



**ZF**

UNIVERSITY OF LJUBLJANA  
Faculty of Health Sciences



INTERNATIONAL  
MIDWIFERY  
STUDENT  
CONFERENCE

BOOK OF ABSTRACTS



**BUILDING  
SKILLS  
AS A  
STUDENT  
RESEARCHER**

Ljubljana, 7. 5. 2024

**Title:** Building Skills as a Student Researcher

**Editors:** dr. Metka Skubic dipl.bab., univ. dipl.ped., Tita Stanek Zidarič dipl. bab. MSc in Midwifery, Lucija Šerjak dipl. bab., mag. zak. in druž. štud., dr. Anita Jug Došler univ. dipl.ped.

**Organizing committee:** Tita Stanek Zidarič dipl. bab., MSc in Midwifery, Tina Levec, prof. angl. jezika in univ. dipl. soc. kulture, dr. Metka Skubic dipl.bab., univ. dipl.ped., Lucija Šerjak dipl. bab., mag. zak. in druž. štud.

**Reviewer:** viš. pred. Anita Prelec and prof. dr. sc. Vedran Đido

**English language proofreading:** lekt. Tina Levec, prof. angl. jezika in univ. dipl. soc. kulture

**Designer:** Marjanca Lapajne

**Published:** University of Ljubljana, Faculty of Health Sciences, Zdravstvena pot 5, Ljubljana

**Publication is available online in PDF format at:**

<https://www.zf.uni-lj.si/images/stories/datoteke/Zalozba/Building.pdf>

Publication is free of charge.  
Ljubljana, 2024

This work is available under a Creative Commons Attribution 4.0 International.

The material was prepared as part of the project co-financed by the University of Ljubljana in the field of implementation of research-based curriculum approaches within the A. I. 1 measure of the RSF - "Designing a support system and mechanisms and implementation of pilot examples of the implementation of a student-centred study process".  
Ljubljana, 2024





# PREFACE

Welcome to the vibrant world of midwifery research! It is with great pleasure that we present to you a collection of extended abstracts prepared by midwifery students from Slovenia, Croatia and Bosnia and Herzegovina and their mentors.

Midwifery is both an art and a science and embodies the essence of compassionate care, informed practice, and evidence-based decision making. There is a wealth of opportunity for exploration, discovery and advancement in this discipline. This International scientific-expert consultation called "Building Skills As A Student Researcher is a testament to the commitment and enthusiasm of midwifery students contributing to the ever-evolving field of maternal and neonatal health.

The theme of this event expresses the central role that research plays in shaping the future of midwifery practise. As student researchers, you are the visionaries and the change-makers of tomorrow. With this meeting we aim to create a dynamic platform for collaboration, knowledge sharing and skills development. From exploring innovative research methods to discussing pressing maternal health issues, this conference promises to be a rich offering of learning opportunities and inspiration.

We would like to thank all the authors, speakers, organisers and participants who have contributed to the delivery of this event. Your commitment and enthusiasm are the driving force behind this endeavour.

Remember that every contribution, no matter how small, has the power to inspire change and improve the standard of care for mothers, newborns and families worldwide. Let us walk the path to a better future for midwifery together through the lens of research.

**Sincerely,**

**Organising Committee**

# TABLE OF CONTENTS

<b>1.</b>	<b>Prenatal Care in the Republic of Croatia .....</b>	<b>6</b>
<b>2.</b>	<b>Content of Programmes in Antenatal Classes - Analysis of Women's Needs.....</b>	<b>8</b>
<b>3.</b>	<b>Mental Disorders and Diseases in Pregnancy and the Role of Midwifery.....</b>	<b>10</b>
<b>4.</b>	<b>Comparative Analysis of Episiotomy Rates in Croatian and Slovenian Hospitals: A Stratification According to the Volume of Births .....</b>	<b>12</b>
<b>5.</b>	<b>Dietary Habits of Breastfeeding Women .....</b>	<b>14</b>
<b>6.</b>	<b>The Potential Impact of Midwives on Saving the Lives of Mothers/Pregnant Women and Babies.....</b>	<b>16</b>
<b>7.</b>	<b>Awariness of Human Milk Banks.....</b>	<b>18</b>
<b>8.</b>	<b>Fostering Empathy in Midwifery Education: Insights from Student Perspectives.....</b>	<b>20</b>
<b>9.</b>	<b>Assessing Student Awareness and Understanding of Jaundice: A Comprehensive Study.....</b>	<b>22</b>
<b>10.</b>	<b>Exploring Student Perceptions and Understanding of Fever: A Knowledge Assessment Study.....</b>	<b>24</b>
<b>11.</b>	<b>Evaluating Student Awareness and Perspectives on Vaccination: A Comprehensive Study.....</b>	<b>26</b>
<b>12.</b>	<b>Exploring the Quality of Life Among Slovenian Midwifery Students .....</b>	<b>28</b>

**ZF**UNIVERSITY OF LJUBLJANA  
Faculty of Health Sciences

## INTERNATIONAL MIDWIFERY STUDENT CONFERENCE

**BUILDING SKILLS  
AS A STUDENT RESEARCHER**

Ljubljana, 7. 5. 2024

**08.00 – 08.15** Registration**08.15 – 08.20** Opening speech by the vice-dean for Study Affairs Asst. Prof. Andrej Ovca, PhD**08.20 – 08.25** Chief Executive Officer of the Nurses and Midwives Association of Slovenia. Anita Prelec BSc, RN, MSc.**08.25 – 08.30** Speech by a representative of the 3rd year midwifery students

## SESSION 1

**08.30 – 08.45** Prenatal Care in the Republic of Croatia (CRO)**08.45 – 09.00** Content of Programmes in Antenatal Classes - Analysis of Women's Needs (SLO)**09.00 – 09.15** Mental Disorders and Diseases in Pregnancy and the Role of Midwifery (BIH)**09.15 – 09.30** Comparative Analysis of Episiotomy Rates in Croatian and Slovenian Hospitals: A Stratification According to the Volume of Births (CRO)

Break – 15 min

## SESSION 2

**09.45 – 10.00** Dietary Habits of Breastfeeding Women (CRO)**10.00 – 10.15** The Potential Impact of Midwives on Saving the Lives of Mothers/Pregnant Women and Babies (BIH)**10.15 – 10.30** Awareness of Human Milk Banks (CRO)**10.30 – 10.45** Fostering Empathy in Midwifery Education: Insights from Student Perspectives (SLO)

Break – 15 min

## SESSION 3

**11.00 – 11.15** Assessing Student Awareness and Understanding of Jaundice: A Comprehensive Study (SLO)**11.15 – 11.30** Exploring Student Perceptions and Understanding of Fever: A Knowledge Assessment Study (SLO)**11.30 – 11.45** Evaluating Student Awareness and Perspectives on Vaccination: A Comprehensive Study (SLO)**11.45 – 12.00** Exploring the Quality of Life Among Slovenian Midwifery Students (SLO)**12.00 – 12.10** Closure

Lunch

# PRENATAL CARE IN THE REPUBLIC OF CROATIA

Tea Levak Cvejić

**University of Rijeka, Faculty of Health Studies Rijeka, Department of Midwifery  
Croatia**

## KEY WORDS:

births, birth rate, examinations, live-born newborn

## INTRODUCTION:

Croatia recognizes the importance of birth rates influenced by economic development and population policies. The survival of communities and perinatal mortality are affected by various factors, including biological characteristics of mothers and external factors such as economic conditions, education, traditions, culture and religion.

## METHODS:

The study analyzed and compared the results of two research projects published in 2012 and in 2022. This method proved to be the most reliable method for presenting the changes in prenatal care outcomes.

## RESULTS:

In 2022, there were 33,885 births in Croatian maternity hospitals with a total of 34,335 live births, compared to 2012 when there were 41,091 births in Croatian maternity hospitals with a total of 41,641 live births. It can be concluded in the ten-year period, i.e. between 2012 and 2022, there was a significant drop in the number of births and the total number of live newborns; in 2022 it was lower by 7206 in the number of births and 7306 in the total number of live newborns compared to the year 2012.

In the given period, in the total number of births a change in the birth rate can also be observed. In 2022 the highest birth rate was in the age group of 30-34 and amounted to 107.5/1000 women of that age, while in 2012 the highest birth rate was in the age group of 25-29 years and amounted to 97.4/1000 women of that age. Also, in 2022 an increase in the birth rate to 56.8/1000 women in the age group of 35-39 is observed, compared to 2012, when the birth rate in that age group was 38.7/1000 women. The percentage of live newborns of mothers under the age of 20 is low, and in the analyzed period

it tends to decrease. In this period the largest share of pregnant women (70.1 % in 2022, compared to 70.3 % in 2012) had a controlled pregnancy with an optimal number of examinations (9 or more examinations), as prescribed by the perinatal care program.

## **DISCUSSION:**

In Croatia, there has been a decreasing number of births in younger age groups and an increase in the birth rate in women aged thirty and more. This can be attribute to social changes, including the extending education, later employment, housing problems and changed family perceptions. A decreasing number of women decide to give birth at an age which, according to biological and medical criteria, is optimal for childbirth. The problem is the increase in the number of cesarean sections as a way of completing the birth.

## **LITERATURE:**

Đelmiš, J., & Orešković, S. (2014). *Fetalna Medicina i opstetricija*. Medicinska naklada Zagreb

Habek, D. (2017). *Ginekologija i porodništvo*. Medicinska naklada Zagreb

Rodin, U. (2012). *Porodi u zdravstvenim ustanovama u Hrvatskoj 2012. godine*. Hrvatski zavod za javno zdravstvo.

[https://www.hzjz.hr/wp-content/uploads/2013/11/porodi\\_2012.pdf](https://www.hzjz.hr/wp-content/uploads/2013/11/porodi_2012.pdf)

Rodin, U., Cerovečki, I., Barišić, I., & Jezdić, D. (2022). *Porodi u zdravstvenim ustanovama u Hrvatskoj 2022. godine*. Hrvatski zavod za javno zdravstvo.

<https://www.hzjz.hr/wp-content/uploads/2023/11/Bilten-porodi-2022.-g..pdf>

# CONTENT OF PROGRAMMES IN ANTENATAL CLASSES - ANALYSIS OF WOMEN'S NEEDS

Deana Pettiroso, Lara Sopotnik, Pia Rupar, Sara Pišek, Neli Rakuša, Nuša Kuri, Janina Emina Zorko Šemen, Anja Grčar, Klara Ostojić, Ana Gabrovec, Zala Kamenik, Klaudija Čelić, Liza Kotnik, Neža Podbregar, Julia Bečan, Klara Vidmar, Ema Šumi, Saša Turk, Manca Merljak, Patricija Šemenc, Sarah Dervić, Valmire Ademi, Eva Mlakar, Noel Kovačič Šturm, Alja Mlakar, Maja Boštjančič, Anita Jug Došler, Tita Stanek Zidarič, Lucija Šerjak, Metka Skubic

**University of Ljubljana, Faculty of Health Sciences, Department of Midwifery  
Slovenia**

## KEY WORDS:

school for parents, women's needs, interview, antenatal classes

## INTRODUCTION:

As part of the survey, we were interested in the content and implementation of programmes of antenatal classes (Drglin et al. 2018; Drglin et al. 2022; Jug Došler & Skubic, 2012; Skubic & Stanek Zidarič, 2022; Skubic et al. 2023). The analysis of women's needs was based on semi-structured interviews with women who had attended the free public programme of antenatal classes in Slovenia during preparation for childbirth and parenthood. The survey was conducted by the 1st year students of the Midwifery study programme at the Faculty of Health Sciences, University of Ljubljana. Each student conducted an interview with one woman addressing her satisfaction, quality of performance and content of the antenatal classes. The survey focused on efficacy, acquired knowledge and skills, woman's specific needs, interests, and expectations of the antenatal classes.

## METHODS:

A combined quantitative-qualitative research paradigm was used in a guided interview with 28 women who gave birth less than one year prior. The average age of women was 30.4 years (4 participants did not want to give their age).

## RESULTS:

The majority of participants (71.4 %) estimated that the duration of meetings was most adequate. A total of 60.7 % of interviewees reported that they were given all the necessary information. Over two thirds of women (78.6 %) said that they were not bored during the "Antenatal classes" as the content was useful.



According to the participants, the most useful and interesting topic was childbirth (67.8 %). The total of 53.6 % were satisfied with the “Antenatal classes”. During childbirth, they were most surprised by the labour pains (how to cope with and overcome the pain). The majority of women (28 %) were least satisfied with the presentation of the topic Labour pain and the topic Lactation, breastfeeding and introduction of food. Almost half of the participants (46.2 %) claimed that the topic on health and social rights (e.g. at the workplace, etc.) was not discussed within the presentation of social services available. The total of 53.6 % of women reported that the topic of physical exercise during pregnancy was not included in the programme.

In the “Antenatal classes”, 89.3 % were aware/informed about the incidence of postpartum depression (e.g. how to recognize and help themselves, whom to address in case of need, etc.). 64.6 % of women were satisfied with the organization of the meetings. As many as 92.8 % of women said that they had enough opportunities to ask questions during classes. 60.7 % of women confirmed that there was a possibility of individual conversation with the lecturer. 57.1 % of women reported that they received enough information about healthy nutrition during pregnancy and after childbirth (for themselves and for the child).

Among the characteristics of a midwife conducting the “Antenatal classes” the interviewees pointed out their understanding and empathy (89 %).

## DISCUSSION

The study results show that the “Antenatal classes” attended by women were tailored according to their needs. The majority of participants received answers to the arising questions and concerns. The results showed only minor discrepancies in some variables (satisfaction with the presentation of each topic and its representation in the training programme for parents-to-be).

## LITERATURE:

Drglin, Z., Pucelj, V., Dakskobler, M., Broder, M., Frigelj, N., Križman Vežočnik, T., Lamut, U., Čeplak, M. (2022). *Razvoj sodobne vzgoje za zdravje za bodoče starše in starše dojenčkov: raziskovalno poročilo*. NIJZ.

<https://www.dlib.si/stream/URN:NBN:SI:DOC-NJ3LPYM2/9f479ea9-12d4-49cc-9f40-c318cce64eb4/PDF>

Drglin, Z., Tomšič, S., Mihevc Ponikvar, B., Pucelj, V., Renar, I., Dravec, S., Broder, M. (2018). *Povzetek programa skupinske vzgoje za zdravje v nosečnosti »priprava na porod in starševstvo«*. NIJZ.

[https://nijz.si/wp-content/uploads/2022/07/program\\_priprava\\_na\\_porod\\_in\\_starsevstvo\\_zadnja.pdf](https://nijz.si/wp-content/uploads/2022/07/program_priprava_na_porod_in_starsevstvo_zadnja.pdf)

Jug Došler, A., Skubic, M. (2012). Analiza prakse izobraževanja v šolah za bodoče starše. *Obzornik zdravstvene nege*, 46(4), 281–288.

<https://www.dlib.si/stream>

Skubic, M., Stanek Zidarič, T. (2022). Virtualna priprava na porod in starševstvo – pilotna študija. *Andragoška spoznanja*, 28(1), 57–71.

<https://doi.org/10.4312/as/10534>

Skubic, M., Šerjak, L., Jug Došler, A., Stanek Zidarič, T. (2023). *Priprava na porod in starševstvo – od ideje do izvedbe zdravstvenovzgojnega nastopa za bodoče starše*. Univerza v Ljubljani, Zdravstvena fakulteta.

<https://www.zf.uni-lj.si/images/zalozba/Priprava.pdf>

# MENTAL DISORDERS AND DISEASES IN PREGNANCY AND THE ROLE OF MIDWIFERY

Nejra Kapo

**University of Sarajevo, Faculty of Health Studies, Midwifery  
Bosnia and Herzegovina**

## KEY WORDS:

pregnancy, mental health, mothers, depression

## INTRODUCTION:

Pregnancy increases risk for mental health of woman, pointing out the importance of training of health workers to recognize and support women with mental disorders including postpartum sadness and depression. Early recognition and interventions are crucial in prevention of harmful consequences for mothers, children and families. They help decrease the risk of complications, improve parental ability and prevent difficulties in the child's development. Health workers need to be well trained in recognizing of symptoms and providing support to women during pregnancy and after childbirth.

## METHODS:

Literature review was conducted using relevant databases such as PubMed, Medline, Google Scholar, Springer, National Library of Medicine.

## RESULTS AND ANALYSIS:

Epidemiological data show that up to 20 % of women suffer from mental disorders, the most common being mood disorders and anxiety. About 10 to 15 % of women experience a depressive episode during pregnancy or after childbirth. The perinatal period carries a higher risk of mental disorders in women, especially those with a history of similar health issues. Mental disorders in pregnancy can be associated with pregnancy complications, poor prenatal care, preeclampsia , depression and/or postpartum anxiety, which can all negatively affect the growth and development of a child. They also increase the risk of mental disorders in children, such as depression. Factors associated with mental disorders include lack of education, partnership problems, multiple children, hospitalization during pregnancy and drug use.

## DISCUSSION:

Mental disorders of women during pregnancy and after childbirth have an impact on perinatal health, with severe consequences for a mother and a child. Early prevention and recognition of these disorders are of essence to optimum health. It is necessary to provide adequate support to women in coping with mental health disorders in the prenatal period and the support to the families. More research should be conducted on promotion of treatment and support to mothers and babies. Education of healthcare workers and access to relevant resources are important to create safe and supportive environment for mothers and families.

## LITERATURE:

Abdelhafez, M. M. A., Ahmed, K. A. M., Ahmed, N. A. M., Ismail, M., Daud, M. N. B. M., Ping, N. P. T., Eldiasty, A., Amri, M. F. B., Jeffree, M. S., Kadir, F., Baharuddin, D. M., Bolong, M. F. B., Hayati, F., BtAzizan, N., Sumpat, D., Rahim, S. S. S. A., & Malek, E. H. A. (2023). Psychiatric illness and pregnancy: A literature review. *Heliyon*.

<https://doi.org/10.1016/j.heliyon.2023.e20958>

House, S.J, Tripathi, S. P., Knight, B. T., Morris, N., Newport, D. J., & Stowe, Z.N. Obsessive-compulsive disorder in pregnancy and the postpartum period: course of illness and obstetrical outcome. *Arch Womens Ment Health*. 2016, 19(1), 3–10.

<https://doi.org/10.1007/s00737-015-0542-z>

Kassada , D. S., Pagliarini Waidman, P. A., Innocenti Miasso, A., & Marcon, S. S. (2015). Prevalence of mentally disorders and associated factors in pregnant women. *Acta Paulista de Enfermagem* 28, 495–502.

<https://doi.org/10.1590/1982-0194201500084>

Patabendige, M., Athulathmudali, S. R, Chandrasinghe, S. K. (2020). Mental Health Problems during Pregnancy and the Postpartum Period: A Multicenter Knowledge Assessment Survey among Healthcare Providers. *Journal of Pregnancy*, 2020.

<https://doi.org/10.1155/2020/4926702>

# COMPARATIVE ANALYSIS OF EPISIOTOMY RATES IN CROATIAN AND SLOVENIAN HOSPITALS: A STRATIFICATION ACCORDING TO THE VOLUME OF BIRTHS

Klaudia Kamenar, Melani Žakić, Magdalena Kurbanović

**University of Rijeka, Faculty of Health Studies Rijeka, Department of Midwifery  
Croatia**

## KEY WORDS:

episiotomy, maternal care, Croatia, Slovenia

## INTRODUCTION:

Episiotomy is a surgical incision to widen the vaginal opening in the second stage of labour which is often routinely performed in obstetrics (Carroli, 2015). The WHO recommends a maximum rate of 10 % due to potential complications highlighted in recent guidelines (WHO, 1996; NICE, 2014). Despite the strong evidence explicitly against the routine use of episiotomy (NICE, 2023), current official data and statistics on the frequency of this surgical procedure in Croatian and Slovenian hospitals are still inaccessible to the public and healthcare professionals.

## METHODS:

The data for this study were obtained from the Croatian Institute of Public Health and from the Slovenian Institute of Public Health, through formal requests for data on 2022 episiotomy rates for all hospitals. Hospitals were categorized into four strata based on the volume of births: S1 (<600), S2 (600-2000), S3 (1201-2400) and S4 ( $\geq 2400$ ) (Escuriet et al. 2015).

## RESULTS:

Episiotomy rates in Croatian hospitals ranged from 7.06 % to 80.54 %, while the range in Slovenia was narrower, from 4.99 % to 41.55 %. A chi-square test was conducted to determine whether there was a difference between episiotomy rates in the two countries. It was established that there was a statistically significant difference ( $\chi^2[1, N=33813] = 4,624, p=0.032$ ). The overall episiotomy rate was 27.14 % in Croatia and 28.21 % in Slovenia. Categorized into four strata, significant difference was found in all strata but one, in S3. In S1, the episiotomy rate was 27.91 % for Croatia and 34.49 % for Slovenia ( $\chi^2[1, N=4188] = 4188, p<0,001$ ). In S2, the episiotomy rate in Croatia was 27.89 % compared to 21.96 % in Slovenia ( $\chi^2[1, N=9042] = 9042, p<0,001$ ). In S4, the episiotomy rate in Croatia was 24.77 %, while in Slovenia it was 30.89 % ( $\chi^2[1, N=10506] = 46.018, p<0,001$ ).

## DISCUSSION:

The study found minor differences in episiotomy rates between Croatia and Slovenia when categorized by annual birth volume. Despite established guidelines and evidence, the observed rates in both countries are well above the recommendations not to exceed the 10 %, with few hospitals adhering to the guidelines, particularly in the S2 stratum.

The exclusion of data from the two largest hospitals in Croatia due to missing episiotomy data, one of which, KBC Split, had a remarkably high rate of 65% of episiotomies (Juričić, 2022) leads to limitations in the generalizability and validity of the main findings of this study.

Given these limitations and differences, further research is essential to investigate the factors influencing the differences in episiotomy rates between the two countries. Examining hospital policies, healthcare provider practices, women preferences and cultural influences on episiotomy rates could provide valuable insights on elevated number of episiotomies.

## LITERATURE:

Carroli, G., & Mignini, L. (2009). Episiotomy for vaginal birth. *Cochrane database of systematic reviews*, (1).

<https://doi.org/10.1002/14651858.CD000081.pub2>

Escuriet, R., Pueyo, M. J., Perez-Botella, M., Espada, X., Salgado, I., Gómez, A., Biescas, H., Espiga, I., White, J., Fernandez, R., Fusté, J., & Ortún, V. (2015). Cross-sectional study comparing public and private hospitals in Catalonia: Is the practice of routine episiotomy changing? *BMC Health Services Research*, 15(1), 1–10

<https://doi.org/10.1186/s12913-015-0753-z>

*Intrapartum care for healthy women and babies: clinical guideline*. (2014). National Institute for Health and Care Excellence (NICE).

[www.nice.org.uk/guidance/cg190](http://www.nice.org.uk/guidance/cg190)

*Intrapartum care: NICE guideline* (2023). National Institute for Health and Care Excellence (NICE).

[www.nice.org.uk/guidance/ng235](http://www.nice.org.uk/guidance/ng235)

Juričić, M. (2023). *Učestalost i stupnjevi razodora međice u KBC u Splitu tijekom 2022 godine*. [Bachelor's Thesis]. Repozitorij Sveučilišnog odjela zdravstvenih studija Sveučilišta u Splitu.

<https://urn.nsk.hr/urn:nbn:hr:176:571175>

Technical Working Group, World Health Organization. (1997). Care in normal birth: a practical guide. *Birth*, 24(2), 121-123.

# DIETARY HABITS OF BREASTFEEDING WOMEN

Mia Pahor, Magdalena Kurbanović, Nataša Skočibušić

**University of Rijeka, Faculty of Health Studies Rijeka, Department of Midwifery  
Croatia**

## KEY WORDS:

breastfeeding, dietary habits, galactogogues, nutrition

## INTRODUCTION:

The WHO recommends exclusive breastfeeding for the first six months of children's lives. During this time, they receive all the nutrients necessary for their growth and development through breastmilk (Alibabić & Mujić, 2016; WHO, 2018). The female body always prioritises the process of lactation and it does not normally depend on nutrition, however, optimal diet can contribute to normal concentration of some vitamins and certain foods can increase breastmilk production (Krešić et al., 2013, McBride et al., 2021). During the first six months of breastfeeding women should increase their calorie intake to 330 calories per day and in the next six months up to 400 calories per day. Traditions and cultural beliefs have a significant influence on the diet of breastfeeding women. Popular myths often present barriers that can lead to dietary restrictions and potentially have an undesirable impact on breastfeeding women and their infants (Čorić et al., 2022). These beliefs are not evidence-based, so it is important to research the dietary habits of breastfeeding women.

## METHODS:

This cross-sectional study included 210 breastfeeding women from Croatia whose children were less than six months old at the time of the study (April 2024). The data were collected using an anonymous online questionnaire "Dietary Habits of Breastfeeding Women" (Čorić et al, 2022).

## RESULTS:

The results showed that majority of breastfeeding women avoid certain foods while breastfeeding (66.7 %). The foods that they avoid were legumes (40.6 %), cabbage (32.4 %), citrus fruits (29.5 %), spicy foods (28.5 %) and onion/garlic (10.6 %). A total of 59.9 % of women consume certain foods (galactogogues) to increase breastmilk production (50.7 % higher fluid intake, 31.4 % fennel tea, 24.6 % soup, 18.4 % oatmeal, 11.1 % cumin tea, 8.2 % fenugreek tea, 7.2 % cow's milk, 4.3 % other foods, 3.4 % non-alcoholic beer). The main source of information on nutrition was the media (54.6 %), healthcare professionals (26.6 %) and family and friends (18.8 %).

## DISCUSSION:

Results from this study reveal that majority of breastfeeding women still believe in cultural myths regarding nutrition during breastfeeding. Determining the dietary habits and identifying deficits in the nutritional intake of breastfeeding women can contribute to the development of targeted interventions such as education and counselling of breastfeeding mothers and may remove existing barriers to optimal nutrition.

## LITERATURE:

Alibabić, V., Mujić, I. (2016). *Pravilna prehrana i zdravlje*. Veleučilište u Rijeci.

Čorić, N., Pandža, N., Bevanda, I., Karlović, A. (2021). Maternal dietary habits and food restrictions during breastfeeding. In J. Babić, D. Šubarić, M. Jašić (Eds.), *Proceedings of the 13th International Scientific and Professional Conference WITH FOOD TO HEALTH* (pp. 3–15). Prehrambeno- tehnološki fakultet Sveučilišta u Osijeku i Tehnološki fakultet Univerziteta u Tuzli.

*Guideline: counselling of women to improve breastfeeding practices* (2018). World Health Organization (WHO).

<https://iris.who.int/bitstream/handle/10665/280133/9789241550468-eng.pdf?sequence=1>

Krešić, D., Dujmović, M., Mandić, M., Mrduljaš, N. (2013). Majčino mlijeko: sastav masnih kiselina i prehrana dojlja. *Mljekarstvo*, 63(3), 158–171.

McBride, G. M., Stevenson, R., Zizzo, G., Rumbold, A. R., Amir, L. H., Keir, A. K., & Grzeskowiak, L. E. (2021). Use and experiences of galactagogues while breastfeeding among Australian women. *PloS one*, 16(7), e0254049.

<https://doi.org/10.1371/journal.pone.0254049>

# THE POTENTIAL IMPACT OF MIDWIVES ON SAVING THE LIVES OF MOTHERS/PREGNANT WOMEN AND BABIES

Vernesa Bećirović, Ernisa Ismaili, Azra Nogo, Selma Kladničanin

**University of Sarajevo, Faculty of Health Studies, Midwifery  
Bosnia and Herzegovina**

## KEY WORDS:

impact; mothers and babies; life; mortality

## INTRODUCTION:

The abstract discusses the vital role of midwives in saving the lives of mothers, pregnant women, and babies through various aspects of their practice. It highlights their contributions in health education, support during childbirth, management of complications, postnatal care, and their holistic approach to healthcare. Through analyzing these key functions and approaches, the abstract aims to emphasize the importance of midwives in global healthcare and their impact on improving outcomes for women and children worldwide.

## METHODS:

The research was carried out by reviewing the available and professional literature published in the relevant databases (PubMed, National Repository of final and diploma works of ZIR). An analytical-descriptive study was conducted with an analysis of scientific and professional literature.

## RESULTS:

A US study looked at the impact of midwives on reducing maternal and infant mortality worldwide. Using the Lives Saved Tool, they predicted that increased midwifery interventions could significantly reduce mortality by 2035. By increasing interventions moderately (10 % every 5 years), reducing them significantly (25 % every 5 years) or achieving universal coverage (up to 95 %), a significant reduction in death was predicted. This effect was more pronounced in countries with a lower Human Development Index (HDI).

Adequate working conditions and a supportive environment are crucial for midwives to maximize their impact. Institutional and national leadership is essential to implement the necessary changes (Nove et al., 2021) Midwives ensure that women consume the necessary nutrients and medicines to have healthy pregnancies. They provide care during labour for normal deliveries. In case of complications or abnormal deliveries, midwives can get help quickly and provide a sense of assurance. They also provide mothers with easier access to the care they need after delivery (Kirkegaard, 2022)



## DISCUSSION:

Midwifery interventions lower maternal mortality rates by promoting natural births and reducing medical interventions. They address broader health issues such as nutrition and chronic disease and promote women's health. Improving access to midwifery services and antenatal education is crucial. Midwives also reduce infant mortality through specialized care and ongoing training.

## LITERATURE:

Atuyambele, L., Ayiasi, M. R., Criel, B., Garimoi, C., Kolsteren, P., Van Royen, K., Verstraeten, R. (2013). Exploring the focus of prenatal information offered to pregnant mothers regarding newborn care in rural Uganda. *BMC pregnancy and childbirth*, 13, 1–11.

<https://doi.org/10.1186/1471-2393-13-176>

Feifer, C. N. (1990). *Maternal health in Jamaica: health needs, services and utilization* (vol. 539). World Bank Publications.

Kirkegaard, D. (n. d.). *How a Midwife can Save Moms Around the World*. USA For UNFPA.

<https://www.usaforunfpa.org/how-midwives-save-moms>

Nove, A., Friberg, I. K., de Bernis, L., McConville, F., Moran, A. C., Najjemba, M., ten Hoop-Bender, P., Tracy, S., Homer, C. S. E. (2021). Potential impact of midwives in preventing and reducing maternal and neonatal mortality and stillbirths: a Lives Saved Tool modelling study. *The Lancet Global Health*, 9(1), e24–e32.

[https://doi.org/10.1016/S2214-109X\(20\)30397-1](https://doi.org/10.1016/S2214-109X(20)30397-1)

# AWARNESS OF HUMAN MILK BANKS

Anamarija Geljić-Vilušić, Gabrijela Mihaljević

**University of Rijeka, Faculty of Health Studies Rijeka, Department of Midwifery  
Croatia**

## KEY WORDS:

awarness, human milk bank, women

## INTRODUCTION:

Introduction: Breast milk is undoubtedly the optimal form of nutrition for newborns since it can be adapted to their needs and it ensures healthy development from the very early stages of life. Donated human milk is a product of a milk bank that serves as a network among infants, i.e. recipients, and donors. The increasing recognition of the benefits of human milk has led to an increase in global interest. With this goal, the first human milk bank was established in the Croatian Tissue and Cell Bank of the Clinical Hospital Center Zagreb. At the beginning of this year, a study conducted from November 2019 to January 2023 was published which included 200 donors who actively donated milk. The number of participants indicates low awareness among women about the existence of the Human Milk Bank and the possibility of donating milk.

## METHODS:

A literature review of the relevant sources was conducted using the PubMed bibliographic database in order to gain an insight into women's awareness of human milk banks and human milk donation.

## RESULTS:

In 2020, it was estimated that there were 756 milk banks in 66 countries, established in low- and middle-income countries. With this goal, the first human milk bank was established in the Croatian Tissue and Cell Bank of the Clinical Hospital Center Zagreb. The human milk bank was opened on November 15, 2019.

## DISCUSSION:

The development of milk banks is hindered by the lack of knowledge, awareness and support. The promotion and health benefits of breast milk banks require some financial resources, however, the humanity and knowledge are based on good will and altruistic attitude towards mankind.

## LITERATURE:

Bai, Y., & Kuscin, J. (2021). The Current State of Donor Human Milk Use and Practice. *Journal of midwifery & women's health*, 66(4), 478–485.

<https://doi.org/10.1111/jmwh.13244>

Golubić Čepulić, B., Novoselac, J., Pavičić Bošnjak, A., Leskovic, I., Gojčeta, K. i Rimac, V. (2020). Banka humanog mlijeka u Hrvatskoj: prva iskustva. *Paediatrica Croatica*, 64(2), 103–109.

<https://doi.org/10.13112/PC.2020.15>

Gül, S., & Zengin, M. (2023). Milk Sharing and Human Milk Banking Among Lactating Women Living in the Southeastern Anatolia Region of Turkey: Knowledge, Opinions, and Practices. *Archives of Health Science and Research* 10(3): 216–223.

<https://doi.org/10.5152/ArcHealthSciRes.2023.23067>

Gutierrez Dos Santos, B., & Perrin, M. T. (2022). What is known about human milk bank donors around the world: a systematic scoping review. *Public health nutrition*, 25(2), 312–322.

<https://doi.org/10.1017/S1368980021003979>

Kontopodi, E., Arslanoglu, S., Bernatowicz-Lojko, U., Bertino, E., Bettinelli, M. E., Buffin, R., Cassidy, T., van Elburg, R. M., Gebauer, C., Grovslien, A., Hettinga, K., Ioannou, I., Klotz, D., Mileusnić-Milenović, R., Moro, G. E., Picaud, J. C., Stahl, B., Weaver, G., ... Wesolowska, A. (2021). „Donor milk banking: Improving the future“. A survey on the operation of the European donor human milk banks. *PloS one*, 16(8), 1–15.

<https://doi.org/10.1371/journal.pone.0256435>

Novoselac, J., Golubić Čepulić, B., Kalenić, B., & Pavičić Bošnjak, A. (2024). Influence of donor characteristics on the milk donation volume and microbiological quality of donated human milk in first 3 years of work of the Croatian human milk bank-retrospective observational study. *Journal of perinatal medicine*, 52(3), 351–359.

<https://doi.org/10.1515/jpm-2023-0331>

Pitino, M. A., Beggs, M. R., O'Connor, D. L., Doyen, A., Pouliot, Y., Sergius-Ronot, M., & Unger, S. (2023). Donor human milk processing and its impact on infant digestion: A systematic scoping review of in vitro and in vivo studies. *Advances in nutrition*, 14(1), 173–189.

<https://doi.org/10.1016/j.advnut.2022.11.004>

Reimers, P., & Coutoudis, A. (2021). Donor Human Milk Banking-Time to Redirect the Focus?. *Journal of Human Lactation*, 37(1), 71–75.

<https://doi.org/10.1177/0890334420941805>

Smyk, J. M., Pergol, J., Danielecka, Z., Kacperczyk-Bartnik, J. P., Bartnik, P., Dobrowolska-Redo, A., & Romejko-Wolniewicz, E. (2021). Knowledge, opinions and attitudes of Polish women towards banking and donation of human breast milk. *Ginekologia polska*, 92(11), 784–791.

<https://doi.org/10.5603/GPa2021.0055>

Tyebally Fang, M., Chatzixiros, E., Grummer-Strawn, L., Engmann, C., Israel-Ballard, K., Mansen, K., O'Connor, D. L., Unger, S., Herson, M., Weaver, G., & Biller-Andorno, N. (2021). Developing global guidance on human milk banking. *Bulletin of the World Health Organization*, 99(12), 892–900.

<https://doi.org/10.2471/BLT.21.286943>

# FOSTERING EMPATHY IN MIDWIFERY EDUCATION: INSIGHTS FROM STUDENT PERSPECTIVES

Emina Grabus, Neja Hranjec, Vita Kos, Marija Rebernik, Sabina Vrh, Klavdija Zadavec Slana, Manca Kotar, Šana Dolamič, Tjaša Gjergjek, Zala Jelina, Saša Krnc, Eva Čagran, Brigita Štrukelj, Ana Vrabič, Ajda Golob, Anita Jug Došler, Tita Stanek Zidarič, Lucija Šerjak, Metka Skubic

**University of Ljubljana, Faculty of Health Sciences, Department of Midwifery  
Slovenia**

## KEY WORDS:

empathy, students, midwifery, quality of life

## INTRODUCTION:

Empathy makes it easier for midwifery students to understand the physical and emotional situation of a woman and her family. Empathy plays a key role in midwifery practice, particularly when a healthy woman in need of a great deal of support is being treated. The midwife's positive attitude, their selflessness and attentiveness to woman's needs contributes to a lower chance of a traumatic birth experience, with less distress in the postnatal period (Moloney & Gair, 2015).

By reason of the importance of empathy in midwifery, it is relevant to note that the research on the topic of empathy in midwifery students is scarce. In the study by McKenna and colleagues (2011) investigating the level of empathy in midwifery students in Australia, the lowest level was found in the first year students, which was attributed to the fact that they had no experience of clinical practice. Research (Petrucci et al., 2016) confirmed higher levels of empathy among female healthcare professionals. Research (Ward et al., 2012) also showed that several factors influence lower levels of empathy in health science students. These factors include inadequate role models (e.g. mentors), negative attitudes of teachers towards students, intimidating learning environments, full and overloaded schedules, as well as client negativity.

## METHODS:

A descriptive and causal non-experimental empirical research method, based on a survey questionnaire in the 1KA web application, was used. The survey was carried out on a purposive sample of midwifery students enrolled in the 1st (27 %), 2nd (34 %) and 3rd study year (35 %). Responses were obtained using the MES scale, which contains 7 levels and includes 22 statements, where agreement or disagreement with a given statement is tested. A score of 1 indicates a strong agreement with the statement and a score of 6 indicates a strong disagreement with the statement. The questionnaire was based on the Midwifery Empathy Scale (MES) (Vivilaki et. al., 2016). In the context of this paper,

we present the results of the study related to the research question: What is the level of empathy of midwifery students?

## RESULTS:

The average scores of all 22 statements show the highest average scores in the following statements: "I believe empathy plays an important role in midwifery care" ( $\bar{x} = 5.9$ ), "A woman feels better when she feels that she is accepted" ( $\bar{x} = 5.8$ ), "I am satisfied when my care makes a woman feel better" ( $\bar{x} = 5.8$ ). The statements with the lowest average scores were: "I avoid touching a woman in my care" ( $\bar{x} = 2.1$ ), "I don't think it is my job to deal with the problems of a woman in my care" ( $\bar{x} = 2.0$ ).

## DISCUSSION:

Students' empathy was highest in the first year, which we attribute to the fact that they have not yet had a clinical practice and thus have no experience with women. As the students completed the questionnaire in the first months of their training, we can assume that the results might change in the second semester (after the first clinical experience in a clinical setting). However, the lowest level of empathy was scored by students in the second year, which could indicate a possible effect of some negative experiences during the practical training, while in the third year, the level of empathy is again scored with higher average scores. This is probably due to the fact that they have more experience and therefore cope more easily with midwifery practice situations in the clinical setting.

## LITERATURE:

McKenna, L., Boyle, M., Brown, T., Williams, B., Molloy, A., Lewis, B., & Molloy, L. (2011). Levels of empathy in undergraduate midwifery students: An Australian cross-sectional study. *Women and Birth*, 24(2), 80–84.

<https://doi.org/10.1016/j.wombi.2011.02.003>

Moloney, S., & Gair, S. (2015). Empathy and spiritual care in midwifery practice: Contributing to women's enhanced birth experiences. *Women and Birth*, 28(4), 323–328.

<https://doi.org/10.1016/j.wombi.2015.04.009>

Petrucci, C., La Cerra, C., Aloisio, F., Montanari, P., & Lancia, L. (2016). Empathy in health professional students: A comparative cross-sectional study. *Nurse Education Today*, 41(4), 1–5. <https://doi.org/10.1016/j.nedt.2016.03.022>

Ward, J., Cody, J., Schaal, M., & Hojat, M. (2012). The empathy enigma: an empirical study of decline in empathy among undergraduate nursing students. *National Library of Medicine*, 28(1), 34–40.

<https://doi.org/10.1016/j.profnurs.2011.10.007>

Vivilaki, V. G., Ffli, P., Charitou, A., Giaksi, P., Ekizoglou, C., Tsopelas, N. D., Bouroutzoglou, M., & Patelarou, E. (2016). Midwifery empathy scale: Development and validation for a greek sample. *Journal of Compassionate Health Care*, 3(1), 12.

<https://doi.org/10.1186/s40639-016-0029-4>

# ASSESSING STUDENT AWARENESS AND UNDERSTANDING OF JAUNDICE: A COMPREHENSIVE STUDY

Vesna Arih, Šana Dolamič, Emina Grabus, Neja Hranjec, Lara Ivančič, Angelika Jakolič, Saša Krnc, Klavdija Zadravec Slana, Katja Smej, Brigita Štrukelj, Anita Jug Došler, Tita Stanek Zidarič, Lucija Šerjak, Metka Skubic

**University of Ljubljana, Faculty of Health Sciences, Department of Midwifery  
Slovenia**

## KEY WORDS:

jaundice, bilirubin, midwife, complications

## INTRODUCTION:

Almost half of all newborns have yellow discolouration of the skin, mucous membranes and whites of the eyes. The cause of the colouring is an increased bilirubin level - a dye that accumulates in the baby's blood due to the increased breakdown of red blood cells after birth (Tekauc & Žolger, 2016). Bilirubin is a natural antioxidant and is not harmful to the newborn in low doses. Jaundice in newborns is not contagious and is also referred to as physiological jaundice. In most healthy premature babies, jaundice is barely detectable and disappears after the first week of life. This type of jaundice is only observed. However, in some children, depending on the cause of the jaundice, doctors may decide to check bilirubin more frequently and treat it (Mitrović, 2020). Treatment is necessary because severe jaundice damages the child's brain and depends on the cause of the jaundice. Treatment of jaundice is also the most common reason why mother and baby have to stay longer in the maternity ward (Kornhauser Cerar, 2014). Early breastfeeding and frequent feeds have a positive effect on the functioning of the baby's entire digestive tract, improve hydration and thus accelerate the elimination of bilirubin from the body, thereby shortening the duration of jaundice (Skubic, 2022). If a child has a yellow skin colour, it is advisable to increase breastfeeding and feed the baby as soon as possible (Amegan-Aho, et al., 2019).

## METHODS:

An empirical research method based on an online questionnaire was used as a descriptive and non-experimental method. The questionnaire was developed in the laboratory tutorials during the course of the study. It is based on a review of the literature recommended in the reference list and studies on similar topics during the course of the study. The survey was administered to a purposive sample of the 1st, 2nd and 3rd year students of the Midwifery study programme at the Faculty of Health Sciences, University of Ljubljana. It was conducted by the 3rd year students. The reliability and validity of the questionnaire was verified by peer review and by the assessment of tutors of the Department of Midwifery. The data were analysed using basic descriptive statistics with calculations of frequencies and percentages.

## RESULTS:

The aim of the study was to determine the midwifery students' knowledge of the types of jaundice. The first correct answer (Physiological jaundice) was chosen by the highest percentage of the 3rd year students (100 %), followed by 2nd year students (96 %) and 1st year students (96 %). The second correct answer (Pathological jaundice) was also chosen by most 3rd year students. It was followed by 2nd year students (96 %) and lastly by 1st year students (89 %). The data show that the majority of 2nd year students are familiar with the agent which causes jaundice (bilirubin). We inquired to what extent midwifery students knew how the change in skin color spreads. The correct answer was the spread of skin discolouration in a cranio-caudal direction (from head to toe). This was chosen most frequently by the 3rd year students with 78 %, followed by the 2nd year students with 57 % and finally by the 1st year students. Midwifery students are cognisant of the time of the onset of physiological jaundice. The correct answer was 2 - 3 days after labour. This answer was most frequently chosen by the 3rd year students at 78 %, followed by 2nd year students at 46 %. Nearly half of the 1st year students (47 %) chose the incorrect answer (within the first 24 hours). Only 37 % of the 1st year students chose the correct answer. When asked about the complications of jaundice, the correct answers were kernicterus and acute bilirubin encephalopathy. The results show that the complications of jaundice are mainly known to 3rd year students. Phototherapy was the most frequently chosen treatment for jaundice by 1st and 3rd year students (100 %). Alternate infusion was most frequently chosen by 3rd year students (87 %). The results show that all the 3rd year students (100 %) correctly answered the question about the name of the device used to measure bilirubin levels through the skin. Data about the question »How is the measurement carried out via the skin?« show that the correct answer was twice on the forehead, twice on the chest and was ticked by most 3rd year students (70 %). After a thorough analysis of the survey data, it was found that the 3rd year midwifery students showed remarkable competence in understanding and recognising jaundice compared to their younger peers.

## DISCUSSION:

Despite the low number of respondents, our survey showed results that confirm our research question. The collected survey results showed that jaundice, its characteristics, symptoms, diagnosis, complications and treatment are best known by the 3rd year students. If the survey had been conducted at the end of the academic year, we could have obtained more accurate results and included a larger research sample of the 2nd study year students.

## LITERATURE:

- Tekauc Golob, A., & Žolger, J. (2016). *Novorojenček*. UKC Maribor, Oddelek za perinatologijo.  
[https://www.ukc-mb.si/media/files/uploads/priprava-na-star%C5%A1evstvo/UKC\\_Knjizica\\_Novorojencek\\_VSEBINA\\_PREDOGLEDE.pdf](https://www.ukc-mb.si/media/files/uploads/priprava-na-star%C5%A1evstvo/UKC_Knjizica_Novorojencek_VSEBINA_PREDOGLEDE.pdf)
- Mitrović, A. (2020). *Zlatenica: knjižica za starše*. UKC Ljubljana, Pediatrična klinika, Klinični oddelek za neonatologijo in PRVI KORAKI – Društvo za pomoč bolnim novorojenčkom.  
[http://prvikoraki.si/prvikoraki/wp-content/uploads/2020/04/Zlatenica-Knji%C5%BEica-za-star%C5%A1e.pdf?fbclid=IwAR2v\\_cAYN7J9jc7Gn2cdfpO2jgAJaN5wPO\\_jQgdpX14mhlCuFnNfd9DPmIQ](http://prvikoraki.si/prvikoraki/wp-content/uploads/2020/04/Zlatenica-Knji%C5%BEica-za-star%C5%A1e.pdf?fbclid=IwAR2v_cAYN7J9jc7Gn2cdfpO2jgAJaN5wPO_jQgdpX14mhlCuFnNfd9DPmIQ)
- Kornhauser Cerar, L. (2014). Pogoste težave nedonošenčkov: Zlatenica. V L. Kornhauser Cerar (Ed.), *Vaš nedonošenček* (pp. 51–53). Društvo za pomoč prezgodaj rojenim otrokom.
- Skubic, M. (2022). *Novorojenček, novorojenčica*. V I. Krotec, Z. Drglin, B. Mihevc Ponikvar, M. Broder, S. Kotar, T. Pibernik (Eds.), *Pričakujemo dojenčka: Vodnik o nosečnosti, porodu in zgodnjem starševstvu* (pp. 78–80). Nacionalni inštitut za javno zdravje.  
<https://nizj.si/wp-content/uploads/2022/01/Pricakujemo-dojencka-VSEBINA-3.-ponatis-2022-KONCNA-SPLET.pdf>
- Amegan-Aho, K. H., Segbefia, C. I., Glover, N. D. O., Ansa, G. A., & Afaa, T. J. (2019). Neonatal Jaundice: awareness, perception and preventive practices in expectant mothers. *Ghana medical journal*, 53(4), 267–272.  
<https://doi.org/10.4314/gmj.v53i4.3>



# EXPLORING STUDENT PERCEPTIONS AND UNDERSTANDING OF FEVER: A KNOWLEDGE ASSESSMENT STUDY

Tjaša Gjergjek, Aja Koblar Tutič, Tjaša Kogovšek, Anastazija Martini, Marija Rebernik, Manca Starman, Naja Šef, Erika Vrešak, Sabina Vrh, Anita Jug Došler, Tita Stanek Zidarič, Lucija Šerjak, Metka Skubic

**University of Ljubljana, Faculty of Health Sciences, Department of Midwifery  
Slovenia**

## KEY WORDS:

fever, midwifery, febrile conditions, baby

## INTRODUCTION:

Fever is a body temperature that is higher than a certain value which is considered normal body temperature. It is one of the main symptoms that indicate illness or infection in a child, but is not considered a medical condition in itself. Ferry (2015) states that fever is defined as a body temperature higher than 38 °C when measured rectally, 37.8 °C when measured orally and 37.2 °C when measured in the axilla region. Esposito et al. (2018) state that fever is one of the most common reasons for visiting emergency departments and outpatient clinics. Febrile convulsions (FC) are the most common form of convulsions in children between 6 months and 6 years. FCs occur only with fever, usually above 38.5 °C, and are often caused by viral infection (Bahovec, 2016). General home support measures include fluid replacement. Parents should offer the child lukewarm drinks (rosehip tea, lime tea, water, etc.). The baby should be warmly covered as long as the temperature is rising (Zdravstveni dom Ljubljana, 2022). A visit to the doctor is recommended for children with a temperature above 39 °C and above 38 °C for babies under three months (Fever in children, 2019). In children with no known complications, fever should be lowered to 38.5°C when taken under the armpit or 39°C using tympanic or rectal method. The most commonly used medications for lowering body temperature are non-steroidal anti-inflammatory (NSAID) drugs and non-opioid analgesics (paracetamol) (Mezgec, 2017).

## METHODS:

A descriptive and causal non-experimental method of empirical research was used, based on an online survey. The questionnaire was aimed at a purposive sample of midwifery students. It was undertaken by the 3rd year midwifery students of the Faculty of Health Sciences, University of Ljubljana. The data were analyzed by using descriptive statistics with frequencies and percentages.



## RESULTS:

Midwifery students have a good general knowledge on febrile conditions. The results of the survey show that the 3rd year students were most accurate in their answers. Students from all three study years have a good knowledge of the symptoms of febrile illnesses. The answers show that in case of emergency, most students would know the correct action to take. Almost all students were cognisant of the fact that a baby may lose consciousness and stop breathing during a febrile convulsion. All the respondents also demonstrated a good knowledge of the causes and signs of fever.

## DISCUSSION:

The students of all three study years estimated that the most common cause of fever is viral infection. Fever in an infant is a phenomenon that should be closely monitored. In the course of our study we found that the theoretical knowledge was best among the 3rd year students, which confirms that knowledge is accumulated over the study years. Midwifery students are well aware that paracetamol should not be administered without consultation. It can be concluded that the knowledge of the incidence of febrile conditions is best among the 3rd year students. The latter also achieved the highest scores in the study, which may be the result of their previous experience in clinical settings.

## LITERATURE:

Bahovec, N. (2016). Vročinski krči pri otrocih. In A. Ljubič (Ed.), *Nujna stanja v pediatriji in vloga medicinske sestre* (pp. 5–7). Zveza strokovnih društev medicinskih sester, babic in zdravstvenih tehnikov Slovenije - Sekcija medicinskih sester in zdravstvenih tehnikov v pediatriji.

[https://www.zbornica-zveza.si/sites/default/files/publication\\_\\_attachments/nujna\\_stanja\\_v\\_pediatriji\\_in\\_vloga\\_medicinske\\_sestre\\_2016.pdf](https://www.zbornica-zveza.si/sites/default/files/publication__attachments/nujna_stanja_v_pediatriji_in_vloga_medicinske_sestre_2016.pdf)

Esposito, S., Rinaldi, V. E., Argentiero, A., Farinelli, E., Cofini, M., D'Alonzo, R., & Principi, N. (2018). Approach to neonates and young infants with fever without a source who are at risk for severe bacterial infection. *Mediators of inflammation*, 2018.

<https://doi.org/10.1155/2018/4869329>

Ferry, R. (n. d.). *Fever in Children*. Emedicinehealth.

[https://www.emedicinehealth.com/fever\\_in\\_children/article\\_em.htm](https://www.emedicinehealth.com/fever_in_children/article_em.htm)

Institute for Quality and Efficiency in Health Care (IQWiG) (2006). Fever in children: Learn More – Fever in children: When to see doctor. *InformedHealth.org, Informed Health Online*. (posodobljeno 9. 12. 2022).

<https://www.ncbi.nlm.nih.gov/books/NBK279456/>

Mezgec, T. (12. 4. 2017). *Visoka vročina pri otroku*. Kraške lekarne.

<https://www.kraske-lekarne.si/advice/visoka-vrocina-pri-otroku/>

Zdravstveni dom Ljubljana (22. 3. 2022). **Vročina**.

[https://www.zd-lj.si/zdlj/images/Navodila\\_za\\_star%C5%A1e/Vro%C4%8Dina.pdf](https://www.zd-lj.si/zdlj/images/Navodila_za_star%C5%A1e/Vro%C4%8Dina.pdf)

# EVALUATING STUDENT AWARENESS AND PERSPECTIVES ON VACCINATION: A COMPREHENSIVE STUDY

Ajda Golob, Ana Vrabič, Barbara Dvoršak, Eva Čagran, Manca Kotar, Sara Hadžić, Teja Car, Vita Kos, Zala Jelina, Anita Jug Došler, Tita Stanek Zidarič, Lucija Šerjak, Metka Skubic

**University of Ljubljana, Faculty of Health Sciences, Department of Midwifery  
Slovenia**

## KEY WORDS:

vaccination, vaccine, infections, infectious diseases

## INTRODUCTION:

The principle of vaccination is to build up protection against a pathogen by mimicking the natural interaction with the human immune system (Di Pietrantonj et al., 2021; Pulendran et al., 2011; Bregant et al., 2014). Vaccination recommendations and policies vary between European countries, reflecting different epidemiology and differences in healthcare systems, levels of evidence, vaccine acceptability and funding across countries (Chaudhari, 2021; Kraigher et al., 2011). The aim of our research project was to determine the knowledge of the 1st, 2nd and 3rd year midwifery students about mandatory and optional vaccinations for infants and young children.

## METHODS:

A descriptive and causal non-experimental method of empirical research based on an online survey was used. The research was conducted on a purposive sample of the 1st, 2nd and 3rd year midwifery students at the Faculty of Health Sciences in Ljubljana. It was carried out by the 3rd year students of the Midwifery study programme at the Faculty of Health Sciences, University of Ljubljana. Descriptive statistics with calculations of frequencies and percentages and measurements of mean values (arithmetic mean) were used to analyse the data.

## RESULTS:

Midwifery students stated that the mandatory vaccinations include measles, whooping cough, mumps, rubella, diphtheria, polio, hepatitis B and haemophilus influenza B. Only a small part, however, opted for chickenpox, tuberculosis, pneumococcal infections and hepatitis C. Most of the correct answers were given by the 3rd year students. More than half of the students believed that rubella, mumps and measles are among the diseases prevented by the trivalent vaccine. In all three years, almost half of the students were incorrect about the number of vaccinations up to the age of 18

months. All the respondents answered correctly that all healthy children can be vaccinated. They also answered the other questions in this section correctly that they would not vaccinate a child with a severe allergic reaction to the vaccine, a child with serious negative effects, a child who is acutely ill and a child whose parents do not agree. If the next dose of vaccination is not given, the majority of students from all years answered correctly that it is not necessary to start the vaccination cycle from the beginning. More than half of the 2nd year students answered the question about vaccinating prematurely born children incorrectly stating that the vaccination should be performed according to the corrected age. Most of the respondents knew the difference between live and non-live vaccines. More than half of the respondents were also correct about vaccination of children solely with non-live vaccines (64 %).

## DISCUSSION:

Results of the study indicate that the 3rd year students have the best knowledge on mandatory vaccination, which is to be expected, as they have covered this subject during their studies and applied this knowledge in clinical settings. The results of the 1st and 2nd year students are similar, which could be explained by the fact that they have not yet covered this topic during their studies. To summarise, knowledge of childhood immunisation highlights the key role of immunisation in protecting the health and wellbeing of our young population.

## LITERATURE:

Bregant, L., Čaušević, M., Hribernik, Š., Kornhauser-Cerar, L., Kozamurnik, O., Lučovnik, M., Mole, H., Novak-Antolič, Ž., Stermecki, J., Šerbec Medjimurec, M., Štucin Gantar, I., Globevnik Velikonja, V., Zavrl, N., Žgur, L., Bazelj, B., Švara, M. & Mahorič, R. (2014). Cepljenje pri nedonošenčku. In L. Kornhauser Cerar (Ed.), *Vaš nedonošenček: priročnik za starše in zdravstvene delavce* (pp.167–176). Društvo za pomoč prezgodaj rojenim otrokom.

Chaudhari, T. (2021). Vaccinations in the newborn. *Best Practice & Research Clinical Obstetrics and Gynaecology*, 76, 66–82.

<https://doi.org/10.1016/j.bpobgyn.2020.09.004>

Di Pietrantonj, C., Rivetti, A., Marchione, P., Debalini, M. G., & Demicheli, V. (2021). Vaccines for measles, mumps, rubella, and varicella in children. *The Cochrane Database of Systematic Reviews*, 11(11), CD004407.

<https://doi.org/10.1002/14651858.CD004407.pub5>

Kraigher, A., Ihan, A. & Avčin, T. (2011). *Cepljenje in cepiva - dobre prakse varnega cepljenja*. Sekcija za preventivno medicino SZD, Sekcija za klinično mikrobiologijo in bolnišnične okužbe SZD, Inštitut za varovanje zdravja RS.

[https://nijz.si/wp-content/uploads/2022/07/cepljenje\\_-\\_knjiga.pdf](https://nijz.si/wp-content/uploads/2022/07/cepljenje_-_knjiga.pdf)

Pulendran, B., & Ahmed, R. (2011). Immunological mechanisms of vaccination. *Nature Immunology*, 12(6), 509–517.

<https://doi.org/10.1038/ni.2039>

# EXPLORING THE QUALITY OF LIFE AMONG SLOVENIAN MIDWIFERY STUDENTS

Vesna Arih, Teja Car, Barbara Dvoršak, Sara Hadžić, Lara Ivančič, Angelika Jakolič, Tjaša Kogovšek, Anastazija Martini, Manca Starman, Naja Šef, Aja Koblar Tutič, Erika Vrešak, Anita Jug Došler, Tita Stanek Zidarič, Lucija Šerjak, Metka Skubic

**University of Ljubljana, Faculty of Health Sciences, Department of Midwifery  
Slovenia**

## KEY WORDS:

quality of life, health, midwifery students

## INTRODUCTION:

Quality of life is closely linked to a person's health. Health status is strongly influenced by lifestyle (Orszulak et al., 2022). Numerous studies (Li & Zhong, 2022; Oates et al., 2019) show that there is a positive correlation between optimism and several other important factors in the lives of young students. These include better psychological adjustment, higher life satisfaction, greater involvement in educational and career planning, and an overall positive attitude. Optimism and life satisfaction can also be influenced by subjective norms, which can affect an individual's ability and motivation to be proactive. All of these cognitive structures, in turn, can independently influence health, which is reflected in mental, physical and social well-being (Kowalska & Szwamel, 2022). Health science students face many stressors, some of which can have an impact on career development and growth, while others can influence their well-being, health and quality of life during studies. Stressors related to academic activities and clinical practice can have serious consequences on students' quality of life (Ribeiro et al., 2018). Work or study load and stress are directly related to insomnia among midwifery and nursing students. Chronic stress can lead to burnout, depression, anxiety and negative health consequences such as exacerbation of autoimmune diseases, cardiovascular diseases and cold symptoms (Kowalska & Szwamel, 2022; Enns et al., 2016).

## METHODS:

A descriptive and causal non-experimental method of empirical research based on an online questionnaire was used. The survey was conducted on a purposive sample of midwifery students at the Faculty of Health Sciences, University of Ljubljana. The survey was conducted among the third-year midwifery students. The data were analysed using descriptive statistics with frequencies and percentages.

## RESULTS:

The second-year students were found to be the most satisfied with their quality of life (for the observed variables: experiencing negative feelings while studying, time for leisure activities, feeling of security in everyday life in general, students' assessment of the meaning of their lives while studying). Following are the first-year students, while the third-year students rate their quality of life as the lowest. After analysing the answers, we found that midwifery students in all three years of study at the Faculty of Health Sciences at the University of Ljubljana lack leisure activities.

## DISCUSSION:

Midwifery students experience negative feelings because they spend most of their time studying and therefore have no time for leisure activities and private life. Some negative feelings are an inevitable part of midwifery education as students find themselves in intense situations during their education. Sports and physical activity should be encouraged, and activities should be carried out to make students aware of the harmful effects of internet abuse and sleep deprivation and finally, to help them develop good lifestyle habits.

## LITERATURE:

Enns, S. C., Perotta, B., Paro, H. B., Gannam, S., Peleias, M., Mayer, F. B., & Tempski, P. Z. (2016). Medical students' perception of their educational environment and quality of life: is there a positive association?. *Academic Medicine*, 91(3), 409–417.

<http://dx.doi.org/10.1097/ACM.0000000000000952>

Kowalska, W., & Szwamel, K. (2022). Stress management strategies and quality of life in undergraduate nursing and midwifery students in Poland: A pilot study. *Nursing Open*, 9(1), 824–838.

<https://doi.org/10.1002/nop2.982>

Li, H. M., & Zhong, B. L. (2022). Quality of life among college students and its associated factors: a narrative review. *AME Medical Journal*, 7.

<https://doi.org/10.21037/amj-22-96>

Oates, J., Topping, A., Arias, T., Charles, P., Hunter, C., & Watts, K. (2019). The mental health and wellbeing of midwifery students: an integrative review. *Midwifery*, 72, 80–89.

<https://doi.org/10.1016/j.midw.2019.02.007>

Orszulak, N., Kubiak, K., Kowal, A., Czaplá, M., & Uchmanowicz, I. (2022). Nurses' quality of life and healthy behaviors. *International Journal of Environmental Research and Public Health*, 19(19), 12927

<https://doi.org/10.3390/ijerph191912927>

Ribeiro, Í. J., Pereira, R., Freire, I. V., de Oliveira, B. G., Casotti, C. A., & Boery, E. N. (2018). Stress and quality of life among university students: A systematic literature review. *Health Professions Education*, 4(2), 70–77.

<https://doi.org/10.1016/j.hpe.2017.03.002>