimes, 1995; Bryant-Lukosius, et al., 2004; Delamaire & Lafortune, 2010; Pulcini, et al., 2010). Številne raziskave se tako usmerjajo v merjenje učinkovitosti diplomiranih medicinskih sester/zdravstvenikov s specialističnimi znanji z namenom, da dokažejo njihovo uporabnost in pomen v vsakdanji klinični praksi (Horrocks, et al., 2002; Delamaire & Lafortune, 2010; Pulcini, et al., 2010). Pri pacientih, ki pridejo v neposreden stik z diplomirano medicinsko sestro/zdravstvenikom s specialističnimi znanji, je manjša možnost, da bi bili sprejeti v bolnišnico, in je bolj verjetno, da bodo deležni zdravljenja, ki temelji na podlagi kliničnih smernic in dokazov (Grothier, 2012). Raziskava Horrocksa in sodelavcev (2012), izvedena v Veliki Britaniji, celo kaže, da so izidi pri pacientu v primarnem zdravstvenem varstvu, obravnavanem s strani diplomirane medicinske sestre/zdravstvenika s specialističnimi znanji, enaki izidom zdravnikov, na večini področij pacienti kažejo celo večje zadovoljstvo. Nadalje prenos del in nalog z zdravnika na diplomirane medicinske sestre/zdravstvenike na primarni ravni dokazuje, da diplomirane medicinske sestre/zdravstveniki s specialističnimi znanji glede na zdravnike dosegajo primerljive zdravstvene izide pri pacientu tudi v povezavi z natančnostjo diagnosticiranja in ocenjevanja zdravstvenega stanja. V državah, kjer so bile specializacije razvite že v drugi polovici preteklega stoletja, so z raziskavami že zelo zgodaj dokazali, da diplomirane medicinske sestre/zdravstveniki s specialističnimi znanji pacientom namenjajo tudi več časa za zdravstveno obravnavo, kar vpliva na njihovo zadovoljstvo (Brown & Grimes 1995; Horrocks, et al., 2002). Pri pacientih, ki so bili obravnavani s strani diplomirane medicinske sestre/zdravstvenika s specialističnimi znanji na področjih, kot so neonatologija, geriatrija ali porodništvo ter nekatera druga, je bilo ugotovljeno, da so bili pri teh pacientih zmanjšani stroški zdravljenja, hospitalizacije so bile krajše, nižja je bila stopnja ponovnega sprejema v bolnišnico in večje je bilo zadovoljstvo pacientov z zdravstveno obravnavo (Bryant-Lukosius, et al., 2004). Najbolj pa lahko poudarimo ugotovitev, da diplomirane medicinske sestre/zdravstveniki s specialističnimi znanji ob nudenju kakovostne na dokazih podprte zdravstvene

nege igrajo ključno vlogo z vidika dolgoročne finančne vzdržnosti zdravstvenega sistema (Grothier, 2012).

V Sloveniji Starc in sodelavci (2009) ugotavljajo, da je ponudba specializacij zdravstvene nege s strani držav Evropske unije in anglosaksonskega sveta obsežna in težko pregledna. Pri samih definicijah, regulaciji in načinu izobraževanja na področju specializacij ni enotnosti. Programe specializacij in nekatere module (npr. predpisovanje zdravil) izvajajo številne visokošolske institucije in različna združenja. Specialistična znanja na področju zdravstvene nege je tako mogoče pridobiti iz psihiatrične zdravstvene nege, zdravstvene nege patronažnega bolnika ali pacienta, onkološke zdravstvene nege, paliativne zdravstvene nege, oskrbe dementnih bolnikov, zdravstvene nege otrok ipd. Tudi Mednarodni svet medicinskih sester, ki daje smernice in priporočila razvoja zdravstvene nege, je že leta 1992 pripravil širši nabor specializacij v zdravstveni negi. Predlagal je, da se specializacije pripravijo na večjih področjih zdravstvene nege, kot so geriatrična zdravstvena nega, javno zdravje, zdravstvena nega otrok, psihiatrična zdravstvena nega, zdravstveno varstvo žensk in otrok, zdravstvena nega patronažnega bolnika ali pacienta, internistična zdravstvena nega, kirurška zdravstvena nega ipd. (International Council of Nurses, 2009). Tako v Veliki Britaniji diplomirane medicinske sestre/zdravstveniki s specialističnimi znanji že od leta 1990 opravljajo preventivne preglede, presejanje za različne bolezni, prevzemajo različne naloge na področju promocije zdravja, zdravstvenega svetovanja, vodenja pacientov s kronično boleznijo, spremljanja pacientov in ponovnih pregledov po končanem zdravljenju ter izvajajo različne intervencije v skladu s smernicami zdravljenja. Pri tem delujejo tako na primarnem kot tudi na sekundarnem nivoju zdravstvenega varstva (Dubois & Singh, 2009).

Kljub dobrim praksam v svetu in dokazanim prednostim, ki jih nudijo diplomirane medicinske sestre/zdravstveniki s specialističnimi znanji, diplomirane medicinske sestre/zdravstveniki v Sloveniji še nimajo razvitih podiplomskih specialističnih izobraževanj. V Sloveniji zaposlenim v zdravstveni negi in študentom zdravstvene nege po končanem študiju karierni razvoj na področju specializacij še ni omogočen, že dalj časa pa o tem potekajo razprave (Bregar, et al., 2013; Lokar, 2013; Skela-Savič, 2013). Kljub temu, da je zdravstveno varstvo izpostavljeno velikim obremenitvam, ki so posledica demografskih sprememb, staranja prebivalstva, čedalje večje ozaveščenosti ljudi, organizacijskih sprememb znotraj zdravstvenega sistema ter do sedaj neuravnoteženega strateškega razvoja zdravstvenega varstva (Poplas Susič & Marušič, 2011), v Sloveniji razvoj specializacij in pomen večje vloge diplomirane medicinske sestre/zdravstvenika ni omogočen. Eden izmed večjih problemov v Sloveniji je neugodno demografsko stanje, kar pomeni, da bo ob takem naraščanju starejšega prebivalstva in vse večjem deležu pacientov s kronično boleznijo oziroma ob nadaljevanju obstoječih demografskih trendov pritisk na zdravstvo vse večji in zdravstvo s finančnega vidika vedno bolj obremenjeno (Starc, 2004). Tako lahko trdimo, da nastaja prostor med drugim tudi za razvoj specializacij v zdravstveni negi (Pajnkihar & Jakl, 2013).

Iz vseh teh razlogov je logično in nujno, da se morajo razvite družbe in izvajalci zdravstvenih storitev na povečane zahteve po zdravstvenih storitvah pripraviti. Smiselno in modro je zdravstveno varstvo organizirati tako, da bo dolgoročno finančno vzdržno in kljub temu kakovostno. Zato smo pri nas na področju zdravstvene nege že pričeli z nekaterimi aktivnostmi. Predvsem smo na podlagi mnenj in želj v domači strokovni javnosti oblikovali širši nabor specializacij, od katerih se nekatere že pripravljajo (Vilar & Ažman, 2011; Kadivec, et al., 2011; Horvat, et al., 2013). V te mnenjske ankete so bili vključeni zaposleni strokovnjaki zdravstvene nege, v razprave pa nihče ni vključeval študentov. Tako smo se v naši raziskavi osredotočili na dodiplomske in podiplomske študente zdravstvene nege in oblikovali raziskovalno vprašanje o odnosu študentov do specializacij v zdravstveni negi, saj so prav oni tisti, ki bodo bodoči povpraševalci na izobraževalnem trgu. Glede na to, da vemo, kakšne bodo bodoče potrebe po zdravstvenih storitvah, je pomembno, da poznamo preference študentov do podiplomskih znanj, saj jih lahko s primernim pristopom med študijem tudi usmerjamo.

Namen in cilj

Namen raziskave je bil ugotoviti in spoznati načrte študentov izbranih zdravstvenih fakultet v Sloveniji za njihov karierni razvoj oziroma ali smisel svojega nadaljnjega izobraževanja vidijo v specializacijah. Z raziskavo smo želeli odgovoriti na naslednja raziskovalna vprašanja:

- Katera so tista področja v zdravstvu, kjer študentje zdravstvene nege prve in druge stopnje potrebe po specializacijah najbolj prepoznavajo?
- V kolikšni meri se študentje strinjajo, da bi z dodatnimi specialističnimi znanji prevzeli nekatere kompetence zdravnikov?
- Zakaj so specializacije v zdravstveni negi po mnenju študentov potrebne?
- Kateri dejavniki so povezani z odnosom študentov do specializacij?

Metode

Raziskava je temeljila na deskriptivni metodi empiričnega raziskovanja. Uporabili smo neeksperimentalno kvantitativno raziskovalno metodo. Za zbiranje podatkov smo uporabili tehniko anketiranja v obliki anonimnega strukturiranega vprašalnika.

Opis instrumenta

Vprašalnik smo sestavili na osnovi pregleda domače in tuje literature o specializacijah v zdravstveni negi (Bryant-Lukosius, et al., 2004; Pulcini, et al., 2009; Starc, et al., 2009; Delamaire & Lafortune, 2010; Vilar, 2011; Skela-Savič, 2013). Odločili smo se za spletno anketiranje, zato smo vprašalnik vnesli na internetno stran 1KA spletne ankete. Vprašalnik je vseboval 20 vprašanj zaprtega tipa v dveh sklopih. Prvi sklop devetih vprašanj je vseboval demografske podatke o anketirancu: spol, starost, letnik in vrsto študija in predhodno izobrazbo in nekatera druga vprašanja. Drugi sklop je vseboval različne trditve, ki se navezujejo na mnenja študentov do specializacij v zdravstveni negi, ki so jih študentje ocenjevali po Likertovi lestvici od 1 do 5 (1 – se popolnoma ne strinjam, 2 – se ne strinjam, 3 – se deloma strinjam, 4 – se strinjam, 5 – se popolnoma strinjam). Za analizo zanesljivosti posameznih sklopov vprašalnika smo uporabili test Cronbach alfa. Pri vseh posameznih sklopih je bil Cronbachov koeficient alfa večji od 0,8, kar dokazuje visoko zanesljivost vprašalnika (Cencič, et al., 2009).

Opis vzorca

V raziskavo smo vključili študente rednega in izrednega študija prvih, drugih in tretjih letnikov ter absolvente zdravstvene nege Fakultete za zdravstvo Jesenice (FZJ), Zdravstvene fakultete v Ljubljani (ZF) in Fakultete za vede o zdravju Univerze na Primorskem (FVZ) ter rednega in izrednega študija študente prvih in drugih letnikov druge stopnje smeri zdravstvena nega na omenjenih fakultetah. Uporabili smo neslučajnostni priročni vzorec. Tako je bilo preko podatkovnih baz fakultet razposlanih 1333 vprašalnikov. V celoti izpolnjenih je bilo 385, kar predstavlja 29-odstotno realizacijo vzorca. Opis vzorca je razviden v Tabeli 1.

Tabela 1: *Opis vzorca*
Table 1: *Description of the sample*

Demografski in drugi s študijem povezani podatki/Demographic and other data related to the studies	***n***	**%**
Spol/Gender		
Moški/Male	52	14
Ženske/Female	333	86
Vrsta študija/Type of studies		
Redni/Full-time	255	66
Izredni/Part-time	130	34
Stopnja študija/Level of studies		
Dodiplomski študij/Undergraduate studies	357	93
Podiplomski študij/Postgraduate studies	28	7
Katero fakulteto obiskujete?/ Which faculty do you attend?		
FZJ	153	40
UL ZF	148	38
UP FVZ	84	22

Legenda/Legend: n – število anketirancev/number of respondents; % – delež anketirancev/proportion of respondents; FZJ – Fakulteta za zdravstvo Jesenice/Faculty of Health Care Jesenice; UL ZF – Univerza v Ljubljani, Zdravstvena fakulteta/University of Ljubljana, Faculty of Health Sciences; UP FVZ – Univerza na Primorskem, Fakulteta za vede o zdravju/University of Primorska Faculty of Health Sciences

Prvi letnik na dodiplomski stopnji zdravstvene nege je obiskovalo 56 (15 %) študentov, drugi letnik 113 (32 %), tretji letnik 98 (28 %), absolventov je bilo 90 (25 %). Prvi letnik študija na podiplomski stopnji zdravstvene nege (magisterij) je obiskovalo 8 (29 %) študentov, drugega pa 20 (71 %). Povprečna ocena opravljenih izpitov študentov je bila 7,8. Povprečna starost je bila 27 let ($s = 7$). Struktura anketirancev glede na že doseženo izobrazbo je bila naslednja: 258 (68 %) s končano srednjo zdravstveno šolo, 37 (9 %) z drugo srednjo strokovno šolo, 52 (13 %) z gimnazijo in 38 (10 %) z visoko šolo ali več.

Opis poteka raziskave in obdelave podatkov

S strani FZJ, ZF in FVZ smo predhodno pridobili soglasje za raziskovanje. Anketirance smo predhodno seznanili z namenom raziskave in da je sodelovanje v raziskavi prostovoljno in anonimno. Raziskava je potekala v obdobju od 22. 7. 2013 do 16. 9. 2013. Za pošiljanje anket je bil zadolžen referat posamezne fakultete, ki je razposlal ankete vsem študentom, katerih elektronske naslove so imeli v svojih bazah. Pričakovana oz. predvidena realizacija vzorca je bila za elektronsko anketiranje značilno nižja tudi zaradi dejstva, da se je anketiranje izvajalo v času poletnih počitnic, vendar smo kontaktnim osebam oziroma predstavnikom letnika večkrat poslali opomnik za ponovno pošiljanje vprašalnikov študentom. Vse pridobljene podatke smo v oktobru 2013 uredili s pomočjo računalniškega programa Microsoft Office Word 2007 in Microsoft Office Excel 2007 in jih statistično obdelali s programom SPSS 20 (IBM; SPSS Inc., Chicago, IL, USA). Rezultate statističnega programa smo predstavili s pomočjo slik in tabel. Pri interpretaciji rezultatov smo uporabili *t*-test, analizo ANOVA, Pearsonovo korelacijo in faktorsko analizo. Kot mejo statistične značilnosti smo upoštevali vrednost $p < 0,05$.

Rezultati

Vse študente smo v prvem sklopu vprašalnika poleg demografskih podatkov (Tabela 1) spraševali tudi po željah glede nadaljnjega kariernega razvoja v zdravstveni negi. Za nadaljevanje študija na področju zdravstvene nege bi se odločilo 258 (67 %) anketirancev. Dvom v nadaljevanje študija izraža 107 (28 %) anketirancev. Študij na ožjem specialističnem področju bi nadaljevalo 156 (41 %) anketirancev, 60 (15 %) anketirancev pa na

magisteriju iz zdravstvene nege (odgovarjali so samo študentje prve stopnje). V zdravstveni negi bi se brez nadaljevanja študija zaposlilo 113 (30 %) anketirancev, 27 (7 %) anketirancev bi nadaljevalo študij na magisteriju druge smeri, 26 anketirancev o kariernem razvoju še ne razmišlja, 3 (1 %) študentje bi odšli iz poklica in se zaposlili v drugi panogi.

V nadaljevanju so predstavljeni rezultati raziskave po posameznih raziskovalnih vprašanjih.

Katera so tista področja v zdravstvu, kjer študentje zdravstvene nege prve in druge stopnje potrebe po specializacijah najbolj prepoznavajo?

Največ - 67(20 %) anketiranih študentov je prepoznalo potrebo po specializaciji v nujni medicinski pomoči. 49 (14 %) študentov je prepoznalo potrebo po specializaciji v zdravstveni negi v anesteziologiji in intenzivni terapiji, 39 (11 %) po specializaciji v kirurški zdravstveni negi in 33 (10 %) po specializaciji v pediatrični zdravstveni negi. Na petem mestu je bila specializacija v patronažni zdravstveni negi (32 (9 %) študentov), na šestem specializacija v psihiatrični zdravstveni negi (30 (8 %) študentov). Sledijo naslednje specializacije: javno zdravje in promocija zdravja (22 (6,5 %) študentov), onkološka zdravstvena nega (16 (4,7 %) študentov), internistična zdravstvena nega (15 (4,4 %) študentov), paliativna zdravstvena nega (10 (2,8 %) študentov), zdravstvena nega starostnika (8 (2,4 %) študentov). Študentje so zaznali najmanj potreb po naslednjih specializacijah: zdravstvena nega v medicini dela, prometa in športa (7 (2 %) študentov), zdravstvena nega pacientov s kronično boleznijo (5 (1,4 %) študentov), bolnišnična higiena in okužbe (5 (1,4 %) študentov) in enterostomalna terapija (2 (0,6 %) študentov).

V kolikšni meri se študentje strinjajo, da bi z dodatnimi specialističnimi znanji prevzeli nekatere kompetence zdravnikov?

Študentje so trditve ocenjevali po Likertovi lestvici od 1 do 5 (1 – niso pomembne, 2 – deloma pomembne, 3 – pomembne, 4 – zelo pomembne, 5 – najbolj pomembne). Večina kompetenc ima povprečje nad 3, v vprašalniku so torej ocenjene kot pomembne. Kompetence, ocenjene nad 4 (zelo pomembne), so: več strokovnega znanja za izvajanje zdravstvene nege, zdravstvenovzgojno delo in promocija zdravja, samostojno vodenje urejenih pacientov s kronično boleznijo. V sredini od 3,7 do 3 so se znašle kompetence: napotitev na preglede (rentgensko slikanje) in laboratorijske preiskave (kri, urin), izvajanje manjših kirurških posegov npr. šivanje ran, predpisovanje terapevtskih pripomočkov, samostojno postavljanje anamneze, napotovanje pacientov k drugim strokovnjakom, izvajanje preventivnih preiskav (ultrazvok, endoskopija), pooblastilo za sprejem in odpust pacienta v bolnišnico. Na zadnjem mestu so se znašle naslednje kompetence (ocenjene z manj kot 3): odločanje o diagnostičnih postopkih, predpisovanje zdravil, pravica do postavljanja medicinskih diagnoz (diagnosticiranja).

Zakaj so specializacije v zdravstveni negi po mnenju študentov potrebne?

Anketiranci so na posamezne trditve odgovarjali z oceno po Likertovi lestvici (1 – se popolnoma ne strinjam, 2 – se ne strinjam, 3 – se deloma strinjam, 4 – se strinjam, 5 – se popolnoma strinjam). Na razpolago so imeli 10 podanih trditev. V ospredju, povprečje nad 4, je razvoj novih tehnologij in potrebe po naprednih znanjih. Sledijo razlogi, kot so: čedalje bolj obremenjen zdravstveni sistem/varstvo in naraščanje števila kroničnih pacientov ter povečano povpraševanje po zdravstvenih storitvah. V sredini, povprečje od 3,6 do 4, je razlog daljše preživetje kroničnih pacientov. Na zadnjem mestu, povprečje pod 3,6, so ekonomski razlogi: večja dostopnost in razbremenitev zdravnikov, medicinske sestre kot cenejša delovna sila, višji stroški zdravstvene obravnave starejših, spremenjena demografska struktura (vse več starejših), podaljševanje življenja.

S pomočjo faktorske analize (rotacijska metoda) smo želeli ugotoviti, ali zveze med opazovanimi spremenljivkami (ocene trditev, zakaj so specializacije potrebne) lahko pojasnimo z manjšim številom posredno opazovanih spremenljivk ali faktorjev, preko katerih bomo lahko v nadaljevanju raziskovali odnos študentov do specializacij. Primernost korelacijske matrike za faktorsko analizo smo preverili s Kaiser-Mayer-Olkinovim testom (KMO-testom), izračunali smo vrednost 0,836 (priporočena meja je nad 0,5), in Bartlettovim testom, tudi pri tem je bila izračunana vrednost statistično pomembna. Oba rezultata kažeta na smiselnost uporabe faktorske analize.

Z uporabo faktorske analize so bili prepoznani trije faktorji med trditvami, zakaj so specializacije po mnenju študentov potrebne. S tremi faktorji smo pojasnili 66,57 % skupne variance, komunalitete vseh posameznih spremenljivk so bile večje od 0,50 (kar je pogoj), večina od njih (od desetih spremenljivk) je večjih od 0,6 (ob pogoju, da je njihova lastna vrednost večja od 1).

S prvim faktorjem – *demografski razlogi,* pojasnimo 32,54 % variance. Z drugim faktorjem – *razlogi obremenjenosti zdravstvenega sistema,* pojasnimo 19,81 % variance. S tretjim faktorjem – *ekonomski razlogi* pojasnimo 14,21 % variance (Tabela 2).

Kateri dejavniki vplivajo na odnos študentov do specializacij?

V nadaljevanju smo raziskovali pomen različnih dejavnikov, kot so spol, starost, letnik študija in uspešnost študentov pri študiju, za posamezne faktorje.

Tabela 2: *Faktorska analiza spremenljivk*
Table 2: *Factor analysis of variables*

Trditve zakaj so specializacije potrebne/ Arguments why specialization are needed	**Faktor 1/ Factor 1**	**Faktor 2/ Factor 2**	**Faktor 3/ Factor 3**
Zaradi spremenjene demografske strukture prebivalstva/ Due to changes in the demographic structure	0,828	/	/
Zaradi višanja življenjske dobe/Due to rising life expectancy	0,806	/	/
Zaradi naraščanja števila pacientov s kronično boleznijo/ Due to increasing number of chronic patients	0,763	/	/
Zaradi daljšega preživetja pacientov s kronično boleznijo/ Due to prolonged survival of chronic patients	0,735	/	/
Zaradi višjih stroškov zdravstvene obravnave starejših/ Due to the higher medical costs of elderly care	0,682	/	/
Zaradi povečanega povpraševanja po zdravstvenih storitvah/ Due to increased demand of health services	/	0,755	/
Zaradi hitro razvijajoče se tehnologije in potreb po naprednih znanjih medicinskih sester/Due to the fast evolving technology and the need for advanced skills of nurses	/	0,732	/
Zaradi čedalje bolj obremenjenega zdravstvenega sistema/ Due to an increasingly burdened health system	/	0,730	/
Ker bodo medicinske sestre cenejša delovna sila/ In order to decrease the cost of nurses	/	/	0,842
Ker bodo zdravniki bolj dostopni in razbremenjeni/ Doctors would be more accessible and less burdened	/	/	0,786

Legenda/Legend: Faktor 1/Factor 1 – demografski razlogi/demographic reasons; Faktor 2/Factor 2 – razlogi obremenjenosti zdravstvenega sistema/reasons due to health system burden; Faktor 3/ Factor 3 – ekonomski razlogi/economic reasons

Spol

Pomen spola smo raziskovali s t-testom za neodvisne vzorce. Do statistično pomembnih razlik pride le pri faktorju *ekonomski razlogi*. Zaključimo lahko, da moški v primerjavi z ženskami v povprečju pogosteje ocenjujejo ekonomske razloge kot najtehtnejši razlog za razvoj specializacij v zdravstveni negi ($t = 0{,}552$, $p = 0{,}011$).

Starost

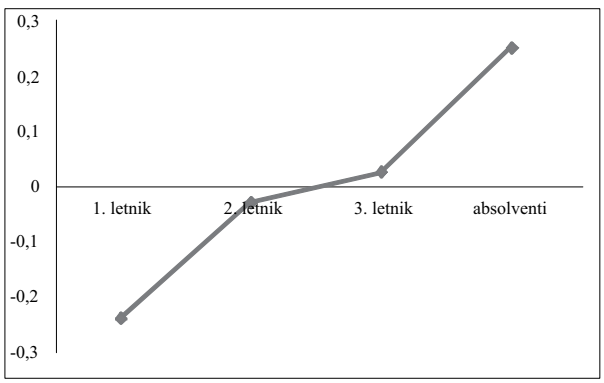
Pri pomenu starosti za posamezne faktorje smo uporabili Pearsonovo korelacijo, kjer smo ugotovili šibko in pozitivno korelacijo s prvim faktorjem *demografski razlogi* ($r = 0{,}354$, $p = 0{,}018$) in šibko ter negativno korelacijo pri drugem faktorju *razlogi obremenjenosti zdravstvenega sistema* ($r = -0{,}322$, $p = 0{,}034$). Starejši študentje torej pripisujejo večji pomen *demografskim razlogom* za specializacijo in vidijo manjši smisel v razvoju specializacij zaradi *obremenjenosti zdravstvenega sistema*.

Letnik študija

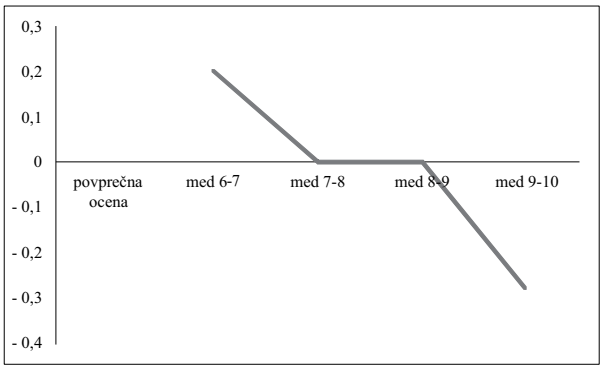
Za ocenjevanje pomena letnika študija smo uporabili test ANOVA, kjer smo ugotavljali, ali pri ocenjevanju faktorjev obstajajo statistično pomembne razlike glede na letnik študija (prvi, drugi, tretji letnik in skupina absolventov, kamor smo vključili vse študente na drugi stopnji). Do statistično pomembnih razlik v odgovorih študentov po posameznih letnikih študija je prišlo le pri prvem faktorju – *demografski razlogi* ($F = 2{,}407$, $p = 0{,}041$). Slika 1 kaže, da študentje višjih letnikov dajejo večji pomen nujnosti specializacije za kakovostnejšo obravnavo starostnikov in pacientov s kronično boleznijo.

Pomen ocene

Pomen ocene posameznih faktorjev smo prav tako ugotavljali s testom ANOVA. Študente smo glede na povprečno oceno razdelili v štiri skupine (6,0–6,9; 7,0–7,9; 8,0–8,9; 9,0–10,0).



Slika 1: *Vpliv letnika študija na faktor demografski razlogi*
Figure 1: *The importance of the year of study on factors – Demographic reasons*



Slika 2: *Pomen ocene faktorja dostopnost in razbremenitev zdravnikov zaradi diplomiranih medicinskih sester/ zdravstvenikov kot cenejše delovne sile v zdravstvu.*
Figure 2: *Importance of ratings on the factor - accessibility of doctors and to decrease the cost of nurses*

Test ANOVA nam pokaže, da prihaja do statistično pomembnih razlik med posameznimi odgovori glede pomena faktorja *ekonomski razlogi* (F = 3,222, p = 0,023). Iz Slike 2 lahko sklepamo, da višja kot je povprečna ocena, manjša je ocena potrebe po specializaciji zaradi dostopnosti in razbremenitve zdravnikov zaradi medicinskih sester kot cenejše delovne sile v zdravstvu.

Pomen odločitve o nadaljevanju šolanja

Študente smo glede na odgovore razdelili v tri skupine (sploh si ne želim, želim si, močno si želim). Do statistično pomembnih razlik med posameznimi skupinami je prišlo pri drugem faktorju – *razlogi obremenjenosti zdravstvenega sistema* (F = 3,664, p = 0,027). Sklepamo, da bolj kot si študentje želijo nadaljevati študij, večji pomen za razvoj specializacij vidijo v obremenjenosti zdravstvenega sistema (v povečanem povpraševanju po zdravstvenih storitvah, obremenjenosti zdravstvenega sistema in prisotnosti novih tehnologij).

Diskusija

V raziskavi spoznavamo, da si študentje nadaljnjega kariernega razvoja v smeri specializacij želijo, vendar lahko rečemo, da v Sloveniji trenutno še ne prihajamo do točke, da bi bili v sistemu zdravstvenega varstva na tem področju prepoznani. V Sloveniji zaposlenim in študentom v zdravstveni negi karierni razvoj na področju specializacij še ni omogočen, vendar v prid temu razprave potekajo že dalj časa (Bregar, et al., 2013; Lokar, 2013). Tudi strokovna združenja in visokošolski zavodi na področju zdravstvene nege vse bolj poudarjajo in spodbujajo razvoj specializacij po vzoru tujih držav (Požun & Skela-Savič, 2011; Skela-Savič & Klemenc, 2011). Ugotavljamo, da študentje vidijo mnoge razloge, ki govorijo v prid razvoju specializacij v zdravstveni negi, kot so demografski razlogi, obremenjenost zdravstvenega sistema in ekonomski razlogi. Večina študentov v raziskavi svoj karierni razvoj vidi v nadaljevanju šolanja na področju zdravstvene nege, od tega velik del na ožjem specialističnem študiju zdravstvene nege. Slednje je v nasprotju z raziskavo, kjer so po nadaljnjem študiju spraševali zaposlene, ki so temu manj naklonjeni (Altman, 2011). Pri tem moramo poudariti, da si večina naših anketirancev želi študij specializacij nadaljevati redno. Podatek je pomemben, saj predvidevamo, da so zdravstvene fakultete in visoke šole v finančnem smislu v veliki meri odvisne tudi od šolnin študentov izrednega študija. Tudi Skela-Savič (2013) opozarja na čedalje bolj skopo finančno politiko države, ki vpliva na razvoj zdravstva in visokega šolstva ter otežuje izobraževanje zaposlenih in financiranje novih študijskih programov. Spodbudno je to, da si večina študentov želi nadaljnje karierne poti tudi v obliki magisterija s področja zdravstvene nege. Izobraževanje na drugi stopnji bolonjskega študija – magisteriju zdravstvene nege, je pomembno tudi zaradi tega, ker večina držav in International Council of Nurses za prevzemanje specialističnih oblik dela v zdravstveni negi zahteva omenjeno stopnjo izobrazbe (International Council of Nurses, 2005; Delamaire & Lafortune, 2010). Prav tako je magisterij s področja zdravstvene nege pomemben zato, ker nadomešča univerzitetno izobrazbo zdravstvene nege, ki je v Sloveniji še ni (Skela-Savič & Klemenc, 2011).

Iz nabora specializacij v anketi, med katerimi so izbirali študentje, se jih je največ odločilo za nujno medicinsko pomoč. Prav tako v samem vrhu sta zdravstvena nega v anesteziologiji in intenzivni terapiji ter kirurška zdravstvena nega, iz česar predpostavljamo, da si študentje želijo specializacij, kjer se medicina in zdravstvena nega bolj prepletata in kjer je več medicinsko-tehničnih posegov. To si morda lahko razlagamo s tem, da so anketirani študentje mladi in se želijo zaposliti ter se specializirati sprva na področjih, ki se bolj prepletajo z medicino, saj tako pridobijo več referenc, kar jim tudi omogoča boljše možnosti za nadaljnjo zaposlitev na drugih področjih ali pa celo v tujini. Tudi Vilar (2011) navaja, da je razvoj specializacij še posebno pomemben tam, kjer se prepletata zdravstvena nega in medicina. Po drugi strani pa lahko predpostavljamo, da če bi anketirali že zaposlene diplomirane medicinske sestre/ zdravstvenike in posledično tudi starejše, bi verjetno v ospredje prišla specialna področja zdravstvene nege, ki so po našem mnenju manj stresna in bolj povezana s spremenjeno demografsko strukturo prebivalstva, kar nam potrjujejo rezultati, da starejši študentje dajejo večji pomen demografskim razlogom, torej zdravstveni negi starostnikov. Nasproti našim ugotovitvam je mnenjska anketa, ki sta jo za Zbornico – Zvezo opravili Vilar in Ažman (2011). Anketiranci so se v tej anketi v največji meri odločali za specializacije v medicini

dela, prometa in športa, patronažni zdravstveni negi, zdravstveni negi v pediatriji, zdravstveni negi v gerontologiji in specializaciji v bolnišnični higieni. Razlike v rezultatih te ankete v primerjavi z našimi lahko po našem mnenju pojasnimo tudi z izbiro vzorca anketirancev Zbornice – Zveze, ki ni vključeval neposrednih izvajalcev zdravstvene nege, poleg tega je bil vzorec tudi majhen.

V raziskavo vključeni študentje se zavedajo, da so specializacije v zdravstveni negi najbolj potrebne zaradi novih tehnologij in naprednih znanj, zaradi naraščanja števila pacientov s kronično boleznijo in podaljšane življenjske dobe, vedno bolj obremenjenega zdravstvenega sistema in povečanega povpraševanja po zdravstvenih storitvah. Kljub temu zavedanju jim specializacije, ki so izraziteje povezane s spremenjeno demografsko strukturo (npr. gerontološka zdravstvena nega), niso toliko zanimive, saj se za specializacijo, ki bi govorila v prid temu dejavniku, niso opredelili. Pask (2011) ugotavlja, da so se specializacije razvile tudi zaradi hitro razvijajoče se sofisticirane tehnologije in razširjajočega se znanstvenega znanja. V našem primeru predpostavljamo, da so ocene te spremenljivke povezane z nizko starostjo študentov oziroma da je študentom tehnologija bližje kot pa starejšim, saj so odraščali v času še posebno hitrega tehnološkega razvoja. Zopet lahko izpostavimo, da skrb za starostnike raste s starostjo anketirancev in letnikom študija. Po našem mnenju je zaskrbljujoče, da v času študija mladih ljudi ne znamo pridobiti za delovanje na področjih, ki bodo v prihodnosti delovno zelo intenzivna, saj se pričakuje, da bo dela s starostniki in posledično s problemi, ki jih prinaša starost, vse več. Tudi nekateri tuji avtorji trdijo, da gerontologija spada med manj zaželena področja za zaposlene v zdravstvenem varstvu in da so za pridobivanje kadra na teh področjih potrebne nadaljnje aktivnosti (Brown, et al., 2008; Shen & Xiao, 2012; Grymonpre, et al., 2013).

V literaturi omenjajo, da se je razvoj diplomirane medicinske sestre/zdravstvenika s specialističnimi znanji začel v 60. in 70. letih prejšnjega stoletja v Združenih državah Amerike, Kanadi in Veliki Britaniji kot odraz pomanjkanja zdravnikov, spremenjenih demografskih struktur prebivalstva (vse več starejših in s tem pacientov s kronično boleznijo), večjih potreb prebivalstva po dostopnosti zdravstvenih storitev, zaradi nenehnega zviševanja stroškov v zdravstvu ipd. (Delamaire & Lafortune, 2010). V naši raziskavi se odraža, da so demografski razlogi (skrb za starostnike) bližje starejšim študentom in tistim, ki so v višjem letniku študija, kar lahko pojasnimo tudi z vplivom določenih študijskih predmetov (zdravstvena nega starostnika z gerontologijo in rehabilitacijo). Moški anketiranci dajejo večji pomen ekonomskim razlogom (medicinske sestre/zdravstveniki bodo cenejša delovna sila, zdravniki bodo dostopnejši), vendar pa na tem mestu ne moremo pojasniti razlogov za te razlike. Ekonomski razlogi za razvoj specializacij so bližje tudi tistim študentom, ki imajo nižjo povprečno oceno, kar verjetno lahko pojasnimo s tem, da študentje, ki so bolj uspešni, bolj cenijo zdravstveno nego. Ekonomske razloge Delamaire in Lafortune (2010) omenjata kot poglavitne vzroke, ki naj bi pospeševali razvoj specializacij v zdravstveni negi. Študentje, ki želijo nadaljevati študij, se tudi bolj nagibajo k drugemu faktorju, tj. obremenjenosti zdravstvenega sistema kot razlogu za razvoj specializacij. Vse skupaj govori v prid temu, da v raziskavi sodelujoči študentje smisel oz. cilj svojega študija vidijo v tem, da bodo opravljali poklic na področju negovanja in ne toliko v tem, da bi nadomeščali zdravnika. Prav tako menimo, da svojega dela stroškovno ne podcenjujejo.

Anketiranci večinoma menijo, da bo diplomirana medicinska sestra/zdravstvenik s specialističnimi znanji s svojim znanjem prispevala k bolj kakovostni in varni zdravstveni negi. Specializacije jim bodo omogočale nadaljnji karierni razvoj. Karierni razvoj je anketirancem oz. študentom zelo pomemben. V več državah Evropske unije (Poljski, Cipru, Irski, Češki) menijo, da bi razvoj specialističnih znanj v zdravstveni negi služil tudi kot pritegnitev diplomiranih medicinskih sester/zdravstvenikov v nadaljnje podiplomsko izobraževanje in da bi jih tako z izboljšanimi kariernimi možnostmi lažje obdržali v državi, saj se jih čedalje več seli v druge države, kjer imajo boljše pogoje za zaposlitev in karierni razvoj (Aiken & Cheung , 2008; Delamaire & Lafortune, 2010).

Pomembnost razvoja specializacij se je še posebej pomembno pokazala na področju, kjer se prepletata zdravstvena nega in medicina. Anketiranci se zavedajo, da se morajo specializacije razvijati vzporedno s spremenjenimi nacionalnimi potrebami, kar v Sloveniji v zadnjih letih že večkrat opozarjajo na vsakoletnih posvetih *Moja kariera – Quovadis – My career* Fakultete za zdravstvo Jesenice in kar v tujini Organisation for Economic Co-operation and Development dokazuje že dalj časa (Delamaire & Lafortune, 2010).

Proti pričakovanjem rezultati kažejo, da študentje v ospredje ne postavljajo kompetenc, ki so v domeni zdravnikov, kot npr. predpisovanje zdravil, diagnosticiranje, odpust bolnika, ampak so se odločali za kompetence, ki so nekoliko bolj povezane z zdravstveno nego, oziroma med katerimi nekatere že izvajajo. Nekoliko v navzkrižju z naborom specializacij, za katere so se anketiranci največ odločali, je le poudarek anketiranih na kompetence v povezavi z medicinsko-tehničnimi intervencijami.

Omejitve raziskave

Med izvedbo raziskave smo naleteli na nekaj ovir. Pričakovana oz. predvidena realizacija vzorca je bila za elektronsko anketiranje značilno nižja tudi zaradi dejstva, da se je anketiranje izvajalo v času poletnih počitnic. Vzorec je bil priložnosten, kar onemogoča posploševanje rezultatov na populacijo študentov zdravstvene nege. V raziskavo smo vključili tudi študente prvih letnikov, ki po našem mnenju še nimajo toliko izoblikovanih lastnih kariernih poti.

Zaključek

V raziskavi zajetim študentom je karierni razvoj v obliki specializacij v zdravstveni negi pomemben in si ga želijo. Med najbolj zaželenimi specializacijami so predvsem tiste ki so povezane z medicino in v ospredje postavljajo medicinsko-tehnične posege. Toda različni dejavniki, kot so spol, starost, letnik študija, povprečna ocena in odločitev o nadaljnjem izobraževanju na področju zdravstvene nege, imajo velik vpliv na odnos študentov do specializacij. Uspešnejši študentje, starejši študentje, študentje višjih letnikov in študentje z željo po nadaljnjem izobraževanju dajejo večji pomen specializacijam, ki so bolj povezane z zdravstveno nego in v ospredje postavljajo negovanje. Tudi želja po določenih dodatnih kompetencah kaže, da študentje v ospredje ne postavljajo medicinskega znanja, ampak več strokovnega znanja s področja zdravstvene nege, zdravstvenovzgojno delo, promocijo zdravja in vodenje pacientov z urejeno kronično boleznijo. Ne glede na vse bodo s specializacijami v zdravstveni negi pridobili tudi uporabniki, saj bodo deležni kakovostnejše in varnejše zdravstvene obravnave.

Glede na zastavljeni namen in cilje raziskave tako sklepamo, da smo uspeli definirati odnos študentov do razvoja specializacij v zdravstveni negi. Menimo, da ekonomsko-socialna kriza, spremenjena demografska struktura prebivalstva, večja incidenca kroničnih bolezni, tako v svetu kot pri nas močno vplivajo tako na organizacijo sistema zdravstvenega varstva kot tudi na zdravstveno nego. Specializacije v zdravstveni negi in razvoj podiplomskih znanj so pomembni tudi za vzdržnost zdravstvenega sistema, vendar odločevalci zdravstvene politike ne omogočajo enakomernega razvoja vseh strok v sistemu zdravstvenega varstva. Prav tako menimo, da študentje dopuščajo možnost, da zdravniški lobi zaradi pozicioniranja in dobro plačanih delovnih mest zdravstveni negi ne bi pustil, da bi se nekatere kompetence zdravnikov razširile na diplomirane medicinske sestre/zdravstvenike. Razvoj specialističnih znanj v zdravstveni negi je nujen predvsem za zagotovitev kakovostne in varne zdravstvene obravnave ter oskrbe pacientov in tudi za razvoj kariernih možnosti za študente zdravstvene nege in že zaposlene diplomirane medicinske sestre/zdravstvenike. Toda pri razvoju specializacij v zdravstveni negi moramo biti previdni in premišljeni, da bi se izognili brezposelnosti diplomiranih medicinskih sester/zdravstvenikov, ki bi se specializirali na ožjem specialističnem področju. Ob tem ne gre pozabiti na ključno poslanstvo zdravstvene nege, to je negovanje, s katerim v procesu zdravstvene obravnave pacientom nudimo bližino, smo pristni v odnosu in jih razumemo – česar jim drugi bolj tehnično usmerjeni poklici v zdravstvenem sistemu ne uspejo dati.

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Izvirni znanstveni članek/Original scientific article

Kakovost življenja starostnikov z depresijo v domskem varstvu
Quality of life of older people with depression in residential care

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Ključne besede: duševno zdravje; samoocena zdravja; socialna vključenost; dom starejših

Key words: mental health; self-assessed health status; social inclusion; nursing homes for the elderly

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IZVLEČEK

Uvod: Starostno obdobje spremljajo številne spremembe, ki povečajo starostnikovo ranljivost in hkrati oblikujejo značilne simptome depresije ter vplivajo na kakovost življenja. Namen raziskave je ugotoviti razlike v kakovosti življenja, vključevanju v družabne aktivnosti in samooceni zdravja starostnikov z depresijo in starostnikov brez depresije.

Metode: Raziskava je temeljila na kvantitativni metodologiji. Vključenih je bilo 138 oseb, od tega 69 oseb z depresivno motnjo in 69 oseb brez depresivne motnje. Podatki so bili pridobljeni z osebnim anketiranjem starostnikov, ki so bili stanovalci izbranih domov za starejše občane v Pomurju. Uporabljen je bil vprašalnik EuroQol-5D (Euro Quality of life – 5 Dimension), zanesljivost je bila dobra (r = 0,86). Raziskava je potekala oktobra 2013. Pridobljeni podatki so bili obdelani v statističnem programu IBM SPSS Statistics ver. 19.0. Za testiranje hipotez je bil uporabljen test χ^2.

Rezultati: Rezultati pokažejo, da je kakovost življenja depresivnih anketirancev značilno slabša (p < 0,001) kot kakovost življenja anketirancev brez depresije. Anketiranci z depresijo se značilno manj (p < 0,005) vključujejo v družabne aktivnosti. Prav tako je samoocena zdravja anketirancev z depresijo, prikazana z vizualno analogno lestvico, značilno slabša (p < 0,001).

Diskusija in zaključek: Depresija povzroča hudo poslabšanje kakovosti življenja obolelih oseb. Starostniki z depresijo, ki bivajo v domskem varstvu, pogosteje opuščajo aktivnosti, za katere bi bili še zmožni, in se manj vključujejo v družabne aktivnosti. Več pozornosti je potrebno nameniti za ohranjanje obstoječih sposobnosti starostnikov in tako ohraniti posameznikov občutek lastne učinkovitosti in zadovoljstva.

ABSTRACT

Introduction: The period of old age is accompanied with many changes which increase the vulnerability of elderly people, bring about typical symptoms of depression and influence the quality of life. The main purpose of this research is to identify the difference in the quality of life, inclusion in social activities and self-assessed health status of the elderly with and without depression.

Methods: Quantitative methodology was used in this research. It included 138 participants, 69 of which suffered from depression and 69 did not suffer from depression. Data were collected through personal interviews with the elderly who were residents of nursing homes for the elderly in the Pomurje region. Interviews were conducted with the help of EuroQol-5D (Euro Quality of Life – 5 Dimension) questionnaire. The reliability coefficient was good (r = 0.86). Research work was conducted in October 2013. Data analysis was performed using a IBM SPSS Statistics ver. 19.0 statistical programme. For hypothesis testing Hi-square test was used.

Results: The results show that the quality of life of the respondents with depression was significantly poorer (p < 0.001) than the quality of life of those without depression disorder. Respondents with depression are significantly less involved (p < 0.005) in social activities than those without depression disorder. Self-assessed health status grade of respondents with depression is also significantly worse (p < 0.001). The results are shown with visual-analogue scale.

Discussion and conclusion: Depression causes severe deterioration in quality of life of individuals suffering from it. The elderly with depression disorder, living in nursing homes for the elderly, more often exclude themselves from the activities, which they are physically capable of performing and they are less willing to join social activities. More emphasis should be placed to retain the existing skills of the elderly and thus their feeling of self-efficiency and satisfaction would be preserved.

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Uvod

Raziskovanje kakovosti življenja starostnikov je v zadnjih letih deležno vedno več pozornosti, saj število starostnikov narašča (Nemec, 2007; Muršec, 2011; Smovnik, 2011; Kogoj, 2013). Med drugim se raziskave nanašajo tudi na kakovost življenja starostnikov v povezavi z njihovo nastanitvijo in oskrbo, saj je danes vse več starostnikov nameščenih v različne oblike institucionalnega varstva. V Sloveniji je bilo v letu 2012 v domskem varstvu okrog 6,5 % starejših od 65 let (Kerbler, 2012), zato je tudi smiselno raziskovati kakovost življenja stanovalcev domov za starejše.

Izboljšanje socialnih in zdravstvenih pogojev omogoča vedno daljšo življenjsko dobo in velikemu številu starostnikov tudi zadovoljivo telesno in duševno zdravje. Kljub vsemu še vedno ostaja pomemben delež starostnikov, ki trpijo zaradi različnih zdravstvenih težav. Pogosta duševna motnja v starostnem obdobju je depresija, ki je pogosto povezana z drugimi telesnimi in duševnimi obolenji (Rudolf, 2004). Depresija je resno zdravstveno stanje, ki prizadene telo, razpoloženje in mišljenje (Kores Plesničar, 2004). Obolelim povzroči hudo oškodovanost tako na področju fizičnega kot socialnega delovanja (Kores Plesničar, 2006) in je najpogostejši vzrok za odsotnost z dela ter zgodnjo upokojitev (Csépe, 2007). Prevalenca depresije se po vsem svetu giblje med 10 in 25 % (Kores Plesničar, 2011). Mnogo večjo prevalenco pa dosegajo depresivni simptomi, ki ne zadoščajo za postavitev diagnoze. Takšni simptomi so še posebej pogosti med starostniki, pri katerih je depresija težje prepoznana zaradi pogoste prisotnosti telesnih obolenj in upada kognitivnih sposobnosti. Delež starostnikov, pri katerih depresivna simptomatika dosega kriterije za postavitev diagnoze, je večja pri starostnikih v eni izmed oblik institucionalnega varstva (Roškar, 2010). Poleg bioloških in psiholoških dejavnikov je starostna depresija pogosteje pogojena z različnimi socialnimi dejavniki. Predvsem specifične življenjske okoliščine, ki spremljajo starost, povečajo verjetnost negativnih čustvenih stanj. Starostniki se pogosto srečujejo z dogodki, kot so izgube partnerja in prijateljev, zdravstvene težave in z njimi povezana zmanjšana samostojnost (Šadl, 2007). Tudi osamljenost in slabše socialno-ekonomsko stanje močno vplivata na starostnikovo duševnost (Tančič Grum, 2010). Negativna čustvena stanja se dodatno stopnjujejo pri starostnikih, ki bivajo v institucionalnem varstvu. Predvsem brezkompromisno prilagajanje domskemu redu, onemogočena samostojna skrb za sebe in svoje okolje ter zmanjšani stiki s svojci in prijatelji povzročajo občutke nekoristnosti, izgube individualnosti in pasivnosti (Postružnik, 2000). Starostniki, ki bivajo v institucionalnem varstvu, izražajo večjo željo po prijaznih besedah, možnosti izražanja čustev, pojasnitvah, strpnosti ob izvajanju različnih negovalnih intervencij (Habjanič, 2011). Specifični dejavniki tveganja oblikujejo tudi značilno klinično sliko depresije v starosti. Predvsem poslabšanje simptomov telesnih obolenj in pretirano pritoževanje nad telesnimi simptomi, za katere ni možno najti telesnega izvora (somatizacija), sta pomembna simptoma starostne depresije. Pogosto so prisotne še različne motnje kognitivnih funkcij, različne oblike spremenjenega vedenja in anksioznost. Prepoznavanje depresije v starosti je težavno predvsem zaradi minimalnega izražanja žalosti (Poštuvan, 2010).

Simptomatika depresije ima izrazito negativen vpliv na kakovost življenja obolelih oseb, njihovih družin in tudi okolja (Škes, 2010; Murtić, 2011). Nezdrave življenjske navade, ki so značilne za bolnike z depresijo (kajenje, telesna neaktivnost, visoka telesna masa), so pogosto dejavnik tveganja za razvoj telesnih obolenj (Škes, 2010). Depresija povzroča večjo samomorilno ogroženost in umrljivost, predvsem zaradi kardiovaskularnih obolenj. Povzroča tudi podaljšano bolnišnično zdravljenje in visoke stroške medicinske obravnave (Škes, 2010). Obolelemu povzroča tudi večjo odvisnost in zmanjšanje življenjskih in socialnih spretnosti (Chan, et al., 2008). Kakovost življenja stanovalcev domov za starejše se pogosto poskuša zagotoviti s tehnično opremljenostjo domov. Pozablja se, da je kakovost življenja povezana predvsem s stanovalčevimi lastnimi ocenami o lastnem zdravju in bivanju. Kakovost življenja v domskem varstvu zagotavljajo predvsem primerna duhovna aktivnost stanovalcev in pravilne socialne interakcije med stanovalci, zaposlenimi in obiskovalci. Velik doprinos h kakovosti življenja je čim večja samostojnost pri opravljanju fizičnih potreb in pri skrbi za lastno okolje (Gašparovič, 1999).

Namen in cilji

Namen raziskave je prispevati k boljšemu razumevanju pomena depresije za kakovost življenja starostnikov v domskem varstvu.

Cilji raziskave so bili ugotoviti razliko v kakovosti življenja, vključevanju v družabne aktivnosti v okviru doma starejših ter samooceni zdravja pri stanovalcih domov za starejše občane z depresijo in brez depresije.

Raziskovalne hipoteze:

– Kakovost življenja stanovalcev izbranih domov za starejše občane z depresijo je slabša kot kakovost življenja stanovalcev brez depresije.
– Stanovalci izbranih domov za starejše občane z depresijo se manj vključujejo v družabne aktivnosti v okviru doma starejših občanov kot stanovalci brez depresije.
– Samoocena zdravja stanovalcev izbranih domov za starejše občane z depresijo je slabša kot samoocena zdravja stanovalcev brez depresije.

Metode

Raziskava je temeljila na kvantitativni metodologiji, podatke smo pridobili s pomočjo anketiranja s standardiziranim vprašalnikom.

Opis instrumenta

Zbiranje podatkov je potekalo s pomočjo standardiziranega vprašalnika EuroQol-5D (Euro Quality of life – 5 Dimension) (The EuroQol Group, 1990). Vprašalnik je namenjen za ugotavljanje kakovosti življenja v povezavi z zdravstvenim stanjem pri določenih ciljnih skupinah. Visoko zanesljivost vprašalnika so potrdili testi ponovnega preizkušanja *(r = 0,86)* (McDowell & Newell, 1996). Avtorji vprašalnika še niso dokončno raziskali njegove občutljivosti. Veljavnost vprašalnika EQ-5D je bila ocenjena s primerjavo pridobljenih rezultatov iz vprašalnikov SF-36 (Short Form 36 Health Survey) in HUI-3 (Health Utilities Index Mark 3). Korelacija s HUI-3 je bila 0,69, korelacija s SF-36 je bila 0,64 za vprašanja telesne komponente in 0,52 za vprašanja duševne komponente (McDowell & Newell, 1996). Vprašalnik vsebuje vprašanja zaprtega tipa. Prvi del vprašalnika se nanaša na pet skupin trditev, ki predstavljajo pet dimenzij funkcionalnega stanja (gibanje, osebna higiena, bolečina, depresivnost/zaskrbljenost in zmožnost opravljanja vsakodnevnih dejavnosti). Drugi del vprašalnika vsebuje vizualno analogno lestvico, na kateri so anketiranci označili oceno svojega zdravstvenega stanja od 0 (najslabše zdravstveno stanje) do 100 enot (najboljše zdravstveno stanje). Vizualna analogna lestvica je pripomoček, ki nazorno prikazuje posameznikovo subjektivno pojmovanje lastnega zdravja. Zaradi mnenja, da je socialna aktivnost posameznika pomemben doprinos h kakovosti življenja in zaradi dejstva, da je socialna izolacija lahko posledica depresije, smo vprašalnik dopolnili z dodatnim vprašanjem. Vprašanje se je nanašalo na pogostost vključevanja stanovalcev izbranih domov v družabne aktivnosti, ki se organizirajo v okviru doma starejših.

Opis vzorca

Raziskava je temeljila na priložnostnem vzorcu stanovalcev izbranih domov za starejše občane v Pomurju ($n = 4$), starejših od 60 let. Anketirali smo 138 oseb, ki so predstavljali dve skupini. V vsako skupino je bilo vključenih 69 oseb. Prva skupina anketirancev je predstavljala skupino stanovalcev z depresijo. To so bili stanovalci, ki so imeli v svoji dokumentaciji s strani osebnega zdravnika ali specialista psihiatra postavljeno medicinsko diagnozo depresivne motnje, ali stanovalci, ki so imeli s strani osebnega zdravnika ali specialista psihiatra predpisano redno antidepresivno terapijo. V drugo skupino anketirancev so bili vključeni stanovalci brez depresije. To so bili stanovalci, ki niso imeli postavljene medicinske diagnoze depresivne motnje in niso prejemali redne antidepresivne terapije. Sodelovanje v raziskavi je zavrnilo 11 stanovalcev, odzivnost je bila 92,6 %. 68,8 % vseh anketirancev je bilo žensk in 31,2 % moških. Največ anketirancev je pripadalo starostni skupini od 81 do 90 let (37,5 %). Sledili so jim stanovalci starostne skupine od 71 do 80 let (31,6 %), nato stanovalci starostne skupine od 61 do 70 let (21,1 %). Najmanj stanovalcev je pripadalo starostni skupini starejših od 90 let (8,8 %). Povprečna starost anketirancev je bila 78,8 let. Največ anketiranih starostnikov je imelo končano osnovno šolo ali manj (66,4 %), sledili so jim starostniki s končano srednjo šolo (29,2 %). Najmanj anketiranih starostnikov je imelo končano višjo šolo ali več (4,4 %).

Opis poteka raziskave in obdelave podatkov

Pri izvedbi raziskave smo upoštevali Kodeks etike medicinskih sester in zdravstvenih tehnikov Slovenije (Kersnič & Filej, 2006). Za dovoljenje za opravljanje raziskave smo zaprosili vodstva izbranih domov za starejše občane, od katerih smo prejeli pisna soglasja, in zdravnike, ki so pooblaščeni za zdravstveno oskrbo stanovalcev izbranih domov. Pred anketiranjem smo vsem sodelujočim predstavili namen in cilje raziskave. Pojasnili smo tudi, da je sodelovanje v raziskavi prostovoljno in anonimno ter da so podatki namenjeni izključno raziskavi. Anketiranje je potekalo oktobra 2013 v Domu starejših Ljutomer, Domu starejših Rakičan, Domu starejših Lendava in v DOSOR, d. o. o. (Dom starejših občanov Radenci). Podatke smo pridobili z osebnim anketiranjem stanovalcev. Na podlagi odgovorov na vprašanja o petih funkcionalnih stanjih (gibanje, osebna higiena, običajne dejavnosti, bolečina/neugodje in zaskrbljenost/depresija) smo anketirane stanovalce razvrstili v štiri kategorije kakovosti življenja. V kategorijo zelo dobra kakovost življenja smo uvrstili stanovalce, ki so na tri ali več vprašanj odgovorili, da nimajo težav pri omenjenih funkcionalnih stanjih. V kategorijo dobra kakovost življenja smo uvrstili tiste stanovalce, ki so na vprašanja enkrat do dvakrat odgovorili, da nimajo težav, v preostalih vprašanjih pa so odgovorili, da imajo zmerne težave. V kategorijo zadovoljiva kakovost življenja smo uvrstili stanovalce, ki so v treh ali več primerih odgovorili, da imajo zmerne težave. V kategorijo slaba kakovost življenja pa smo uvrstili stanovalce, ki so na tri ali več vprašanj odgovorili, da omenjenih aktivnosti niso sposobni opravljati. Na podlagi razvrstitve anketirancev v eno izmed štirih kategorij kakovosti življenja smo primerjali kakovost življenja stanovalcev z depresijo in stanovalcev brez depresije. Pri stanovalcih z depresijo in stanovalcih brez depresije smo primerjali samooceno zdravja na vizualni analogni lestvici in stopnjo vključevanja v družabne aktivnosti. Pridobljeni podatki so bili

obdelani v statističnem programu SPSS, Verzija 19 (IBM SPSS Statistics. 19). Za testiranje postavljenih hipotez smo uporabljali test χ^2. Za mejo statistične značilnosti smo določili $p < 0{,}005$.

Rezultati

Primerjava kakovosti življenja anketirancev z depresijo in anketirancev brez depresije na podlagi vprašanj o petih funkcionalnih stanjih (gibanje, osebna higiena, bolečina, depresija/ zaskrbljenost, običajne dejavnosti)

Prvo vprašanje se je nanašalo na stopnjo gibanja anketirancev. 43,5 % vseh anketirancev je odgovorilo, da nimajo težav s hojo, 47,1 % jih je odgovorilo, da imajo nekaj težav pri hoji, in 9,4 %, da ne morejo samostojno hoditi. Primerjava anketirancev z depresijo in brez depresije je pokazala, da imajo več težav z gibanjem anketiranci z depresijo. 11,6 % anketirancev z depresijo ne more samostojno hoditi, 53,6 % jih ima nekaj težav pri gibanju in 34,8 % jih nima nobenih težav pri gibanju. Med anketiranci brez depresije je 7,2 % oseb, ki ne morejo samostojno hoditi, 40,6 % jih ima nekaj težav na področju gibanja in 52,2 % jih nima nobenih težav pri gibanju.

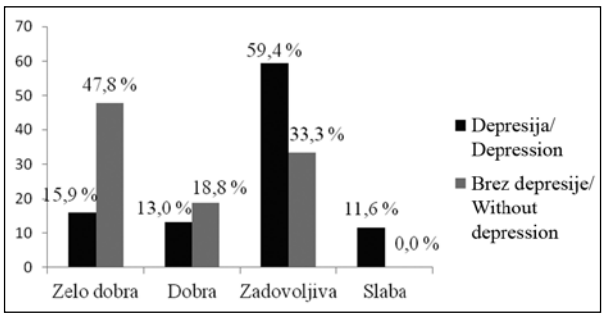
Na vprašanje o sposobnosti opravljanja osebne higiene je 75,4 % vseh anketirancev odgovorilo, da pri osebni higieni nimajo težav, 15,2 % jih ima nekaj težav in 9,4 % anketirancev osebne higiene ne more opravljati samostojno. Primerjava anketirancev z depresijo in anketirancev brez depresije je pokazala, da imajo anketiranci z depresijo na področju osebne higiene več težav. 10,1 % anketirancev z depresijo osebne higiene ne zmore samostojno opravljati, 18,8 % jih ima pri opravljanju osebne higiene nekaj težav in 71,0 % anketirancev z depresijo nima nobenih težav. Med anketiranci brez depresije jih je 8,7 % navedlo, da osebne higiene ne zmorejo samostojno opravljati, 11,6 % jih ima pri tem nekaj težav in 79,7 % jih pri opravljanju osebne higiene nima nobenih težav.

Na vprašanje o prisotnosti bolečine je 19,6 % vseh anketiranih stanovalcev odgovorilo, da nimajo bolečin. Še znosne bolečine ima 52,2 % anketirancev, 28,3 % jih navaja neznosne bolečine. Primerjava anketirancev z depresijo in anketirancev brez depresije je pokazala, da imajo pogostejše bolečine anketiranci z depresijo. Med anketiranci z depresijo jih je 42,0 % navedlo, da imajo neznosne bolečine, 46,4 % jih ima še znosne bolečine in 11,6 % jih nima nobenih bolečin. Med anketiranci brez depresije jih je 14,5 % z neznosnimi bolečinami, 58,0 % jih ima še znosne bolečine in 27,5 % jih nima nobenih bolečin.

Naslednje vprašanje se je nanašalo na sposobnost opravljanje vsakodnevnih dejavnosti, kot so kuhanje, čiščenje, pospravljanje, družinske aktivnosti in prostočasne aktivnosti. 43,5 % vseh anketirancev je odgovorilo, da nimajo nobenih težav pri opravljanju običajnih aktivnosti. 38,4 % jih ima nekaj težav in 18,1 % jih vsakodnevne aktivnosti ne zmore samostojno opravljati. Primerjava anketirancev z depresijo in anketirancev brez depresije je pokazala, da imajo večje težave pri opravljanju vsakodnevnih aktivnosti anketiranci z depresijo. Med anketiranci z depresijo jih je 24,6 % navedlo, da niso sposobni opravljati vsakodnevnih aktivnosti. 34,8 % jih ima pri tem nekaj težav in 40,6 % jih pri opravljanju vsakodnevnih aktivnosti nima nobenih težav. Med anketiranci brez depresije jih je 11,6 % poročalo o nezmožnosti opravljanja vsakodnevnih aktivnosti, 42,0 % jih ima nekaj težav in 46,4 % jih pri opravljanju omenjenih aktivnosti nima nobenih težav.

Na vprašanje o prisotnosti depresije ali zaskrbljenosti je 29 % vseh anketirancev odgovorilo, da niso zaskrbljeni ali depresivni, 44,9 % anketirancev je poročalo o zmerni zaskrbljenosti ali depresiji, 26,1 % anketirancev je bilo skrajno zaskrbljenih ali depresivnih. Primerjava anketirancev z depresijo in anketirancev brez depresije je pokazala večjo prisotnost depresije ali zaskrbljenosti med anketiranci z depresijo. Med anketiranci z depresijo jih je 42,0 % poročalo o skrajni zaskrbljenosti ali depresiji, 46,4 % jih je zmerno zaskrbljenih ali depresivnih in 11,6 % anketirancev ni zaskrbljenih ali depresivnih. Med anketiranci brez depresije jih je 10,1 % skrajno zaskrbljenih ali depresivnih, 43,5 % jih je poročalo o zmerni zaskrbljenosti ali depresiji in 46,4 % anketirancev ni zaskrbljenih ali depresivnih.

Primerjava kakovosti življenja anketirancev z depresijo in anketirancev brez depresije na podlagi petih funkcionalnih stanj



Legenda/Legend: % – odstotek/percentage; zelo dobra – zelo dobra kakovost življenja/very good quality of life; dobra – dobra kakovost življenja/good quality of life; zadovoljiva – zadovoljiva kakovost življenja/satisfactory quality of life; slaba – slaba kakovost življenja/poor quality of life; depresija – anketiranci z depresijo/respondents with depression; brez depresije – anketiranci brez depresije/respondents without depression

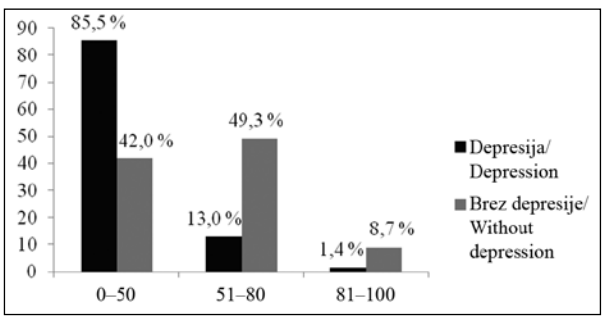
Slika 1: *Primerjava kakovosti življenja anketirancev z depresijo in anketirancev brez depresije na podlagi petih funkcionalnih stanj*

Figure 1: *Comparison of respondents with depression and respondents without depression based on the five functional stages*

Na podlagi vprašanj o petih dimenzijah funkcionalnega stanja (gibanje, osebna higiena, bolečina, običajne dejavnosti, depresija/zaskrbljenost) smo stanovalce razvrstili v štiri kategorije kakovosti življenja. 31,9 % vseh anketirancev ima zelo dobro kakovost življenja, 15,9 % dobro, 46,4 % zadovoljivo in 5,8 % slabo. Statistično značilno je, da imajo anketiranci z depresijo slabšo kakovost življenja kot anketiranci brez depresije *($\chi^2 = 24{,}790$, $p < 0{,}001$)* (Slika 1). S tem smo tudi potrdili hipotezo, da je kakovost življenja stanovalcev izbranih domov za starejše občane z depresijo slabša kot kakovost življenja stanovalcev brez depresije.

Primerjava samoocene zdravja na vizualni analogni lestvici anketirancev z depresijo in anketirancev brez depresije

Vizualno analogno lestvico smo zaradi lažje interpretacije razdelili na tri območja. Območje od 0 do 50 prikazuje najslabšo samooceno zdravja, območje od 51 do 80 srednjo, in od 81 do 100 najboljšo samooceno zdravja. 5,1 % vseh anketirancev je svoje zdravstveno stanje na vizualni analogni lestvici ocenilo v območju od 81 do 100, 31,1 % anketirancev v območju od 51 do 80 in 63,8 % anketirancev v območju od 0 do 50. Statistično značilno je, da je samoocena zdravja anketirancev z depresijo po vizualni analogni lestvici in na podlagi anketiranja z vprašalnikom EQ-5D slabša kot pri anketirancih brez depresije ($\chi^2 = 28{,}334$, $p < 0{,}001$) (Slika 2). Omenjeni rezultati potrjujejo hipotezo, da je samoocena zdravja stanovalcev izbranih domov za starejše občane z depresijo slabša kot samoocena stanovalcev brez depresije.



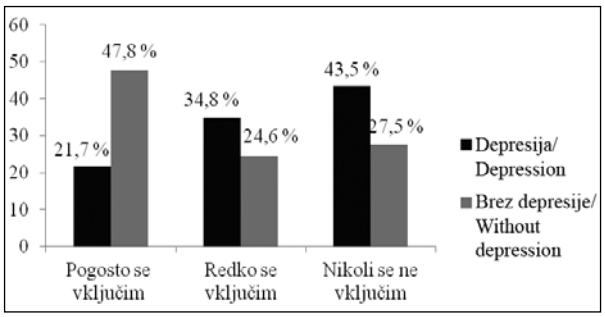
Legenda/Legend: % – odstotek/percentage; 0–50 – najslabša samoocena zdravja/worst health self-assessment; 51–80 – srednja samoocena zdravja/middle health self-assessment; 81–100 – najboljša samoocena zdravja/the best health self-assessment; depresija – anketiranci z depresijo/respondents with depression; brez depresije – anketiranci brez depresije/respondents without depression

Slika 2: *Primerjava samoocene zdravja anketirancev z depresijo in anketirancev brez depresije na podlagi vizualne analogne lestvice*

Figure 2: *Comparison of respondents with depression and respondents without depression on the basis of visual-analogue scale*

Primerjava anketirancev z depresijo in anketirancev brez depresije na področju vključevanja v družabne aktivnosti, ki se organizirajo v okviru doma starejših

Vprašanje, ki se je nanašalo na pogostost vključevanja v družabne aktivnosti v okviru doma starejših, je pokazalo, da se 34,8 % vseh anketirancev pogosto vključuje v družabne aktivnosti, 29,7 % se jih le redko in 35,5 % se jih nikoli ne vključi v družabne aktivnosti. Statistično značilno je, da se anketiranci z depresijo manj vključujejo v družabne aktivnosti kot tisti brez depresije *($\chi^2 = 10{,}415$, $p < 0{,}005$)* (Slika 3). Rezultati potrjujejo hipotezo, da se stanovalci izbranih domov za starejše občane z depresijo manj vključujejo v družabne aktivnosti v okviru doma starejših občanov kot stanovalci brez depresije.



Legenda/Legend: % – odstotek/percentage; pogosto se vključim – v družabne aktivnosti pogosto vključeni/often included in social activities; redko se vključim – v družabne aktivnosti redko vključeni/rarely included in social activities; nikoli se ne vključim – v družabne aktivnosti nikoli vključeni/never included in social activities; depresija – anketiranci z depresijo/respondents with depression; brez depresije – anketiranci brez depresije/respondents without depression

Slika 3: *Primerjava anketirancev z depresijo in anketirancev brez depresije na področju vključevanja v družabne aktivnosti v okviru doma starejših*

Figure 3: *Comparison of respondents with depression and respondents without depression in inclusion in social activities in nursing homes for the elderly*

Diskusija

Vprašalnik, uporabljen v raziskavi, je vseboval vprašanja, ki so se nanašala na pet različnih funkcionalnih stanj (gibanje, osebna higiena, običajne dejavnosti, depresivnost/zaskrbljenost, bolečina). Na področju gibanja so rezultati pokazali, da je med depresivnimi starostniki več tistih, ki imajo zmerne oziroma hude težave pri hoji. Gibanje je v tesni povezavi z zmožnostjo opravljanja osebne higiene, zato so tudi rezultati na to vprašanje podobni.

Večjo pojavnost težav na področju gibanja in osebne higiene med depresivnimi stanovalci lahko pripišemo tesni povezavi telesnega in duševnega zdravja. Prisotnost depresije lahko poslabša telesno

stanje oz. poveča njegovo negativno percepcijo. Stanje telesnega zdravja se lahko objektivno poslabša zaradi vedenja, značilnega za depresivne bolnike, saj je njihova stopnja sodelovanja pri zdravljenju manjša in pogosteje opuščajo skrb za lastno zdravje. Subjektivno poslabšanje telesnega zdravja izvira prav iz negativne percepcije, kar je značilno za depresivne bolnike. Zaradi občutka zmanjšane sposobnosti pri starostnikih pogosteje opazimo opuščanje dejavnosti, za katere bi le-ti še bili sposobni (Pap, 2013).

Rezultate naše raziskave smo primerjali s predhodnimi raziskavami, opravljenimi v enakih institucijah in z enakim instrumentom kot naša raziskava. Nemec (2007) v svoji raziskavi ugotavlja, da sta med stanovalci domov za starejše občane dve tretjini takšnih, ki pri gibanju nimajo težav. Iz primerjave podatkov je razvidno, da se je v obdobju šestih let zmanjšal delež stanovalcev, ki nimajo težav na področju gibanja.

Posledica nezadostnega števila kadra v socialnih in zdravstvenih ustanovah je lahko med drugim tudi pomanjkanje spodbud in razumevanja do stanovalcev na področju ohranjanja obstoječih sposobnosti. Negovalni kader zaradi pomanjkanja časa pogostokrat prehitro nudi pomoč in tako stanovalcu odvzame možnost samostojne skrbi zase in svoje okolje (Pap, 2013). Tudi Janež (2004) ugotavlja, da so glavne slabosti v domovih za starejše povečanje števila stanovalcev in pomanjkanje časa zaposlenih. Pomanjkanje spodbud za ohranitev funkcionalnih sposobnosti namreč pri starostnikih povzroči zmanjšanje samostojnosti, kar negativno vpliva na kakovost življenja. Mali (2004) je v svoji raziskavi dognala, da ima nepomičnost in odvisnost od drugih največji negativen vpliv na počutje starostnikov, saj jih prikrajša za stike z zunanjim svetom in zmanjša stopnjo avtonomije posameznika. Nasprotno mnenje navaja Janež (2004), ki je v svoji raziskavi ugotovil, da se stanovalci domov ne počutijo slabo ali ponižane med negovanjem. Pap (2013) navaja, da počutje stanovalcev domov za starejše občane delno pogojujejo tudi odnosi med stanovalci domov in zaposlenim osebjem ter tudi dolžina bivanja starostnika v instituciji. Tudi Mali (2004) in Krajnc in Krajnc (2005) so v svojih raziskavah ugotovili, da medsebojna pomoč vpliva na kakovost življenja in daje večji občutek sprejetosti.

O prisotnosti bolečine je 28,3 % anketirancev naše raziskave odgovorilo, da ima neznosne bolečine. Nemec (2007) ugotavlja, da je med stanovalci domov za starejše občane 7,5 % takih, ki imajo neznosne bolečine. Pap (2013) navaja, da povečanje pojavnosti neznosne bolečine med stanovalci domov za starejše občane lahko delno pripišemo tudi depresivni motnji. Depresija namreč povzroča intenzivnejše zaznavanje bolečine oz. stopnjo bolečine dodatno povečuje.

Pri stanovalcih domov smo prav tako ugotavljali sposobnost opravljanja vsakodnevnih dejavnosti. Iz primerjave stanovalcev z depresijo in stanovalcev brez depresije je razvidno, da imajo stanovalci z depresijo večje težave pri opravljanju vsakodnevnih aktivnosti. Nastale razlike lahko pripišemo simptomom depresije, kot so manjša motiviranost in občutek nesposobnosti. Zmanjšanje obsega vsakodnevnih aktivnosti je lahko tudi posledica telesnih obolenj. Omeniti je potrebno, da se ob prisotnosti depresije doživljanje simptomov telesnih obolenj poveča. Rezultati naše raziskave so pokazali manjše razlike med skupinama na področju osebne higiene in gibanja, kar lahko pripišemo načinu organiziranosti domov za starejše. V domovih, kjer je potekala raziskava, so namreč organizirani tako, da večino aktivnosti vsakdanje oskrbe opravijo tamkajšnji zaposleni. Takšna organiziranost domov stanovalcem odvzame možnost samostojne skrbi zase in svoje okolje ter s tem posredno zmanjša kakovost njihovega življenja. Samostojna skrb zase in svoje okolje namreč daje posamezniku občutek koristnosti in učinkovitosti. Tudi Mali (2004) v svoji raziskavi ugotavlja, da ima velik vpliv na kakovost življenja čim večja ohranitev prejšnjega načina življenja, saj se s tem daje možnost samostojnega odločanja o sebi.

O prisotnosti zaskrbljenosti ali depresije je več kot petina vseh anketiranih odgovorila, da so skrajno zaskrbljeni ali depresivni. Več tovrstnih odgovorov je bilo pri skupini anketirancev z depresijo. Nemec (2007) v svoji raziskavi ugotavlja, da je med stanovalci domov za starejše 10,6 % tistih, ki so skrajno zaskrbljeni ali depresivni. Pap (2013) navaja, da lahko porast zaskrbljenosti ali depresije med stanovalci domov za starejše delno pripišemo slabim ekonomskim razmeram v Sloveniji. Depresija lahko nastopi tudi v reaktivni obliki, kot posledica različnih stresnih dogodkov, med katere lahko štejemo tudi odhod starostnika v domsko varstvo (Kobal Straus & Kalan, 2008). Jernejc (2008) navaja, da veliko starostnikov namestitev v domsko varstvo pričakuje s strahom in zaskrbljenostjo, saj ne vedo, kaj se bo tam dogajalo. Slaba informiranost o lastnem zdravstvenem stanju je morebiti prav tako vir zaskrbljenosti. Krajnc in Krajnc (2005) ugotavljata, da večja informiranost starostnikov o zdravstveni tematiki zmanjša stopnjo tesnobnosti in nezadovoljstva ter poveča zadovoljstvo z lastnim zdravjem. V naši raziskavi je zaskrbljujoč podatek o veliki prisotnosti zmerne zaskrbljenosti in depresije med stanovalci, ki niso bili uvrščeni v skupino depresivnih.

Na podlagi odgovorov na vprašanja o petih funkcionalnih stanjih smo anketirance razvrstili v štiri kategorije kakovosti življenja. Primerjava stanovalcev z depresijo in stanovalcev brez depresije je pokazala, da je največji delež stanovalcev z depresijo bil uvrščen v kategorijo zadovoljive kakovosti življenja. Največji delež stanovalcev brez depresije pa je pripadal kategoriji zelo dobre kakovosti življenja. Kakovost življenja stanovalcev z depresijo je značilno slabša ($p < 0{,}001$) kot kakovost življenja stanovalcev brez depresije.

Zaradi pomembnosti vključevanja stanovalcev v družabne aktivnosti doma smo v okviru raziskave vključili tudi to področje. Menimo, da je vključevanje v tovrstne aktivnosti velik doprinos h kakovosti življenja, kar potrjujejo tudi izsledki drugih raziskav. Mali (2004) navaja, da so stanovalci, ki ne sodelujejo v družabnih aktivnostih v okviru doma starejših, v manjši meri zadovoljni s svojim življenjem, zdravstvenim stanjem in trenutnim položajem. Ti stanovalci tudi niso želeli biti informirani o dogajanju v domu starejših in so bili splošno nezainteresirani za kakršnokoli dejavnost. Krajnc in Krajnc (2005) ugotavljata, da stanovalci domov za starejše občane, ki so bili vključeni v skupino za samopomoč, uživajo višjo kakovost življenja.

Rezultati naše raziskave so pokazali, da se največji delež stanovalcev z depresijo nikoli ne vključi v družabne aktivnosti v nasprotju s stanovalci brez depresije, ki se v večjem deležu pogosto vključijo v družabne aktivnosti. Stanovalci z depresijo se značilno manj ($p < 0{,}005$) vključujejo v družabne aktivnosti kot stanovalci brez depresije.

V okviru naše raziskave nas je zanimalo tudi, kako stanovalci ocenjujejo svoje zdravje, kar smo ugotavljali s pomočjo vizualne analogne lestvice. Kakovost življenja je lahko zelo dobra ne glede na starost, kar nazorno kaže primer anketiranke v naši raziskavi. Gospa, stara 91 let, je na vizualni analogni lestvici označila svoje stanje zdravja s 100. Tudi na vprašanja o petih funkcionalnih stanjih je odgovorila, da na nobenem izmed teh področij nima težav. Glede vključevanja v družabne aktivnosti je povedala, da se poleg domskih aktivnosti pogosto odpravi s taksijem v mesto zaradi pevskih vaj, ki potekajo tedensko.

Primerjava podatkov, ki smo jih pridobili s pomočjo vizualne analogne lestvice, prikazujejo razliko v subjektivnem pojmovanju lastnega zdravstvenega stanja stanovalcev z depresijo in stanovalcev brez depresije. Največji delež stanovalcev z depresijo je samooceno lastnega zdravja označilo v območju, ki prikazuje najslabšo samooceno zdravja. Samoocena zdravja stanovalcev z depresijo je značilno slabša ($p < 0{,}001$) kot samoocena zdravja stanovalcev brez depresije.

Večina raziskav starostnikov obravnava populacijo, ki je nameščena v različne oblike institucionalnega varstva. Manjši delež raziskav se nanaša na starostnike, ki živijo doma, pogosto odmaknjeni od urbanega okolja. V našo raziskavo nismo vključili starostnikov z začetnimi oblikami demence. Nadaljnje raziskave starostnikov se lahko usmerijo v raziskovanje depresivnih simptomov pri bolnikih z demenco. Vpliv depresije na intenzivnejše zaznavanje bolečine bi bilo potrebno proučiti tudi z vidika potreb paliativne obravnave v domovih za starejše.

Raziskava dokazuje potrebo po nenehnem raziskovanju in spremljanju kakovosti življenja starostnikov, še posebej tistih v domovih za starejše. Le na osnovi izsledkov je možno načrtovati in izvajati ukrepe za izboljšanje kakovosti življenja starostnikov. Omejitev raziskave je dejstvo, da le-ta ni potekala v vseh domovih za starejše občane v Pomurju, ampak samo v izbranih. V raziskavo niso bili zajeti vsi pomurski starostniki, zato rezultatov ne moremo posploševati.

Zaključek

Depresija povzroča hudo poslabšanje kakovosti življenja obolelih oseb. Depresivni starostniki, predvsem tisti, ki so nameščeni v različne oblike institucionalnega varstva, neredko opuščajo aktivnosti, za katere bi bili še zmožni. Posledično se pojavi izguba samostojnosti in odvisnost od tuje pomoči. Zaradi depresije se prav tako zmanjša starostnikovo vključevanje v družabne aktivnosti. Percepcija simptomov telesnih obolenj, pogostih v starostnem obdobju, je mnogo hujša pri starostnikih, ki hkrati trpijo tudi zaradi depresije. Zaradi velikega vpliva depresije na kakovost življenja starostnikov menimo, da je potrebno veliko pozornost nameniti ohranjanju obstoječih sposobnosti starostnikov in tako ohraniti posameznikov občutek lastne učinkovitosti in zadovoljstva. Starostniki, ki bodo imeli omogočeno samostojno skrb zase, bodo v manjši meri izpostavljeni odvisnosti od svojcev in prehitri namestitvi v domove starejših, ki predstavlja enega od rizičnih dejavnikov za razvoj depresije. Prav tako je potrebno ohranjati in spodbujati socialne stike z družino in prijatelji. Pozitivne učinke prinaša tudi povezanost z lokalno skupnostjo, v kateri dom za starejše deluje, in razvit sistem druženja prostovoljcev s starostniki. Dolgoročna zagotovitev kakovosti življenja starostnikov je možna preko starostnikom naklonjene družbene klime, ki temelji na izkazovanju spoštovanja in razumevanja potreb, ki jih to življenjsko obdobje prinaša.

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Izvirni znanstveni članek/Original scientific article

Pomen izobraževanja diplomiranih medicinskih sester v referenčnih ambulantah: primer arterijske hipertenzije

The role of education for graduated nurses in model practices: example of arterial hypertension

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Ključne besede: družinska medicina; timsko delo; kakovost; ocena potrebe; zadovoljstvo

Key words: family medicine; teamwork; quality; needs assessment; satisfaction

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IZVLEČEK

Uvod: Diplomirane medicinske sestre se za delo v referenčnih ambulantah dodatno izobražujejo. Namen raziskave je bil preveriti potrebo in oceniti uspešnost izobraževanja za diplomirane medicinske sestre v referenčnih ambulantah za področje arterijske hipertenzije.

Metode: Vključene so bile diplomirane medicinske sestre (n = 143), ki so obiskovale petintrideseturno urno izobraževanje o arterijski hipertenziji v času od januarja 2012 do marca 2013. Ugotavljali smo spremembo v znanju o vodenju bolnika z arterijsko hipertenzijo, zadovoljstvo udeležencev s celotnim modulom in posameznimi vsebinami modulov ter izbranimi učnimi metodami. Uporabili smo kvantitativno (deskriptivna statistika, parni t-test, enovzorčni t-test) in kvalitativno analizo podatkov.

Rezultati: Z vstopnim testom so bile prepoznane velike razlike v znanju udeležencev (zbrali so med 15,0 % in 100,0 % točk). Z izobraževanjem se je njihovo znanje pomembno izboljšalo (vstopni test 56,6 % vs. končni test 89,1 %, $p < 0{,}001$). Zadovoljstvo s celotnim modulom in posameznimi deli modula je bilo visoko: povprečna vrednost za celoten modul na lestvici od 5 do 10 je znašala 8,6 (s = 1,3). Metode poučevanja so bile ocenjene kot ustrezne: povprečna vrednost na lestvici od 1 do 5 je bila 4,6 (s = 0,6). Udeleženci so najbolj pohvalili uporabnost in kakovost predavanj, dostopnost predavateljev in povezovanje teorije s prakso preko prikazov praktičnih primerov.

Diskusija in zaključek: Ugotovitve naše raziskave podpirajo potrebo po dodatnem izobraževanju diplomiranih medicinskih sester v referenčnih ambulantah s področja arterijske hipertenzije.

ABSTRACT

Introduction: Graduated nurses are involved in additional educational process to be prepared for working in model practices. The aim of our research was to recognize the necessity for further education and to evaluate the success of additional education for graduated nurses in model practices in the field of arterial hypertension.

Methods: The research included 143 graduated nurses who attended a thirty-five hour educational programme on arterial hypertension from January 2012 to March 2013. We assessed the improvement in knowledge of the management of patients with arterial hypertension, the satisfaction of the attendees with the entire educational programme, the particular topics of the module and the teaching methods. We used quantitative (descriptive statistics methods, paired t-test, one sample t-test) and qualitative research methods.

Results: In assessing prior knowledge, significant differences were noted between attendees (test results varied from 15.0 % to 100.0 %). The level of knowledge at the end of the educational programme was remarkably higher (56.6 % at the beginning vs. 89.1 % at the end of the educational programme, $p < 0.001$). Moreover, the satisfaction with the entire educational programme and with its particular modules was high: the mean value on a scale from 5 to 10 was 8.6 (s = 1.3). Teaching methods were assessed as appropriate: the mean value on a scale from 1 to 5 was 4.6 (s = 0.6). Attendees were satisfied with the usefulness and the quality of the lectures, availability of lecturers and the correlation between theory and practice through the use of a case-based discussion.

Discussion and conclusion: Our results support the necessity for additional education of graduated nurses working in model practices in the field of arterial hypertension.

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Uvod

Osnovna zdravstvena dejavnost je večdimenzionalen sistem, ki ga opredeljujejo značilnosti, kot so prvi kontakt z zdravstveno službo, dolgotrajnost in celovitost oskrbe ter pomemben prispevek h kakovosti zdravstvene oskrbe in zdravju prebivalstva (Kringos, et al., 2010). Zdravstveni sistemi, ki podpirajo osnovno zdravstveno dejavnost, se kažejo kot učinkoviti in pravični v zagotavljanju zdravstvenega varstva, praviloma zagotavljajo boljšo kakovost oskrbe za celotno populacijo ter so učinkoviti v obvladovanju stroškov (Starfield, et al., 2005; Starfield, 2012).

S staranjem prebivalstva narašča število kroničnih bolnikov. Standardi kakovosti zdravstvene obravnave, ki jih določajo strokovna priporočila in smernice, so ob razvoju novih diagnostičnih in terapevtskih možnosti vedno višji. Pričakovanja bolnikov, ki so vedno bolj ozaveščeni in seznanjeni s svojimi pravicami, postajajo vedno večja. Nove diagnostične možnosti in načini zdravljenja zahtevajo dodatna sredstva za zdravstveno varstvo, ki pa postajajo vedno bolj omejena (Fahy, 2012).

Pred osnovno zdravstveno dejavnost, kjer ima osrednjo vlogo v skrbi za odraslo populacijo družinska medicina, sodobni trendi postavljajo nove izzive. Zagotavljanje učinkovite in pravične zdravstvene oskrbe zahteva spremembe v organizaciji sistema zdravstvenega varstva v osnovni zdravstveni dejavnosti (Starfield, 2009; Brook, 2011). Ena izmed možnih sprememb v sistemu zdravstvenega varstva, ki prispeva k zagotavljanju kakovostnega in cenovno sprejemljivega zdravstvenega varstva na primarnem nivoju, je prenos določenih kompetenc z zdravnika na druge visoko usposobljene zdravstvene delavce (Carter, et al., 2009; Skela-Savič & Kydd, 2011; Hegney, et al., 2013).

V Sloveniji smo s spremembami pri organizaciji obravnave bolnikov v družinski medicini začeli v letu 2011, ko se je začel projekt Ministrstva za zdravje »Referenčne ambulante družinske medicine«. Referenčna ambulanta je ambulanta družinske medicine z razširjenim timom, ki poleg zdravnika in srednje medicinske sestre, ki ohranja svojo vlogo, vključuje še diplomirano medicinsko sestro oz. diplomiranega zdravstvenika (v nadaljevanju dipl. m. s.). Dipl. m. s. je v referenčni ambulanti vključena v izvajanje preventivnih programov ter sodeluje pri vodenju kroničnih bolnikov (Poplas Susič & Marušič, 2011). Trenutno dipl. m. s. sodelujejo pri vodenju bolnikov z astmo in kronično obstruktivno pljučno boleznijo (KOPB), sladkorno boleznijo in arterijsko hipertenzijo (Poplas Susič, et al., 2013).

Dipl. m. s. v referenčnih ambulantah svoje delo opravljajo samostojno, nujen pogoj za uspešno delo pa je ustrezna usposobljenost. Dipl. m. s. imajo veliko teoretičnega znanja s področja zdravstvene nege in vzgoje (Zbornica zdravstvene in babiške nege Slovenije, 2011), za delo v referenčni ambulanti pa potrebujejo veliko specifičnega znanja in veščin za delo v preventivi in pri vodenju kroničnih bolnikov. To je bilo izhodišče, na osnovi katerega se je projektni svet referenčnih ambulant odločil, da se za dipl. m. s. v referenčnih ambulantah uvede dodatno izobraževanje (Poplas Susič, et al., 2013). Oblikovanje izobraževanja, za katerega je bila po sklepu Ministrstva za zdravje pooblaščena Katedra za družinsko medicino Medicinske fakultete v Ljubljani, je bilo plod skupnega dela več relevantnih institucij, tako da so bili v oblikovanje programa vključeni strokovnjaki s področja klinike, družinske medicine in zdravstvene nege, za izobraževanje na področju preventive pa tudi strokovnjaki Inštituta za varovanje zdravja (Poplas Susič, et al., 2013).

Najpogostejši razlog za obisk v ambulanti družinske medicine je arterijska hipertenzija (Petek Šter, 2005). Arterijska hipertenzija je zelo pogosto kronično stanje, ki zahteva dolgotrajno zdravljenje zvišanega krvnega tlaka in pridruženih dejavnikov tveganja ter zapletov arterijske hipertenzije (Accetto, et al., 2008). Problem nadzora krvnega tlaka ostaja prisoten v svetu in tudi v Sloveniji (Petek Šter & Švab, 2007). Med ukrepi za izboljšanje nadzora krvnega tlaka, ki so se izkazali za najbolj učinkovite, so razširitev tima, ki skrbi za bolnika z arterijsko hipertenzijo, z dipl. m. s. in/ali farmacevtom, zdravstvena vzgoja bolnikov, odločanje zdravnika, ki temelji na kliničnih informacijah, ter spodbujanje samomerjenja krvnega tlaka. Dipl. m. s. se lahko uspešno vključuje v obravnavo bolnikov z arterijsko hipertenzijo na področju vzgoje bolnikov za zdrav življenjski slog, posredovanja navodil za nefarmakološko zdravljenje zvišanega krvnega tlaka ter bolnika usposobi in spodbuja k samomeritvam krvnega tlaka, ki prispevajo k izboljšanju zavzetosti za zdravljenje (Clark, et al., 2010).

Vključitev dipl. m. s. v obravnavo bolnikov z arterijsko hipertenzijo z namenom izboljšanja nadzora krvnega tlaka zahteva oblikovanje jasnih priporočil (protokolov) za vodenje bolnikov (Glynn, et al., 2010). Protokoli za vodenje bolnikov s kroničnimi boleznimi, namenjeni medicinskim sestram, so se izkazali za učinkovite pri vodenju bolnikov s sladkorno boleznijo, arterijsko hipertenzijo ter dislipidemijo (Shaw, et al., 2014). Protokol za vodenje bolnikov z arterijsko hipertenzijo v referenčnih ambulantah, ki je podlaga za program izobraževanja dipl. m. s. v referenčnih ambulantah, so oblikovali relevantni strokovnjaki (Petek Šter, et al., 2011).

Izobraževanje medicinskih sester, v katerem pridobijo znanje, veščine in privzamejo ustrezna stališča, prispeva k oblikovanju kompetenc medicinskih sester, da lete lahko prispevajo k izboljšanju kakovosti vodenja bolnikov s kroničnimi boleznimi (Cowan, et al., 2005; Garside, et al., 2013). Mnoge raziskave potrjujejo, da sodelovanje medicinskih sester pri vodenju kroničnih bolnikov z arterijsko hipertenzijo prispeva k izboljšanju

nadzora krvnega tlaka, zmanjšanju zapletov arterijske hipertenzije ter srčno-žilne umrljivosti (Clark, et al., 2010; Walker, et al., 2014).

Namen raziskave je bil na primeru izobraževanja na področju arterijske hipertenzije oceniti potrebo po izobraževanju dipl. m. s. v referenčnih ambulantah ter ugotoviti, ali so vsebine izobraževalnega modula in uporabljene metode primerne.

Metode

V opazovalni raziskavi smo ugotavljali, kako izobraževanje o arterijski hipertenziji za diplomirane medicinske sestre v referenčnih ambulantah vpliva na znanje o arterijski hipertenziji in kakšno je zadovoljstvo udeležencev z vsebino in kakovostjo izobraževanja.

Opis poteka izobraževanja in instrumenta

Izobraževalni modul za arterijsko hipertenzijo, prav tako tudi moduli za vodenje ostalih kroničnih bolezni, traja pet delovnih dni in je razdeljen na teoretični in praktični del v obsegu 19 ur teoretičnega in 16 ur praktičnega izobraževanja. Skupino, ki je hkrati obiskovala teoretični del modula, je sestavljalo do 30 udeležencev, na praktičnem delu modula pa je skupina štela do 8 udeležencev. Za posamezne vsebine znotraj teoretičnega in praktičnega izobraževanja smo udeležence razdelili v manjše skupine.

Uporabljene so različne metode poučevanja (ob predavanjih še seminarji v malih skupinah, učenje »eden na enega«, problemsko usmerjeno učenje, samostojno delo …). Poudarek je na aktivnih oblikah učenja in samostojnem učenju. Del samostojnega učenja predstavlja »domača naloga«, kar pomeni, da morajo udeleženci modula po predstavljenem protokolu poizkusiti voditi prvih pet bolnikov z arterijsko hipertenzijo in o nalogi poročati zadnji dan modula.

V teoretičnem delu udeleženci spoznajo bolezen in njene zaplete, diagnostični postopek in zdravljenje, pristop k bolniku ter posebnosti obravnave posameznih skupin bolnikov z določeno boleznijo in spremljajočimi stanji. Poseben sklop je namenjen doseganju sodelovanja pri zdravljenju, ki je pri kroničnih boleznih, ki večini bolnikov ne povzročajo posebnih težav, pogost problem in eden vodilnih razlogov za neuspeh zdravljenja.

V praktičnem delu, ki poteka na Kliničnem oddelku za hipertenzijo Kliničnega centra Ljubljana, pa se dipl. m. s. usposobijo za izvajanje praktičnih veščin jemanja usmerjene anamneze in pregleda bolnika, izvajanja pravilne tehnike merjenja krvnega tlaka, izvajanje dodatnih preiskav (24-urnega neinvazivnega merjenja krvnega tlaka, merjenja gleženjskega indeksa s pomočjo dopplerja, 12-kanalnega EKG) ter se seznanijo z dodatnimi diagnostičnimi preiskavami, ki so potrebne pri nekaterih bolnikih z arterijsko hipertenzijo (ehokardiografija, obremenitveno testiranje, pregled ožilja z ultrazvokom, merjenje pulznega vala za določanje centralnega arterijskega tlaka).

Dipl. m. s., ki izvajajo praktični del pouka, praktično usposobljenost kandidatov preverjajo tako, da jih opazujejo pri izvajanju veščin. Uspešnost izvedbe veščine ocenijo v skladu z obrazcem za strukturirano izvajanje veščine. Kriteriji za uspešno izvedbo veščine so vnaprej znani. Za osvojene praktične veščine udeleženci prejmejo podpis v evalvacijski list veščin.

Zadnji dan modula je podrobno predstavljen protokol za vodenje bolnikov z arterijsko hipertenzijo ter prikazana obravnava primerov bolnikov in zapleti arterijske hipertenzije na interaktiven način. Udeleženci po načelu problemsko usmerjenega učenja s pridobljenim znanjem rešujejo predstavljene primere bolnikov na način, kot bi bili ti bolniki v njihovi referenčni ambulanti.

Ob koncu modula se znanje udeležencev preveri z zaključnim testom, ki je enak vstopnemu testu, pri čemer po izobraževanju pričakujemo višji delež pravilnih odgovorov na zastavljena vprašanja. Test je bil sestavljen za namen preverjanja znanja in je vseboval 20 vprašanj testnega tipa, ki se nanašajo na vsebino modula. Pri oblikovanju testa smo se opirali na protokol za vodenje bolnikov z arterijsko hipertenzijo v referenčni ambulanti (Petek Šter, et al., 2011). Z vprašanji so bila zajeta naslednja področja: opredelitev arterijske hipertenzije, pristop k bolniku z arterijsko hipertenzijo, vodenje bolnika ter prepoznava in ukrepanje ob zapletih arterijske hipertenzije.

Udeleženci, ki na testu zberejo vsaj 60 % vseh točk ter osvojijo veščine po programu (pregled bolnika z arterijsko hipertenzijo, snemanje EKG, merjenje gleženjskega indeksa s pomočjo dopplerja, priprava bolnika na 24-urno merjenje krvnega tlaka), so uspešno zaključili modul, ki predstavlja osnovo za začetek vodenja bolnikov z arterijsko hipertenzijo v referenčni ambulanti.

Pri poučevanju sodelujejo zdravniki in dipl. m. s. s Kliničnega oddelka za hipertenzijo Univerzitetnega kliničnega centra Ljubljana, z Univerzitetne klinike za pljučne bolezni in alergologijo Golnik in s Katedre za družinsko medicino Medicinske fakultete Univerze v Ljubljani.

Udeleženci so bili ob koncu izobraževanja zaprošeni, da ocenijo zadovoljstvo s celotnim modulom in izbranimi metodami poučevanja ter posameznimi deli modula. Ocenjevanje je potekalo na prostovoljni bazi in je bilo anonimno. Zadovoljstvo s celotno delavnico so udeleženci ocenjevali z oceno od 1 (sploh nisem zadovoljen) do 10 (zelo sem zadovoljen), ustreznost uporabljenih metod pa smo preverjali z ocenami trditve »Izbrane učne metode so bile ustrezne: od 1 (ni res) do 5 (res je)«.

Koristnost izobraževanja so udeleženci ocenjevali ob koncu izobraževanja na vnaprej pripravljenem obrazcu za vsak sklop posebej, in sicer z oceno od 1 (nekoristno) do 5 (zelo koristno). Kakovost izobraževanja so udeleženci

prav tako ocenjevali za vsak sklop posebej z oceno od 1 (nezadostno) do 5 (odlično). Obrazec za oceno izobraževanja je vseboval tudi vprašanja esejskega tipa, ki so udeležencem omogočala, da povedo, kaj jih je motilo, česa je bilo preveč oz. premalo in kaj bi še posebej pohvalili.

Opis vzorca

V raziskavo smo vključili dipl. m. s., ki so bile vključene v izobraževanje s področja arterijske hipertenzije v petih modulih med januarjem 2012 in marcem 2013. Sodelovalo je 143 dipl. m. s. z vsaj tremi leti delovnih izkušenj, ki so bile zaposlene na delovnem mestu dipl. m. s. v referenčni ambulanti. Vse so izpolnile začetni in končni test, s katerim smo ocenjevali izboljšanje znanja, 138 (93 %) udeležencev je izpolnilo vprašalnik za končno evalvacijo modula.

Opis poteka raziskave in obdelave podatkov

Vpliv izobraževanja na izboljšanje znanja smo ugotavljali s pomočjo pisnega testa, ki smo ga udeležencem dali v izpolnjevanje na začetku in ob zaključku izobraževalnega modula. Primerjali smo delež na testu zbranih točk na začetku in na koncu izobraževanja. Na vsako vprašanje je bil najbolj pravilen en odgovor, ki je lahko predstavljal tudi kombinacijo več odgovorov. Sodelovanje pri testu je bilo obvezno in je predstavljalo enega izmed pogojev za uspešno zaključen modul. Obvladovanje praktičnih veščin so ocenjevale učiteljice praktičnih veščin (dipl. m. s. s Kliničnega oddelka za hipertenzijo Kliničnega centra Ljubljana) tako, da so ocenjevale, ali je kandidat zahtevane postopke izvedel v predpisanem obsegu.

Uporabili smo kvantitativno in kvalitativno analizo podatkov. V kvantitativni analizi so bile uporabljene metode deskriptivne statistike s prikazom povprečnih vrednosti spremenljivk in standardnih odklonov. Rezultate na testu pred in po opravljenem izobraževanju smo primerjali s parnim *t*-testom. Za oceno napredka kot razlike med končnim in začetnim rezultatom pa smo uporabili enovzorčni *t*-test. Kot mejo statistične značilnosti smo upoštevali vrednost $p < 0,05$. Statistično analizo smo izvedli s programskim paketom SPSS, verzija 21 (IBM SPSS Statistics 21). Odgovore, ki so jih udeleženci podali na odprta vprašanja, ki so se nanašala na vsebino modula, sta po načelih deskriptivne kvalitativne analize analizirala dva neodvisna raziskovalca, ki sta stališča udeležencev s konsenzom razdelila v tri vnaprej določene kategorije: Kaj bi pohvalili?, Kaj vas je motilo?, Kaj ste pogrešali?

Rezultati

Znanje smo ocenjevali na populaciji vseh 143 dipl. m. s., ki so se udeležile izobraževanja. Znanje udeležencev pred in po izobraževanju prikazuje Tabela 1.

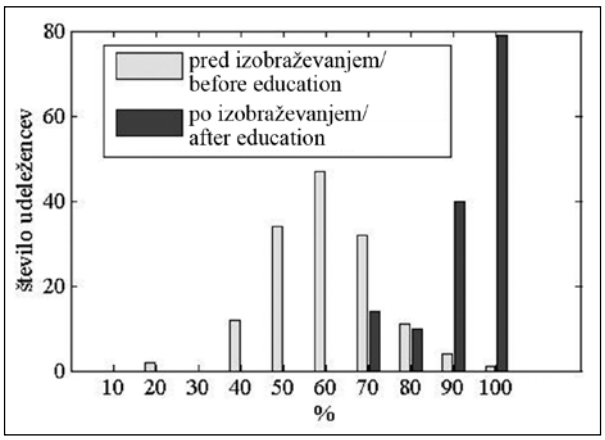
V povprečju je bil rezultat na končnem testu za 32,5 % boljši kot na začetnem testu. Vsi udeleženci so uspešno opravili končni test, ki je zahteval vsaj 60,0 % vseh zbranih točk. S parnim *t*-testom smo primerjali znanje udeležencev pred in po izobraževanju. Znanje po zaključenem modulu je bilo statistično značilno boljše ($p < 0,001$). Na Sliki 1 je histogram, ki prikazuje porazdelitev doseženih točk v odstotkih pred in po izobraževanju.

Tabela 1. *Znanje udeležencev pred in po izobraževanju*
Table 1. *Knowledge of attendees before and after education*

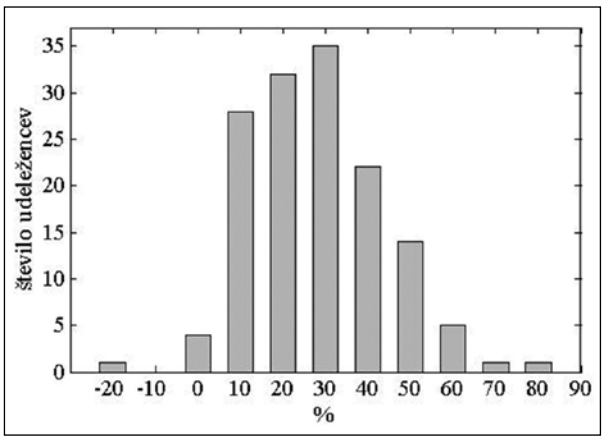
	Min (%)	**Max (%)**	$\overline{x}$ **(%)**	**s (%)**
Pred izobraževanjem/ Before education	15,0	100,0	56,6	13,2
Po izobraževanju/ After education	62,5	100,0	89,1	10,3

Legenda/Legend: Min – minimalen delež zbranih točk/minimal proportion of collected points; Max – maksimalen delež zbranih točk/maximal proportion of collected points; $\overline{x}$ *– povprečje/mean value; s – standardni odklon/standard deviation*

Analizirali smo tudi napredek, kar smo definirali kot razliko med točkami v % na končnem in točkami v % na začetnem testu. Porazdelitev napredka prikazuje Slika 2. Povprečje je enako 32,5 %, standardni odklon pa znaša 15,6 %. Enovzorčni *t*-test je pokazal, da je napredek signifikanten ($p < 0,001$).



Slika 1. *Porazdelitev doseženih točk (%) pred in po izobraževanju*
Figure 1. *Distribution of achieved points (%) before and after education*



Slika 2. *Porazdelitev napredka (razlike med točkami v % po in pred izobraževanjem)*
Figure 2. *Distribution of progress (difference between points in % after and before education)*

Zadovoljstvo udeležencev

Zadovoljstvo udeležencev s celotnim modulom in ustreznostjo uporabljenih metod poučevanja prikazuje Tabela 2.

Ocena koristnosti in kakovosti izobraževanja

Oceno udeležencev o koristnosti (potrebnosti) in kakovosti posameznih sklopov izobraževanja prikazuje Tabela 3.

V Tabeli 4 je zbranih nekaj najpogostejših stališč udeležencev, ki so jih zapisali na zastavljena tri vprašanja: Kaj bi pohvalili?, Kaj vas je motilo? in Kaj ste pogrešali?

Tabela 2. *Zadovoljstvo udeležencev s celotnim modulom in uporabljenimi metodami poučevanja*
Table 2. *Satisfaction of the attendees with the module as a whole and applied educational methods*

	Min	***Max***	$\overline{x}$	***s***
Celoten modul/ Module as a whole	4	10	8,6	1,3
Uporabljene metode/Methods used	3	5	4,6	0,6

Legenda/Legend: Min – minimalna vrednot/minimal value; Max – maksimalna vrednost/maximal value; $\overline{x}$ *– povprečje/mean value; s – standardni odklon/standard deviation*

Tabela 3. *Ocena koristnosti in kakovosti posameznih sklopov izobraževanja*
Table 3. *Assessment of usefulness and quality of individual segments of the education*

	Koristnost/Usefulness		**Kakovost/Quality**	
Oblika pouka	$\overline{x}$	***s***	$\overline{x}$	***s***
Predavanja/Lectures	4,7	0,40	4,6	0,42
Seminarji/Seminars	4,7	0,44	4,7	0,47
Prikazi kliničnih primerov/Case presentations	4,7	0,66	4,6	0,68
Praktične vaje/Practical exercises	4,6	0,68	4,6	0,73

Legenda/Legend: $\overline{x}$ *– povprečje/mean value; s – standardni odklon/standard deviation*

Tabela 4. *Stališča udeležencev o izobraževanju o arterijski hipertenziji*
Table 4. *Attendees' opinions about education in arterial hypertension*

Kaj bi pohvalili?/ What did you like?	**Kaj vas je motilo?/ What did you find disturbing?**	**Kaj ste pogrešali?/ What did you find disturbing?**
Uporabnost in kakovost predavanj/ Usefulness and quality of lectures	Vsebine, ki niso ključne za delo dipl. m. s./ The contents that are not crutial for graduated nurses	Več praktičnega dela (in manj teorije)/ More practice (and less theory)
Dostopnost predavateljev/ Accessibility of lecturers	Premalo aktivne vaje na kliniki/ Not enough active work at the clinic	Več možnosti za reševanje praktičnih primerov/ More opportunities for case-based discussion
Povezovanje teorije s prakso s prikazi kliničnih primerov/ Connection between theory and practice through case-based discussion	–	–

Diskusija

Prepoznali smo velike razlike v znanju med dipl. m. s. ob vstopu v izobraževanje – na v testu zastavljena vprašanja je bil delež pravilnih odgovorov med 15 % in 100 % – in pomembno izboljšali znanje (v povprečju za 32,5 %) z izobraževalnimi vsebinami, ki so jih dipl. m. s. prepoznale kot potrebne za delo v referenčni ambulanti, ter tako utemeljili potrebo po dodatnem izobraževanju dipl. m. s. za delo v referenčnih ambulantah.

Z raziskavo smo prepoznali razlike v teoretičnem znanju. V naši raziskavi nismo imeli podatka o visokošolskem zdravstvenem zavodu, na katerem so kandidatke zaključile študij, tako da težko povezujemo razlike v znanju z visokošolsko ustanovo, ki so jo dipl. m. s. obiskovale. Razlike v usposobljenosti med študenti različnih ustanov, ki izvajajo program zdravstvene nege, je v magistrskem delu ugotovila Kulaš (2013). Ugotovila je pomembno razliko v zadovoljstvu kliničnih mentorjev s študenti dveh zdravstvenih fakultet. Mentorji so zadovoljstvo s študenti ocenjevali na osnovi njihovega znanja, motivacije in usposobljenosti za delo. Ob verjetnih razlikah v kakovosti izvajanja dodiplomskega študija zdravstvene nege na različnih visokošolskih zavodih so razlike v znanju in usposobljenosti za izvajanje veščin verjetno tudi posledica različnih predhodnih delovnih izkušenj, s katerimi so dipl. m. s. prišle v referenčne ambulante (Chen, et al., 2011).

Ob koncu izobraževanja so vsi udeleženci izkazali vsaj minimalno zahtevano stopnjo znanja ter veščin in so uspešno opravili zaključni test. V literaturi obstajajo številni dokazi, ki izkazujejo uspešnost izobraževalnih programov za medicinske sestre z namenom izboljšanja zanesljivosti merjenja krvnega tlaka (Dickson & Hajjar, 2007; Rabbia, et al., 2013) in znanja s področja arterijske hipertenzije (DaSilva, et al., 2010). Razlike v znanju med udeleženci so bile ob koncu izobraževanja bistveno manjše kot na začetku. S tem smo dosegli enega izmed pomembnih ciljev na področju kakovosti – čim bolj enotno znanje in veščine udeležencev za čim bolj enotno kakovost zdravstvene oskrbe bolnikov (Rochfort, et al., 2012).

Pri izbiri metod izobraževanja smo izbirali metode, ki zahtevajo aktivno udeležbo slušateljev in so usmerjene v pridobivanje znanja na način, ki bo udeležencem omogočil, da znanje in veščine uporabijo v praksi in pripomorejo k razvoju kompetentnosti. Udeleženci so ocenili vsebine, ki so bile podane z različnimi metodami poučevanja, kot koristne in kakovostne, v pisnih odgovorih pa so izpostavili potrebo po še več prikazih kliničnih primerov z možnostjo takojšnje povratne informacije (ang. problem-based learning), kjer so najbolj prepoznali povezovanje teorije s prakso (Verstappen, et al., 2004; Petek Šter, 2012). Klinični primeri so bili predstavljeni na način, ki je udeležence postavil v vlogo dipl. m. s. v referenčni ambulanti, ki vodi obravnavo primera z uporabo protokola za vodenje bolnika z arterijsko hipertenzijo. V analizi obravnave primerov sta sodelovala tako zdravnik kot dipl. m. s.

V kvalitativnem delu analize smo zaznali, da so udeleženci zadovoljni s kakovostjo in uporabnostjo teoretičnih vsebin, ki so bile podane v obliki predavanj. Udeleženci so izrazili željo po še bolj praktično usmerjenem izobraževanju za delo v referenčni ambulanti. Kot dobro možnost so navedli že prej omenjeno učenje ob kliničnih primerih. Do učenja veščin, ki je potekalo na kliniki ob bolnikih in ob rednem delu, so imeli udeleženci pozitiven odnos, vendar pa smo zaznali, da si želijo biti bolj aktivno vključeni v proces obravnave bolnika, kot jim je bilo omogočeno. V kratkem času, ki so ga udeleženci prebili na kliniki, so se mentorji trudili, da bi prikazali potrebne veščine in udeležencem omogočili, da jih izvedejo pod nadzorom, za razvoj kompetentnosti pri izvajanju nekaterih za večino dipl. m. s. novih veščin pa bodo udeleženci potrebovali še dodatno vajo. Dipl. m. s. v referenčnih ambulantah, ki že izvajajo določene postopke (npr. merjenje gleženjskega indeksa z dopplerjem ali 24-urno neinvazivno merjenje krvnega tlaka), so lahko dobre učiteljice tistim, ki se v delo šele uvajajo.

Prednosti in omejitve raziskave

Raziskava je bila izvedena na populaciji vseh dipl. m. s., ki so opravile izobraževanje s področja arterijske hipertenzije. S testom, ki je bil enak na začetku in na koncu izobraževanja (ob začetku izobraževanja so dipl. m. s. polo z vprašanji vrnile ocenjevalcem), smo zagotovili objektivnost pri oceni spremembe v znanju udeležencev.

Glavna slabost raziskave glede ocenjevanja koristnosti in uporabnosti posameznih delov modula in uporabljenih metod je bila, da smo uporabili v namen evalvacije pripravljen vprašalnik, ki ni bil validiran. Ob uporabi Likertove lestvice je višja številka pomenila bolj pozitivno oceno, kar lahko pomeni, da so udeleženci težili k bolj pozitivnim odgovorom (Anastasi, 1976), čemur pa bi se izognili, če bi bila ocenjevalna lestvica oblikovana tako, da bi del pozitivnih odgovorov pomenil najvišjo, del pa najnižjo možno oceno.

Uporaba rezultatov v praksi

Ugotovitve naše raziskave podpirajo potrebo po dodatnem izobraževanju dipl. m. s. v referenčnih ambulantah. Toda izobraževanje dipl. m. s. se ne sme končati z obveznimi izobraževalnimi vsebinami, ki so za delo dipl. m. s. v referenčnih ambulantah del obveznih modulov, temveč mora predstavljati del kontinuiranega vseživljenjskega učenja, ki ga poudarja tudi strategija razvoja zdravstvene nege in oskrbe v Sloveniji v letih 2011–2020 (Kadivec, et al., 2013).

Potrebno bi bilo spremljati delo dipl. m. s. v referenčnih ambulantah in preveriti, kako izobraževanje dipl. m. s. za različna področja vpliva na kakovost postopkov obravnave in izide zdravljenja bolnikov (Dickson & Hajjar, 2007; DaSilva, et al., 2010; Rabbia, et al., 2013) ter na zadovoljstvo bolnikov z delom

dipl. m. s. (Klemenc Ketiš, et al., 2014). Ugotoviti bi bilo potrebno, ali so tudi drugi moduli, ki se izvajajo na področju izobraževanja za dipl. m. s., ustrezni in prispevajo k izboljšanju znanja udeležencev, ter prepoznati področja, na katerih bi bilo potrebno dipl. m. s. v referenčnih ambulantah dodatno izobraziti.

Zaključek

Na osnovi naše analize ugotavljamo, da je bila odločitev Projektnega sveta referenčnih ambulant o potrebi po dodatnem izobraževanju pravilna, saj je delo dipl. m. s. v referenčni ambulanti specifično in zahteva posebna znanja, ki jih dodiplomsko izobraževanje po programu zdravstvene nege ne daje.

Zahvala

Zahvala gre vsem udeležencem izobraževanja na modulih s področja arterijske hipertenzije, ki so sodelovali v raziskavi, ter vsem, ki so sodelovali pri izobraževanju: Roku Accettu, Snežani Škorič, Meliti Dolšak, Mariji Globokar, Mateju Reispu, Nataliji Žitnik - Mataj, Ernici Jovanovič, Tanji Žontar, Primožu Dolencu, Andreju Erhartiču, Jani Brguljan Hitij, Mateji Bulc; tajnici katedre za družinsko medicino Ani Artnak ter Zavodu za razvoj družinske medicine za administrativno pomoč pri izvedbi izobraževanja.

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Strokovni članek/Professional article

Uporabnost maščobnih kislin omega-3 pri obravnavi ran na koži

Effect of omega-3 fatty acids on skin wound healing

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Ključne besede: nenasičene maščobne kisline; celjenje; akutna rana; kronična rana

Key words: unsaturated fatty acids; healing; acute wound; chronic wound

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IZVLEČEK

Uvod: Namen članka je prikazati analizo podatkov o učinkih maščobnih kislin omega-3 na celjenje ran ter njihovo uporabnost pri obravnavi ran na koži.

Metode: Za pregled literature ter analizo dobljenih virov so bile uporabljene podatkovne baze: PubMed, CINAHL, Medline in ScienceDirect. Iskanje je bilo izvedeno s ključnimi besedami v angleščini: omega-3, fish oil, polyunsaturated fatty acid (PUFA), wound, wound healing, in Boolovim operatorjem »AND«. V analizo so bile vključene eksperimentalne ali randomizirane klinične raziskave, objavljene v angleškem jeziku in izdane od 1993 do januarja 2014, ki so vključevale preprečevanje ali zdravljenje akutnih ali kroničnih ran na koži z uporabo maščobnih kislin omega-3. Izključitveni kriterij je bil obravnava uporabe maščobnih kislin omega-3 pri opeklinah. Iz iskalnega nabora 1151 zadetkov je bilo v podrobno analizo vključenih 15 raziskav.

Rezultati: Rezultati analize literature so pokazali, da so maščobne kisline omega-3 večinoma neučinkovite pri obravnavi travmatskih in kirurških ran na koži, potencialno učinkovite pri obravnavi diabetičnih ran in učinkovite pri obravnavi razjed zaradi pritiska.

Diskusija in zaključek: Protivnetni učinek maščobnih kislin omega-3 upočasnjuje in moti celjenje akutnih ran na koži, vendar lahko z njimi obvladujemo lokalne vnetne odzive in pospešujemo reepitelizacijo pri kroničnih ranah. Za oblikovanje natančnih smernic uporabe bodo potrebna nadaljnja raziskovanja.

ABSTRACT

Introduction: The purpose of this article is to analyse the effect of omega-3 fatty acids on wound healing and to demonstrate their usefulness in the wound treatment.

Methods: Databases PubMed, CINAHL, Medline and ScienceDirect were searched for the literature review and analysis. A search was performed with keywords in English: omega-3 fish oil, polyunsaturated fatty acid (PUFA), wound, wound healing, and Boolean operator AND. Experimental or randomized clinical studies published in English from 1993 to January 2014, which included the prevention or treatment of acute skin wounds or chronic wounds by using omega-3 fatty acids, were included in analysis. Exclusion criterion was the use of omega-3 fatty acids in the treatment of burn wounds. From a total of 1151 retrieved studies, 15 were included in a detailed analysis.

Results: The results showed that omega-3 fatty acids are ineffective in the treatment of traumatic and surgical skin wounds, potentially effective in the treatment of diabetic wounds and effective in the treatment of pressure ulcers.

Discussion and conclusion: Anti-inflammatory effect of omega-3 interferes and slows down acute skin wound healing, but promotes the reepitalization of chronic wounds. Further research is required to establish exact wound care use guidelines.

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Uvod

Maščobne kisline so pomembne komponente vseh živih celic, saj so sestavni del celičnih membran, predstavljajo pa tudi vir energije in so predhodniki za sintezo številnih biološko aktivnih komponent (Wall, et al., 2010; Calder, 2012). Delimo jih na nasičene in nenasičene maščobne kisline, slednje pa glede na število prisotnih nenasičenih vezi delimo na mono- in polinenasičene maščobne kisline. Polinenasičene maščobne kisline, med katere štejemo maščobne kisline omega-3 in omega-6, spadajo med tako imenovane esencialne maščobne kisline, ki jih človeško telo za svoje delovanje nujno potrebuje, samo pa jih ni sposobno sintetizirati (Suvarna, 2008; Wall, et al., 2010).

Med maščobne kisline omega-3 spadajo α-linolenska kislina (alfa-linolenic acid – ALA), eikozapentaenojska kislina (eicosapentaenoic acid – EPA) in dokozaheksaenojska kislina (docosahexaenoic acid – DHA) (Suvarna, 2008), ki imajo 3, 5 in 6 dvojnih vezi. Zanje je značilno, da imajo dolge verige (najmanj 18 ogljikovih atomov), prva od dvojnih vezi pa se nahaja na tretjem atomu ogljika glede na metilni konec molekule (Calder, 2012).

Maščobne kisline omega-3 pozitivno učinkujejo pri obravnavi določenih vnetnih bolezni (Calder, 2012), saj so predhodniki številnih eikozanoidov (prostaglandini, tromboksani, levkotrietni, resolvini, lipoksini), ki imajo protivnetni učinek in zmanjšujejo stopnjo vnetja. Nasprotno pa je za eikozanoide iz maščobnih kislin omega-6 značilno, da delujejo provnetno, torej pospešujejo vnetje (Wall, et al., 2010). Poleg pretvorbe v eikozanoide maščobne kisline omega-3 delujejo na vnetje tudi tako, da vplivajo na izražanje genov, ki imajo pomembno vlogo pri vnetnih procesih ter celični diferenciaciji (Wall, et al., 2010; Calder, 2012).

Maščobne kisline omega-3 vplivajo tudi na celjenje ran (Cardoso, et al., 2004; Guo & Dipietro, 2010; Otranto, et al., 2010; Lenox & Bauer, 2013). Celjenje ran je normalen biološki proces, ki poteka preko visoko integriranih in natančno programiranih prekrivajočih se faz: hemostaza, vnetje, delitev celic (proliferacija) in preoblikovanje tkiva (maturacija), ki morajo potekati ob točno določenem času in v ustreznem zaporedju, saj morebitne prekinitve, odstopanja ali podaljševanje teh faz, ki so posledica delovanja številnih dejavnikov, lahko privedejo do podaljšanega in nepravilnega celjenja ali celo neceljenja ran (Guo & Dipietro, 2010).

Namen

Namen članka je analizirati podatke obstoječih raziskav o učinkih maščobnih kislin omega-3 na preprečevanje ali zdravljenje ran na koži. Članek bo medicinski sestri omogočil vpogled v delovanje maščobnih kislin omega-3 in njihovo uporabnost pri obravnavi različnih tipov ran.

Metode

Raziskovalna metoda je deskriptivna, izveden je bil pregled literature ter analiza dobljenih virov. Iskanje literature je bilo opravljeno s pomočjo podatkovnih baz: PubMed, Cumulative Index to Nursing and Allied Health Literature – CINAHL, Medical Literature Analysis and Retrieval System Online – Medline in ScienceDirect. Iskanje je bilo izvedeno s ključnimi besedami v angleščini: omega-3, fish oil, polyunsaturated fatty acid (PUFA), wound, wound healing, in Boolovim logičnim operatorjem »AND«. Kriterij pri izboru literature je bila objava prispevkov v angleščini v časovnem obdobju od 1993 do januarja 2014. Iskanje je dalo 1151 zadetkov. Identificirali smo duplikate in pregledali naslove in izvlečke raziskav. Kriteriji za vključitev v podrobnejšo analizo so bile eksperimentalne ali randomizirane klinične raziskave, ki so vključevale preprečevanje ali zdravljenje akutnih ali kroničnih ran na koži z uporabo maščobnih kislin omega-3. Izključene so bile raziskave, ki so obravnavale uporabo maščobnih kislin omega-3 pri opeklinah, saj je njihov možen pozitivni vpliv na zdravljenje že predstavljen (Kurmis, et al., 2010). V podrobnejšo analizo je bilo vključenih 15 raziskav, ki smo jih glede na vrsto rane razdelili v tri tematske sklope: travmatske in kirurške rane (9 raziskav), diabetične rane (3 raziskave) in razjede zaradi pritiska (3 raziskave).

Rezultati

Travmatske in kirurške rane

V prvo skupino smo uvrstili akutno povzročene rane na koži, natančneje kirurške rane in travmatske rane. Raziskave so se nanašale na bodisi enteralno, paranteralno ali lokalno uporabo maščobnih kislin omega-3. Rezultati raziskav so pokazali nevtralne (Scardino, et al., 1999; Gercek, et al., 2007; McDaniel, et al., 2008; McDaniel, et al., 2011), negativne (Albina, et al., 1993; Cardoso, et al., 2004; Otranto, et al., 2010; Cardoso, et al., 2011) in pozitivne učinke (Shingel, et al., 2008) uporabe maščobnih kislin omega-3 pri obravnavi teh ran.

McDaniel in sodelavci (2008) so raziskovali učinke prehranskih dopolnil z maščobnimi kislinami omega-3 (EPA/DHA) na izražanje provnetnih citokinov v rani in ugotovili, da imata pri zdravih ljudeh EPA in DHA zelo majhen učinek na reepitelizacijo akutno povzročene rane na koži. Toda rezultati randomizirane dvojne slepe študije so pokazali, da z enteralnim uživanjem povečanih odmerkov EPA in DHA lahko vplivamo na sistemsko raven lipidnih mediatorjev, ki so povezani z zmanjšanjem vnetja, kar bi lahko uporabljali za pospeševanje celjenja kroničnih ran (McDaniel, et al., 2008; McDaniel, et al., 2011). Zanimivo pri raziskavi McDaniel in sodelavci (2011) je tudi, da so ugotovili razlike v izražanju citokina interlevkina

1 beta (interleukin-1 beta – IL-1β glede na spol, zato predvidevajo, da v vnetni fazi pri inhibiciji tega citokina igra pomembno vlogo estrogen.

Scardino in sodelavci (1999) so ugotavljali učinke diete, obogatene z maščobnimi kislinami omega-3, na celjenje zašite in odprte rane na koži. Po petih dneh opazovanja so ugotovili statistično značilno manjšo epitelizacijo v odprti rani in manjši edem pri zašiti rani, v primerjavi s kontrolno skupino, ki je prejemala dieto brez maščobnih kislin omega-3. Vendar dieta ni pokazala dolgoročnega negativnega učinka na sam proces celjenja, saj po desetih dneh opazovanja statistično značilnih razlik ni bilo več.

V raziskavi Gercek in sodelavci (2007) se je intraperitonealna uporaba maščobnih kislin omega-3 ob sočasni terapiji z deksametazonom sicer izkazala za neškodljivo, vendar pozitiven vpliv različnih celičnih aktivnosti na obnovo tkiva ni bil ugotovljen.

V raziskavi Albina in sodelavci (1993) se je dieta, obogatena z maščobnimi kislinami omega-3, v primerjavi z dieto z maščobnimi kislinami omega-6 izkazala celo za škodljivo, saj so pri celjenju incizijske rane ugotovili podaljšano fazo preoblikovanja tkiva. V začetnih fazah celjenja ni bilo razlik. Po 30 dneh od nastanka poškodbe so se pokazale razlike v mehanični vzdržljivosti vzorcev kože, le-ta je bila slabša pri maščobnih kislinah omega-3, presenetljivo pa razlik v nalaganju kolagena ni bilo.

Tudi Otranto in sodelavci (2010) so ugotovili podaljšanje celjenja rane ob predhodnem enteralnem nadomeščanju maščobnih kislin omega-3, vendar so s histološko analizo v nasprotju z raziskavo Albina in sodelavci (1993) ugotovili povečano raven hidroksiprolina in s tem povečano nalaganje bolj kompaktnega kolagena v primerjavi s kontrolno skupino in skupino, ki je prejemala maščobne kisline omega-6.

Cardoso in sodelavci (2004) so z lokalno uporabo maščobnih kislin omega-3 pri zdravljenju rane na koži prav tako ugotovili prekomerno nalaganje kolagena iz fibroblastov, večje področje vezivnega tkiva ter slabšo reepitelizacijo in s tem podaljšano celjenje rane v primerjavi z maščobnimi kislinami omega-6 in omega-9. S podrobnejšo raziskavo so Cardoso in sodelavci (2011) prav tako ugotovili upočasnjeno celjenje ran pri maščobnih kislinah omega-3. Maščobne kisline omega-9 so se v primerjavi z maščobnimi kislinami omega-3 izkazale za učinkovitejše, saj so pri slednjih poleg nalaganja kolagena ugotovili tudi povečano tvorbo provnetnih citokinov, zvišan citokin interlevkin 10 (interleukin-10 – IL-10) in zmanjšano prepisovanje gena za encim ciklooksigenazo 2 (cyclooxygenase-2 – COX-2), kar prispeva k boljšemu uravnavanju vnetja in pospešuje potek celjenja.

Shingel in sodelavci (2008) so izdelali oblogo v obliki trdega emulzijskega gela, ki je vsebovala maščobne kisline omega-3, in primerjali njeno učinkovitost v primerjavi z oblogo iz olivnega olja, navadno gazo in hidrogelno oblogo. Obloga iz maščobnih kislin omega-3 je povzročila največje spremembe v celjenju rane. Rezultati raziskave so pokazali, da maščobne kisline omega-3 vplivajo na metabolizem in/ali delitev celic, uravnavajo izražanje nekaterih genov fibroblastnih in endotelijskih celic ter spodbudijo zgodnjo angiogenezo in zaprtje rane. Menijo, da bi obloge lahko uporabljali pri obravnavi kroničnih ran.

Diabetične rane

Rezultati sicer zelo podobnih raziskav so pokazali potencialno pozitivne učinke uporabe maščobnih kislin omega-3 pri akutnih ranah pri diabetesu. Lu in sodelavci (2010) so z določitvijo novega endogenega lipidnega mediatorja 14*S*,21*R*-dihidroksi-DHA, ki nastane ob poškodbi kože in izvira iz DHA, ugotovili njegov pozitiven učinek na zdravljenje ran. Vendar je njegova biosinteza pri obolelih za diabetesom zmanjšana (Tian, et al.; 2011a). Oslabljena biosinteza lipidnega mediatorja, ki je posledica slabše regulacije makrofagov, je povezana z okvarjenimi funkcijami celjenja (Tian, et al., 2011a; 2011b), zato so se s pomočjo mezenhimskih celic raziskovalci odločili preveriti učinke vnosa tega mediatorja pri diabetesu. Rezultati so pokazali, da mediator lahko pozitivno vpliva na reepitelizacijo in oblikovanje granulacijskega tkiva ter izboljšuje angiogenezo in vaskularizacijo (Tian, et al., 2011a). Pri obravnavi ran pri diabetesu bi bilo smiselno raziskovati uporabnost avtolognih makrofagov, ki bi jih izpostavil 14*S*,21*R*-dihidroksi-DHA (Tian, et al., 2011b).

Razjede zaradi pritiska

Pripravki maščobnih kislin omega-3 v obliki prehranskih nadomestil ali v obliki lokalne uporabe na koži so se izkazali za učinkovite pri zdravljenju razjede zaradi pritiska v vseh objavljenih študijah, kar je spodbudno, saj razjede zaradi pritiska predstavljajo tako ekonomsko kot zdravstveno breme (Theilla, et al., 2012a).

Theilla in sodelavci (2007) so v svoji prospektivni randomizirani študiji pri kritično bolnih pacientih z akutno poškodbo pljuč in razjede zaradi pritiska ugotavljali preventivne in zdravilne učinke enteralne diete, obogatene z EPA, gama-linolensko kislino (gamma-linolenic acid – GLA) in vitamini (A, C, E). Rezultati so pokazali, da dieta pomembno vpliva na pojavnost novih razjed zaradi pritiska, razlik pri samem zdravljenju razjed zaradi pritiska pa niso ugotovili. V intervencijskem kontroliranem randomiziranem kliničnem preizkusu pri pacientih z razjedo zaradi pritiska druge ali višje stopnje so Theilla in sodelavci (2012a) potrdili, da prehranski dodatek ribjega olja (EPA) v kombinaciji z drugimi mikronutrienti pomembno vpliva na preprečevanje poslabšanja stanja razjede zaradi pritiska. Pri pacientih so tudi zaznali pomemben upad krvnega proteina akutne faze vnetja

(C-reaktivnega proteina – CRP). S podobno študijo so poleg upada CRP ugotovili tudi povišanje limfocitov CD18 in CD11a ter granulocitov CD49b (Theilla, et al., 2012b).

V intervencijski kontrolirani randomizirani študiji se je lokalna uporaba maščobnih kislin omega-3 v ribjem olju izkazala za učinkovito pri izboljševanju prve stopnje razjede zaradi pritiska v primerjavi s standardnim obračanjem na dve uri (Elahi, et al., 2012).

Diskusija

Temeljni cilj obravnave ran je hitro celjenje ter zadovoljiv nastanek funkcionalnega in estetskega brazgotinskega tkiva (Cardoso, et al., 2011). Proces celjenja rane je odvisen od primernega vnetnega odziva, nanj pa vplivajo številne bioaktivne molekule, med katere spadajo tudi maščobne kisline (Cardoso, et al., 2004; Guo & Dipietro, 2010; Otranto, et al., 2010; Lenox & Bauer, 2013).

Ko se odločamo za uporabo nenasičenih maščobnih kislin pri obravnavi ran, je poleg značilnosti pacienta potrebno upoštevati tudi tip rane in vrsto maščobne kisline, ki jo bomo uporabili (Jia & Turek, 2005). Na sam učinek zdravljenja pomembno vpliva tudi količina maščobnih kislin (McDaniel, et al., 2008; McDaniel, et al., 2011). Kljub temu delovanje in učinki maščobnih kislin omega-3 pri celjenju ran še niso popolnoma razjasnjeni, dosedanje ugotovitve si med seboj celo nasprotujejo (Cardoso, et al., 2004; Otranto, et al., 2010).

Protivnetni učinki maščobnih kislin omega-3 lahko motijo normalen proces celjenja rane (Cardoso, et al., 2004). Slabša epitelizacija in kontrakcija rane, zakasnela angiogeneza in zmanjšana tvorba granulacijskega tkiva posledično pomenijo tudi podaljšan čas celjenja akutnih travmatskih in kirurških ran na koži. To je bilo najverjetneje povezano s prekomernim vnetnim odzivom takoj po nastanku rane (Cardoso, et al., 2004; Otranto, et al., 2010). Lenox in Bauer (2013) zato menita, da je pred samo operacijo najbolje, če opustimo visoke odmerke maščobnih kislin omega-3 bodisi v obliki diete ali prehranskih nadomestil.

Pomembna komponenta optimalnega celjenja rane je uravnavanje nastanka kolagena (Jia & Turek, 2005). Maščobne kisline omega-3 vplivajo na povišano izražanje kolagena (Cardoso, et al., 2004; Otranto, et al., 2010), učinek pa je povezan s povečanim izražanjem inducibilne sintaze dušikovega oksida (inducible nitric oxide synthase – iNOS) in nastankom dušikovega oksida (nitric oxide – NO). Povečana tvorba kolagena oziroma posledično intenzivno brazgotinjenje tkiva (fibroza) lahko negativno vpliva na estetski izgled in funkcionalnost zaceljene rane, lahko pa ima tudi pozitivne učinke, saj stimulacijo vezivnega tkiva lahko s pridom uporabljamo pri obravnavi kroničnih ran (Cardoso, et al., 2004; Jia & Turek, 2005; Otranto, et al., 2010).

Za kronične rane je značilno podaljšano vnetje in povečana aktivnost polimorfonuklearnih levkocitov (McDaniel, et al., 2008; Otranto, et al., 2010; McDaniel, et al., 2011). Raziskovalci sklepajo, da maščobne kisline omega-3 zaradi vpliva na izražanje adhezijskih molekul (Theilla, et al., 2012b) skrajšajo podaljšano vnetje in pospešujejo proces celjenja iz vnetne k regenerativni fazi (Theilla, et al., 2012a). Upoštevati je treba, da je podaljšana vnetna faza lahko tudi posledica prisotne infekcije (Guo & Dipietro, 2010).

Nekatera nasprotna dognanja o učinkih in delovanju maščobnih kislin omega-3 bi bila lahko posledica različne sestave uporabljenih preparatov (Cardoso, et al., 2004). Theilla in sodelavci (2012a; 2012b) so na primer poleg maščobnih kislin omega-3 uporabili tudi druga hranila, minerale in vitamine ter GLA, ki spada med maščobne kisline omega-6. Eden izmed možnih razlogov boljše učinkovitosti obloge iz maščobnih kislin omega-3 je vzpostavitev za celjenje rane ugodnega vlažnega okolja (Shingel, et al., 2008).

Potrebno bi bilo podrobneje ugotoviti vpliv drugih hranil na celjenje ran. Vendar se uporabi hranil ne moremo izogniti, pomembna so predvsem tista, ki preprečujejo peroksidacijo maščobnih kislin, najpomembnejšo vlogo pri tem ima po mnenju Lenox in Bauer (2013) vitamin E. Polinenasičene maščobne kisline so namreč zelo nagnjene k peroksidaciji, ki lahko privede do upočasnjenega celjenja rane (Cardoso, et al., 2004). Druga znana hranila, ki izboljšujejo delovanje in učinkovanje maščobnih kislin, so arginin, glutamin in vitamini A, C, E (Guo & Dipietro, 2010). Zaradi različnih količin in koncentracij uporabljenih hranil je interpretacija teh raziskav lahko otežena (Lenox & Bauer, 2013). Raziskovalci opozarjajo tudi, da obstajajo pomembne razlike v učinkovitosti med EPA in DHA (Tonutti, et al., 2010; Kaur, et al., 2011). Zaradi različnega uravnavanja genskega izražanja limfocitov EPA in DHA različno vplivata na fagocitozo, izločanje citokinov in homeostazo (Gorjão, et al., 2009).

Pri obravnavi ran je potrebno upoštevati tudi značilnosti pacienta. Veliko pacientov s kronično rano je namreč mejno prehranjenih ali pa so podhranjeni, kar vpliva na upočasnjeno celjenje ran (Lavrinec, et al., 2007). Ob slabi prehranjenosti in tudi omejeni mobilnosti pa se zviša možnost nastanka razjed zaradi pritiska. Na delovanje in učinkovanje maščobnih kislin vplivajo tudi nekatera zdravila (Survana, 2008; Guo & Dipietro, 2010). McDaniel in sodelavci (2011) so na primer uporabili aspirin, ki poveča aktivnosti resolvinov, tj. komponent, ki nastanejo iz EPA in DHA ter delujejo protivnetno. Gercek in sodelavci (2007) so ugotovili, da glukokortikoid deksametazon v kombinaciji z maščobnimi kislinami omega-3 ne vpliva na poslabšanje celjenja ran, čeprav je za kortikosteroide znano, da imajo negativni učinek na celjenje ran. Interakcije med zdravili z maščobnimi kislinami pri celjenju ran so možne, zato bi bilo le-te potrebno natančno raziskati.

Zaključek

Na podlagi analize literature smo ugotovili, da maščobne kisline omega-3 delujejo protivnetno, vplivajo na izločanje citokinov, metabolizem celice, gensko izražanje in tvorbo krvnih žil, vendar nekateri učinki še niso popolnoma raziskani. Dokazi kažejo, da bi dieta ali lokalna uporaba maščobnih kislin omega-3 lahko pripomogli k stroškovno racionalnejšemu preprečevanju in obravnavi kroničnih ran na koži, predvsem razjed zaradi pritiska in diabetičnih ran. Pri tem je pomembno upoštevati druge dejavnike, kot so značilnosti pacienta, tip rane, vrsta in količina maščobne kisline in druga hranila. Samo uporaba različnih dodatkov ob splošno slabi prehranjenosti in omejeni mobilnosti pacientov ne prinese želenih rezultatov. Potrebna je celostna in individualna obravnava posameznika. Celjenje akutno povzročenih kirurških in travmatskih ran na koži bi lahko izboljševali z uporabo maščobnih kislin omega-6 in omega-9.

Ugotavljamo, da ni veliko raziskav s tega raziskovalnega področja. Članek zato medicinskim sestram predstavlja teoretično izhodišče za izvajanje kliničnih raziskav tudi v našem okolju. Podaljšano in nepravilno celjenje ran vpliva na kakovost življenja pacienta, podaljšani čas hospitalizacije in zdravljenje teh ran je povezano tudi s povečanimi stroške obravnave. V kolikor bomo lahko s pripravki iz maščobnih kislin uspešneje obravnavali rane, bo to pomenilo tudi glede stroškov učinkovitejše izboljševanje kakovosti zdravstvene obravnave v bolnišnicah in v domači oskrbi. Nova dognanja in dokazi bodo osnova za oblikovanje smernic pri obravnavi ran, medicinski sestri pa bo novo znanje koristilo tudi pri odločanju v zdravstveni negi, ki bo temeljilo na znanstvenih dokazih.

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NAVODILA AVTORJEM

Splošna načela

Članek naj bo pisan v slovenskem ali angleškem knjižnem jeziku, razumljivo in jedrnato, dolg naj bo največ 5.000 besed. 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. Avtor mora pri oddaji članka dosledno upoštevati navodila glede standardizirane znanstvene opreme, videza in tipologije dokumentov. Članku mora priložiti izjavo o avtorstvu na obrazcu, ki je dostopen na spletni strani Obzornika zdravstvene nege. Izjavo morajo lastnoročno podpisati avtor in vsi soavtorji v zaporedju, kot so navedeni v članku. Članek se ne uvrsti v uredniški postopek, dokler pravilno podpisana izjava ne prispe v uredništvo. Uredništvu je treba, v obliki spremnega dopisa, sporočiti odgovornega (kontaktnega) avtorja (njegov celotni naslov, telefonsko številko in e-naslov), ki bo skrbel za komunikacijo z uredništvom. 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 Helsinške 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 naslov 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. 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) (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. Navedenih naj bo od tri do šest ključnih besed, ločenih s podpičjem, 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 glavni problem, namen raziskave ter 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. 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 ciljev raziskave, raziskovalnih vprašanj oz. hipotez in načrta 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. 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 svoje raziskave.

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

Za zaključkom sledijo navedbe:
- ali članek vključuje del rezultatov večje raziskave;
- ali je članek nastal v okviru diplomskega, magistrskega ali doktorskega dela; v tem primeru je prvi avtor vedno študent;
- ali je bila raziskava financirana; če je bila financirana, je treba navesti financerje in raziskovalno skupino, v kolikor niso vsi člani skupine avtorji članka;
- morebitne zahvale.

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: 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 izvirnem 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 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 (tabelarični 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 mrebiten prepad v znanju in razumevanju, izpostavimo pomen bodočih raziskav, uporabnost pridobljenih spoznanj in priporočila za prakso/raziskovanje/izobraževanje/menedžment, 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 izvirnih 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.

Literatura

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, priimka 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 kronološko v 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 otroka.

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 za citiranje literature v seznamu

Knjige:

Hoffmann Wold, G., 2012. *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.

Knjige, ki jih je uredil eden ali več urednikov:

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.

Poglavja oz. prispevki iz knjige, ki jo je uredilo več urednikov:

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

Girard, N.J., 2004. Preoperative care. In: Lewis, S.M., et al. eds. *Medical – surgical nursing: assessment and management of clinical problems.* 6th ed. St. Louis: Mosby, pp. 360–375.

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

Anonimno delo (avtor ni naveden):

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Delo korporativnega avtorja:

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NAVODILA ZA PREDLOŽITEV ČLANKA

Avtor, s katerim bo uredništvo komuniciralo, naj na e-naslov uredništva **obzornik@zbornica-zveza.si** pošlje:

- **elektronsko verzijo članka**, in sicer v enem izmed formatov, ki jih prepozna urejevalnik besedil MS Word, in en izvod v formatu PDF (portable document format); ime datoteke članka naj bo v obliki: PRIIMEKPRVEGAAVTORJA_Prve_tri_besede_naslova_članka (npr. BABNIK_Predstavitev_rezultatov_dela);
- **izjavo o avtorstvu** (obrazec je dostopen na spletni strani revije); natisnjeno izjavo naj podpišejo vsi avtorji v zaporedju, v kakršnem so navedeni v članku; skenirana izjava naj se nato pošlje kot priponka e-pošti; če avtor nima možnosti skeniranja, naj originalni dokument pošlje na naslov uredništva: Obzornik zdravstvene nege, Ob železnici 30a, 1000 Ljubljana;
- spremni dopis, v katerem naj bosta navedena celotni naslov in telefonska številka odgovornega (kontaktnega) avtorja, ki bo skrbel za komunikacijo z uredništvom.

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. Priporočamo uporabo oblikovne predloge za članek (word), dostopne na spletni strani Obzornika zdravstvene nege. Članek naj bo pripravljen tako, da si na naslovni strani sledijo: naslov članka v slovenščini in angleščini, ime in priimek avtorja oz. avtorjev, ključne besede in izvleček v slovenščini ter ključne besede in izvleček v angleščini. Sledijo podatki o avtorjih z vsemi strokovnimi naslovi in morebitnimi habilitacijskimi nazivi ter ime ustanove, v okviru katere je delo nastalo. Nujno je navesti korespondenčni oz. kontaktni e-naslov za kontakt z avtorjem. Avtor, ki bo komuniciral z uredništvom, bo v članku naveden kot kontaktni avtor. Sledi morebitna opomba o izvoru članka (npr. diplomsko delo) ter celotno besedilo članka in seznam literature. V članku naj bodo uporabljene enote SI, ki jih dovoljuje Zakon o meroslovju.

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 in legendo uporabljenih znakov. Opisni naslov, ter legenda morata biti v slovenščini in angleščini. V tabeli morajo biti izpolnjena vsa polja, obsegajo lahko največ 57 vrstic. Za njihovo oblikovanje naj velja naslednje: velikost črk 11, 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. Opisni naslovi in legende razpredelnic naj bodo v slovenščini in angleščini.

Slike naj bodo oštevilčene z arabskimi zaporednimi številkami. Podpisi k slikam *(pod sliko)* naj bodo v slovenščini in angleščini. 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, 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. V kolikor katere od predlaganih izboljšav ne upošteva, mora to pisno pojasniti. Po zaključenem recenzijskem postopku uredništvo članek vrne avtorju, da popravke odobri, jih upošteva in pripravi čistopis. Čistopis uredništvo pošlje v jezikovni pregled.

Prvi natis avtor prejme 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 dneh, sicer uredništvo meni, da se avtor s prvim natisom strinja.

NAVODILA ZA DELO RECENZENTOV

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 na obrazcu in ugotovil, ali so trditve in mnenja, zapisani v članku, verodostojni in ali je avtor upošteval navodila za objavljanje. 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 jasen, ali ustreza vsebini; ali izvleček povzema bistvo članka; ali avtor citira (naj)novejšo literaturo in ali omenja domače avtorje, 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.

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 e-pošte prejel le vsebino članka brez imena avtorja. Besedilu članka bo priložen obrazec Mnenje in strokovna recenzija, ki je dostopen tudi na spletni strani revije. Če ima recenzent večje pripombe, jih kot utemeljitev za sprejem ali morebitno zavrnitev članka na kratko opiše oz. avtorju predlaga nadaljnje delo. Zaradi večje preglednosti in lažjih dopolnitev s strani avtorja 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 (sledi spremembam, spremeni ime/Track changes, change user name). Končno odločitev o objavi članka sprejme uredniški odbor.

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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 not including 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. The statement of responsibility and publication approval must be signed by the authors' full name. In submitting a manuscript, the authors must observe the standard scientific research paper components, the format and typology of documents. 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 Code of Ethics for Nurses and Nurse Assistants of Slovenia and the Declaration of Helsinki. 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 title 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 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 executive 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. 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. 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 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. 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-

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Citation Examples by Type of Reference

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

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

Citing a chapter/essay in a book edited by multiple authors:

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

Girard, N.J., 2004. Preoperative care. In: Lewis, S.M., et al. eds. *Medical – surgical nursing: assessment and management of clinical problems*. 6th ed. St. Louis: Mosby, pp. 360–375.

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

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

Citing a journal article:

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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.

Citing an article from a journal supplement or issue supplement:

Halevay, 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.

Citing from published conference proceedings:

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., et al. 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., et al. 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 osrediščeni 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.

Citing diploma theses or master's theses and doctoral dissertations:

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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.

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

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

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