No. 3, Vol. 8, 2017

Editor-in-chief: Peter G. Fedor-Freybergh, Michael Olah

Including: Social Work, Humanitary Health Intervention, Nursing, Missionary Work

CLINICAL SOCIAL WORK
AND HEALTH INTERVENTION

international scientific group of applied preventive medicine I - GAP vienna, austria

Foto: Michael Olah, Basilica of the Blessed Virgin Of Ta' Pinu

Issue: Perception of Health Sciences by Consumers

Original Articles

ISSN 2076-9741/Online ISSN 2222-386X/Print

Editors

Editorial plan for the year 2017:

Issue 1/2017: Health and Social Care in Imprisoned, Orphans and Homeless
Issue 2/2017: Health Intervetions for the Health for all initiative from SPA to Slums
Issue 3/2017: Perception of Health Sciences by Consumers
Issue 4/2017: Social and Health Palliative Care

Contact

International Gesellschaft für angewandte Präventionsmedizin i-gap e.V. (International Society of Applied Preventive Midicine i-gap)

Währinger Str. 63
A-1090 Vienna, Austria

Tel. : +49 - 176 - 24215020
Fax : +43 / 1 4083 13 129
Mail : office@i-gap.org
Web : www.i-gap.org

Issue Guarantor:
prof. Dr. Roberto **Cauda**, Ph.D.

Impact factor:
1.620

Affiliated Institutions:
Panuska College of Professional Studies, Scranton, USA
St. Elizabeth University of Health and Social Work, SVK
Catholic university of Eastern Africa, Nairobi, Kenya

Subscription rates 2017, Vol. 8, No. 3

Open Access Journal

Additional information on Internet:
www.clinicalsocialwork.eu

The journal works on the non-profit basis. The Original Articles are published free of charge / the scope up to 3,500 words, over the scope should be paid 50 EUR / USD for every 500 words/. All the published Articles are charged 450 EUR / USD with standard range which cannot be exceed.

Table of Contents

Original Articles

Editorial

The topic if this issue of Clinical Social Work and health intervention is „Perception of Health Sciences by Consumers“. Indeed, there are at least two papers which already in the title strictly focus on this theme and others that are indirectly related to the same topic. In the last years the perception of the quality of the service has shifted from the healthcare providers to the healthcare consumers. For this reason the consumers' satisfaction is being increasingly used worldwide for the assessment of quality of services provided by healthcare institutions and not only by them. It is also noteworthy that while in the past it was always reported to „patient“, nowadays it is preferred the term of „consumer“. This change is not only semantic but it involves a totally different perception of the services provided by healthcare institutions equating them to other institutions with different aims.

Healthcare is now recognized by the civil society as an „industry“ which provides specific services in the field of „health“ having the quality care as the evaluation parameters of them. It is also important to mention that according to the Institute of Medicine (IOM) „Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.“

Thus, it is not surprising that among the most relevant parameter of evaluation of the health institutions there is patient satisfaction which has become a regular outcome in order to monitor the efficiency of medical staff and hospitals. Patient-Reported Outcomes (PROs) and Patient-Reported Outcome Measures (PROMs) are good example of consumers' evaluation of healthcare system since they focus on placing patients at the center of health care research and of clinical care.

Consumer perception of health has drastically changed since the eighties. In the past, the idea of „feeling well“ was the ultimate goal of any medical act and this mantra was widely perceived and accepted by the medical staff as well as by the patients. Today, at variance, the consumers feel that health should provide a more complex and wide range of services such as adequate preventative care, support to healthy lifestyle choices for long-term health and adequate access to health care.

In any case, it is the consumer perception on the quality of services which drives most of the success or failure of an individual institution either in the healthcare field or in other fields. Since health and wellness are essential quality of life factors, many consumers often accept to pay a high price for receiving services that they consider essential to their health status even in countries where there is a national health service. The logical consequence of these high expectations and of the high costs sustained by consumers is the dramatic increases in the malpractice claims against physicians and hospitals recorded in the last decades. In fact, sometimes the patient's request go far beyond what the public or private health system can offer.

A new relevant element is present in the current scenario and is the increasing number of consumers seeking health information via the Internet. Indeed, more than 70 000 websites disseminate health information and an average of 50 million people seek health information online. This high number of Internet users for health problems invariably influence (and it will do it even more in the future) the degree of consideration for health systems.

In conclusion, the perception of healthcare sciences by consumers is currently one of the most important elements to define the strategies and needs of the public in this field and for this reason is extremely interesting this issue of Clinical Social Work and health intervention.

Roberto Cauda
Institute of Infectious Diseases
Catholic University of the Sacred Heart, Rome, Italia

Few words from the Editors-In-Chief

This journal brings authentic experiences of our social workers, doctors and teachers working for the International Scientific Group of Applied Preventive Medicine I-GAP Vienna in Austria, where we have been preparing students for the social practise over a number of years. Our goal is to create an appropriate studying programme for social workers, a programme which would help them to fully develop their knowledge, skills and qualification. The quality level in social work studying programme is increasing along with the growing demand for social workers.

Students want to grasp both: theoretical knowledge and also the practical models used in social work. And it is our obligation to present and help students understand the theory of social work as well as showing them how to use these theoretical findings in evaluating the current social situation, setting the right goals and planning their projects.

This is a multidimensional process including integration on many levels. Students must respect client's individuality, value the social work and ethics. They must be attentive to their client's problems and do their best in applying their theoretical knowledge into practice.

It is a challenge to deliver all this to our students. That is also why we have decided to start publishing our journal. We prefer to use the term 'clinical social work' rather than social work even though the second term mentioned is more common. There is some tension in the profession of a social worker coming from the incongruity about the aim of the actual social work practice. The question is whether its mission is a global change of society or an individual change within families. What we can agree on, is that our commitment is to help people reducing and solving the problems which result from their unfortunate social conditions. We believe that it is not only our professional but also ethical responsibility to provide therapeutic help to individual and families whose lives have been marked with serious social difficulties.

Finding answers and solutions to these problems should be a part of a free and independent discussion forum within this journal. We would like to encourage you – social workers, students, teachers and all who are interested, to express your opinions and ideas by publishing in our journal. Also, there is an individual category for students' projects.

In the past few years there have been a lot of talks about the language suitable for use in the field of the social work. According to Freud, a client may be understood as a patient and a therapist is to be seen as a doctor. Terminology used to describe the relationship between the two also depends on theoretical approach. Different theories use different vocabulary as you can see also on the pages of our journal.

Specialization of clinical social work programmes provides a wide range of education. We are determined to pass our knowledge to the students and train their skills so they can one day become professionals in the field of social work. Lately, we have been witnessing some crisis in the development of theories and methods used in clinical social work. All the contributions in this journal are expressing efforts to improve the current state. This issue of CWS Journal brings articles about social work, psychology and other social sciences.

Michael Olah
Peter G. Fedor-Freybergh
Edition of the journal

Demographic Characteristics of Population Ageing in Slovakia

I. Bartosovic (Ivan Bartosovic)[1], E. Zacharova (Eva Zacharova)[1], K. Zrubakova (Katarina Zrubakova)[2], E. Gazikova (Elena Gazikova)[4], D. J. West (Daniel J. West)[3], M. M. Costello (Michael M. Costello)[3]

Original Article

[1] St. Elizabeth University of Health and Social Work, Bratislava, SK
[2] Catholic University Ruzomberok, SK
[3] University of Scranton, Department of Health Administration and Human Resources, USA
[4] Constantine the Philosopher University in Nitra, Slovakia

E-mail address:

michael.costello@scranton.edu

Reprint address:

Michael M. Costello
University of Scranton
Department of Health Administration and Human Resources
Pennsylvania, USA

Suource: Clinical Social Work and Health Intervention *Volume: 8* *Issue: 3*
Pages: 7 – 14 *Cited references: 17*

Reviewers:

Vlastimil Kozon
Allgemeines Krankenhaus – Medizinischer Universitätscampus Vienna, AU
Stefan Krajcik
Geriatric Department, Slovak Medical University, SK

Key words:

Demography, Crude birth rate, Mortality, Life expectancy, Healthy life years, Aging Index, Total dependency ratio, Active Aging Index.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2017; 8(3): 7 – 14; DOI 10.22359/cswhi_8_3_01 © 2017 Clinical Social Work and Health Intervention

Abstract:

Population aging is a global process which is particularly marked mainly in developed countries, especially in Europe. From the point of view

of gerontology and geriatrics the following characteristics are typical for the current demographic trend: persistently decreasing crude birth rate; stagnancy of mortality; increasing life expectancy; changes in the age structure; growth of the group of very old people; feminization of aging; changes in demographic indices. The phenomenon of "over-mortality" of men is confirmed by the fact that 79% of all deaths in 2015 in the age category from 30 to 34 years are deceases of men. According to the OECD, the age-standardized mortality rate for cardiovascular diseases and the age-standardized mortality rate for cancer (per 100,000 population), Slovakia is the worst among the countries of OECD and other compared countries. As for the life expectancy, Slovakia is on the bottom position among the countries of the European Union. In 2014, the healthy life years at birth in Slovakia were 55.5 years in men and **54.6** years in women. At present, **14.45%** of people in Slovakia are 65 years old or older. According to predictions, in 2060 every third inhabitant in Slovakia will be at least 65 years old. A very important demographic feature is also the growth of the group of "very old people", thus the so-called double aging. The "double aging" process means that more people are living longer while fewer children are born, resulting in an increase in the median age.

Population aging is a global process which is particularly marked mainly in developed countries, especially in Europe. In this regard, this situation is specific in Slovakia. As a result of very intensive population aging, within 40 years Slovakia will transform from a relatively young European country into one of the oldest countries in Europe (Vano, 2015). The following characteristics are typical for the demographic trend from the view of gerontology and geriatrics:

- persistently decreasing crude birth rate,
- stagnancy in mortality,
- increasing life expectancy,
- changes in the age structure,
- growing group of very old people,
- feminization of aging,
- changes in demographic indices (Hegyi *et al.,* 2012).

Persistently decreasing crude birth rate

The crude birth rate is the number of live births occurring among the population of a given geographical area during a given year, per 1,000 mid-year total population of the given geographical area during the same year, thus expressed in *per mille* (Jurcova, 2005). In Slovakia, the crude birth rate was **10.3‰**. Since 2001, this value has not changed notably (9.5% in 2001, 10.0% in 2004, 10.0% in 2006, 11.3% in 2009). However, one should notice that, e.g., in 1950 the crude rate birth was 28.79% and in 1979 its value was 20.29% (*SU SR, 2016*, Katusa *et al.,* 2014).

Stagnancy of mortality

The crude death rate is the number of deaths occurring among the population of a given geographical area during a given year, per 1,000 mid-year total population of the given geographical area during the same year, thus expressed in *per mille* (Jurcova, 2005). In 2015, 53,826 people died in Slovakia; the crude death rate was **9.9%**. Since 1993, it has been below the level of 10 deceased per 1,000 people *(Katusa et al.,* 2014).

Mortality is higher in men than in women (1,041 deceased men per 1,000 deceased

women). The phenomenon of "over-mortality" of men is confirmed by the fact that 79% of all deaths in 2015 in the age category from 30 to 34 years are deceases of men. "Over-mortality" of women does not begin until in the age category of 75 years, which is closely related to the higher share of women in these age categories (SU SR, 2016).

Other indicators of mortality are similarly adverse. According to the OECD (Organization for Economic Co-operation and Development) the age-standardized mortality rate for cardiovascular diseases and the age-standardized mortality rate for cancer (per 100,000 population), Slovakia ranks among the worst countries of OECD and other compared countries (OECD, 2015). As for mortality for ischemic heart diseases and cerebrovascular diseases, Slovakia is in the last position; in mortality for cancer we are on the third place from the bottom among the 34 countries of OECD, see **Table 1**.

Increasing life expectancy

Life expectancy (at birth and ages 40, 60, 65 and 80) is the average number of years that a person at that age can be expected to live, assuming that age-specific mortality levels remain constant (Jurcova, 2005). The life expectancy expresses the probable number of years remaining in the life of an individual or class of persons determined statistically and reflects the effects of other factors such as the standard of health service; health policy; availability of medical services; state of prevention; etc. (Filadelfiova et Bodnarova, 2013).

In 2015, the life expectancy at birth was **73.03** years in men and **79.73** years in women (*ŠÚ* SR, 2016). In 2014, life expectancy of a 65-year old man was 15.1 years, that of a 65-year old woman 19.1 years (Eurostat, 2016).

As for the values of life expectancy, Slovakia ranks to the worst countries of the European Union. **Table 2** compares the newest life expectances at birth and at the age of 65 of women and men in selected countries in 2014 (Eurostat, 2015). Life expectancy at the age of 65 is shorter for men from Bulgaria, Latvia, Lithuania, Hungary, Romania,

Table 1: Age standardized mortality per 100,000 population in selected countries (source - OECD Health statistics)

	Ischemic heart disease mortality 2013	**Cerebrovascular disease mortality 2013**	**Cancer mortality 2013 or nearest year**
OECD Countries	117	66	205.6
United States	128	44	197.9
Japan	35	54	179
Germany	115	52	205
Switzerland	82	37	204.8
Austria	140	49	197.1
Poland	106	86	234.2
Hungary	297	118	286.3
Czech Rep.	260	97	229.8
Slovakia	**404**	**137**	**247.2**

Serbia and Macedonia, and for women from Bulgaria, Latvia, Hungary, Romania, Montenegro, Macedonia, Albania and Serbia. Life expectancy in Slovakia is slowly increasing, nevertheless it remains among the lowest values among the countries of the European Union (Katusa *et al., 2014*).

the healthy life years for three ages – at birth, at age 50 and at age 65 – the indicator being presented separately for men and women. It is calculated using mortality statistics and data on self-perceived activity limitations. Mortality data come from Eurostat's demographic database, while self-perceived

Table 2: Life expectancy at birth and at age 65 in selected European countries (source http://ec.europa.eu/eurostat)

2014	Life expectancy at birth	Life expectancy at age 65	Life expectancy at birth	Life expectancy at age 65
	Men *(in years)*		**Women** *(in years)*	
EU 28 Countries	78.1	18.2	83.6	21.
Slovakia	**73.3**	**15.1**	**80.5**	**19.1**
Czech Republic	75.8	16.1	82	19.8
Poland	73.7	15.9	81.7	20.4
Hungary	72.3	14.6	79.4	21.7
Austria	79..2	18.5	84	21.8
Sweden	80.4	18.9	84.2	21.6
Germany	78.7	18.2	83.6	21.4
France	79,5	19,7	86	24
United Kingdom	79.5	18.8	83.2	21.3
Italy	80.7	19.2	85.6	22.8
Spain	80.4	19.3	86.2	23.5

For comparisons of single countries, another indicator is preferred recently, the **healthy life years** (disability-free life expectancy). This indicator expresses the average number of years in a healthy condition (Jurcova, 2005). Eurostat defines life in a healthy condition as a state that the person does not suffer from severe problems and can execute common activities (Bodnarova, 2013, Eurostat, 2013). **The Healthy Life Years (HLY)** indicator measures the number of years that a person (at birth, at age 65) is still expected to live in a healthy condition. **HLY** is a health expectancy indicator which combines information on mortality and morbidity. Eurostat calculates information relating to activity limitations data come from a European health module that is integrated within the data collection EU statistics on income and living conditions (EU-SILC). HLY is derived from self-reported data so it is, to a certain extent, affected by respondent's subjective perception as well as by their social and cultural background. EU-SILC does not cover the institutionalized population, for example, people living in health and social care institutions who are more likely to face limitations than the population living in private households. It is therefore likely that, to some degree, this data source under-estimates the share of the population facing limitations (Eurostat, 2013, Meszaros, 2010).

Table 3 shows the healthy life years at birth and at the age of 65 years in selected countries for men and women in 2014.

In this context it might be worth mentioning that this position is possibly influenced by an ambiguous understanding of the survey question (Piscova et al., 2015).

Table 3: Healthy life years at birth and at age 65 in selected European countries (source http://ec.europa.eu/eurostat)

2014	Healthy life years at birth	Healthy life years at age 65	Healthy life years at birth	Healthy life years at age 65
	Men *(in years)*		**Women** *(in years)*	
EU 28 Countries	61,4	8,6	61,8	8,6
Slovakia	**55,5**	**4,3**	**54,6**	**3,6**
Czech Republic	63,4	8,5	65	9,3
Poland	59,8	7,5	62,7	8,1
Hungary	58,9	6	60,8	6,1
Austria	57,6	8,4	57,8	7,7
Sweden	73,6	15,2	73,6	16,7
Germany	56,4	6,8	56,5	6,7
France	63,4	10,4	64,2	10,7
United Kingdom	63,4	9,7	64,2	10,6
Italy	62,5	7,8	62,3	7,3
Spain	65	10,1	65	9,4

In 2014, the healthy life years indicators at birth in Slovakia were 55.5 years for men and 54.6 years for women; which is 75.7% of the life expectancy for men and 67.8% of the life expectancy for women. This means that men in Slovakia live with chronical diseases on average one quarter and women one third of their lives. The healthy life years at 65 years are similar – a 65-year old Slovakian man survives healthy 4.2 years shorter and a women 5.7 years shorter than the inhabitants of the Czech Republic of the same age (Eurostat, 2013).

These data are the worst among all countries of the European Union, therefore some authors refer to this indicator as our *Achille's Heel (Bodnarova, 2013).* Other authors recommend a rather cautious approach to the analyses and ranks based on this indicator.

Changes in the age structure

Aging brings about changes in the age structure of people; a growing group population above 65 years of age. **Table 4** shows how the percentages of single age groups developed in 2001, 2006, 2010 and 2015.

At present, in Slovakia **14.45%** of inhabitants are 65 years old or older. Prognoses claim that during the next decades this group will grow 2.5-times in comparison with 2011. This means that in 2060 every third inhabitant of Slovakia will be older than 65 (*Bleha et al., 2013*).

Table 4: Age structure of population in Slovakia in 2001, 2006, 2010, 2015 (source: Statistical Office of the Slovak Republic, 2016)

Age group	2001	2006		2010	2015
0 – 14 years	18.72%	16.14%		15.28%	15.33%
15 – 64 years	69.89%	72%		72.34%	70.22%
65 + years	11.39%	11.86%		12.38%	14.45%

Double aging

Another important demographic feature is the growth of the group of "very old people" ("oldest old", above 80 years) (Hegyi *et al*., 2012), thus the so-called double aging. In 2012, people above 80 years created 15.4% of the group above 60 years and 22.7% of the group above 65 years (Katusa *et al.,* 2014). Double aging will have an immense economic, social and medical importance (Weber, 2005).

Feminization of aging

The term feminization of aging is used to describe the increasing numbers of women in the older population. The feminity index (women-to-men ratio) is increasing (Hegyi et Krajcik, 2010).

More boys are born than girls (1,049 boys per 1,000 girls). This ratio is balanced around 45 years of age. At 60 years, the women-to-men ratio is 1,000:610, at 85 years the ratio is 2,600:1,000 and in the group above 90 years the ratio is 3:1 (Katusa *et al.*, 2014).

This phenomenon is a two-edged sword – on the one hand it is a victory for women in overcoming mortality, on the other hand for many old women a period of social isolation and frequently economic adversity. The share of widows in the group above 80 years of age is 81.5% (Hegyi *et al*., 2012).

Demographic indices

In demography, important demographic indices related to seniors are utilized. They include:

Aging index

The aging index is calculated as the number of persons 60 years old or over per hundred persons under age 15, thus the ratio of the post-active component to the children's component. Since 1950, this index has continually increased. In 2013, there were 88.3 seniors per 100 children (while as many as 112 women per 100 girls) (*National Program of Active Aging 2014;* Katusa *et al*., 2014). According to prognoses, in 2060 this ratio will achieve a value of 220, which means a three-fold growth in comparison with the year 2012 (Bleha *et al., 2013).*

Total dependency ratio

The total dependency ratio is the number of persons under age 15 plus persons aged 65 or older per one hundred persons between 15 to 64 years. The ratio determines the number of dependent people (children and seniors) per one hundred economically active people. Since 2009, its increase has been observed. In 2013, there were 40.57 dependent people per 100 productive persons *(Katusa et al*., 2014). Both of the indices are shown in **Table 5**.

The Active Aging Index (AAI) is constructed on the basis of four distinct domains

- employment,
- participation in society,
- independent, healthy and secure living,
- capacity and enabling environment for active aging.

Table 5: Aging index and total dependency ratio in Slovakia (years 2003, 2007, 2010, 2015) Source: (Statistical Office of the Slovak Republic, 2016).

		2003	2007	2010	2015
Aging Index	**Men**	48,10	55,25	59,00	71,06
	Women	84,20	97,83	104,07	118,62
	All	65,70	76,00	81,01	94,22
Total dependency ratio	**All**	41,01	38,38	38,23	42,41

The four domains are populated by a set of 22 indicators. AAI score for individual countries shows the extent to which their old people's potential is used; and the extent to which older people are enabled and encouraged to participate in the economy and society. The theoretical maximum is 100. The latest 2014 AAI results of the EU28 are presented in **Figure 1**. The highest 2014 AAI score stands at 44.8 points (Sweden). Slovakia is on the third place from the bottom (score 28.5), leaving behind only Poland (score 28.2) and Greece (score 27.7) (UNECE, 2014).

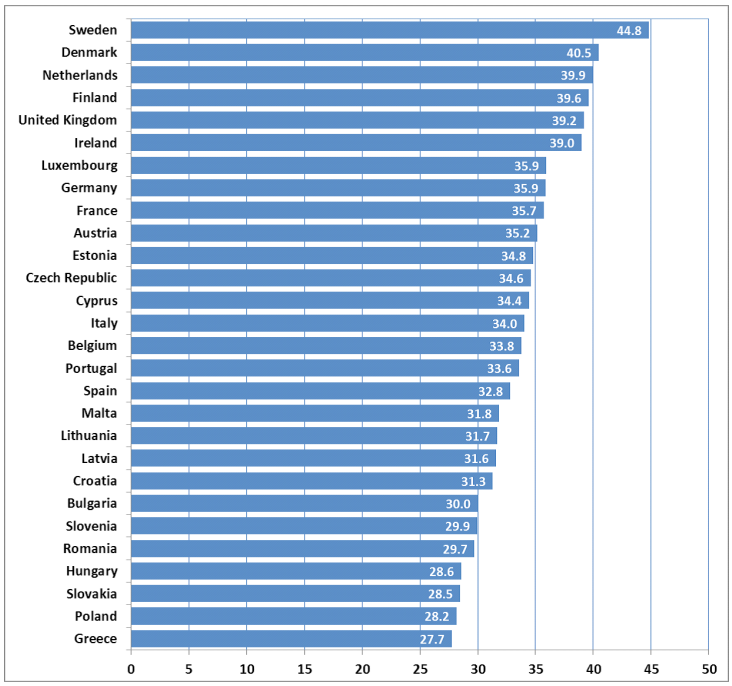
One of the main issues for the future development of the Slovak Society is the process of population aging (Sprocha, 2015). Population aging is caused by the improvements in the health service; by changes in the reproduction behavior of the population; by the longer lives of individuals *(Katusa et al.,* 2014). It is valid generally that in the countries in which the process of population aging began later (Slovakia belongs to this group) this process is more intense and these countries will have less time for accommodation. Therefore, the statistical data should be used to identify and measure the possible consequences of this process and to mitigate them. If the society is not prepared for these severe issues, the way of organization and control of the society will change dramatically. Substantial changes will occur in the economy; on the labor market; in the pension system; in the health service; etc. (Katusa *et al.,* 2014; *National program of Active Aging 2014*).

References

1. ACTIVE AGEING INDEX FOR 28 EUROPEAN UNION COUNTRIES (2014) (online). EC; UNECE (cit. 1. 8. 2015). Available from: <http://www.unece.org/fileadmin/DAM/pau/age/WG7/Documents/Policy_Brief_AAI_for_EG_v2.pdf>.
2. BLEHA B, SPROCHA B, VANO B (2013) *Prognosis of population development in Slovak Republic until year 2060*. Bratislava: Infostat, 2013, 81 p. ISBN 978-80-89398-23-2.
3. BODNAROVA B (2013) Health and Age: For Healthier ageing. In: *The Fourth Dimension of the Third Age*. *Ten Chapters on Active Ageing.* [Butorova, Z. a kol. - eds.]. Bratislava : IVO, 2013, p. 61–94. ISBN 978-80-89345-44-1.
4. EUROSTAT (2014) *Healthy life years statistics.* [online]. [cited 19.10.2014] Available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Healthy_life_years_statistics
5. FILADELFIOVA J, BODNAROVA B (2013) Facts that won´t let go: how does Slovakia´s population age. In: *The Fourth Dimension of the Third Age. Ten Chapters on Active Ageing.* [Butorova, Z. a kol. - eds.]. Bratislava : IVO, 2013, p. 45–59. ISBN 978-80-89345-44-1.
6. HEGYI L, KRAJCIK S (2010) *Geriatrics.* 1. vyd. Bratislava: Herba, 2010, 608 p. ISBN 978-80-89171-73-6.
7. HEGYI L et al (2012) *Social gerontology*. 1 vyd. Bratislava: Herba, 2012, 172 p. ISBN 978-80-89171-99-6.

8. JURCOVA D (2005) *Dictionary of demographic terms*. Bratislava: Infostat, 2005, 72 p. ISBN 80-85659-40-9.
9. KATUSA M et al (2013) *The development of the population in the Slovak republic and regions in 2013.* Bratislava: Statistical Office of the Slovak Republic, 2014, 150 p. ISBN 978-80-8121-309-0.
10. MESZAROS J (2009) *Healthy life years according to EHIS 2009*. Bratislava: Infostat, 2010, 34 p.
11. NATIONAL PROGRAM OF ACTIVE AGEING FOR THE YEARS 2014–2020 (2014) Bratislava: Ministry of labour, social affairs and family, 2014, 83 p. ISBN 978-80-89125-18-0.
12. OECD (2015) *Health at a glance. OECD indicators*. OECD: 2015. [online]. [cited 7.5.2016] DOI: 10.1787/health_glance-2015-en. Available na: http://www.oecd.org/els/health-systems/Health-at-a-Glance-2013.pdf.
13. PISCOVA M, KLOBUCKY R, BAHNA M (2015) *Elderly people in society and in family. Several Views on Elderly People in Statistics and Comparative Surveys Data.* Slovak statistics and demography 2015; 25 (3): p. 22-43.
14. STATISTICAL OFFICE OF THE SLOVAK REPUBLIC (2016) Demographical processes in the Slovak Republic 2015. Bratislava: 2016. [online]. [cited 12.5.2016] Available at: https://slovak.statistics.sk/wps/wcm/connect/932219bf-d5bf-4607-96eb-0a5ea1528cbf/Demograficke_procesy_v_SR_rok_2015.pdf?MOD=AJPERES.
15. SPROCHA B (2015) *The age structure of the population in the Slovak Republic and in regions and its projection up to 2030.* Slovak statistics and demography 2015; 25 (3): p. 7-21.
16. VANO B (2015) *Editorial.* Slovak statistics and demography 2015; 25 (3): p. 1-4.
17. WEBER P (2005) *Basics of gerontology and geriatrics*. In: P. Dítě (ed.): Internal medicine III – skriptum. Brno: School of Medicine MU, 2005, p. 675 – 689 s. ISBN 80-210-3673-7.

Figure 1: Ranking of 28 EU Member States on the basis of the 2014 Active Aging Index (source: <http://www.unece.org/fileadmin/DAM/pau/age/WG7/Documents/Policy_Brief_AAI_for_EG_v2.pdf>.



Spectrum of Bacterial Isolates and Diagnoses in Physiotherapy and Rehabilitation Facility before and after Armed Conflict in Iraq (Research Note)

P. A. Hajj (Peri Ali Hajj)[1], Z. Dudova (Zuzana Dudova)[1], V. Krcmery (Vladimir Krcmery)[1], P. Tomanek (Pavel Tomanek)[1], T. Hrindova (Tatiana Hrindova)[1], J. Polonova (Jaroslava Polonova)[1], K. Zoller (Katarina Zoller)[1], D. Dorko (Dominik Dorko)[1], B. Durecova (Barbora Durecova)[1], I. Bartosovic (Ivan Bartosovic)[1], S. Spanik (Stanislav Spanik)[1], N. Bujdova (Natasa Bujdova)[1], J. Ridosko (Jaroslav Ridosko)[2], F. Mellinghoff (Franz Mellinghoff)[1]

Original Article

[1] Refugee and PhD Program of St. Elisabeth University Erbil, Iraq
[2] University Hospital Trencin, SK

E-mail address:

peri986@hotmail.com

Reprint address:

Peri Ali Hajj St. Elisabeth University refugee health and MSc/PhD programme
UNHCR Camp 22 Veria
Alexandria, Greece

Suource: Clinical Social Work and Health Intervention *Volume: 8* *Issue: 3*
Pages: 15 – 17 *Cited references: 6*

Reviewers:

Daniel J. West
University of Scranton, Department of Health Administration and Human Resources, USA
John Mutuku
MIC Nairobi, Kenya

Key words:

Physiotherapy, Epidemiology, Conflict, War.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2017; 8(3): 15 – 17; DOI 10.22359/cswhi_8_3_02 © 2017 Clinical Social Work and Health Intervention

Abstract:

Etiology and spectrum of diagnoses in the refugee population in the Physiotherapy and Rehabilitation Mobile Clinic is discussed. The Clinic is located in the conflict area of Dohuq, Iraq. The area was largely influenced by *Freedom* operations in Mosul. Before the conflict, species such as S. aureus, S. pyogenes and S. epidermidis were prevalent. After the conflict, spectrum of bacterial isolates was significantly different; most prevalent species were A. baumanii, Ps. aeruginosa and Enterobacteriaceae.

Conflict of interests:

The authors whose names are listed in the title of the article certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, or other equity interest), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Background

During war conflict in Iraq, some of the facilities previously used for treatment of chronic patients have changed to Acute Departments and Clinics. Armed conflict ongoing in Iraq caused lack of staff and other resources, such as electricity, material and/or infrastructure. One of these clinics is situated about 15km from Mosul and serves as a Rehabilitation Center for war victims.

The aim of this study was to compare the spectrum of bacterial isolates in the patients from the conflict area of Mosul who were treated in the Rehabilitation and Physiotherapy Ward in Dohuq, Iraq.

Patients and methods

The research group consisted of 197 patients treated after war conflict at the Physiotherapy and Rehabilitation Ward. Medical data of these patients were analyzed and compared to the patients treated before the conflict. EPI-15 System was used for analysis and T-test.

Results and discussion

In Group 1 (pre-conflict period), majority of the patients had cardiovascular and diabetic complications or non-traumatic wounds, such as lower leg ulcers, erysipelas and others. Most common pathogens found in the swabs collected from the wounds were S. aureus (7/20, 35%, $p>0.05$) and S. pyogenes (6/198, 3%). Vice versa, in post conflict group, traumatic or post-traumatic SSTI occurred, mostly after amputations or severe wounds due to bombing. In these wounds, most prevalent species were A. baumanii, Ps. aeruginosa and and Enterobacteriaceae.

Conclusion

Conflicts largely influence spectrum of bacterial isolates among rehabilitation and physiotherapy patients. In ATB prophylaxis this should be considered as well.

References

1. KHALED I, ALI HAJJ P, KRCMERY V, KALATOVA D, GALLOVA A, BAK T, SCHUMMAN I, DUDOVA Z, ZOLLER K, REITH B, OBTULOVIC M, OLAH M, HRINDOVA T, BELOVICOVA M (2017) *Spectrum of infections in physiotherapy and rehabilitation ward for war victims and veterans from Iraq and Syria (short note).* Clinical Social Work and Health Intervention. 8. 26-28. 10.22359/cswhi_8_2_05.
2. AEILTS GD, SAPICO FL, CANAWATH HN, MALIK GM, MONTGOMERIE JZ (1982) *Methicillin-resistant Staphylococcus aureus colonization and infection in a rehabilitation facility.* J Clin Microbiol.
3. THOMAS R (2013) *MRSA in early rehabilitation – incidence, prevalence and morbidity.* Neurol Rehabil. 2013, 19: 118-122.
4. VETKASOV A, HOSKOVA B, SOBOTKOVA I (2015) *Reliability of lower motion measurements ribs and diaphragmatic mobility by a radiographic method in people after spinal cord injury*. In: Rehabilitácia ISSN 0375-0922, Vol. 52, 2015, No 4, p. 228-235.
5. KIMULI D,CZARNECKI P, MIKLOSKOVA M, SPANIK S, BRYNDZAK P et al (2016) *Social pathology II.* WMU WARSAW. 2016. 455 pp.
6. BELOVICOVA M, LISKOVA A, HRINDOVA T et al (2017) *Low Prevalence of MRSA in Physiotherapy and Gym Facilities in a Greek Refugee Camp*. Clinical Social Work and Health Intervention Vol. 8 No. 2 2017.

Screening of HIV, HCV, HBV and Malaria among Migrants from Africa (Short communication)

K. Zoller (Katarina Zoller)[1], V. Krcmery (Vladimir Krcmery)[1], J. Polonova (Jaroslava Polonova)[1], T. Hrindova (Tatiana Hrindova)[1], S. Hinze (Susana Hinze)[1], D. Dorko (Dominik Dorko)[1], B. Durecova (Barbora Durecova)[1], I. Bartosovic (Ivan Bartosovic)[1], S. Spanik (Stanislav Spanik)[1], N. Bujdova (Natasa Bujdova)[1], J. Ridosko (Jaroslav Ridosko)[2], P. A. Hajj (Peri Ali Hajj)[1]

Original Article

[1] St. Elisabeth Refugees and migrants centers, Catania Italy and Alexandria Greece
[2] University Hospital Trencin, Slovakia

E-mail address:

tropicteam@gmail.com

Reprint address:

Katarina Zoller
St. Elisabeth university refugee health MSc/PhD programme
UNHCR Refugee Camp Veria
Alexandria, Greece

Suource: Clinical Social Work and Health Intervention *Volume: 8* *Issue: 3*
Pages: 18 – 20 *Cited references: 8*

Reviewers:

Steve Szydlowski
University of Scranton School of Education, USA
Victor Namulanda Wanjala
Catholic University of Eastern Africa, Nairobi, Kenya

Key words:

Refugee crisis, Migrants, ID, HIV, HBV, Malaria.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2017; 8(3): 18 – 20; DOI 10.22359/cswhi_8_3_03 © 2017 Clinical Social Work and Health Intervention

Abstract:

Screening results of African migrants entering the coasts of Italy in 2017 are presented and compared to results of migrants entering the

EU via Greece. Occurrence of all screened diseases (HCV, HBV, HIV and malaria) was significantly higher among African migrants in comparison to those who were staying in camps or migrated via the Balkan route.

Conflict of interest:

The authors whose names are listed in the title of the article certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, or other equity interest), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Background

Two major waves of refugees entered Europe in 2015; first via Greece and Turkey. The second wave entered Europe via Sicily and Malta using maritime transport. There were many papers published on differences between these two groups as far as communicable diseases are concerned. Diseases, such as malaria and other parasitic diseases were more prevalent in the group entering Malta and Sicily, probably due to the different origin of the migrants. The aim of this short paper was to compare results of the rapid tests for HIV, HBV, HCV and malaria in the groups of migrants of different origin using different points of entry to Europe.

Methods

Comparison of the results of screening tests for HBV, HIV and HCV was performed in two groups of migrants. The first group consisted of 199 migrants from Syria, Iraq and Afghanistan who stayed in the asylum and refugee camp in Veria, Greece. The second group consisted of prevalently African migrants (in total of 203), who were screened at refugee camp. Their main countries of origin were Somalia, Eritrea and Ethiopia.

Results and discussion

There was significant difference among two groups of migrants. Screening tests for malaria, HIV, HCV and HBV were significantly more often positive in the group of African migrants than in the migrants from the Middle East (0.5% vs. 8.5% HIV, 2.5% vs. 9% HBV, 0% vs. 5% HCV, 0% vs. 35% for malaria, $p>0.05$).

Conclusions

Refugees from the African continent are more likely to be hosts of HBV, HCV, HIV and malaria. Screening strategies should be therefore considered for various populations.

References

1. HAJJ PA et al (2016) *Are migrants from Middle East carriers of multi-resistant bacteria?* Clinical Social Work and Health Intervention Vol. 7 No. 3 2016 2.
2. PRESTILEO T, DI LORENZO F, CORRAO S (2015) *Infectious Diseases among African irregular migrants in Italy. Just an individual problem?* Clin. Soc. Work 2015, 5, 45.
3. TROVATO A, REID A, TAKARINDA KC, MONTALDO C, DECROO T, OWITI P, ... CARLO SD (2016) *Dangerous crossing:*

demographic and clinical features of rescued sea migrants seen in 2014 at an outpatient clinic at Augusta Harbor, Italy. Conflict and Health, 10(1). doi:10.1186/s13031-016-0080-y.

4. KIMULI D,CZARNECKI P, MIKLOSKOVA M, SPANIK S, BRYNDZAK P et al (2016) *Social pathology II.* WMU WARSAW. 2016. 455 pp.
5. MANZARDO C, TREVIGNO B, GOMEZ I PRAT J, CABEZOS J *et al.* (2008) *Communicable diseases in the immigrant population attended to in a tropical medicine unit: Epidemiological aspects and public health issue.* Travel Medicine and Infectious Disease, 2008 Vol. 6, Issue 1 , Pages 4-11. 2.
6. BREZINOVA M (2015) *Assessment of functional potential in patients after amputation of the lower limbs.* In: Rehabilitácia ISSN 0375-0922, Vol. 52, 2015, No 4, p. 218-226.
7. RIDOSKO J (2014) *Treatment of intra-articular femur fractures*. Radix, spol. s. r. o. ISBN 978-80-87573-09-9.
8. PRESTILEO T, CASSARA G, DI LORENZO F, SANFILIPPO A, DALLE NOGARE ER, ORLANDO G (2011) *Infectious diseases and health in the migrant people: experience from Lampedusa 2011.* Infezioni in Medicina: 2013. 17-24 – Vol. 21.

Table 1: Comparison of the refugee screening

	African Migrants (Italy)	Middle East Migrants (Greece)
HIV	17/203 (8.5%)	1/199 (0.5%)
HBV	18/203 (9%)	5/199 (2.5%)
HCV	10/203 (5%)	0/199
malaria	9/203 (3,5%)	0/199

Comparison of Episodic Memory in Students Suffering with Cerebral Palsy and Normal Students (Original paper)

S. Mousavi (Shokoufeh Mousavi)[1], A. Aghayousefi (Alireza Aghayousefi)[1], S. M. Zadehhossein (Sayed Mohsen Zadehhossein)[1], E. Honejani (Esmail Honejami)[2], N. Mirjahanian (Nooshim Mirjahanian)[3]

Original Article

[1] Department of Psychology, Payame Noor University, Tehran, Iran
[2] Master of Science in Psychology, Department of Education, Isfahan, Iran
[3] Department of Psychology, Khomeinishahr Branch, Islamic Azad University, Khomeinishahr/Isfahan, Iran

E-mail address:

rooyamousavi@gmail.com

Reprint address:

Shokoufeh Mousavi
Department of Psychology, Payame Noor University
PO BOX 19395-3697
Tehran, Iran

Suource: Clinical Social Work and Health Intervention *Volume: 8* *Issue: 3*
Pages: 21 – 27 *Cited references: 22*

Reviewers:

Roberto Cauda
Institute of Infectious Diseases, Catholic University of the Sacred Heart, Rome, IT
Steve Szydlowski
University of Scranton School of Education, USA

Key words:

Episodic memory, Verbal memory, Practical memory, Cerebral palsy, Students.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2017; 8(3): 21 – 27; DOI 10.22359/cswhi_8_3_04 © 2017 Clinical Social Work and Health Intervention

Abstract:

The present study aimed to compare the episodic memory among students who suffer cerebral palsy and normal students. A total of 36 students participated in this study. At first, in a convenience sampling

method 18 ill students were selected. Then 18 normal students were matched with them by demographic features, socio-economic status and average grades. For assessment of episodic memory verbal task and subject performed task were applied. Memory was evaluated by free recall test. The result of T-test and ANOVA showed there was significant difference between cerebral palsy students and the normal ones in memory tasks. Cerebral palsy students showed low and weak performance in verbal and practical memory tests. Motor weakness and speech disorders are causal factors in reducing cognitive abilities of children affected by cerebral palsy. In this aspect, reduced cognitive capacity causes those child to not have enough ability to explore the surrounding world. In this respect damaged memory assumes an important part of cognitive functioning.

Introduction

Cerebral palsy is defined as a non-progressive disorder in a growing brain. This disorder causes the occurrence of motor, conditional and neurological disabilities in the growing child (Rogers, 2005). This occurs in early years of life during the formative stages of the brain, and in fact, it is one of the most common disabilities in children the prevalence of which is 1 to 3.2 cases in each 1000 livebirths (Toopchizadeh *et al.,* 2008).

We can find various causes for cerebral palsy including genetic, congenital, metabolic, inflammatory, infection and hypoxia (Weierink *et al.,* 2013). All children with cerebral palsy suffer from a kind of brain lesion which usually includes motor paths. Although the defect of the motor and condition of the body are two of the main specifications of Cerebral Palsy. There are numerous secondary disorders in this field such as cognitive, sensory, mental, social defects and these disorders are different depending on the type and intensity of the cortical involvement (Pellegrino, 2002).

To date, researches on children suffering from cerebral palsy have mostly focused on their movement; but there are evidences that the symptoms of cerebral palsy exceed motor disorders and this has been accepted as a part of these disorders (Rosenbaum *et al.,* 2007). These motor disorders are mostly together with cognitive and behavioral disabilities and sensory performance (Bottcher, 2010). The problem faced by these children more than others is establishing social relationships with their peers (Whittingham *et al.,* 2010).

Researches have shown that the motor defect of the children suffering from cerebral palsy will ultimately negatively affect all of the aspects of their growth (Litosh, 2002). One of the most important of these aspects is memory.

By reviewing newer texts associated with memory, it was shown that today, no conceptual definition of memory as a general component is considered by the Specialists as much as the past, but each of its different types is considered as a separate definition. Generally, memory is learning information through encoding, accumulation and recovery. Encoding means putting information in memory; accumulation is keeping information in time; recovery means taking out the saved information (Santrock, 2001).

Memory has been divided into various types such as long-term memory versus short-term memory¸ active memory, semantic memory, emotional memory, etc. and episodic memory is one type of long-term memory (Movahed Abtahi, 2010).

Episodic memory is one's cautious memory of the events as episodes of their lives such as their 16th birthday party, falling off a bike and what they have had for breakfast today. Episodic memory is in fact memory of remembering (Sousa, 2006). This type of personal memory is mixed with emotions and is detailed. The main feature in episodic memory is that it is associated with a specific moment in time; not with any time or the entire time but with the time the one experiences themselves (Convey, 2008). Recent studies show that episodic memory is self-awareness as a continuous existence in time and the possibility of a mental cautious experience (Soderlund *et al.,* 2008).

Peters, *et al.* (2009), in a study, aimed to review growth of reading skill in children suffering from cerebral palsy and to compare them with ordinary children and showed that children suffering from cerebral palsy, with additional speaking disorders, encounter more risks in the field of growth of this skill.

Hulk*, et al*. (2011), in a study, reviewed the ability of expression of events and occurrences as one of the vital abilities in doing everyday activities and expressing personal experiences which can be considered as a part of episodic memory and showed that children with cerebral palsy have been weaker than ordinary children in this area.

Khayatzadeh Mahani, *et al*. (2011), in a study, aimed to investigate the problems children with cerebral palsy face and showed that speaking difficulties experience the highest rate of problems among these children. They also showed that there is a significant relationship between the level of motor function and mental and speech problems, eating, seizures and the number of accompanying problems.

In Iran, many researches have been done in the field of cerebral palsy and the disorders it brings, but there is not much information about the difference between the episodic memory of ordinary and ill children and few studies have been done in this regard. Thus, this study attempts to compare and investigate the speech and performance memory of students suffering from these disorders and compare them with ordinary children. Research hypotheses is as follows:

1. Students with cerebral palsy are different from normal students in verbal memory,
2. Students with cerebral palsy are different from normal students in practical memory,
3. Verbal memory in students with cerebral palsy is different from their practical memory.

Research Method

The research method in this study has been a comparative causal method and 36 middle school and high school students have participated. In order for the sampling, at first the researcher visited Taha School for people with physical and motor disabilities in Isfahan and 18 of their students with cerebral palsy were selected through the method at hand (the number of all of the students suffering with cerebral palsy at that academic year was 25 persons some of whom had severe disabilities and were not able to do the physical assignments of this study and that is why they were not selected). Then, given the age, gender, socio-economic condition and average of the group

of students, the group of the ordinary samples (18 persons) were matched with them (P>0.60).

Episodic memory test

In this study, the episodic memory test included 32 short imperative sentences selected based on the study of Karami Noori and Mousavi (2008). 32 sentences were divided into two 16-sentence lists and each of them were used for verbal and practical memory. In order to do the episodic memory tests, after presenting the instructions and some examples, the person is asked to do some assignments and after the list is finished, in order to create a distance between the stages of encoding and accumulation, the semantic memory test was done. The reason for the creation of this distance was for the long-term learning memory to be formed for the testees.

In order for the students not to use practical strategies in speech encoding, the speech list was what was presented to the testees first. In the speech-related assignment, some sentences are read to the testees and they must repeat them and memorize them. After presenting a speech list and creating an approximately 30-minute distance during which the testees received the semantic memory test, the free accumulation test was done during which a white sheet is given to them and they are asked to write down any number of sentences that they remember in their order of preference. Then, the second list of the sentences is given to them and they must do the assignment with the tools given to them at the same time after hearing the sentences. After finishing the list and a 30-minute time difference (receiving semantic memory tests), the testees again receive a sheet associated with free accumulation.

Each test taken by an individual took about 150 minutes for each testee. It was attempted to provide a peaceful, and quiet environment without traffic. The scoring here was done in such a way that if the testee remembered the original sentence, he or she was given the score *one*.

Results

Mean and standard deviation of task of two groups of cerebral palsy and normal students are shown in **Table 1**.

Table 1: Descriptive characteristics (mean and standard deviation) of providing task

Types of Memory	Number	Mean	SD
Verbal memory			
Student with cerebral palsy	18	2.44	1.10
Normal students	18	3.66	1.05
Practical memory			
Student with cerebral palsy	18	6.11	1.11
Normal students	18	7.88	1.31

Table 2: Results of t test between the two groups in the verbal task

Index	T	df	Two-tailed significance
Verbal	-2.295	34.000	0.036

Table 3: Results of t test between the two groups in the practical task

Index	T	df	Two-tailed significance
Practical	-3.094	34.000	0.007

Results of t test between the two groups are shown in **Table 2** and **3**. According to the results there was a significant difference between the two groups of cerebral palsy and normal students, so that testee with cerebral palsy had a lower performance than normal students. ANOVA analysis was also performed to ensure more, where there is a significant difference. Summary of ANOVA for both verbal and practical task are shown in **Tables 4** and **5**.

7.88 respectively; which difference between the two groups was significant at the **Table 3** (sig = 0.007 and t = -3.094). Generally, the results showed higher mean scores in both practical and verbal memory in normal students.

The obtained results comply with the findings of Peters, *et al.* (2009), Hulk, *et al*. (2011), Khayatzadeh Mahani, *et al*. (2011) in the presence of disorders in motor and

Table 4: Summary of ANOVA for the scores of testee in verbal task

Sources of changes	SS	df	MS	F	Sig
Between group	6.126	1	6.125	-	-
Intergroup	18.611	34	1.163	5.266	0.036
Total	24.736	35	-	-	-

Table 5: Summary of ANOVA for the scores of testee in practical task

Sources of changes	SS	df	MS	F	Sig
Between group	14.222	1	14.222	-	-
Intergroup	23.778	34	1.486	9.570	0.000
Total	38.000	35	-	-	-

Discussion and conclusion

The aim of the study was to investigate the differences between verbal and practical memory in students with cerebral palsy and normal students. The results of this study in **Table 1** showed that average verbal memory in testees with cerebral palsy and normal students was 2.44 and 3.66 respectively, which difference between the two groups was significant in **Table 2** (sig = 0.036 and t = -2.295). The results also showed average practical memory in testees with cerebral palsy and normal students was 6.11 and

cognitive functions in people suffering from cerebral palsy in comparison with ordinary people.

Motion is considered to be one of the most important needs in the natural growth of human beings. Therefore, doing basic motor skills such as crawling, walking and jumping is very satisfying for a child. However, children who lack these motor capabilities are deprived from such a blessing (Baloochi and Ghaeni, 2009). Presence of a disorder in various functions of the motor

system of the children suffering from cerebral palsy causes reduction of the working capacities of their upper organs and ultimately limits their environmental capabilities and social compliance (Symivnova, 1999).

The evidences at hand show that more disorders in the functional and cognitive function of these people might create some problems in their social participation and educational potentials (Bottcher, *et al.* 2010). The functional performance includes various behaviors including control; planning for motion; starting behavior; response inhibition (Collette, *et al.* 2006). This disorder weakens the function of the person in the practical memory test in comparison with ordinary people.

Pirila, *et al.* (2007) believed that most children suffering from cerebral palsy also suffer from speech disorders and this problem might be due to motor disorders. Speech disorders are seen in more than 80% of the children suffering from cerebral palsy (Odding *et al.,* 2006). Prevalence of these disorders has a significant relationship with the type and intensity of motor involvement (Shevell *et al.,* 2009). The delay in cognitive growth and lower than average IQ is seen in 50% to 75% of these children. These disorders can vary from mild to severe (Odding *et al.,* 2006). Also, 15% to 60% of these children also suffer from seizure and epilepsy and when this disease comes along with epilepsy provides the substrate for cognitive defects (Khodapanahandeh, 2004). Therefore, the presence of cognitive disorders leads to the reduction of the function of the person suffering from cerebral palsy in speech memory tests in comparison with ordinary people.

In an overall conclusion, it can be said that cerebral palsy, as a disease that comes with motor defect and weakness, creates the substrate for the creation of disorder in cognitive activities including memory. In other words, motor weakness in the child suffering from this disease leads to them not having the sufficient movement to explore and discover their surrounding world and as time goes by, the rate of their cognitive capacities will be reduced. Memory, as an important component of cognitive function, gets harmed in this respect. The person suffering from cerebral palsy, in comparison with a healthy person, is not able to repeat the events while doing the assignments associated with verbal and practical memory and then talk about them and repeat them. Therefore, verbal and practical memory and in total, the episodic memory of that person will be weaker than a healthy person.

Investigation of other types of memory in these individuals and comparing them with ordinary people have not been done in this study. Thus, it is recommended to the future researchers to compare these patients regarding their long-term memory, semantic memory, active memory, emotional memory and other types of memory. It is also recommended to them to do some interventions in the field of improvement of memory in these people and to investigate its effects on different types of memory.

References

1. BOTTCHER L (2010) *Children with spastic cerebral palsy, their cognitive functioning, and social participation: A review*. Child Neuropsychology. 16(3): 209–228.
2. BOTTCHER L, FLACHS E M, ULDALL P (2010) *Attentional and executive impairments in children with spastic cerebral palsy.* Developmental Medicine and Child Neurology 52(2):42–47.
3. COLLETTE F, HOGGE M, SALMON E,. VAN DER LINDEN M (2006) *Exploration of the neural substrates of executive*

functioning by functional neuro imaging, Neuroscience. 139(1): 209–221.
4. CONVEY M A (2008) *Exploring episodic memory.* Dere E A, Easton, A, Nadel L (eds). Handbook of Episodic Memory, Elsevier: UK.
5. KARAMI NOORI R, MOUSAVI S (2008) *Compare variety of episodic and semantic memory in deaf and hearing students.* Recent Cognitive Science. 10 (4): 83-93.
6. KHAYATZADEH MAHANI M, AMIRSALARI S, KARIMLOO M (2011) *Investigating the problems of children with cerebral palsy and their relation to the type and level of motor function.* Journal of Medicine. 10(1): 59-67.
7. KHODAPANAHANDEH F (2004) *Epilepsy in children with cerebral palsy,* Iranian journal of Medical Sciences. 11(43): 743-748.
8. LITOSH L (2002) *Adaptive physical education-psychological characteristics education of children with growth disorders.* Public Sport Academy Press Moscow. pp. 225-29.
9. MOVAHED ABTAHI M (2010) *Studies acute effects of nicotine on spatial learning and memory in rats using a radial arm maze.* Clinical psychology master's thesis, Faculty of Education and Psychology, University of Isfahan. Iran.
10. ODDING E, ROEBROECK M E, STAM H J (2006) *The epidemiology of cerebral palsy: incidence, impairments and risk factors,* Disability Rehabil. 28(4): 183-191.
11. PELLEGRINO L (2002) *Cerebral Palsy*. In: Batshaw ML editor. Children with disabilities. Baltimore: Brookes; pp: 443-466.
12. PIRILA S, VAN DER MEERE J, PENTIKAINEN T, RUUSU-NIEMI P, KORPELA R, KILPINEN J (2007) *Language and motor speech skills in children with cerebral palsy.* Journal of Communication Disorders. 40: 116–128.
13. ROGERS S (2005) *Common conditions influencing children's participation.* In: Case-Smith J. Occupational therapy for children.5th ed. Boston: Mosby Co. 176-80.
14. ROSENBAUM P, PANETH N, LEVITON A, GOLDSTEIN M, BAX M, DAMIANO D (2007) *A report: The definition and classification of cerebral palsy April 2006.* Developmental Medicine and Child Neurology. Supplement. 109: 8–14.
15. SANTROCK J W (2001) *Educational Psychology. Publisher*: McGraw-Hill. ISBN: 0072906367.
16. SHEVELL M I, DAGENAIS L, HALL N (2009) *Co-morbidities in cerebral palsy and their relationship to neurologic subtype and GMFCS level*, Neurology. 72(24): 2090-2096.
17. SODERLUND H, BLACK S E, MILLER B L, FREEDMAN M., LEVINE B (2008) *Episodic memory and regional atrophy in frontotemporal lobar degeneration*, Neuropsychological. 46:127–136.
18. SOUSA D A (2006) *How the Brain Learns, Sage publication: India*.
19. SYMIVNOVA A (1999) *Reconstructive treatment in children with cerebral palsy*. Publ Ntydvr Moscow. Pp.165-69.
20. TOOPCHIZADEH V, BARZEGAR M H, HOSSEINI S M J (2008) *Reviews the type of cerebral palsy, etiology, associated disorders and motor development in children's hospital in Tabriz.* Medical Journal of Tabriz University of Medical Sciences. 30(4): 27-31.
21. WEIERINK L, VERMEULEN R J, BOYD R N (2013*) Brain structure and executive functions in children with cerebral palsy: A systematic review*, Research in Developmental Disabilities. 34: 1678–1688
22. WHITTINGHAM K, FAHEY M, RAWICKI B, BOYD R (2010) *The relationship between motor abilities and early social development in a preschool cohort of children with cerebral palsy,* Research in Developmental Disabilities. 31(6): 1346–1351.

The Association between Body Mass Index and Craniometrical Parameters in Slovak Population (Original paper)

A. Nadazdyova (Anna Nadazdyova)[1], E. Stefankova (Eva Stefankova)[2], M. Samohyl (Martin Samohyl)[3]

Original Article

[1] Department of Stomatology and Maxilofacial Surgery, Faculty of Medicine, Comenius University in Bratislava, Slovakia
[2] Department of Pediatric Surgery, Children teaching hospital, Faculty of Medicine, Comenius University in Bratislava, Slovakia
[3] Institute of Hygiene, Faculty of Medicine, Comenius University in Bratislava, Slovakia

E-mail address:

martin.samohyl@fmed.uniba.sk

Reprint address:

Martin Samohyl
Comenius University in Bratislava
School of medicine
Bratislava, Slovakia

Suource: Clinical Social Work and Health Intervention *Volume: 8* *Issue: 3*
Pages: 28 – 30 *Cited references: 4*

Reviewers:

George Benca
House of family St. Max Kolbe, Children's Hospital Clinic Phnom Penh
Daria Kimuli
St. Kizito centre Nairobi, Kenya

Key words:

Craniometrical Parameters, Body Mass Index, Slovak Population.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2017; 8(3): 28 – 30; DOI 10.22359/cswhi_8_3_05 © 2017 Clinical Social Work and Health Intervention

Abstract:

Anthropometry can detect shape changes over time. This is important to diagnose acquired malformations. The term surface anthropometry is

used in this paper to refer to the measurement of the facial surface features (1). One of the major reasons patients seek orthodontic treatment is to improve their facial appearance (2). Currently, two non-invasive methods can be used to collect quantitative soft tissue facial data in three dimensions: direct; conventional anthropometry; digital/computerized anthropometry. Body mass index except of important impact to the craniofacial parameters also has a significant influence on e.g. the blood pressure (cardiovascular risk) (3, 4).

The aim of this study is to find any association between the mean values of craniofacial and BMI.

The study

The sample consisted of 100 patients (50.0% men, 50.0% women) aged between 18-32 years (mean age 23.09±2.70 years) attending dental surgeries in Bratislava (2013 – 2016). In this paper these craniofacial parameters were analyzed: nose breadth, bi-entocanthion breadth, bi-zygomatic breadth, bi-gonial breadth, total facial height, mouth breadth, morphologic face height, upper-lip height, lower-lip height and pupils – mid-face (right). The analyzed group of patients included measurements provided by directed anthropometry

Table 1: Mean, minimum and maximal values of craniofacial parameters according to BMI (n=100)

Craniofacial Parameters	Study Group			Mean	Median	Min	Max	p
			n	x (SD)				
al-al (cm) nose breadth	BMI [kg.m^{-2}]	18.6-24.9	83	3.45 (0.36)	3.40	2.64	4.60	**0.018**
		> 25.0	14	3.70 (0.33)	3.70	3.20	4.28	
en-en (cm) bi-entocanthion breadth	BMI [kg.m^{-2}]	18.6-24.9	83	2.98 (0.38)	2.90	2.30	4.00	0.432
		> 25.0	14	3.06 (0.34)	3.17	2.37	3.60	
zy-zy (cm) bi-zygomatic breadth	BMI [kg.m^{-2}]	18.6-24.9	83	12.54 (0.99)	12.60	10.50	14.30	**0.031**
		> 25.0	14	13.33 (1.19)	13.05	11.02	15.80	
go-go (cm) bi-gonial breadth	BMI [kg.m^{-2}]	18.6-24.9	83	11.22 (0.95)	10.90	10.00	13.80	0.489
		> 25.0	14	11.50 (1.42)	10.55	10.00	13.80	
n-gn (cm) total facial height	BMI [kg.m^{-2}]	18.6-24.9	83	11.71 (0.89)	11.80	9.50	13.70	**0.001**
		> 25.0	14	12.55 (0.73)	12.80	11.50	13.70	
ch-ch (cm) mouth breadth	BMI [kg.m^{-2}]	18.6-24.9	83	5.04 (0.45)	5.00	3.41	6.00	**0.001**
		> 25.0	14	5.42 (0.30)	5.36	4.75	5.92	
sn-gn (cm) morphologic face height	BMI [kg.m^{-2}]	18.6-24.9	83	6.32 (0.71)	6.40	4.60	8.30	**0.041**
		> 25.0	14	6.79 (0.74)	6.74	5.50	8.31	
Ls-Stm (cm) upper-lip height	BMI [kg.m^{-2}]	18.6-24.9	83	0.70 (0.22)	0.70	0.10	1.20	0.495
		> 25.0	14	0.64 (0.28)	0.59	0.20	1.02	
Stm-Li (cm) lower-lip height	BMI [kg.m^{-2}]	18.6-24.9	83	1.04 (0.17)	1.03	0.56	1.50	0.588
		> 25.0	14	1.06 (0.11)	1.05	0.81	1.22	
Pupils- mid face (right) (cm)	BMI [kg.m^{-2}]	18.6-24.9	83	3.41 (0.30)	3.46	2.50	3.94	0.884
		> 25.0	14	3.42 (0.30)	3.50	2.80	3.70	

(PDAA) and from 3D scan (P3DAS). We have expected that participants with a BMI > 25 will have a higher amount of fat in the face than participants with a BMI 18.6-24.9. The data were analyzed by the statistical program SPSS.

Mean values of craniofacial parameters according to BMI are presented in **Table 1**. The differences between BMI 18.6-24.9 and BMI > 25.0 had significant effect on the evaluation of nose breadth (3.45±0.36 cm vs. 3.70±0.33 cm; P=0.018), bi-zygomatic breadth (12.54±0.99 cm vs. 13.33±1.19 cm; P=0.031), total facial height (11.71±0.89 cm vs. 12.55±0.73 cm; P=0.001), mouth breadth (5.04±0.45 cm vs. 5.42±0.30 cm; P=0.001) and morphologic face height (6.32±0.71 vs. 6.79±0.74 cm; P=0.041).

In conclusion BMI > 25.0 had significant impact on high proportions of facial tissue than BMI 18.6-24.9 in this parameter: upper-lip height in relationship with these parameters; the nose breadth, bi-zygomatic breadth, total facial height, breadth and mouth morphologic face height.

References

1. FOURIE Z, DAMSTRA J, GERRITS PO et al (2011) *Accuracy and repeatability of anthropometric facial measurements using cone beam computed tomography.* Cleft Palate Craniofac J, 2011; 48 (5): 623-630.
2. DIMITRIOS K (2012) *The impact of extraction vs nonextraction treatment on soft tissue changes in Class I borderline malocclusions.* The Angle Orthodontist, 2012; 82 (2): 209-217.
3. JURKOVICOVA J, STEFANIKOVA Z, ARGALASOVA L (2009) *Risk factors of cardiovascular diseases in the group of 65+ year olds of SR.* Cardiology (2009) 18 (2): 47-62.
4. JURKOVICOVA J, STEFANIKOVA Z, ARGALASOVA L (2011) *Selected life-style factors and nutrition habits associated with cardiovascular risk.* Eur. J. Cardiovasc. Prev. Rehabil. 2011; 18 (Suppl. 1): S74.

Non-correlation between CRP and rapid diagnostic tests for malaria among rural population in Southern Uganda (Original research paper)

B. Silhar (Barbara Silhar)[1], D. Dorko (Dominik Dorko)[1], B. Durcova (Barbora Durcova)[1], N. Bujdova (Natasa Bujdova)[2], S. Spanik (Stanislav Spanik)[2], J. Polonova (Jaroslava Polonova)[2], V. Krcmery (Vladimir Krcmery)[2] J. Suvada (Jose Suvada)[1]

Original Article

[1] St. Bakhita and Health Initiatives for Africa project, Uganda
[2] Outstation in Nairobi, Kenya

E-mail address:

barbara.silharova@gmail.som

Reprint address:

Barbara Silhar
Health Initiatives Associate, St. Elisabeth University of Health and Social Sciences
Tropic programme
Buikwe, Uganda

Suource: Clinical Social Work and Health Intervention *Volume: 8* *Issue: 3*
Pages: 31 – 33 *Cited references: 6*

Reviewers:

Vitalis Okoth
Mary Immaculata and VCT Ctr Nairobi, Kenya
Dadline Kisundi
St. Bakita and St. Kizito Ctr Nairobi, Kenya

Key words:

C-reactive protein, CRP, Malaria, Rapid diagnostic tests, Diagnostics of malaria, RDT.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2017; 8(3): 31 – 33; DOI 10.22359/cswhi_8_3_06 © 2017 Clinical Social Work and Health Intervention

Abstract:

The correlation between CRP blood levels and clinical presentation of malaria or blood parasitemia diagnosed microscopically or by PCR is one of the most discussed topics in the field of tropical medicine and malaria diagnostics. In total, 650 patients from the Lake Victoria area,

which is of high risk for malaria were included in this study. In patients with febrile episodes, CRP tests were done together with the RDT for malaria. In 239 cases with CRP positive malaria, only 119 (51%) showed RDT malaria positive. CRP does not correlate with proven RDT for malaria. Patients with fever due to infection caused by Pl. falciparum can be CRP negative and vice versa, CRP positive patients may have negative RDT for malaria.

Conflict of interest:

The authors whose names are listed in the title of the article certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, or other equity interest), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Introduction

South East Uganda has a significant migrating (IDP and refugees) population. This is mainly due to the instability of surrounding countries and famine in South Sudan, Northern Kenya and Nigeria. At the same time, being near Victoria Lake makes this area high risk of malaria due to the proximity of the water source and the altitude. RDTs are often a useful diagnostic tool for malaria, HIV and other infectious diseases where RDTs are available. Lack of resources, staff and infrastructure make them ideal for "field conditions". Moreover, CRP is also a relatively cheap and available diagnostic option for patients with fever. The correlation between CRP positivity and RDT positive malaria test could be lifesaving. The aim of this study was to assess whether a correlation exists in this area of rural settings with highly vulnerable population.

Patients and methods

651 patients presented with fever at the local OPD center. In the diagnostic algorithm, also malaria RDT and CRP tests were done. Patients with positive RDT underwent microscopic confirmation of malaria parasites. Statistical correlation for CRP and RDT positive patients was performed with x^2 test and EPI-info statistical package was used for evaluation of the results.

Table 1: Patients with fever and diagnostics of malaria in Buikwe, South East Uganda

Total	605
CRP<20, MPS -, RDT -	297
CRP<20, MPS +, RDT+	18
CRP>20, MPS-, RDT-	185
CRP>20, MPS+, RDT+	103
CRP>20, MPS+, RDT-	1
CRP<20, MPS-, RDT+	1

Results and discussion

Among 650 patients, 178 had microscopically confirmed malaria (27.38%). Of those, 103 (57.87%) had also CRP blood level elevated >50μg/l. Of the 297 malaria negative patients, 183 had CRP elevated above 50μg/l, probably due to the

bacterial infection (all above 50µg/l, median 71.33µg/l). Therefore, we can say that CRP elevation is not typical for malaria and threshold 20µg/l cannot be predictable for malaria diagnostics. In some studies threshold is even 100µg/l ().

Conclusion

Threshold level 50µg/l for CRP cannot be predictive marker for malaria diagnostics in endemic region, such as South East Uganda. Patients with a CRP level above 50µg/l did not have significantly more positive RDTs for malaria and vice versa.

References

1. KOMLOSI M, AHISHAKIYE Z, NIYIBAMPA R, RWASA T, MPAWENAYO A (2017) *Comparison between Microscopy and PfHRP2 based RDT for diagnosing Tropical Malaria in Febrile Patients in Mesoendemic Malaria Transmission Area of Rural Burundi, among Internally Displaced Populations after Tribal Conflicts.* Clinical Social Work and Health Intervention Vol. 8 No. 2 2017.
2. MOLNAROVA K, WOLF S, TENNA M (2016) *Highland malaria at the Kiziba UNHCR refugee camps (1950m. a. s.).* Clinical Social Work and Health Intervention Vol. 7 No. 3 2016.
3. KIMULI D,CZARNECKI P, MIKLOSKOVA M, SPANIK S, BRYNDZAK P et al (2016) *Social pathology II.* WMU WARSAW. 2016. 455 pp.
4. RIDOSKO J (2014) *Treatment of intra-articular femur fractures*. Radix, spol. s. r. o. ISBN 978-80-87573-09-9.
5. PAUL R, SINHA PK, BHATTACHARYA R, BANERJEE AK, RAYCHAUDHURI P, MONDAL J (2012) *Study of C reactive protein as a prognostic marker in malaria from Eastern India.* Advanced Biomedical Research, 1, 41. http://doi.org/10.4103/2277-9175.100140.
6. HAGHIGHI L (1969) *C-Reactive protein in malaria.* Journal of Clinical Pathology, 22(4), 430–432.

The Satisfaction Level of Patients Seeking Dental Care in the Slovak Republic: A Cross-sectional Questionnaire Study (Original paper)

M. Samohyl (Martin Samohyl)[1], A. Nadazdyova (Anna Nadazdyova)[2], M. Hirjak (Martin Hirjak)[3], L. Argalasova (Lubica Argalasova)[1], K. Hirosova (Katarina Hirosova)[1], J. Jurkovicova (Jana Jurkovicova)[1]

Original Article

[1] Institute of Hygiene, Faculty of Medicine, Comenius University in Bratislava, Slovakia
[2] Department of Stomatology and Maxilofacial Surgery, Faculty of Medicine, Comenius University in Bratislava, Slovakia
[3] Department of Public Health, St. Elizabeth's College of Health and Social Sciences, Bratislava, Slovakia

E-mail address:

martin.samohyl@fmed.uniba.sk

Reprint address:

Martin Samohyl
Comenius University in Bratislava
School of medicine
Bratislava, Slovakia

Suource: Clinical Social Work and Health Intervention *Volume: 8* *Issue: 3*
Pages: 34 – 42 *Cited references: 22*

Reviewers:

Johnson Mawole
Department of Sociology and Statistics, University of Mwanza, Tanzania
George Herdics
School of Management Warsaw University of Management, Poland

Key words:

PSQ III, satisfaction, dental care.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2017; 8(3): 34 – 42; 10.22359/cswhi_8_3_07 © 2017 Clinical Social Work and Health Intervention

Abstract:

Objective: To determine the level of the healthcare quality satisfaction according to some demographic variables (gender, age, education level, employment); change/no change of Dentist during the past year; extra payment for the healthcare; the distance to the Dentist.
Design: A Cross-sectional Questionnaire Study.
Participants: Completed questionnaires were obtained from 433 subjects (53.6% men, 46.4% of women, mean age 35.9±14.6 years).
Methods: A standardized Patient Satisfaction Questionnaire (PSQ III, long-form) was used.
Results: General healthcare quality satisfaction was identical (or nearly identical) in subgroups according to gender, changing Dentist, and extra payment for healthcare. The age and extra payment for healthcare had no impact on the assessment in any subscale. The overall satisfaction rate suggested significant differences within the subgroups according to gender, education level, and changing Dentist.
Conclusion: Satisfaction of dental patients was observed to be different in various demographic subgroups and across several subscales of satisfaction assessment.

Introduction

Football is a popular outdoor activity often used as a social intervention in refugee camps to prevent cabin fever and promote healthy social and physical interactions. However, sportsmen are at risk of acquiring SSTI usually caused by *S. aureus*. Wet towels, close contact at a match, physiotherapeutic procedures and massages are risk factors. The aim of this study was to assess the proportion of MRSA among football players in the refugee camp at Veria, Greece, which serves about 5,000-7,000 migrants waiting for asylum procedures.

Methods

In this cross-sectional study, the standardized *Patient Satisfaction Questionnaire PSQ III* (long-form) was used(5). The questionnaire itself was preceded by several questions regarding basic demographic data; questions about the reasons for changing Dentists during the past year; extra payment for healthcare; distance to the Dentist. The standardized questionnaire *PSQ III* consists of 50 statements focusing on the quality of the healthcare provided. Respondents were free to choose an answer on a scale from 1 to 5 - to what extent they agree with each statement: (1 strongly agree, 2 agree, 3 not sure, 4 disagree, 5 strongly disagree).

The statements in the standardized questionnaire are divided into seven subscales:

- General satisfaction (6 questions); technical quality (10 questions);
- Interpersonal aspects (7 questions); communication (5 questions);
- Financial aspects (8 questions); time spent with the Dentist (2 questions); Access/availability/convenience (12 questions);
- We evaluated the overall satisfaction (50 questions altogether) as well.

Answers to some questions where strong agreement means the maximum satisfaction with the HCQ had to be rescaled (strongly

agree 5, agree 4 disagree 2, strongly disagree 1) to obtain a unified HCQ score: 1 = maximum dissatisfaction with the HCQ, 5 = maximum satisfaction with the HCQ. Particular groups of questions reflecting the degree of HCQ satisfaction were evaluated as mean scores for each subscale. The highest average value means the highest level of HCQ satisfaction.

The study sample was recruited from patients attending dental surgeries in the capital of Slovakia and in several small towns in western and eastern regions of Slovakia; questionnaires were collected from November 2014 to April 2015. In total, 433 completed questionnaires were collected; the response rate was 93%. Parents completed a questionnaire instead of underage respondents. The questionnaire was anonymous and a privacy policy was respected; participation in the study was voluntary.

The whole sample was divided into subgroups according to gender; age; education level; employment; change/no change of Dentist within the last year; extra payment for the Healthcare; the distance to the Dentist. The sample consisted of 433 respondents (53.6% of men, 46.4% of women) aged 15-75 years; mean age was 35.9±14.6 years. The majority of respondents were in the age group 30-49 years (41.6%). In terms of employment, most subjects were classified as employed workers (61.4%); students (22.4%); pensioners (7.8%). Subjects with a secondary education represented the largest group (64.3%), followed by subjects with a University (25.1%) and elementary education (9.7%).

Data was analyzed using the statistical program SPSS. Descriptive statistics (percentages, averages, standard deviations) were used. A two-sample T-test was used to compare the mean scores of HCQ satisfaction in subgroups according to gender; changing Dentist; the amount of extra payment for healthcare; distance to the Dentist. An ANOVA test was used to compare the mean scores of HCQ satisfaction in subgroups according to age, occupation and education level. The statistically significant level was determined at P values <0.05.

Results

Mean scores in all subscales of HCQ satisfaction are presented in **Table 1**. General HCQ satisfaction was identical (or nearly identical) in subgroups according to gender; changing Dentist; extra payment for healthcare. A higher, although not significant satisfaction level was noticed in the oldest patients; in those with the lowest education level; and in pensioners. Lowest general satisfaction was declared by unemployed patients (2.36±0.24) and patients who have to commute long distances to the Dentist (2.34±0.25). The only statistically significant difference was found between subgroups according to distance to the Dentist (P=0.013).

Men were significantly less satisfied with technical aspect of HCQ compared to women (2.55±0.25 and 2.62±0.26, respectively; P=0.008). Age, extra payment for healthcare, and distance to the Dentist had almost no impact to the assessment of technical aspect of HCQ. The most satisfied subgroups were patients with a secondary education level, students, and patients who had changed their Dentist (the differences in scoring in subgroups according to occupation and changing Dentist were significant (P=0.014 and P=0.005, respectively).

Table 1: Mean scores in all subscales of HCQ satisfaction and in overall satisfaction in dental clinics according to different variables (n = 433)

		General Satisfaction		Technical Quality		Interpersonal Aspect		Communication		Financial Aspect		Time Spent with Dentist		Access/Availability/Convenience		Overall Satisfaction	
Variables		x (SD)	*P*	x (SD)	*P*	x (SD)	*P*	x (SD)	*P*	x (SD)	*P*	x (SD)	*P*	x (SD)	*P*	x (SD)	*P*
Gender	**n (%)**																
Male	232 (53.6)	2.54 (0.35)	0.883	2.55 (0.25)	0.008	2.71 (0.37)	0.234	2.61 (0.31)	0.085	2.80 (0.26)	0.663	2.74 (0.66)	0.015	2.75 (0.28)	0.743	2.67 (0.20)	0.022
Female	201 (46.4)	2.54 (0.35)		2.62 (0.26)		2.75 (0.43)		2.67 (0.32)		2.79 (0.26)		2.89 (0.62)		2.75 (0.26)		2.72 (0.20)	
Age [years]																	
<30	176 (40.6)	2.53 (0.33)	0.146	2.59 (0.28)	0.945	2.77 (0.37)	0.168	2.61 (0.30)	0.128	2.81 (0.27)	0.088	2.74 (0.67)	0.110	2.73 (0.31)	0.422	2.68 (0.19)	0.456
30–49	182 (41.6)	2.52 (0.37)		2.58 (0.25)		2.69 (0.41)		2.64 (0.32)		2.77 (0.26)		2.88 (0.65)		2.76 (0.23)		2.69 (0.20)	
≥50	75 (17.8)	2.61 (0.33)		2.59 (0.23)		2.73 (0.44)		2.70 (0.34)		2.83 (0.23)		2.78 (0.55)		2.78 (0.27)		2.72 (0.20)	
Education level																	
Incomplete elementary	4 (0.9)	2.71 (0.37)	0.296	2.45 (0.06)	0.065	2.61 (0.36)	0.445	2.75 (0.41)	0.001	2.94 (0.22)	0.332	2.75 (0.50)	0.235	2.63 (0.14)	0.267	2.69 (0.11)	0.029
Elementary	42 (9.7)	2.61 (0.31)		2.56 (0.18)		2.72 (0.23)		2.76 (0.31)		2.82 (0.19)		2.87 (0.47)		2.72 (0.19)		2.72 (0.12)	
Secondary school	278 (64.3)	2.54 (0.36)		2.62 (0.26)		2.80 (0.40)		2.65 (0.29)		2.79 (0.25)		2.89 (0.53)		2.74 (0.27)		2.73 (0.18)	
University	109 (25.1)	2.51 (0.33)		2.54 (0.28)		2.68 (0.51)		2.55 (0.35)		2.76 (0.31)		2.70 (0.86)		2.79 (0.24)		2.65 (0.25)	

Occupation																	
Student	97 (22.4)	2.53 (0.35)	0.339	2.66 (0.28)	0.014	2.84 (0.37)	0.163	2.61 (0.32)	0.103	2.81 (0.26)	0.819	2.77 (0.60)	0.612	2.75 (0.25)	0.332	2.71 (0.18)	0.356
Unemployed	7 (1.6)	2.36 (0.24)		2.59 (0.20)		2.82 (0.07)		2.67 (0.11)		2.88 (0.00)		2.57 (0.73)		2.63 (0.08)		2.64 (0.15)	
Employed	266 (61.4)	2.54 (0.34)		2.56 (0.25)		2.69 (0.41)		2.62 (0.32)		2.79 (0.27)		2.83 (0.68)		2.74 (0.26)		2.68 (0.20)	
Pensioner	34 (7.8)	2.63 (0.33)		2.56 (0.21)		2.69 (0.25)		2.76 (0.30)		2.76 (0.23)		2.74 (0.53)		2.80 (0.28)		2.71 (0.17)	
Other	29 (6.8)	2.57 (0.43)		2.64 (0.22)		2.72 (0.52)		2.72 (0.24)		2.81 (0.27)		2.93 (0.62)		2.83 (0.42)		2.75 (0.25)	
Dentist changing																	
Yes	84 (19.4)	2.52 (0.43)	0.650	2.67 (0.31)	0.005	2.89 (0.34)	0.000	2.71 (0.32)	0.024	2.83 (0.27)	0.228	2.89 (0.69)	0.188	2.91 (0.29)	0.000	2.78 (0.19)	0.000
No	349 (80.6)	2.55 (0.33)		2.57 (0.24)		2.69 (0.40)		2.62 (0.32)		2.79 (0.26)		2.79 (0.64)		2.71 (0.25)		2.67 (0.20)	
Extra Payment for Healthcare																	
<100€	426 (98.3)	2.54 (0.35)	0.616	2.58 (0.25)	0.848	2.73 (0.40)	0.901	2.64 (0.32)	0.764	2.80 (0.26)	0.359	2.81 (0.65)	0.695	2.75 (0.27)	0.163	2.69 (0.20)	0.957
≥100€	7 (1.7)	2.48 (0.22)		2.63 (0.58)		2.75 (0.54)		2.66 (0.15)		2.71 (0.32)		2.71 (0.57)		2.89 (0.31)		2.69 (0.25)	
Distance to Dentist																	
<30km	415 (95.9)	2.55 (0.35)	**0.013**	2.58 (0.25)	0.334	2.72 (0.40)	**0.030**	2.64 (0.31)	0.482	2.80 (0.26)	0.341	2.83 (0.64)	**0.000**	2.75 (0.27)	0.819	2.70 (0.20)	0.067
≥30km	18 (4.1)	2.34 (0.25)		2.67 (0.40)		2.93 (0.37)		2.57 (0.44)		2.74 (0.23)		2.28 (0.57)		2.74 (0.22)		2.61 (0.20)	

The significant differences in the interpersonal aspect subscale were found in subgroups according to changing Dentist (P=0.000) and distance to the Dentist (P=0.030); more satisfied were patients who had changed their Dentist and those with longer distance to the Dentist. Gender, age, education level, occupation and extra payment had no significant impact on the HCQ assessment in this subscale.

In the subscale communication with the Dentist, the highest level of satisfaction was observed in the oldest age group (2.70±0.34); in patients with elementary education level (2.76±0.31); in pensioners (2.76±0.30); in Dentist changing patients (2.71±0.32). Significant differences in this subscale were found in subgroups according to education level (P=0.001) and changing Dentist (P=0.024).

We did not find any significant differences among subgroups in the subscale financial aspect of HCQ satisfaction. The highest level of dissatisfaction in this subscale was observed in the age group 30–49 years (2.77±0.26); in patients with University education (2.76±0.31); in pensioners (2.76±0.23); in patients with a higher extra payment for healthcare (2.71±0.32); and in those with long distances to the Dentist (2.74±0.23).

Women were significantly more satisfied with HCQ in the subscale time spent with the Dentist than men (2.89±0.62 and 2.74±0.66, respectively; P=0.015). The high significant difference was observed between patients subgroups according to distance to the Dentist: in this subscale, the most dissatisfied patients were those with a longer distance to the Dentist (2.28±0.57; P=0.000).

The high significant difference in the subscale access/availability/convenience was achieved in the variable Dentist changing: the highest level of satisfaction in this subscale was declared by patients who had changed their Dentist in the last year (2.91±0.29 vs. 2.71±0.25; P=0.000).

The overall HCQ satisfaction assessment suggested significant differences within subgroups according to gender (P=0.022); education level (P=0.029); changing Dentist (P=0.000). Higher levels of overall dissatisfaction were declared by men (2.67±0.20); the youngest age group (2.68±0.19); patients with university education (2.65±0.25); unemployed subjects (2.64±0.15); patients who had not changed their Dentist within the last year (2.67±0.20); those with long distances to the Dentist (2.61±0.20).

Discussion

General patient satisfaction is subjective, because patients do not take into account the appropriateness and results of therapy(6). The mean general satisfaction in our study was lower than reported by Chander *et al.*(7), Holikatti *et al.*(8). This can be partly explained by the fact that the studies mentioned above dealt with different patient samples and used the short-form questionnaire PSQ-18 (only 3 general satisfaction questions); whereas in our study the long-form questionnaire PSQ III (6 general satisfaction questions) was used.

An average score of patient satisfaction in the subscale technical quality is in our study nearly the same as in the study by Holikatti *et al.*(8); the highest level of satisfaction was declared by Dentist changing patients and patients who commute long distance to their Dentist. Technical quality is based upon objective criteria; satisfaction is subjective. Satisfaction reflects both the patient's subjective assessment of quality of care and expectations for it. Edlund *et*

al.(9) confirmed the appropriate technical quality of healthcare leading to greater patient satisfaction. However, many aspects of technical quality of healthcare should not be evaluated by patients. Dentists who provide a high level of technical quality might not be highly rated by patients(10). Dentists in small towns and villages in Slovakia usually lack higher standard equipment such as panoramic X-ray devices, and this fact forces patients to commute long distances to a center with the required medical equipment.

The quality of communication between Dentists and patients is a multidimensional concept that includes medical technology, psychosocial aspects and interaction(11). Proper communication skills have often been neglected in medical education in the EU as well as in the USA(12). An important feature of communication processes is the fact that they can convey messages through multiple layers of verbal and nonverbal communication, and may indirectly facilitate the analysis of healthcare(13). Our study showed far lower rate in the subscale communication compared with Jagadeesan's study who reported the mean score in ophthalmological patients in this subscale 4.46(14). We found the highest mean scores in the subscale communication among pensioners as well as among patients with elementary education level (deemed to be of less frequent users of the Internet). Current knowledge about Internet users seems to be limited concerning the number and demographic profile of people acquainted with this medium(15). Currently, when communicating with a Dentist, the Internet is the preferred medium. A direct link between Internet use and HCQ rates is confirmed by Esmaeilzadeh *et al.*(16). Errors in communication between healthcare professionals and patients can lead to medical errors which have unintended consequences for a patient's condition(17). The approach concentrated on communication between health-care professionals and patients is considered a valuable strategy in creating relationships with patients, and is considered a key aspect of HCQ improvement(18).

Health cost must be included in economic calculations of all sectors and at all levels of governance. Some answers in this subscale could be skewed because the kind of medical examination was not taken into account. HCQ in this subscale was assessed as poor when compared with studies by Nordyk *et al*. (19), Ziaei *et al*.(20). However, patient mean age in Nordyk´s study was higher than in our study. In general, satisfaction appears to be higher in older patients(21). This fact was partly confirmed by our study, too.

Patient satisfaction found in the subscale time spent with Dentist was lower than in studies by Ziaei *et al*.(20), Chander *et al.*(7), Holikatti *et al*.(8). However, in our sample patients declared the highest level of satisfaction right in this subscale. Dentist should not only be focused on finishing the treatment as fast as possible just to minimize the waiting time, but also should concentrate on explaining the treatment as well as the treatment options, to patient's satisfaction(22).

Access to health services is a prerequisite for a high HCQ. Simultaneously, access to health-care services is considered as one of the cornerstones of the HCQ, and an important strategy for providing healthcare for all. Healthcare should be available without restrictions to every citizen near the place where he/she lives.

Conclusion

In conclusion, patient satisfaction is a complex issue with various influencing factors. Overall satisfaction with the dental

service was observed to be varied across demographic groups: men; youngest patients; unemployed; patients with University education were least satisfied.

Our result suggests a series of recommendations:

- Create training programs for Dentists to can improve their communication skills.
- Promote the development of a team that will support the implementation of changes in the HCQ at the national level. This approach would be based on the knowledge of HCQ Theory and would strive to achieve positive changes in healthcare facilities as well.
- Introduce mentorship (i.e. the way employees are managed) as an additional tool for HCQ improvement.

Reference

1. DUBOVA SVD, FLORES - HERNANDEZ S, RODRIGUEZ - AGUILAR L, PÉREZ - CUEVAS R (2010) *Quality of care and health-related quality of life of climacteric stage women cared for in family medicine clinics in Mexico*. Health Quality Life Outcomes; 8: 20.
2. THAYAPARAN AJ, MAHDI E (2013) *The Patient Satisfaction Questionnaire Short Form (PSQ-18) as an adaptable, reliable, and validated tool for use in various settings*. Med Educ Online; 18: 21747.
3. ZACHAROVA E (2015) *The quality of healthcare from the perspective of the client in prison*. Clinical Social Work 1: 70-75.
4. MICHEL R (2015) *Satisfaction with the provision of seniors social services*. Clinical Social Work; 1: 87-95.
5. HAYS RD, DAVIES RD, WARE JE (1987) *Scoring the medical outcomes study patient satisfaction questionnaire: PSQ-III.* MOS Memorandum. Santa Monica (CA): Rand Corporation; (unpublished).
6. NGUYEN THI PL, BRIANÇON S, EMPEREUR F, GUILLEMIN F (2002) *Factors determining inpatient satisfaction with care*. Soc Sci Med; 54: 493-504.
7. CHANDER V, BHARDWAJ AK, RAINA SK, BANSAL P, AGNIHOTRI RK (2011) *Scoring the medical outcomes among HIV/AIDS patients attending antiretroviral therapy center at Zonal Hospital, Hamirpur, using Patient Satisfaction Questionnaire (PSQ-18).* Indian J Sex Transm Dis; 32: 19-22.
8. HOLIKATTI PC, KAR N, MISHRA A, SHUKLA R, SWAIN SP, KAR S (2012) A study on patient satisfaction with psychiatric services. Indian J Psychiatry 2012; 54: 327-332.
9. EDLUND MJ, YOUNG AS, KUNG FY, SHERBOURNE CD, WELLS KB (2003) *Does Satisfaction Reflect the Technical Quality of Mental Healthcare?* Health Serv Res; 38: 631-645.
10. MCGLYNN EA (1997) *Six challenges in measuring the quality of healthcare*. Health Affairs; 16: 7-21.
11. BUTALID L, VERHAAK PF, TROMP F, BENSING JM (2011) *Changes in the quality of Dentist-patient communication between 1982 and 2001: an observational study on hypertension care as perceived by patients and general practitioners.* BMJ Open; 1: e000203.
12. ĐORĐEVIC V, BRAS M, MILUNOVIC V, BRAJKOVIC L, STEVANOVIC R, POLASEK O (2011) *The founding of the Centre for Palliative Medicine, Medical Ethics and Communication Skills: a new step toward the development of patient oriented medicine in Croatia*. Croat Med J; 52: 87-88.
13. SIMINOFF LA, STEP MM (2011) *A Comprehensive Observational Coding Scheme for Analyzing Instrumental, Affective, and Relational Communication in Healthcare Contexts*. J Health Commun; 16: 178-197.
14. JAGADEESAN R, KALYAN DN, LEE P, STINNETT S, CHALLA P (2010) *Use of a Standardized Patient Satisfaction*

Questionnaire to Assess the Quality of Care Provided by Ophthalmology Residents. Ophthalmology; 115: 738-743.

15. MCMELLON CA, SCHIFFMAN LG (2001) *Cybersenior research: a practical approach to data collection*. J Interact Market; 15: 46-55.
16. ESMAEILZADEH P, SAMBASIVAN M, KUMAR N (2010) *The Challenges and Issues Regarding E-Health and Health Information Technology Trends in the Healthcare Sector*. In Zaman M, Liang Y, Siddiqui SM *et a*l. (ed) E-business Technology and Strategy. pp 23-37. Berlin Heidelberg: Springer-Verlag,.
17. HUGHES R G, ORTIZ E (2005) *Medication Errors: Why they happen, and how they can be prevented*. Am J Nurs; 105: 14-24.
18. TAYLOR SL, LURIE N (2004) *The role of culturally competent communication in reducing ethnic and racial healthcare disparities*. Am J Manag Care; 10: SP1-4.
19. NORDYKE RJ, CHANG CH, CHIOU CF, WALLACE JF, YAO B, SCHWARTZBERG LS (2006) *Validation of a patient satisfaction questionnaire for anemia treatment, the PSQ-An*. Health Qual Life Outcom; 4: 1-10.
20. ZIAEI H, KATIBEH M, ESKANDARI A, MIRZADEH M, RABBANIKHAH Z, JAVADI MA (1982) *Determinants of patient satisfaction with ophthalmic services* BMC Res Notes 2011;4:1-4.
21. LINN MW, LINN BS, STEIN SR (1982) *Satisfaction with ambulatory care and compliance in older patients.* Med Care; 20: 606-14.
22. DEWI FD, SUDJANA G, OESMAN YM (2011) *Patient satisfaction analysis on service quality of dental healthcare based on empathy and responsiveness*. Dent Res J (Isfahan); 8: 172-177.

Perception of Quality of Life at Patients after Surgery of Disc Herniation (Original research paper)

Z. Slezakova (Zuzana Slezakova)[1,2], G. Vorosova (Gabriela Vorosova)[1], K. Michalenkova (Kristina Michalenkova)[2]

Original Article

[1] Constantine the Philosopher University in Nitra,
Faculty of Social Sciences and Health Care, Department of Nursing, Nitra, Slovakia
[2] St. Elizabeth College of Health and Social Work, Bratislava, Slovakia.
Depertment of Nursing

E-mail address:

zuzana.slezakova@health.gov.sk

Reprint address:

Zuzana Slezakova
Constantine the Philosopher University in Nitra
Faculty of Social Sciences and Health Care
Nitra, Slovakia

Suource: Clinical Social Work and Health Intervention *Volume: 8* *Issue: 3*
Pages: 43 – 48 *Cited references: 19*

Reviewers:

Vladimir Krcmery
MIC Nairobi, Kenya
Gunther Dorfmeister
Vienna General Hospital, Vienna, AT

Key words:

D SF 36; nursing**;** Quality of Life, Hernation dicsu, Neurosurgery nursing.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2017; 8(3): 43 – 48; 10.22359/cswhi_8_3_08 © 2017 Clinical Social Work and Health Intervention

Abstract:

Objective: Disc herniation affects a person in all aspects of life, physically, mentally and socially. In performing activities of daily living movement is limited; patients are often dependent on the help of others; the thinking and behavior of the patient are changing. At least one year

after intervertebral discs surgery the overall assessment of the perception of quality of life should be change.

Design: We sought to ascertain the perception of quality in daily activities of life in areas of bio - psycho - social needs after disc herniation surgery.

Results: For diagnostic purposes evaluating the quality of life of patients after disc herniation surgery we used the questionnaire SF 36 (36-Item Heath Survey Short Form 36 Health Subject Questionnaire). Respondents were patients after disc herniation surgery n = 86 from neurosurgery clinics in Slovakia, n = 86.

Conclusions: We can state that for patients after disc herniation surgery quality of life only slightly improved: with restricted movement in the damaged area; problems with lifting heavy objects; persistent back pain. Our study of n = 86 respondents showed that: In our study n = 86 respondents showed that 84% of respondents stated that despite successful disc herniation surgery their normal daily activities are causing problems. 95% report that they still experience difficulties in carrying out daily activities and 33% of patients still suffer from severe pain preventing them from doing normal activities. We found that 68% of respondents indicate that their normal daily activities cause problems because of their lingering emotional conditions, including anxiety, fear, depression and other conditions. Negative feelings such as anxiety, depression, sadness, exhaustion, fatigue was confirmed by 52% of patients. Although nearly half, 48% do experience a positive emotional condition. Conversations with respondents reveal that the social support and social contacts after spinal surgery are still rated relatively restrictive in intensity and frequency. The most effective social support respondents receive is from their families who often insure that rehabilitation and other services continue to be available.

Introduction

In the last two decades, the concept of the quality of life is thought to apply more to the individual, not so much on economic or social conditions. It has become the major research of the quality of life associated with healthy subjects (HRQOL = Health-Related-Quality of Life) (Chisholm, Healey, Knapp 1997; Draper, J 2005). Health Related Quality of Life – HRQOL - thus the quality of life that is affected by health involves subjective perception of health for an individual, but also the perception of vital functions in health including physical and emotional spheres (Lebow *et al.* 2012).

WHO defines health as a state of complete physical, mental emotional and social well-being, not just the absence of disease. This definition implies that the measurement of health status and effects of the provision of healthcare must include not only the severity of the disease, but also an estimate of well-being. And, it is an estimate of well-being as it relates to an assessment of measuring actual quality of life. According to the WHO, this quality is considered to be a situation that is perceived individually by a certain culture; the system of value in relation to expectations; interests; evaluation

criteria. Also, it is influenced by individual mental health; social relationships; physical health; degree of independence (Dzuka,2004). Gurkova, 2011 defines this is primarily a subjective feeling of well-being that include physical, mental, emotional, social and spiritual dimension:

Degeneration of intervertebral discs is associated with a sedentary work, total physical activity, turning, lifting, stretching, vibration while driving, improper posture and bad formula at work. So poor work factors increase the burden and stress that is placed on the back (Hakkinen *et al.,* 2005 Kagaya *et.al* 2005 Heider *et.al.* 2007). Information on working conditions report that 30% of employed workers in Europe suffer from back pain which belongs at the top of the list of work-related disabilities. Other studies report increases in a variety of injuries including back injuries related to manual work and lifting heavy loads. Trouble-free life with no restrictions are causing sudden instant discomfort and the feeling of strong pain. It starts the cycle of neurology; neurosurgery; rehabilitation; examinations; difficulties in walking; dependency on others. Frustration occurs with chaos in the head, fear, anxiety, restrictions in daily activities of living.

Design: For diagnosis mapping of quality of life after disc herniation surgery we used questionnaire SF 36 - Short Form 36 Health Subject Questionnaire (SF-36) by Ware and Sherbourne (1992).

Results: In research participation n = 86 respondents (38% women and 62% men). The age limit of the respondents ranged from 18 to 61 and above. The largest sample consisted of respondents aged 31-50 years which was 64%. The research sample consisted of patients at least one year after surgery on intervertebral discs in the neurosurgery clinic of a Hospital in Slovakia.

Methods

For diagnosis mapping quality of life after surgery of disc herniation we used questionnaire SF 36 (Short Form 36 Health Subject Questionnaire) questionnaire Short Form 36 (SF-36) Ware and Sherbourne (1992. The questionnaire contains 36 questions focused on the last four weeks, divided into 8 dimensions. For each dimension there can be a T - score between 0-100, which expresses the degree of health and the affect on normal patient activities, where zero corresponds to a lower health status and 100 to the best health status. Dimensions are: objective physical functions (PF), social functions (SF), limitations in physical roles (RP), the limitations in emotional roles (RE), managing emotions and subjective well-being (MH), vitality (VT), pain (BP), subjective assessment of the health (GH), perceived health change (CH). In addition to basic dimensions questionnaire allows the evaluation of summary dimensions: perceived physical health (SPH), perceived mental health (SMH), perceived health status (PHS). We used the Chi- square test for the comparison of qualitative variables finding the frequency of occurrence.

Results

Based on statistical analysis, we present the data obtained in the individual components of the SF 36, comparing gender to physical activity, mental, emotional and social activity. The achieved result p = 8.271 * 10-5 is significantly smaller than the level of 0.05. In general, this means the health of patients negatively affects normal daily activities. When compared to women, even though not an equal number of respondents women to men, we found that men suffer more with physical limitations than do women.

The achieved level of statistical significance is less than 0.05. The results show that

in the last four weeks men had at least one of the named problems (e.g. reducing the time to work or take other action; reducing certain types of tasks or activities; expending more effort to carry out the work or activities) compared with women who have these common activities better managed.

On the basis of statistical indicators, we concluded that to physically improve the quality of life for women after disc herniation surgery, they must be able to perform activities of daily living better than men after disc herniation surgery. On the basis of statistical indicators, we concluded that after disc herniation surgery women emotionally feel less nervousness, sadness or tension than men. After disc herniation surgery, women did not have to restrict meetings with friends or have restrictions on the conduct of social activities. The achieved level of statistical significance is greater than 0.05. This means that the men greatly hinder their emotional health problems in social life.

Discussion

In there research, Laxton W. and G. Perrin R. (2003) and D. Heider (2007) reported that pain and mobility problems associated with disease reduces abilities to be productive at home and at work. Generally, during the day, the patient's condition negatively affects normal daily activities. We agree with these authors. Results obtained show that due to their post-surgery mode, the majority of patients after surgery depend respectively on others as well as family members. They need help whether dressing, bathing and other daily living activities that have managed in the full health without help. Pain in even moderate activities limited up to 71% of patients; 50% reaching; 64% bathing and dressing; walking up the stairs make problems for the majority of respondents. In our survey, we found that most patients report needing extra time to carry out normal activities and expending more effort and energy to carry out normal activities. In their studies, several authors (Hakkinen *et al.* 2005 Schneider*, et.al.* 2007), as we also have identified. report persistence of pain even 12 months after surgery. When comparing between men and women, we found the perception of quality of life for women has improved after disc herniation surgery and they are physically able to perform activities of daily living better than men after similar disc herniation surgery.

Evaluating the results of the psychological field four weeks after surgery 52% of respondents complained of fatigue; 40% of depression and sadness; 58% at patients experienced nervousness. Compared with research, authored by Lebow (2012), which compared negative emotional states after surgery, he found that with decreasing pain intensity decreased feelings of anxiety and depression. Rehabilitation can fully improve mental status with the disappearance of pain. Also, in the research, conducted by Heider (2007) it concluded that in most of the patients their emotional feelings are related to the intensity of their pain. The researchers found an increased incidence of depression, anxiety, dissatisfaction with financial situation, reflected in family relationships. Laxton and Perrin (2003) found in their research that patients suffering from anxiety have a reduced incentive to rehabilitation and post-surgery results are worse. On the other hand, the psychological aspect is closely linked with the social and physical aspects, so if patients feel less pain and cope better with every day care for themselves their social viewpoint will not be limiting; their everyday mental attitude will offer a better way to get rid of unpleasant emotional feelings. Our research tells us that the pain in men after surgery prevented quite

a lot of routine work compared to women. In the last four weeks, in comparison with men, women did not feel their emotional problems in normal daily activities; as well, women did not feel negative emotional expressions related to anxiety, depression, sadness, exhaustion and fatigue as much as for men. After disc herniation surgery, women emotionally feel less nervousness, sadness and tension than men.

From the perspective of the respondents after spine surgery, the intensity and frequency social support and social contacts are rated as relatively restrictive. The biggest social support respondents receive is from their family and this is often also backed by rehabilitation and other available services. In Germany, compared with the research sample (Heider, 2007), which divided the patients into a groups of singles and those in partnership, they found that in social relations, singles need increased support as they have more difficulties to deal with diseases compared with patients who have the support of people close by. Other research (Laxon and Perrin, 2003) showed that with post-surgery complications after disc herniation spinal surgery, there was a lack of social support from family relationships due to the inconvenience as well as increased nervousness and than in patients who didn't have complications. They predicted that with increased of social support to them it will facilitate patient's quality of life after of spinal surgery. To some extent, this was also confirmed, especially among people who had their loved one close. In our survey, despite health and emotional problems after disc herniation surgery, women manage their recovery better nor does it prevent them building social contacts and social life more easily than men. We can say that the quality of life for patients after disc herniation surgery only slightly improved and that restricted movement in the damaged area, problems with lifting, and back pain remain. This is also in accordance with previous research presented in patients of both genders. Therefore, it would be appropriate to focus future research on the possibilities of preventive measures in relation to disc herniation.

Reference

1. BURKS JS, JOHNSON KP (2000) *Multiple sclerosis*. New York: Demos 2000: 377 s.
2. DZUKA J (2004) *Psychologic Dimensions of quality of life.* Presov: University of Presov, 2004. ISBN 80-8068-282-8.
3. DRAGOMIRECKA E, BARTONOVA J (2006) *Whoqol-Bref, Whoqol – 100. Health Organization Quality of Life Assessment.* 1. pub. Praha: 2006
4. LAXTON W, PERRIN R G (2003) *The relations between social support, life stress, and quality of Life following spinal decompression surgery.* [online] 2003. [cit. 20. 2. 2015]. http://www.nature.com/sc/journal/v41/n10/full/3101432a.html.
5. LEBOW R et al (2012) *Microdiscectomy improves pain-associated depression, somatic anxiety, and mental well-being in patients with herniated lumbar disc.* Neurosurgery 70.2 (2012): 306-311.
6. HEIDER D et al (2007) Health-related quality of life in patients after lumbar disc surgery: a longitudinal observational study. *Quality of Life Research* 16.9 (2007): 1453-1460.
7. KAGAYA A, HITOSHI P, et al (2005) Quality of life assessment before and after lumbar disc surgery. *Journal of Orthopaedic Science* 10.5 (2005): 486-489.
8. HAKKINEN A, et al (2005) Health related quality of life after lumbar disc surgery: a prospective study of 145 patients. *Disability and rehabilitation* 27.3 (2005): 94-100.
9. CHISHOLM D (1), HEALEY A, KNAPP P (1997) QALYs and mental health care. *Soc. Psychiatry Psychiatr Epidemiol.* 1997 Feb;32(2):68-75.

10. FAYERS P M, MACHIN D (2000) *Quality of Life: Assessment, Analysis, Interpretation*. First edition. Chichester: John Wiley and Sons Ltd., 2000, 395 s.
11. GURKOVA E (2011) *Assessing the quality of life.* 1. vyd. Praha: Grada publishing, 2011. 224s. ISBN 978-80-247-3625-9.
12. KUCERA P (2006) Pain and neuropathy. In: *Via practica*. ISSN 1336 - 4790. roč. III., 2006. č. 12, s 562 - 566.
13. KING CYNTHIA R, HINDS PAMELA S (2011) *Quality of life: From nursing and patient perspectives*. Jones & Bartlett Publishers, 2011.
14. DRAPER P (2005) *Nursing perspectives on quality of life*. Routledge, 2005. ISBN 0-203-99276-8 Master e-book ISBN
15. PAYNE J et al (2005) *Quality of life and health*. Praha: Triton, 2005. ISBN 80-7254-657-0
16. SCHNEIDER C, KRAYENBUHL N, LANDOLT H (2007) Conservative treatment of lumbar disc disease: patient's quality of life compared to an unexposed cohort. *Acta neurochirurgica* 149.8 (2007): 783-791.
17. THE WORLD HEALTH ORGANIZATION (1999) *Annotated Bibliography of the WHO Quality of Life Assessment Instrument – WHOQOL.* [online]. [cit. 2015-12-04]. http://depts.washington.edu/seaqol/docs/WHOQOL_Bibliography.pdf
18. TYLL T, DOSTALOV V, NETUKA D et al (2014) *Neuroanestezie* Praha 4: Mlada fronta, 2014. 310s. ISBN 978-80-204-3148-6.
19. ESCH S, FRICCHIONE G, HERBERT B (2002) The role of stress in neurodegenerative diseases and mental disorders. *Neuroendocrinology letters.* 2002; 23:199-208. ISSSN 0172-780X.

Kidney Transplantations in the Slovak Republic, Hungary and Austria

S. Geisel (Stacey Geisel), B. Ramirez (Bernardo Ramirez)

Original Article

University of Central Florida, College of Health and Public Affairs,
Department of Health Management and Informatics

E-mail address:

sgeisel@knights.ucf.edu

Reprint address:

Stacey Geisel
University of Central Florida
College of Health and Public Affairs
Department of Health Management and Informatics
Florida, USA

Suource: Clinical Social Work and Health Intervention *Volume: 8* *Issue: 3*
Pages: 49 – 53 *Cited references: 11*

Reviewers:

Daniel J. West
University of Scranton, Department of Health Administration and Human Resources, USA
Gabriela Lezcano
University of California, San Francisco, USA

Key words:

Kidney transplantation, Renal disease, Living donation, Deceased donors healthcare expenditure, Eurotransplant.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2017; 8(3): 49 – 53; DOI 10.22359/cswhi_8_3_09 © 2017 Clinical Social Work and Health Intervention

Abstract:

This paper highlights the importance of kidney transplants with regard to cost and quality. Kidney transplants provide higher quality of life, freedom, and cost savings for patients compared with dialysis. The cost savings for health systems are also significant. In comparison to Austria and Hungary, Slovakia has the fewest kidney transplants per million population. This paper presents the value of prevention of end-stage

renal disease; donor education; increased living donor participation; decreased waitlist time. Throughout the entire European Union, The Netherlands has the highest number of living donor kidney transplants per million population. The Netherlands puts priority on living donors rather than deceased donors and actively approaches potential donors. An increase in the use of best practices in kidney transplants will present Slovakia and other countries in the region with better value healthcare management options.

Introduction

Currently, 2% of the healthcare budget in Europe goes towards kidney failure, and the percentage is only expected to increase within the coming years (Kofler, 2012). Due to unhealthy diets and physical inactivity, the most common cause of end-stage renal disease is diabetes. At this time, there are about 60 million people in Europe with diabetes (World Health Organization, 2016). Individuals with end-stage renal disease can either choose to do a lifetime of dialysis or receive a kidney transplant. A kidney transplant is a surgical procedure in which a healthy kidney (whether from a living or deceased donor) is placed into a person whose kidneys no longer function properly. Compared to dialysis, kidney transplants significantly improve patient health outcomes; provide a higher quality of life; result in greater freedom for patients. In addition, receiving a kidney transplant saves patients about 17,000 euros per year versus dialysis.

Methods

Through a literature search and a discussion of the main findings with local experts during a visit to Slovakia, we compared the number of kidney transplants per million population (from both living and deceased donors) in the Slovak Republic versus the number in Hungary and Austria. Historical data was gathered and additional insights from healthcare professionals while traveling in Slovakia helped to refine our initial search. With this information, we draw conclusions from the data and provide suggestions for opportunities for improvement.

Results

Historically, Austria has had the highest number of kidney transplants per million population (for both living and deceased donors) followed by Hungary and then Slovakia. All countries have low living donor numbers compared to donations from the deceased. As can be seen in **Figure 1** below, in the year 2013, Austria had 421 transplants per million population, Hungary had 291 and Slovakia had 119 kidney transplants per million population. When comparing these three countries to a poorer country such as Slovenia and a richer country like The Netherlands, there was more of a range in the number of transplants. The Netherlands has the highest number of kidney transplants with 954 and Slovenia had the lowest at 60 kidney transplants per million population (European Commission, 2014).

Discussion

In Slovakia, the National Transplant Organization (NTO) organizes and coordinates donations and transplantations. The National Transplant Organization was created in 2013 by the Ministry of Health in the Slovak Republic (Accord, 2016). The First Cadaveric Kidney Transplantation in the Slovak Republic was performed in June 1972 at the Department of Urology at the Dérer's

Hospital in Bratislava. There are four transplant centers in Slovakia and they are located in Bratislava, Banská Bystrica, Martin, and Košice. In Slovakia, the removal of kidneys is free and donors must be fully informed and consented. In order to be a living donor, you must be an adult blood relative, partner, or friend. They must have two healthy kidneys, and a similar blood type to the patient (National Transplant Organization, 2016). In addition, the donor must have a negative cross-match and absence of disease. Patients who receive a kidney transplant from a living donor have better kidney function start and longer kidney survival. There is no registry for people willing to donate. In Slovakia, there is only a registry for refusal of donation of organs, tissues, and cells after death. Slovakia believes that it is a right to be able to refuse organ donation. If refusing to donate, one must fill out a form and send it to the National Transplant Organization.

In Slovakia, there is an average wait of three years for a kidney transplant. There is a 93% survival rate one year following transplantation. There needs to be continuous follow-up after surgery and access to healthcare and social care. There are no rules concerning medical treatment after transplantation. One example of important rules that should be considered is that the patient's country of residence should not change after the transplant or during the treatment. According to Prihodova, (2014) the first three months after transplantation are considered to be the most problematic period. During this time, there is an increased rate of morbidity and mortality. Adherence to medication and proper follow-up care is essential to the success of a transplant.

The Eurotransplant Organization (ET) currently provides transplant coordination services in eight countries including Austria and Hungary. ET also services The Netherlands, Belgium, Croatia, Germany, Luxembourg, and Slovenia. The first kidney transplant in Vienna, Austria was in 1965 (Margreiter R, Mühlbacher F. 2014). Currently, Austria has four transplant centers. The cost for a kidney transplant in Austria is €17,200 for the first 24 months and €12,900 from the 25th month and beyond. In contrast, dialysis costs a patient in Austria €43,600 the first 1-24 months and €40,600 from the 25th month and beyond (Haller M., Gutjahr G., Harnoncourt F., Kramar R., Oberbauer R. 2010). Living donors account for only 15% of donors in Austria.

The first kidney transplant in Hungary was in 1962 in Szeged (Asztalos *et al*. 2013). There are five transplant centers in Hungary. Austria, Hungary, and Slovakia all have presumed consent for donations by deceased donors. The ET support donations from deceased donors. As shown in **Figure 1**, of the countries included in this study and members of the ET, Austria has historically had the highest number of kidney transplants per million population (from both living and deceased donors), followed by Hungary. Slovakia has a lower number, and since it is not a current member of the ET, they do not provide specific information in their reports. All countries have low living donor numbers in comparison to donations from deceased donors. In 2013, Austria had 421 transplants per million population. Hungary had 291 and Slovakia had 119 kidney transplants per million population.

While traveling to Slovakia, there was a scheduled opportunity to present this research at the University of Trnava. Most of the students in attendance did not realize the topic of kidney transplantations was such an important issue for their country. Unfortunately, accessing articles in English on kidney transplants in Slovakia is difficult. The data found for transplants in Slovakia

was not as up-to-date as other countries within the European Union. Some articles and references were found on the research conducted recently by Dr. Lucia Prihodova on kidney transplantations in Košice, Slovakia. The authors made some unsuccessful attempts to contact her and schedule a possible conference or on-site meeting during the study abroad trip to Slovakia to learn more about her research and obtain additional information about transplants and her perspective of this topic.

Conclusion

Compared to Austria and Hungary, Slovakia has continually had the fewest kidney transplants per million population. In order to increase numbers of kidney transplants, Slovakia must address difficulties; exchange best practices with other countries; create an action plan (Conklin, 2008). The action plan may include engaging in more donor education; increasing living donor participation; decreasing waitlist times; providing routine pre-transplant counseling; follow-up care. Donor education is the most effective method to increase the number of transplants. Education on the criteria for donation will increase the number of living donors and waitlist time will then decrease.

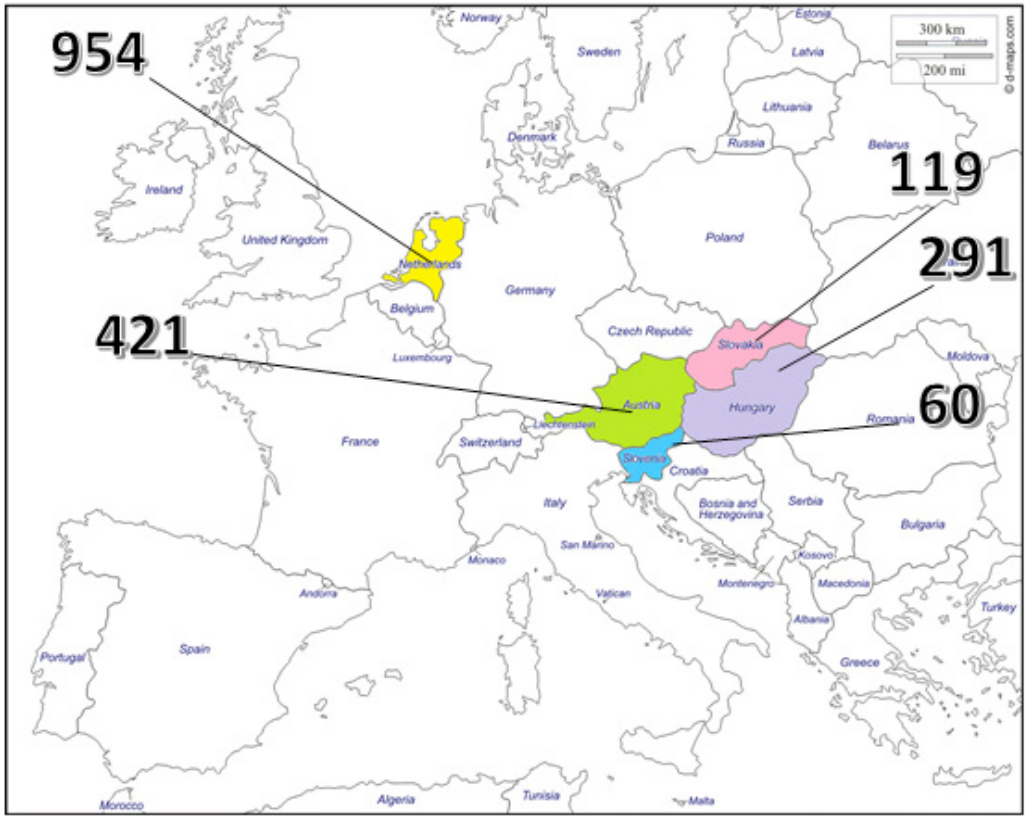
Throughout the entire European Union, The Netherlands has the highest number of living donor kidney transplants 954 per million population. Unlike other countries, The Netherlands puts priority on living donors rather than deceased donors, and the nephrologists actively approach potential donors within the patient's family. In addition, The Netherlands only puts patients on the waitlist for donation if a suitable living donor cannot be identified. They also increased their number of transplant donor coordinators. Thus, pre-and post-transplant patient care has become more coordinated. Slovakia should examine the best practices of other countries, including The Netherlands, to increase their number of kidney transplants. Furthermore, joining the ET could help Slovakia to increase the number of transplants as well as better coordinate transplant patient care. Donor education is essential for individuals to understand the risks and benefits of transplantation. Increasing the number of kidney transplants could help control healthcare spending on dialysis and improve the quality of life of patients with end-stage renal disease.

References

1. ACCORD (2016) Slovak Republic: *National Transplant Organization*. Retrieved from http://www.accord-ja.eu/content/national-transplant-organization.
2. ASZTALOS L, CSAJBOK E, KALMAR N, LANGER R, PERNER, F, SZEDER-KENYI E, SZENOHRADSZKY P (2013) *50 year history of kidney transplantation in Hungary* Retrieved http://www.ncbi.nlm.nih.gov/pubmed/23708984.
3. CONKLIN A, HATZIANDREU E, JANTA B, LING T, PATRUNI B, RABINOVICH L, TIESSEN J, VRIES H (2008) *Improving Organ Donation and Transplantation in the European Union*. Retrieved from http://www.rand.org/content/dam/rand/pubs/technical_reports/2008/RAND_TR602.pdf.
4. EUROPEAN COMMISSION (2014) *Organ Donation and Transplantation Recent Facts and Figures* http://ec.europa.eu/health/blood_tissues_organs/docs/ev_20141126_factsfigures_en.pdf.
5. EUROTRANSPLANT (2016) *Kidney transplants per million population, per year, by country, by donor type.* Retrieved http://statistics.eurotransplant.org/index.php?search_type=transplants&search_organ=&search_region=&search_period=by+year+chart&search_characteristic=&search_text=.

6. HALLER M, GUTJAHR G, HARNON-COURT,F, KRAMAR R, OBERBAUER R (2010) *Cost-effectiveness analysis of renal replacement therapy in Austria.* Retrieved http://ndt.oxfordjournals.org/content/early/2011/02/10/ndt.gfq780.full.
7. KOFLER B (2012) *Danger of kidney disease underestimated*. Retrieved from http://www.ehfg.org/kidneys.html.
8. MARGREITER R, MUHLBACHER F (2014) *The history of organ transplantation in Austria* Retrieved http://link.springer.com/article/10.1007/s10353-014-0248-x.
9. NATIONAL TRANSPLANT ORGANIZATION (2016) Retrieved from http://www.nto.sk/home.html.
10. PRIHODOVA L, NAGYOVA I, ROSENBERGER J, MAJERNIKOVA M, ROLAND R, GROOTHOFF JW, DIJK J P (2014) *Adherence in patients in the first year after kidney transplantation and its impact on graft loss and mortality: a cross-sectional and prospective study*. Journal of Advanced Nursing, 70(12), 2871-2883. doi:10.1111/jan.12447.
11. WORLD HEALTH ORGANIZATION (2016) *Diabetes data and statistics.* Retrieved http://www.euro.who.int/en/health-topics/noncommunicable-diseases/diabetes/data-and-statistics.

Figure 1: Kidney Transplantations per Million Population in selected countries



Source: European Commission, 2014

Health emergencies during flights (Case reports and Mini-review)

M. Meciakova (Michaela Meciakova)[1], V. Foltin (Viktor Foltin)[1], V. Krcmery (Vladimir Krcmery)[1], M. Olah (Michael Olah)[1], J. Ridosko (Jaroslav Ridosko)[1], E. Gazikova (Elena Gazikova)[3], R. Cauda (Roberto Cauda)[2]

Original Article

[1] St. Elisabeth University Tropical Program, Nairobi, Kenya
[2] A. Gemelli Hospital, School of Medicine, Rome, Italy
[3] Constantine the Philosopher University in Nitra, Slovakia

E-mail address:

roberto.cauda@unicatt.it

Reprint address:

Roberto Cauda
Institute of Infectious Diseases, Catholic University of the Sacred Heart
Rome, Italy

Suource: Clinical Social Work and Health Intervention *Volume: 8* *Issue: 3*
Pages: 54 – 57 *Cited references: 4*

Reviewers:

Harald Stefan
Vienna General Hospital, Vienna, Austria
Gabriela Lezcano
University of California, San Francisco, USA

Key words:

Air travel, Acute events, Travel.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2017; 8(3): 54 – 57; DOI 10.22359/cswhi_8_3_10 © 2017 Clinical Social Work and Health Intervention

Abstract:

Cases of acute air travel events with short mini-review are presented; commonest acute events are cardiovascular (myocardial infarction, stroke etc.) and diabetes with complications (hypoglycemia, diabetic coma etc.). Those are followed by the acute intoxications, allergic reactions and infectious diseases; last group of the diseases being psychiatric

disorders. Mortality is rather exceptional (1:600 – 600,000 flights/year), however, emergency landings are common

Conflict of interest:

The authors whose names are listed in the title of the article certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, or other equity interest), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Introduction

In air travel the commonest acute events are cardiovascular (myocardial infarction, stroke etc.) and diabetes with complications (hypoglycemia, diabetic coma etc.). These are followed by acute intoxications, allergic reactions and infectious diseases; last group of diseases being psychiatric disorders. Mortality is rather exceptional (1:600 – 600,000 flights/year), however, emergency landings are common.

Case reports

Case 1 - Sub-fatal Tachycardia without acute consequences

A lady, 20 year old model from an international beauty competition having a BMI< 20, was on a midnight flight from Lisbon to Bratislava (5 hours 05 minutes). During dinner she had a regular coca cola, coffee and on board 0.5 – 1 liter of coca cola. While flying over Salzburg she had an extreme tachycardia with obnubilation and somnolence with a heart rate of 150 - 180 min. to 200 - 240 per minute. There was no AED on board and the oxygen tank was empty so an incidental doctor used a parasympaticomemetic maneuver with only very limited efficacy, decreasing the heart rate 180/min to avoid emergency landing in Salzburg. After normal landing in Vienna rescuers at the gate with equipment applied chemical cardioversion with beta blocker and digoxin with success and referred the lady to the cardiovascular hospital. Acute ECG was without any other pathology. The patient also visited another specialized cardiologist and again, no pathology was found and her case was diagnosed as "Caffeine induced supraventricular tachycardia". Patients with extremely low BMI shall avoid high volumes of drinks with caffeine, such as coke, coffee, etc.

Case 2 - Myocardial infarction with emergency landing

On a Swiss Air flight with 220 passengers from Nairobi to Zurich (overnight flight) a Myocardial infarction occurred with devastating consequences to other passengers. A sudden asystole occurred in a 60 year old male passenger. Incidentally present, an Anesthesiologist used AED and made cardioversion for the patient. As there was a need for emergency landing, the pilot had not enough time for emptying all the tanks with gasoline and damaged the plane's wheels during the landing in Addis Ababa. The patient was immediately transported to Addis University Hospital and survived. However, the plane was unable to take off so all the passengers had to wait about 48 hours for another aircraft. One patient had hysterical paroxysm as he was about to miss

an important court session in Zurich. After sedation with benzodiazepines, his state was improved. This is an example, how one medical condition can cause significant economic losses and irreplaceable logistical consequences for many people.

Case 3 - Food poisoning with emergency landing

Due to severe turbulence, passenger flight from Boston to Los Angeles was forced to make an emergency landing in Chicago. The turbulence was caused by 20 passengers in First Class, who simultaneously, urgently needed to use toilet due to acute watery diarrhea. The virus was determined as Norovirus (NW1), in the so called "seafood platter", where the shrimps were contaminated during the preparation by a cook who was working for an unlicensed company. Some of passengers were kept fastened by safety belts to the seats and asked to defecate in the seat rather than to group on the one side of the plane. The pilot appropriately indicated emergency landing and had enough time to empty the tanks to minimize damage to the aircraft. Apart of Norovirus, staphylococcal toxin or ETEC E. coli or Shigella spp. were considered as potential causes of the outbreak which fortunately did not cause the aircraft to crash, but ended by safely landing.

Case 4 - Acute alcoholic intoxication with psychotic attack

A group of 15 football fans boarded a flight from Kosice to Bratislava (a 40 minute length), with moderate alcohol intoxication. Boarding, one of the passengers attacked the pilot, but the pilot didn't eject the passenger from flight nor do a breath-test. About 20 minutes into the flight, at an altitude of 5.5 km, the passenger suffered a panic-psychotic event and was trying to force land the aircraft by opening the emergency exit. The other drunk fans were trying to assist. In 15 minutes an Emergency Landing was completed at the nearest airport.

Discussion and conclusions

Cardiovascular and cerebrovascular events are responsible for 50-66% of all deaths on board flights. The vast majority of acute emergencies on airplanes are of cardiovascular origin. In these cases, especially when MI is present, emergency landing is always indicated. In case of asystolia, each aircraft should be equipped with AED (automatic defibrillator) and cardioversion is indicated. Oxygen is also available on aircraft.

Diabetic complications are the second most common inflight medical events. Hypo or hyperglycemia may result to coma when not treated immediately. Fortunately, both types of events are preventable with simple methods. In hypoglycemia, oral administration of coke or any other sweetened liquid is recommended if the patient is awake. When in coma, intravenous administration of glucose (10%) is recommended. In hyperglycemia, patients are obliged to carry their insulin devices with them at all times. Administration of insulin is usually easy when using pens or pumps.

Other acute emergencies may include deterioration of psychiatric conditions, such as panic psychotic attacks, intoxications with alcohol or food, infectious diseases and gastrointestinal disturbances all mainly during long flights.

Medical emergencies occur in approximately 1out of 100 flights. In conclusion, crews always ask if there is a doctor on board (or any other medical personnel) to seek action or advice. However, crews should also be trained in the basics of first aid, including cardiopulmonary resuscitation. There should always be AED and equipment for basic first aid on board, at least on big

aircraft. In some cases, emergency landing is not required when first aid is quickly delivered and the patient is stabilized.

References

1. GENDREAU MA, DEJOHN C (2002) *Responding to Medical Events during Commercial Airline Flights.* N Engl J Med 2002; 346:1067-1073April 4, 2002DOI: 10.1056/NEJMra012774.
2. ZIAKOVA E, TANHAUSEROVA, M (2015) Evaluation of postural stability using the electronic phyaction balance platform in patients with vertebrogenic disorders. In: Rehabilitácia ISSN 0375-0922, Vol. 52, 2015, No 4, p. 204-216.
3. NABLE JV, TUPE CL, GEHLE BD, BRADY WJ (2015) *In-Flight Medical Emergencies During Commercial Travel.* N Engl J Med 2015;373:939-945.
4. DEHART RL (2003) *Health issues of air travel. Annu Rev Public Health.* 2003;24:133-51. Epub 2002 Oct 23. Review. PMID: 12428033.

Rapid diagnostic tests correlates with microscopy but not C-reactive protein among HIV positive rural population with malaria in Central Uganda (Research note)

B. Silhar (Barbara Silhar)[1], J. Suvada (Jose Suvada)[1], G. Mikolasova (Gertruda Mikolasova)[1], A. Mamova (Alexandra Mamova)[1,2], M. Belovicova (Maria Belovicova)[3], I. Bartosovic (Ivan Bartosovic)[3], V. Krcmery (Vladimir Krcmery)[3], T. Hrindova (Tatiana Hrindova)[4], J. Ridosko (Jaroslav Ridosko)[4], P. A. Hajj (Peri Ali Hajj)[3]

Original Article

[1] Health Initiative Association, Buikwe, Uganda
[2] Elizabeth University Tropical PhD and MPH Programme, Slovak Republic in Buikwe, Uganda
[3] Migrant Health Programme SEUC and UNMCR Refugee Camp II., Veroia, Greece
[4] Elizabeth University Tropical MSc/PhD and Programme

E-mail address:

peri986@hotmail.com

Reprint address:

Peri Ali Hajj
St. Elisabeth University refugee health and MSc/PhD programme
UNHCR Camp 22
Veroia Greece

Suource: Clinical Social Work and Health Intervention *Volume: 8* *Issue: 3*
Pages: 58 – 61 *Cited references: 7*

Reviewers:

George Herdics
School of Management Warsaw University of Management, Poland
Gabriela Lezcano
University of California, San Francisco, USA

Key words:

Malaria, Rapid diagnostic tests, CRP.

Publisher:

International Society of Applied Preventive Medicine i-gap

CSWHI 2017; 8(3): 58 – 61; DOI 10.22359/cswhi_8_3_11 © 2017 Clinical Social Work and Health Intervention

Abstract:

Objectives: To assess the correlation between three diagnostic methods in tropical malaria: Rapid Diagnostic Test (RDT); Microscopy; and C-reactive Protein (CRP) in clinically suspected cases of malaria in HIV positive rural Ugandan population.

Patients and methods: Among 625 cases of clinically suspected malaria, 292 had provided all three types of tests RDT, CRP, plus routine microscopy (RM). Correlation between RTD and RM and CRP and fever was tested with t-test in a HIV positive population in the North Victoria Lake region which is highly endemic for tropical malaria.

Results: Of 74 documented cases, both clinically and in laboratory (19% of all cases tested by three types of test), 67 had laboratory confirmed malaria (both RTD and microscopy positive). There is a strong correlation between RTD and microscopy (100% sensitivity and 97% specificity) but not with CRP, when only 47.5% of CRP positive cases had RTD and microscopically positive malaria.

Conflict of interest:

The authors whose names are listed in the title of the article certify that they have NO affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, or other equity interest), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Introduction

Consumption of antimalarial treatment is increasing after artemisin was introduced as a first line treatment of tropical malaria. (Molnarova *et al*. 2016). Due to the limited resources in the area of Sub-Saharan Africa (SSA) only parasite based microscopy (PM) was used in the past. (Mamova *et al.* 2017) After 2010 also rapid point of care dynamic tests were introduced. In a cohort of 90,000 patients in Rwanda after introducing RTD, consumption of antimalarial drugs decreased 5x such as only 20% of febrile episodes are confirmed as malaria, the rest were likely simple RTI. (Molnarova *et al.* 2016)

In Kenya, Tanzania and Uganda a study of almost 600 patients was performed on correlation of febrile episodes due to malaria and CRP positivity and RTD from malaria. (Komlosi *et al*. 2016) Only 185 patients had malaria and the positivity of RTD plus RM and did not correlate with elevated CRP. Another study in highland Kenya tried to correlate CRP more than 30 μg/ml and documentation of malaria with Neurologic complications. (Szabo *et al*. 2013) CRP was found in at least 3 cohorts as a poor predictor of malarial etiology, when RDT's demonstrated 95-99% sensitivity and 93-98% specificity in comparison to PCR or repeated RM.

The aim of this research note was to assess the correlation between 3 different diagnostic methods for tropical malaria. Rapid diagnostic tests (HRP-RDT), routine microscopy

(RM) and C-reactive protein (CRP) were correlated in clinically suspected cases of malaria in rural Ugandan population.

Patients and Methods

Malaria is hyperendemic in the area of Victoria Lake in Central Uganda and is responsible for almost 50% of all febrile episodes. Due to the availability of artemisin-combined therapy (ACT), almost all cases of febrile episodes receive such therapy. Introduction of RDTs and RM had the aim to decrease unnecessary drug use in this area, with population of about 2 -3 million.

Correlation between RDT and RM and CRP and fever was tested with t-test in patients presenting with fever between March 2013 and December 2016 in Buikwe, Central Uganda.

Results and Discussion

625 patients in total presented in the OPD with febrile episodes and were clinically suspected as malaria: 292 had provided RDT, CRP plus routine microscopy (RM) and 74 had positive microscopy – Out of these 74 RT positive tests only 66 were confirmed also by the rapid test 8 RDT were false negative (almost 11%) All patients with positive microscopy results were treated as malaria. All of them received ACT, nobody died or developed complications. Of 74 cases (with RM and positivity) only 27 had CRP < 30 μg/ml, 12 had CRP between 30 and 50, and 35 had CRP > 50 μg/ml. Similar results were presented in Ugandan, Tanzanian, Kenyan and Rwandan cohorts, (Molnarova, K. Wolf, S. Tenna, M. 2016) The study had failed to prove CRP as a diagnostic factor for malaria. (Mamova, A. *et al.* 2017, Kweka, EJ. *et al.* 2011, Komlosi, M. *et al.* 2017, Szabo, I. *et. al.* 2013) Specificity and sensitivity for RDTs was 99.2% and 99.9% respectively.

There is a statistically significant correlation between RDT and RM, but not with CRP in the patients presenting with fever to medical centers. Therefore, CRP should not be used as a diagnostic method for malaria. Microscopy should not be considered longer as the first. line test for malaria; only did RTD may replace microscopy. If both tests (RTD, MC – microscopy) negative, bacterial infection is more likely and tropical malaria unlikely. The number of false positive microscopy in patients with RTD positive tests was very low.

References

1. MOLNAROVA K, WOLF S, TENNA M (2016) *Highland malaria at the Kiziba UNHCR refugee camps* (1950m. a. s.). Clinical Social Work and Health Intervention Vol. 7 No. 3 2016.
2. MAMOVA A, MIKOLASOVA G, KRCMERY V, MULERA M (2017) *Misdiagnosing of malaria as RTI decreased after introduction of RDTs in rural areas of Kenya.* Neuroendocrinol Lett 2017; 38(Suppl.1):101–103.
3. KOMLOSI M, AHISHAKIYE A, NIYIBAMPA R, RWASA T, MPAWENAYO A (2017) *Comparison between Microscopy and PfHRP2 based RDT for diagnosing Tropical Malaria in Febrile Patients in Mesoendemic Malaria Transmission Area of Eural Burundi, among Internally Displaced Populations after Tribal Conflicts.* Clinical Social Work and Health Intervention Vol. 8 No. 2 2017.
4. KWEKA EJ, LOWASSA A, MSANGI S, KIMARO EE, LYATUU EE, MWANG'ONDE BJ, MAHANDE AM, MAZIGO HD (2011) *Low sensitivity of ParaHIT-f rapid malaria test among patients with fever in rural health centers, Northern Tanzania.* J Infect Dev Ctries. 2011 Mar 21; 5(3): 204-8.
5. KIMULI D,CZARNECKI P, MIKLOSKOVA M, SPANIK S, BRYNDZAK P ET AL

(2016) *Social pathology II.* WMU WARSAW. 2016. 455 pp.

6. BUHALATA SN, MASSAGA JJ (2011) *Performance of ParaHit and OptiMAL tests in the diagnosis of malaria in Mwanza, north-western Tanzania.* Tanzan J Health Res. 2011 Jan; 13(1): 48-53.
7. SZABO I, KULKOVA N, SOKOLOVA J, MIKOLASOVA G, SUVADA J, KALAVSKA A, DOBRODENKOVA S, MATEICKA F, KAFKOVA J, NKOWA I (2013) Neurologic complications and sequellae of infectious diseases in Uganda and Kenya: Analysis of 288 cases from two rural hospitals. Neuroendocrinology letters, 2013, Vol 34. Supplement 1, 28-31.

Contributor's guidelines

Allow me to introduce a new expert journal – Clinical Social Work and Health Care. We would like to offer you an opportunity to contribute to its content as we would like to aspire to create a collection of real experiences of social workers, doctors, missionaries, teachers, etc. CWS Journal is published by the International Scientific Group of Applied Preventive Medicine I-GAP in Vienna, Austria.

The journal is to be published semi-annually and only in English language as it will be distributed in various foreign countries.

We prefer to use the term 'clinical social work' rather than social work even though it is less common. In the profession of clinical social work, there clearly is some tension coming from unclear definitions of competence of social workers and their role in the lives of the clients; the position of social work in the structures of scientific disciplines especially in cases where people declare themselves to be professionals even though they have no professional educational background. These are only few of the topics we would like to discuss in the CWS Journal.

Your contribution should fit into the following structure:

1. Editorial
2. Interview, Case Reports
3. Review
4. Original article
5. Letters

Instructions for contributors:

All articles must be in accordance with the current language standards in English, current ISO and the law on copyrights and rights related to copyrights.

Your contributions are to be sent via e-mail (addressed to: michalolah@gmail.com) as an attachment or on a CD via regular postal service. In both cases written and saved in MS Word (no older version than year 2000).

Style Sheet Requirements:
Maximum length: 3500 words
Letter type: Times New Roman
Letter size: 12
Lining: 1

All articles must include:
Name of the article and author's address in English
Article abstract of 150 words in English
Brief professional CV of the author (100 words)
Publishing languages: English
Text of the article consisting of at most 3500 words

Each article must be an original never published before. When using references, parts of other articles or publications it is inevitable to quote them and provide information about the source.

We reserve the right to formally edit and reduce the text if needed. Academic articles undergo an anonymous critique. Each author will receive a prior statement of publishing his/her article. Reference styles writing: "name and year".

When writing a review it is necessary to attach a copy of the cover of the book.

Published Statement of Human and Animal Rights

When reporting experiments on human subjects, authors should indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000 (5).

Published Statement of Informed Consent

Patients / klients have a right to privacy that should not be infringed without informed consent. Identifying information, including patients' names, initials, or hospital numbers, should not be published in written descriptions, photographs, and pedigrees unless the information is essential for scientific purposes and the patient (or parent or guardian) gives written informed consent for publication. Informed consent for this purpose requires that a patient who is identifiable be shown the manuscript to be published. Authors should identify Individuals who provide writing assistance and disclose the funding source for this assistance.

Identifying details should be omitted if they are not essential. Complete anonymity is difficult to achieve, however, and informed consent should be obtained if there is any doubt. For example, masking the eye region in photographs of patients is inadequate protection of anonymity. If identifying characteristics are altered to protect anonymity, such as in genetic pedigrees, authors should provide assurance that alterations do not distort scientific meaning and editors should so note.

Published Conflict-of-Interest Statement

Public trust in the peer review process and the credibility of published articles depend in part on how well conflict of interest is handled during writing, peer review, and editorial decision making. Conflict of interest exists when an author (or the author's institution), reviewer, or editor has financial or personal relationships that inappropriately influence (bias) his or her actions (such relationships are also known as dual commitments, competing interests, or competing loyalties). These relationships vary from those with negligible potential to those with great potential to influence judgment, and not all relationships represent true conflict of interest. The potential for conflict of interest can exist whether or not an individual believes that the relationship affects his or her scientific judgment. Financial relationships (such as employment, consultancies, stock ownership, honoraria, paid expert testimony) are the most easily identifiable conflicts of interest and the most likely to undermine the credibility of the journal, the authors, and of science itself. However, conflicts can occur for other reasons, such as personal relationships, academic competition, and intellectual passion.

The journal works on the non-profit basis. The Original Articles are published free of charge / the scope up up to 3,500 words, over the scope should be paid 50 EUR / USD for every 500 words/. All the published Articles are charged 100 EUR / USD with standard range which cannot be exceed.

No. 3, Vol. 8, 2017

CLINICAL SOCIAL WORK
AND HEALTH INTERVENTION

Indexed by:
ESCI/Web of Science
ERIH
Alexander Street
ProQuest
ScienceOpen
Ulrich's
CrossRef Similarity Check Powered by iThenticate

Journal DOI 10.22359/cswhi
Issue DOI 10.22359/cswhi_8_3

www.clinicalsocialwork.eu