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A CROSS-SECTIONAL STUDY AMONG HEALTHCARE AND NON-HEALTHCARE STUDENTS IN SLOVENIA AND CROATIA ABOUT DO-NOT RESUSCITATE DECISION-MAKING

PRESEČNA RAZISKAVA MED SLOVENSKIMI IN HRVAŠKIMI ŠTUDENTI ZDRAVSTVENIH IN NEZDRAVSTVENIH VED O ODLOČITVAH ZA NEOŽIVLJANJE

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ABSTRACT

Objective: To survey university students on their views concerning the respect for autonomy of patients and the best interest of patients in relation to the withholding of resuscitation.

Methods: A cross-sectional survey among university students of medicine, nursing, philosophy, law and theology of the first and the final study years at the University of Ljubljana and the University of Zagreb was conducted during the academic year of 2016/2017. A questionnaire constructed by Janiver et al. presenting clinical case vignettes was used.

Results: The survey response rates for students in Ljubljana and Zagreb were 45.4% (512 students) and 37.9% (812 students), respectively. The results of our research show statistically significant differences in do-not resuscitate decisions in different cases between medical and non-medical students in both countries. Male and religious students in both countries have lower odds of respecting relatives' wishes for the withholding of resuscitation (odds ratio 0.49–0.54; 95% confidence interval). All students agreed that they would first resuscitate children if they had to prioritize among patients.

Conclusions: Our study clearly shows that gender, religious beliefs, and type of study are important factors associated with the decisions pertaining to the respect for autonomy, patient's best interest, and initiation or withholding of resuscitation.

Keywords:
ethics, resuscitation, withholding, autonomy, best-interest, students, culture, religion, nationality

IZVLEČEK

Namen: *Preučiti mnenja študentov glede odločitev o avtonomiji pacientov in njihovi največji koristi z vidika odločati se za neoživljanje.*

Metode: *Opravljena je bila presečna raziskava med študenti medicine, zdravstvene nege, filozofije, prava in teologije prvih in zadnjih letnikov študija univerz v Ljubljani in Zagrebu v akademskem letu 2016/2017. Vprašalnik je bil zasnovan na podlagi vprašalnika Janvier et al., ki so predstavili klinične primere v obliki vinjet.*

Rezultati: *Na raziskavo se je odzvalo 45,4 % (512) študentov v Ljubljani in 37,9 % (812) v Zagrebu. Rezultati naše raziskave so pokazali statistično pomembne razlike pri odločitvah za neoživljanje v različnih primerih med študenti zdravstvenih in nezdravstvenih fakultet obeh držav. Študentje moškega spola in verni študentje obeh držav imajo nižje obete po upoštevanju želje svojcev za neoživljanje pacienta (razmerje verjetnosti 0,49-0,54; 95-odstotni interval zaupanja). Vsi študentje so se strinjali, da bi pri oživljanju dali prednost otrokom, če bi morali izbirati med več pacienti hkrati.*

Zaključki: *Študijska smer, spol in versko prepričanje so glavni dejavniki, ki vplivajo na odločitve študentov o oživljanju, upoštevanju želje svojcev glede oživljanja, pacientovi avtonomiji in največjih koristih za pacienta.*

Ključne besede:
etika, oživljanje, neoživljanje, avtonomija, največja korist, študentje, kultura, religija, narodnost

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1 INTRODUCTION

In emergency situations, physicians sometimes have to make difficult decisions on whether or not to initiate emergency life-sustaining therapy. Usually the principle of the best interest of the patient is taken into account (1). In certain emergency situations, physicians can get guidance from family members and relatives (2, 3).

Janiver et al. performed a study among Canadian physicians and students in law, medicine, anthropology and bioethics on do-not resuscitate decision-making based on hypothetical clinical patients' case vignettes that they have constructed. The study's findings suggest that the resuscitation priority of patients is not closely related to the foreseeable survival of the patients and that the age of the patient has a strong influence on the decision-making (4). Similar findings were found in two consecutive studies carried out using the same methodology in Ireland among physicians and students of medicine and in Norway among paediatricians (5, 6). Sham et al. carried out a study in Hong Kong among medical and non-medical students (7). Tyer et al. carried out a qualitative study among physicians and medical students in the United Kingdom regarding factors that influence decisions about cardiopulmonary resuscitation. The factors that were found to be important were the patient's diagnosis, prognosis, age, quality of life, the opinions of physicians and other medical staff, and the wishes of patients and relevant others (8).

1.1 Aims of the Study

Our aim was to conduct a study among first-and final-year students from five different faculties at the University of Ljubljana, Slovenia, and the University of Zagreb, Croatia, using the questionnaire developed by Janiver et al. to find possible differences between variables, such as religious beliefs, gender and year of study, in do-not resuscitate decision-making related to patient's best interest and autonomy (4, 11).

1.2 Hypothesis

The hypothesis of the research was that there are differences among Croatian and Slovene students in do-not resuscitate decision-making in regard to the type of study, the year of the study, gender and religious beliefs.

2 METHODS

2.1 Participants

We conducted a cross-sectional survey among Slovenian and Croatian students of the first and final study years at the University of Ljubljana, Slovenia, and the University of Zagreb, Croatia. Students of five different faculties from both universities were included: Faculty of Medicine, Faculty of Nursing, Faculty of Catholic Theology, Faculty of Law, and Faculty of Philosophy. In the academic year 2016/2017, a total of 1,128 students were enrolled in the selected study programs at the University of Ljubljana and 2,142 students at the University of Zagreb. Questionnaires were distributed to all students present at the specific lecture, which was the most visited lecture in each year of study, in agreement with professors from the faculties. We used the questionnaire that was previously used and validated by Janvier et al. (4, 11), which was anonymous and took on average 15–25 minutes to be completely filled in. The questionnaire was accompanied by text that explained the background and purpose of the study.

2.2 Data Collection

With the deans of the mentioned faculties, it was agreed that research could be carried out at their faculty during the classes of students of the first and last years of study. If students did not want to participate in the questionnaire, they returned it empty. Questionnaires were given out in a paper form (Appendix 1 and 2) by Jure Puc and Petra Obadić and were collected after the lecture in a paper box to ensure the anonymity of the survey. The survey was carried out during January 1, 2017 and May 5, 2017.

2.3 Questionnaire

The questionnaire depicts 8 hypothetical clinical cases involving different age groups of currently incompetent, critically-ill patients, all with potential neurologic sequelae (premature baby in the 24th week of gestation, new-born baby, 2-month old infant, 7-year-old boy, 13-year-old girl, 35-year-old adult, 50-year-old adult and 80-year-old elder patient). In all vignettes, the hypothetical patients arrived at the emergency department of a university health centre when a family member could not be immediately consulted. The patients' expected outcomes were described; gender or other social information such as marital status was not provided. The patients were presented in order from youngest to oldest. After each patient description, the same set of questions was asked: "Would you intubate, resuscitate, and consult intensive care for admission?" (for all cases); "If the parents asked you not to resuscitate, would you respect their decision?" (autonomy of the patient; for paediatric patient cases); "If the family asked you not to resuscitate, would you respect their decision?" (autonomy of the patient; adult patient cases); "Do you think that intubating, resuscitating, and consulting intensive care for admission is in the patient's best interest?" (all cases); "If it was your child and you had a few moments to consider, would you wish the physician to intubate, resuscitate, and consult intensive care for admission?" (for paediatric patient cases); "If it was your sibling's child, and you had time to think (not an emergency situation), and she or he asks for

your opinion, would you recommend that the physician intubate, resuscitate, and consult intensive care for admission?" (for paediatric patient cases); "If it was your partner, and you had to decide for him or her, would you wish the physician to intubate, resuscitate, and consult intensive care for admission?" (for adult patient cases); "If it was your brother or sister, and you had to decide for him or her, would you wish the physician to intubate, resuscitate, and consult intensive care for admission?" (for adult patient cases); "If this was you and you were able to decide, would you want the physician to intubate, resuscitate, and consult intensive care for admission?"

To each of the questions, the respondents could provide answers on the 4-point scale with the following answers "always", "usually", "rarely", and "never". Finally, participants ranked the patients in order of resuscitation priority if they presented simultaneously.

The questionnaire was translated from English to Slovenian and Croatian and again back from Croatian and Slovenian to English in order to find any inconsistencies in the understanding of the questions. We followed the recommendations for cross-cultural translation and adaptation (12–14).

Given that the questions in the questionnaire referred to hypothetical clinical cases, albeit based on real situations, and our survey included students from areas other than medicine and nursing, we tested comprehension of the questions by giving the questionnaire to 20 randomly chosen students from the abovementioned faculties prior to conducting our study.

2.4 Statistical Analysis

Categorical variables were described with frequencies and percentages. The measurement reliability of the six parts of the questionnaire, as measured by Cronbach's alpha, ranged from 0.84 to 0.94 in Slovenia and from 0.88 to 0.96 in Croatia. For the purpose of the analysis, four-point scale questions with possible answers "always", "usually", "rarely", and "never" were combined into two categories; "always" and "usually" were combined into one and "rarely" and "never" into the other category. The number of respondents varied by each question and the percentages were calculated with regard to the number of responses on a given question. As the amount of missing data per question was very low (<3%), it is not expected that the results would change substantially if all the respondents answered all the questions. Chi-square test was used to determine the association between two categorical variables. Multiple logistic regression analysis was used to investigate the association between several factors (country, university courses, year of study, gender and religion) and willingness to resuscitate each hypothetical clinical case. Due to multiple testing, P-values<0.01 were considered as statistically significant. All statistical analyses were performed using IBM Corp. Released 2015. IBM SPSS Statistics for Windows, Version 23.0. Armonk, New York: IBM Corp. The licence belongs to the University of Maribor, Faculty of Criminal Justice and Security.

3 RESULTS

The response rates were 45.4% for the University of Ljubljana (512 students) and 37.9% for the University of Zagreb (812 students) (Table 1).

Table 1. Characteristics of students by country.

	Slovenia f (%)	Croatia f (%)	P
Gender			**<0.001**
Female	375 (75)	510 (62.8)	
Male	125 (25)	302 (37.2)	
Study			**<0.001**
Philosophy	29 (5.7)	66 (8.1)	
Medical	201 (39.3)	389 (47.9)	
Law	220 (43.0)	173 (21.3)	
Theology	30 (5.9)	102 (12.6)	
Nursing (Health Sciences)	32 (6.3)	82 (10.1)	
Year of study			**0.055**
First	318 (63.1)	469 (57.8)	
Final	186 (36.9)	343 (42.2)	
Education of father			**<0.001**
Basic or less	20 (4)	24(2.9)	
High school	174 (34.6)	335 (41.3)	
Higher	68 (13.5)	91 (11.2)	
Bachelor	115 (22.9)	271 (33.4)	
Master's, PhD	126 (25)	91 (11.2)	
Education of mother			**<0.001**
Basic or less	18 (3.6)	44 (5.4)	
High school	134 (26.6)	335 (41.3)	
Higher	68 (13.5)	77 (9.5)	
Bachelor	152 (30.2)	277 (34.1)	
Master's, PHD	132 (26.2)	79 (9.7)	
Religion			**<0.001**
Atheist	228 (44.5)	124 (15.3)	
Religious	284 (55.5)	688 (84.7)	

3.1 The Age of a Patient and Decision not to Resuscitate

In Slovenia, there was a statistically significant difference between students of medical and nursing faculties when compared to other non-healthcare faculties (theology, law, philosophy) in the decision of resuscitating an extremely premature infant (P=0.006) and an 80-year-old patient (P=0.004). A higher share, 225 (97%) of students at medical and nursing faculties, decided to resuscitate a premature infant at 24-weeks of gestation, in comparison to students from non-healthcare faculties 254 (91%). In

the case of the 80-years-old patient, fewer students from the Slovenian medical and nursing faculties 194 (84.3%) would decide to resuscitate the patient compared to students from non-healthcare faculties 255 (92.4%). In Croatia, there was a statistically significant difference in decision-making for cases of a 2-month-old infant (P=0.003), a 7-year-old boy (P=0.008) and a 35-year-old adult (P=0.009). In all these cases, students from medical and nursing schools were more likely to resuscitate. Differences between the students in the first and final years of study were statistically significant only in the Slovenian sample (P=0.004) in the case of an 80-year-old patient. Compared to 289 (91.7%) of the first-year students, only 154 (83.2%) of the final-year students would opt for resuscitation in this case (Table 2).

Table 2. Decision of the students to resuscitate split by type of faculty (non-healthcare vs healthcare) and year of study in Slovenia and Croatia.

	Non-healthcare[a] f (f%)	Healthcare[b] f (f%)	P	First year[c] f (f%)	Last year[d] f (f%)	P
Premature of 24-weeks gestation old						
SLO	254 (91.0)	225 (97.0)	**0.006**	293 (92.4)	178 (95.7)	0.147
CRO	316 (92.7)	449 (95.3)	0.109	435 (92.8)	330 (96.2)	0.037
Mature new-born						
SLO	252 (91.3)	223 (96.5)	0.016	293 (92.7)	175 (95.1)	0.293
CRO	312 (91.5)	438 (93.0)	0.428	428 (91.3)	322 (93.9)	0.165
2-month-old boy						
SLO	265 (95.0)	226 (97.4)	0.158	303 (95.6)	180 (96.8)	0.509
CRO	321 (94.1)	462 (98.1)	**0.003**	449 (95.7)	334 (97.4)	0.213
7-year-old boy						
SLO	259 (93.2)	218 (95.6)	0.238	299 (94.3)	171 (94)	0.867
CRO	323 (94.7)	462 (98.1)	**0.008**	450 (95.9)	335 (97.7)	0.177
13-year-old girl						
SLO	255 (91.7)	214 (93.9)	0.359	297 (93.7)	165 (90.7)	0.213
CRO	312 (91.5)	448 (95.1)	0.038	432 (92.1)	328 (95.6)	0.043
35-year-old adult						
SLO	248 (89.5)	207 (91.2)	0.532	287 (90.8)	162 (89)	0.513
CRO	294 (86.2)	433 (91.9)	**0.009**	413 (88.1)	314 (91.5)	0.109
50-year-old adult						
SLO	263 (94.6)	214 (94.3)	0.871	300 (94.6)	171 (94.0)	0.750
CRO	316 (92.7)	452 (96.0)	0.041	436 (93.0)	332 (96.8)	0.017
80-year-old adult						
SLO	255 (92.4)	194 (84.3)	**0.004**	289 (91.7)	154 (83.2)	**0.004**
CRO	313 (91.8)	422 (89.6)	0.293	421 (89.8)	314 (91.5)	0.393

*f (f%)–frequencies and percentages of positive answers; SLO=Slovenia; CRO=Croatia; n=number of respondents: p=probability tested by chi-square; non-healthcare–Faculties of Theology, Law, and Philosophy; Healthcare–Faculty of Medicine, and Faculty of Nursing or Health Sciences.

Multiple logistic regression model showed that religious students have higher odds (more than 2-folds) of resuscitating a mature new-born and a 2-month-old infant. Religious students had higher odds (from 1.35 to 1.80) of resuscitating patients in other age groups; however, the effect was statistically not significant.

3.2 The Respect of Parents' or Relatives' Wishes to Withhold Resuscitation – Autonomy of the Patient

In Slovenia, there was a statistically significant difference between the students of medical and nursing studies and the students of non-healthcare studies with respect to respecting the wishes of relatives to withhold resuscitation of an 80-year-old patient (P=0.007). In Croatia, a statistically significant difference with respect to withholding resuscitation was found between students of healthcare and non-healthcare studies in all presented cases. A lower share of final-year students of all studies, when compared to first-year students, would take parents' wishes into consideration in cases of 2-month-old infants (first year of the study 232 [49.5%], last year 134 [39.1%] [P=0.003]) and 7-year-old boy (first year 233 [49.7%], last year 138 [40.2%] [P=0.008]) (Figure 1).

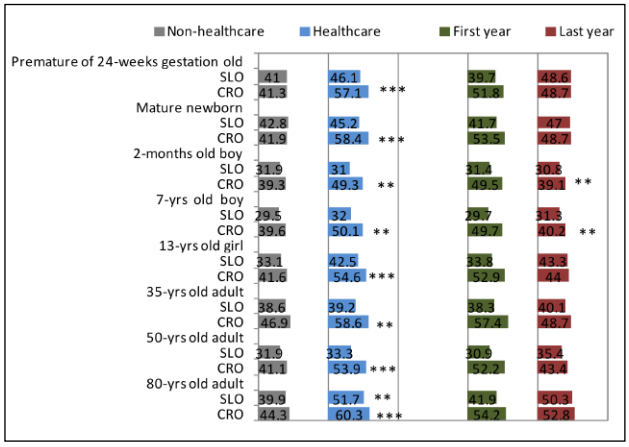

Figure 1. The shares of students who would respect the wish to withhold resuscitation split by the type of faculty (non-healthcare vs. healthcare) and year of the study (first vs. final year) in Slovenia and Croatia (**P<0.01;***P< 0.001; SLO=Slovenia; CRO=Croatia).

Multiple logistic regression analysis showed that the odds of respecting parents' or relatives' wishes to withhold resuscitation in male students were statistically significantly lower when compared to female students in all eight clinical cases (the odds ratio varies between 0.49 and 0.54). The same was true for religious students. The odds ratio varied between 0.68 and 0.83 and was statistically significant in premature, mature new-borns and close to significant in all other cases. Croatian students, when compared to their Slovenian peers, had higher odds of respecting parents' or relatives' wishes to withhold resuscitation in six clinical cases from 2-months-old onward, but are close to significant also in premature and new-born children (the odds ratio varies between 1.42 and 2.4) and the same was true for Croatian students in medical and nursing faculties, when compared to students of non-healthcare faculties who show higher odds in relation to respecting parents' wishes in cases of a new-born child (OR=1.24–1.96; 95% CI: 1.22–3.16).

3.3 Best Interest of the Patient and Decisions to Resuscitate

In the case of an 80-year-old patient, statistically significant lower shares of Slovenian and Croatian students of medical and nursing faculties, compared to students of non-healthcare faculties, believed that resuscitation is in the best interest of the patient. However, in the case of a 2-month-old infant, a significantly higher number of Croatian final year students of healthcare and non-healthcare studies believed that resuscitation is in the best interest of the patient, when compared to Slovenian students (P=0.004) (Figure 2).

Multiple logistic regressions including gender, country, study year, study type, parents education and religion as independent variables, showed that students of healthcare faculties both in Croatia and Slovenia had statistically significantly lower odds when compared to students from non-healthcare faculties of believing that resuscitation is in the best interest of the 80-year-old patient (the odds ratio varies between 0.33 and 0.75; 95% CI: 1.16–2.95; p<0.001). This was true even in cases when the patient is a close (OR=0.41%; 95% CI: 0.25–0.66) or wider family member (OR=0.42; 95% CI: 0.26–0.69). Male and religious students had statistically significantly higher odds to demand to be resuscitated if in the position of adult patients (35-, 50-, and 80-years old) represented in the vignettes.

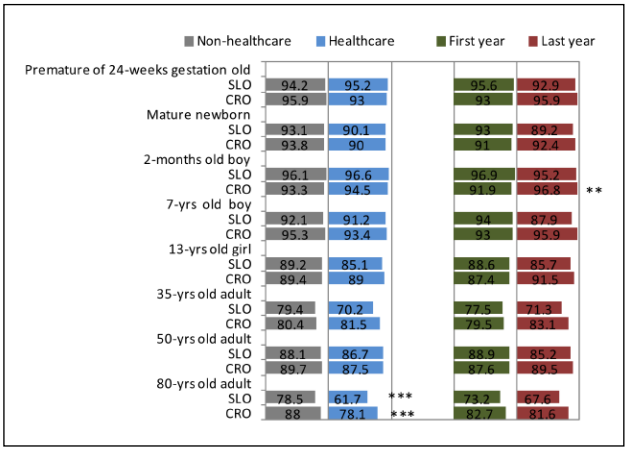

Figure 2. The shares of students who believe that resuscitation is in the patient's best interest by the type of faculty (non-healthcare vs. healthcare) and the year of the study in Slovenia and Croatia (**P<0.01;***P<0.001; SLO=Slovenia; CRO=Croatia).

3.4 Priority Order of Resuscitation

Both Slovenian and Croatian students would prioritize the resuscitation of children over adult patients (Table 3). The order of resuscitation among children varies among Slovenian and Croatian students.

Table 3. The number and share of surveyed students and their resuscitation priority ratings ("position") for the eight presented cases.

	SLO (n=489)	Position	CRO (n=812)	Position
Premature 24-weeks of gestation infant	96 (19.6)	3	232 (28.6)	2
Mature new-born	36 (7.4)	4	22 (2.7)	6
2-month-old infant	97 (19.8)	2	139 (17.1)	3
7-year-old boy	206 (42.1)	1	336 (41.4)	1
13-year-old girl	27 (5.5)	5	29 (3.6)	4
35-year-old adult	8 (1.6)	7	8 (1.0)	8
50-year-old adult	17 (3.5)	6	24 (3.0)	5
80-year-old adult.	2 (0.4)	8	22 (2.7)	7

4 DISCUSSION

Our study showed that there are differences among Croatian and Slovene students in do-not resuscitate decision-making with regards to type of study, gender and religious beliefs.

The results of our research show statistically significant differences in do-not resuscitate decisions in different cases between medical and non-medical students in Slovenia and Croatia. The study of Sham et al. found out that medical education and clinical exposure might influence the students' views on do-not resuscitate decisions. Medical students, especially those who were already in clinical praxis, tended to take into account a patient's proposal to not resuscitate more often, if this was their wish. Their study also showed that family wishes were considered less important to all participants. In contrast, findings in our study showed that healthcare students (51.7%) compared to non-healthcare students (39.9%) were more likely to respect relatives' wishes for resuscitation in all case scenarios (7). This tendency is especially pronounced in Croatian healthcare students, in comparison to non-healthcare students. However, Croatian final-year students would be less likely to accept relatives' wishes to withhold resuscitation in the cases of a 2-month-old baby and a 7-year-old boy. Richter et al. performed a study on how end-of-life decisions are influenced by cultural and socio-political circumstances and explored the compliance of doctors with patients in Germany, Sweden and Russia. Russian physicians, unlike German and Swedish physicians, were less likely to respect a patient's family's wishes (15).

Religious students were more likely to resuscitate all patients from presented cases. Despite already finding differences in groups of new-borns comparing non-healthcare and healthcare faculties in terms of resuscitating (91.3–96.5% would resuscitate him), participants in our study did not devalue new-borns unlike the participants from Janiver et al., where only 79% would decide to resuscitate (4, 11, 16). They treated all patients, whether adult or child/young/infant patients equally. Religious and male students were also more likely to not respect parents' or relatives' wishes to withhold resuscitation and wanted to be resuscitated if ever found in the situation of adult patients depicted in the vignettes. Sham et al. did not find differences in decision-making amongst various religions and genders, but stated that further researches should be made on this topic (7). Donohue et al. studied the impact of neonatologists' religiosity and spirituality on healthcare delivery and found that physicians who reported that their religious beliefs influence their medical practice had similar responses in response as those not influenced by religion (17).

However, unlike the study of Sham et al. where final-year students had lower tendency compared to first-year students to resuscitate patients, Croatian and Slovenian medical and nursing students' attitudes toward resuscitation did not change between the first and final year of the study. Our findings prompt us to ask the question: has a formal medical curriculum at all helped healthcare students in Slovenia and Croatia in making decisions about resuscitation? Janiver et al. also found in their research that medical knowledge did not contribute to resuscitation decision-making, while Sham et al. suggest that clinical exposure during medical training is a key factor in DNR decision-making (4, 7, 11).

The resuscitation priority ratings differed in our sample, where participants gave the most value to a 7-year-old boy and premature infant and the least to 35- and 80-year-old patients, compared to the studies of Janiver et al, in which participants put in their first two places a 2-month-old baby and a 7-year-old boy, and their last two places a premature baby and an 80-year-old patient. Unlike the participants from Janiver at al., where the 24-week of gestation premature infant was among those patients that are more likely not to be resuscitated (4, 16), students of medical and nursing studies in Slovenia and Croatia were more likely to resuscitate a 24-weeks of gestation premature infant. In Croatia, medical students would also resuscitate more often than non-medical students in all patients from the presented cases except the 80-year-old patient. However, medical and nursing students in Croatia and Slovenia believe that resuscitation

is not in the best interest of the 80-year-old patient (368 [78.1%] of Croatian healthcare students in comparison to 300 [88%] students of non-healthcare studies; 142 [61.7%] Slovenian healthcare students in comparison to 215 [78.5%] students of non-healthcare studies). Among Slovenian students, this was the case even if the patient was a family member. As in the Janiver et al. Study, the age of the patient was a strong factor that influenced the do-not resuscitate decision-making of our respondents and the life of a child had higher value then the life of an adult. This tendency to resuscitate younger patients more often than an 80-year-old patient can also be seen in other studies which used the Janiver et al. questionnaire (2, 3). The review of Cook et al. and other studies also shows that age is an important determinant for the initiation of do-not resuscitate orders in critically-ill patients (18–20). According to our findings, students' decisions on the same clinical cases went along with their gender, religious beliefs, and type of study. We think that the practice of DNR should be always, when possible, discussed with the patient firstly and then with their relatives that know them and their wishes the best, to avoid biases made solely out of doctor's own thinking about what is the best for the patient. In addition to this, currently in Slovenia legislation about DNR is still in quite an unfledged state. Our study could serve as a helpful tool to improve it and, thus, make decisions in this medical field easier for doctors.

There are certain limitations with respect to the interpretation of the results. First, we did not include students from other faculties in other Slovenian and Croatian cities. By consequence, the results cannot be generalized to the population of all students. Second, we used hypothetical clinical scenarios which illustrate examples of clinical practice and, therefore, students' answers may not reflect the reactions that would happen in real-life circumstances, especially considering the socio-economic status of vignette-related patient cases and their outcome comparing various socio-economic situations. Third, the response rate of our study was less than 50%. Finally, an important caveat is that a young person, a student of a non-healthcare faculty, rarely faces an end-of-life or death decision and, consequently, those answers may not give the real picture.

5 CONCLUSIONS

Our study clearly shows that gender, religious beliefs, and type of study are important factors that are associated with the decisions pertaining to the respect for autonomy, patient's best interest, and initiation or withholding of resuscitation.

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CONFLICTS OF INTEREST

The authors declare that no conflicts of interest exist.

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ETHICAL APPROVAL

The study was approved by the Slovene National Medical Ethics Committee (Decision No. 0120-506/2016-2 KME 58/08/16); by the Ethics Committees at the School of Medicine at the University of Zagreb (No. 380-59-10106-16-20/290); the Faculty of Law at the University of Zagreb; the Faculty of Humanities and Social Sciences at the University of Zagreb; and the Catholic Faculty of Theology at the University of Zagreb.

PRESENTATIONS

This study was conducted as an international student's research work at the Faculty of Medicine University Ljubljana and School of Medicine University Zagreb in years 2016–2017.

This work was presented as a poster presentation at the 7th Slovenian Paediatric Congress held in Portorož, Slovenia, between 27th and 29th of November 2018.

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Appendix 1. Slovene version of the questionnaire (page 1).

»Etika oživljanja, avtonomija pacienta in največja korist za pacienta«

Spoštovani študenti in študentke!

Pred vami je vprašalnik študentske Preširnove naloge »Etika oživljanja, avtonomija pacienta in največja korist za pacienta«, katerega vprašanja se nanašajo na etična vprašanja, s katerimi se boste lahko na svoji študijski in življenjski poti srečali osebno ali profesionalno. Vsakega posamezника, ki se je ali se bo s temi vprašanji srečal se bo morala bližina konca življenja dotakniti ne samo osebno ampak tudi občečloveško. Kajti poleg etičnih dimenzij imajo vprašanja, ki so pred vami medicinske, pravne, filozofske, sociološke in ne nazadnje teološke dimenzije. Medicina je umetnost odločanja oziroma sprejemanja trenutkov, ko se končuje življenje in začenja smrt ter se je predvsem v zahodni kulturi spreminjala z razvojem s časom.

Na tujem so že bile izvedene raziskave glede vprašanj, ki se jih loteva obravnavana tema, med študenti različnih študijskih usmeritev in zdravnikov različnih usmeritev, pri nas ne. Iz teh razlogov smo se na Medicinski fakulteti Univerze v Ljubljani in Sveučilišta v Zagrebu jure Puc, pod mentorstvom izr. prof. dr. Štefana Groska, dr. med. in izred. prof. dr. Ane Borovečki, dr. med., odločili za izvedbo te raziskovalne naloge na ljubljanski in zagrebški univerzi.

Za izvedbo te raziskave smo dobili privoljenje avtorjev (*dr. Janvier, dr. Leblanc in dr. Barrington*), da v naši raziskavi uporabimo njihov vprašalnik (*Etika oživljanja pri različnih starostih*).

S vprašalnikom, ki je pred vami, želimo pridobiti vaše odgovore, kako bi se vi kot študentje in študentke, bodoči mladi intelektualci in intelektualke, odzvali in odločili pri zdravljenju težko bolnih pacientov in sicer v starostnih obdobjih, ki zajemajo obdobja od najmlajših do najstarejših pacientov (od nedonošenčka do starostnika v visoki starosti).

Raziskavo bomo izvedli na petih fakultetah (medicine, prava, filozofije, teologije, zdravstvene) Univerze v Ljubljani, Slovenija in Sveučilišta v Zagrebu, Hrvaška. K sodelovanju smo povabili vas študente in študentke prvega in zadnjega letnika omenjenih študijskih smeri ter študente in študentke magistrskega študija zdravstvene nege z željo, da bi pridobili vaša mnenja na začetku in na koncu akademske poti z željo, da bi dobili odgovore kako bi se vi opredelili in odločili, če bi se morali odločati.

Vprašalnik je bil odobren s strani Komisije za medicinsko etiko RS. Vprašalnik je anonimen.

Če slučajno ne želite sodelovati pri reševanju vprašalnika ali se ne strinjate z uporabo vaših odgovorov, vas prosimo, da oddate prazen vprašalnik.

Upam, da se boste na nalogo odzvali in odgovorili na vprašalnik ter pripomogli k izvedbi raziskovalne naloge. Za vaš čas in prijaznost se vam lepo zahvaljujemo

avtorji raziskave:
Jure Puc, študent MF UL
Izr. prof. dr. Ana Borovečki, dr. med.
Izr. prof. dr. Štefan Grosek, dr. med.

ETIKA OŽIVLJANJA PRI RAZLIČNIH STAROSTIH

(dr. Janvier, dr. Leblanc in dr. Barrington)

Obravnavate nujen primer 3. stopnje. Za naslednje scenarije označite svojo pripravljenost, da intubirate in oživljate naslednje nekompetentne bolnike in se posvetujete z oddelkom za intenzivno nego. Bolnišnica ima oddelke za intenzivno nego novorojenčkov, pediatrične bolnike in odrasle.

Pripeljejo mater, nosečo 24 tednov, ki bo začela rojevati. Otrok ima 50-odstotne možnosti za preživetje. Prognoza za preživele je: 50 % normalno, 15–25 % resna prizadetost (gluhost, slepota, cerebralna paraliza* ali občutno abnormalen psihomotorični razvoj), 40 % blaga prizadetost (hiperaktivnost, motnje učenja). Dojenček ima pri rojstvu težo 650 g (združljivo s 24 tedni) in ne diha učinkovito. Časa za posvet s starši nimate.

Bi intubirali**, oživljali in se obrnili na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Bi upoštevali prošnjo in odločitev staršev, da ga ne oživljate?
□ vedno □ običajno □ izjemoma □ nikdar

Ali mislite, da so intubacija, oživljanje in posvetovanje z intenzivno nego glede sprejema v interesu bolnika?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil otrok vaš in bi imeli nekaj minut časa za premislek, bi želeli, da zdravnik intubira, oživlja in se posvetuje z intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil to otrok vašega brata ali sestre in bi imeli čas za razmislek (ni nujen primer) in bi vas prosil ali prosila za mnenje, bi priporočili, naj zdravnik intubira, oživlja in se posvetuje z intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

* **cerebralna paraliza** – skupina možganskih okvar, ki povzročajo trajne motnje gibanja
** **intubacija** – vstavitev plastične cevke (tubusa) v sapnico, da je omogočen prosti zrak in s tem dihanje

Donošeni otrok je hitro rojen na urgenci. Ima malformacijo možganov, ki je bila diagnosticirana in utero (ko je otrok še v maternici). Glede na konzultacije med nosečnostjo ima otrok 50-odstotne možnosti za preživetje. Prognoza za preživele je: 50 % normalno, 15–25 % resna prizadetost, 40 % blaga prizadetost. Otrok je rojen in ne diha učinkovito. Časa za posvet s starši nimate.

Bi intubirali, oživljali in se obrnili na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Bi upoštevali prošnjo in odločitev staršev, da ga ne oživljate?
□ vedno □ običajno □ izjemoma □ nikdar

Ali mislite, da so intubacija, oživljanje in posvetovanje z intenzivno nego glede sprejema v interesu bolnika?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil otrok vaš in bi imeli nekaj minut časa za premislek, bi želeli, da zdravnik intubira, oživlja in se posvetuje z intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil to otrok vašega brata ali sestre in bi imeli čas za razmislek (ni nujen primer) in bi vas prosil ali prosila za mnenje, bi priporočili, naj zdravnik intubira, oživlja in se posvetuje z intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Prej zdrav 2-mesečni dojenček je bil sprejet na urgenco zaradi (po navedbah staršev) vročine, razdražljivosti in preknitev dihanja. Je močno bolan in ima nevrološke znake. Lumbalna punkcija* je purulentna in potrjuje diagnozo meningitisa. Prognoza za ta bakterijski meningitis je 50-odstotna možnost preživetja. Prognoza za preživele je: 50 % normalno, 15–25 % resna prizadetost, 40 % blaga prizadetost. Otrok neha dihati. Časa za posvet s starši nimate.**

Bi intubirali, oživljali in se obrnili na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Bi upoštevali prošnjo in odločitev staršev, da ga ne oživljate?
□ vedno □ običajno □ izjemoma □ nikdar

Ali mislite, da so intubacija, oživljanje in posvetovanje z intenzivno nego glede sprejema v interesu bolnika?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil otrok vaš in bi imeli nekaj minut časa za premislek, bi želeli, da zdravnik intubira, oživlja in se posvetuje z intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil to otrok vašega brata ali sestre in bi imeli čas za razmislek (ni nujen primer) in bi vas prosil ali prosila za mnenje, bi priporočili, naj zdravnik intubira, oživlja in se posvetuje z intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

* **lumbalna punkcija** – metoda za odvzem likvorja (možganske tekočine) iz hrbtenjeničnega kanala z vbodom igle v ledvenem predelu hrbtenjače
** **purulentna** – gnojna; kaže na prisotnost okužbe

7-letni fant ima cerebralno paralizo, brez pomoči hodi, čeprav lepa, in sodeluje pri večini športov. Zaradi motenj učenja in hiperaktivnosti bo ponavljal 1. razred. Ima okvaro sluha, ki zahteva medicinske pripomočke, s katerimi je to stanje povsem popravljeno. Na urgenco je sprejet s pljučkim dihanjem po tem, ko ga je zbil avtomobil. Ima kratek napad, ki ga zdravila ustavijo. CT* pokaže zmerno do resno zatekanje možganov.

Appendix 2. Slovene version of the questionnaire (page 2).

Prognoza je 50-odstotna možnost preživetja s 50-odstotno možnostjo vrnitve na izhodišče, če preživi. Znova dobi napad, vzdrževanje dihalnih poti ni mogoče.

Bi intubirali, oživljali in se obrnili na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Bi upoštevali prošnjo in odločitev staršev, da ga ne oživljate?
□ vedno □ običajno □ izjemoma □ nikdar

Ali mislite, da so intubacija, oživljanje in posvetovanje z intenzivno nego glede sprejema v interesu bolnika?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil otrok vaš in bi imeli nekaj minut časa za premislek, bi želeli, da zdravnik intubira, oživlja in se posvetuje z intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil to otrok vašega brata ali sestre in bi imeli čas za razmislek (ni nujen primer) in bi vas prosil ali prosila za mnenje, bi priporočili, naj zdravnik intubira, oživlja in se posvetuje z intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

* **CT** – ang. computed tomography; radiološka slikovna metoda, ki omogoča podrobnejši prikaz dela telesa in uporablja ionizirajoče sevanje

13-letni otrok ima akutno mieloblastno levkemijo. Vpleteni so možgani, zato je potrebno zdravljenje z obsevanjem. Po določanju stadija je napovedana 5-odstotna možnost dolgoročnega preživetja po presaditvi kostnega mozga. Če preživi, je tveganje dolgoročnih nevroloških posledic 20 %, med drugim tudi večje težave v šoli. Rešilni avtomobil jo pripelje s septičnim šokom, potrebuje intubacijo.

Bi intubirali, oživljali in se obrnili na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Bi upoštevali prošnjo in odločitev staršev, da ga ne oživljate?
□ vedno □ običajno □ izjemoma □ nikdar

Ali mislite, da so intubacija, oživljanje in posvetovanje z intenzivno nego glede sprejema v interesu bolnika?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil otrok vaš in bi imeli nekaj minut časa za premislek, bi želeli, da zdravnik intubira, oživlja in se posvetuje z intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil to otrok vašega brata ali sestre in bi imeli čas za razmislek (ni nujen primer) in bi vas prosil ali prosila za mnenje, bi priporočili, naj zdravnik intubira, oživlja in se posvetuje z intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

35-letnik brez anamneze je sprejet na urgenco zaradi čedalje hujših glavobolov v zadnjem mesecu in težav pri iskanju pravih besed. Nevrološka preiskava ima abnormalne rezultate, je dezorientiran. Na CT je viden zelo velik tumor na desni strani, ki je konsistenten z glioblastome multiforme, za katerega je stopnja preživetja po 5 letih 5 %. Operacija za odstranitev te velike mase bo pustila posledice (spremenjive, vključno s paralizo, kognicijo in težavami z govorom) in nezmožnost dela. Ko se vrnete, da bi se pogovorili z bolnikom in družino, izgubi zavest.

Bi intubirali, oživljali in se obrnili na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Bi upoštevali prošnjo in odločitev družine, da ga ne oživljate?
□ vedno □ običajno □ izjemoma □ nikdar

Ali mislite, da sta intubacija in oživljanje v interesu bolnika?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil to vaš partner in bi se morali odločiti zanj, bi želeli, da zdravnik intubira, oživlja in se obrne na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil to vaš brat/sestra in bi se morali odločiti zanj/anjo, bi želeli, da zdravnik intubira, oživlja in se obrne na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi šlo za vas in bi se lahko odločali, bi želeli, da zdravnik intubira, oživlja in se obrne na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

50-letni travmatološki bolnik (prometna nesreča) je sprejet na urgenco z več zlomi in zlomom vretenca C6* (brez premika). Zahteva oživljanje s tekočinami in je na pol pri zavesti. CT prikaže velika območja krvavitev. Prognoza preživetja je 50 %. Če preživi, je tveganje abnormalnega izida 50 % z občutno možnostjo kvadriplegije. Bolnika je treba intubirati in nimate časa za pogovor z družino.**

Bi intubirali, oživljali in se obrnili na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Bi upoštevali prošnjo in odločitev družine, da ga ne oživljate?
□ vedno □ običajno □ izjemoma □ nikdar

Ali mislite, da sta intubacija in oživljanje v interesu bolnika?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil to vaš partner in bi se morali odločiti zanj, bi želeli, da zdravnik intubira, oživlja in se obrne na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil to vaš brat/sestra in bi se morali odločiti zanj/anjo, bi želeli, da zdravnik intubira, oživlja in se obrne na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi šlo za vas in bi se lahko odločali, bi želeli, da zdravnik intubira, oživlja in se obrne na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

* **Vretence C6** – 6. cervikalno (vratno) vretence (1. vratno vretence (C1) je tik pod lobanjo, 7. vratno vretence (C7, zadnje) je približno v višini ramen
** **zlom brez premika** – vretence je ob poškodbi ostalo na svoji normalni legi (ni prišlo do hude zožitve hrbtenjičnega kanala in prekinitve hrbtenjače)

Rešilni avtomobil pripelje 80-letnega bolnika. Po besedah njegove žene ima akutno paralizo na levi strani in ne more govoriti. Ima zmerno Alzheimerjevo bolezen*, prepozna samo ožjo družino, pogosto odtava in potrebuje pomoč pri vsakodnevnih dejavnostih. Slika možganov kaže na veliko kap. Prognoza preživetja je 50 %. Če preživi, je prognoza za vrnitev na prejšnje zdravstveno stanje približno 50 %. Bolnik preneha dihati.

Bi intubirali, oživljali in se obrnili na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Bi upoštevali prošnjo in odločitev družine, da ga ne oživljate?
□ vedno □ običajno □ izjemoma □ nikdar

Ali mislite, da sta intubacija in oživljanje v interesu bolnika?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil to vaš partner in bi se morali odločiti zanj, bi želeli, da zdravnik intubira, oživlja in se obrne na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi bil to vaš brat/sestra in bi se morali odločiti zanj/anjo, bi želeli, da zdravnik intubira, oživlja in se obrne na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

Če bi šlo za vas in bi se lahko odločali, bi želeli, da zdravnik na urgenci intubira, oživlja in se obrne na intenzivno nego glede sprejema?
□ vedno □ običajno □ izjemoma □ nikdar

* **Alzheimerjeva bolezen** – degenerativna bolezen možganov, katere najpogostejši in glavni znak je demenca (izguba spomina)

ČE BI VSE OPISANE BOLNIKE MORALI OŽIVLJATI HKRATI, V KATEREM VRSTNEM REDU BI JIH OŽIVLJALI? OZNAČITE S ŠTEVILKAMI OD 1 DO 8. (1 = PRVI BOLNIK, KI BI GA OŽIVLJALI).

24-tedenski nedonošenček _____
novorojenček z okvaro možganov _____
2-mesečni dojenček z meningitisom _____
7-letnik v prometni nesreči _____
13-letnica z levkemijo _____
35-letnik s tumorjem možganov _____
50-letnik v prometni nesreči _____
80-letnik s kapjo _____

PODATKI *(obkrožite po eno trditev)*

- **Spol:** M Ž
- **Leto študija:**
  - o 1. letnik
  - o Zadnji letnik (5. ali 6. letnik)
- **Fakulteta:**
  - o Medicinska fakulteta
  - o Zdravstvena fakulteta
  - o Teološka fakulteta
  - o Filozofska fakulteta
  - o Pravna fakulteta
- **Iz katere statistične regije prihaja:**
  - o Pomurska
  - o Gorenjska
  - o Podravska
  - o Osrednje slovenska
  - o Koroška
  - o Jugovzhodna Slovenija
  - o Savinjska
  - o Goriška
  - o Zasavje
  - o Obalno-Kraška
  - o Spodnje posavska
  - o Notranjsko-Kraška
- **Izobrazba staršev (oče):**
  - o brez izobrazbe
  - o srednja izobrazba
  - o nepopolna osnovna izobrazba
  - o višja izobrazba
  - o visoka dodiplomska izobrazba
  - o osnovna izobrazba
  - o visoka podiplomska izobrazba
- **Izobrazba staršev (mati):**
  - o brez izobrazbe
  - o srednja izobrazba
  - o nepopolna osnovna izobrazba
  - o višja izobrazba
  - o visoka dodiplomska izobrazba
  - o osnovna izobrazba
  - o visoka podiplomska izobrazba
- **Verozapoved**
  - o katoliška
  - o islamska
  - o protestantska
  - o asist
  - o pravoslavna
  - o drugo (navedite):