

## PS228

### Is more stressful to become a physician or a pharmacist? A study on medical and pharmacy students' psychological state

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(R. Silva).

**Aim:** The objective of this study was to evaluate stress, anxiety, depression and happiness in medical and pharmacy students and to explore similarities and differences between them.

**Introduction:** Higher levels of depression, anxiety and stress have been found in medical and pharmacy students when compared to general population,<sup>1,2</sup> varying across year in school and gender. Well-being during school years conversely may decrease depressive symptoms, boost happiness and life satisfaction, and contributes to resilience to stressful academic experiences. Students awareness of symptoms and consequences of distress may foster the search for psychoeducation and psychotherapy which offer effective strategies to improve mental health and academic performance.<sup>3,4</sup>

**Methods:** A cross-sectional study included 420 students of Faculty of Medicine of the University of Porto (FMUP) and 200 students of Faculty of Pharmacy of the University of Porto (FFUP). Assessment included sociodemographic characterization, screening for anxiety and depressive symptoms - Hospital Anxiety and Depression Scale (HADS), stress - Perceived Stress Scale (PSS) and subjective wellbeing - Subjective Happiness Scale (SHS). One-way analysis of variance (ANOVA) and the independent paired t-test were applied to compare demographic and psychological characteristics from within each group.

**Results:** Statistically significantly higher number of anxiety and depressive symptoms were found in medical students ( $p < 0.001$ ), and pharmacy students presented significantly higher PSS scores ( $p < 0.001$ ). Interestingly, medical students showed statistically significantly higher SHS scores than pharmacy students. Female students revealed significantly higher levels of anxiety, depression and stress in pharmacy school, but in medical school female students presented uniquely higher stress levels.

**Conclusion:** Attending a faculty degree is a challenging experience which involves life changing experiences and poses different personal and academic problems according each specific school. These findings demonstrate the need to better understand the balance between students' stressful experiences and happiness to identify students at risk in both schools.

#### References

1. Hope V, Henderson M. Medical student depression, anxiety and distress outside North America: a systematic review. *Med Educ*. 2014;48:963–79.
2. Gallagher CT, et al. Perceived stress levels among undergraduate pharmacy students in the UK. *Curr Pharm Teach Learn*. 2014;6:437–41.
3. Duan W. The benefits of personal strengths in mental health of stressed students: a longitudinal investigation. *Qual Life Res*. 2016;1–10.
4. Rajiah K, Saravanan C. The effectiveness of psychoeducation and systematic desensitization to reduce test anxiety among first-year pharmacy students. *Am J Pharm Educ*. 2014;78:163.

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## PS234

### The relationship between socio-economic determinants and incidence of most common types of cancer in Poland

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**Aim:** To establish the link between incidence rates of cancer and selected socio-economic variables.

**Introduction:** Geographical analysis of cancer incidence rates shows significant regional diversity and can be viewed as an approximation of the actual risk of particular types of cancer.

**Methods:** The absolute numbers of new registered cases of lung, breast and colon cancer in Poland in 2014 by voivodeships (Polish provinces) were obtained from the Polish National Cancer Registry. The situation in individual voivodeships in terms of social isolation, social capital, religious activity and poverty was assessed based on the results of the Polish Social Cohesion Survey for 2015. The Spearman's rank correlation coefficient (rS) was used to test the association between incidence rates of types of cancer (number of cases/100 inhabitants) and social variables. The significance level was set at  $p < 0.05$  (2-tailed tests).

**Results:** Spearman's correlation analysis showed a statistically significant strong positive correlation between lung cancer risk and: social isolation ( $rS = 0.73$ ;  $p < 0.0013$ ), living conditions poverty ( $rS = 0.55$ ;  $p = 0.028$ ), poverty resulting from the lack of budget balance ( $rS = 0.72$ ;  $p = 0.0015$ ), and low/no involvement in religious activity ( $rS = 0.7$ ;  $p = 0.003$ ). Strong negative correlation with  $rS = -0.64$  and  $p < 0.008$  exists between lung cancer risk and high level of association-based social capital. In colon cancer, only negative correlation between colon cancer risk and high level of friend- and neighbour-based social capital ( $rS = -0.56$ ;  $p = 0.020$ ) was statistically significant. Breast cancer risk was statistically significant for strong negative correlation with high level of friend- and neighbour-based social capital ( $rS = -0.74$ ;  $p = 0.0009$ ) and for a fairly strong positive correlation with low/no involvement in religious activity ( $rS = 0.53$ ;  $p = 0.04$ ).

**Conclusion:** Our findings provide important evidence for the link between social and economic environment and the risk of most common cancer sites in Poland, and highlight the need to address these determinants as part of national cancer preventive programs.

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Surgery Poster Session

Friday, September 15th, 10h00

## PS093

### Multimodal analgesia after total knee joint arthroplasty surgery: Intrathecal morphine vs. local infiltration with ropivacaine

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**Aim:** To assess and compare effectiveness and side effects of postoperative anesthesia methods, using intrathecal morphine and



local infiltration of ropivacaine, a day after knee joint arthroplasty operations with spinal anesthesia.

**Introduction:** Inadequately chosen postoperative anesthesia method after knee joint arthroplasty surgery might cause prolonged hospitalization period, readmissions due to pain and overall increased cost of care.

**Methods:** In 2016 a prospective research was conducted in Vilnius University Hospital Santaros Clinics. 25 patients undergoing knee joint arthroplasty surgery with spinal anesthesia were enrolled in the study. Group1 – local soft tissue ropivacaine infiltration anesthesia around the knee ( $n=13$ ; dose 300 mg); Group2 – intrathecal morphine sulfate analgesia ( $n=12$ ; dose 0.1–0.2 mg). Pain intensity (using VAS) at rest and in motion, patient's satisfaction and side effects – nausea, vomiting, itch, urinary retention – were assessed at time intervals – 1, 2, 4, 6, 12, 18, 24 h postoperatively.

**Results:** In the first 12 h mean values of VAS were  $1.8 \pm 2.6/1.4 \pm 1.7$  in Group1 and Group2 accordingly. After 12 h period a downtrend occurred and values were  $1.7 \pm 1.1/1.1 \pm 1.5$ , respectively ( $p > 0.05$ ). Examining pain in motion 12 h after the surgery pain intensity values were  $2.5 \pm 2.7/3.3 \pm 2.7$  and after 24 h in both groups pain intensity was  $3.2 \pm 1.5/3.6 \pm 2.1$ , resp. ( $p > 0.05$ ). Zero episodes of nausea/vomiting were registered in Group1, while 58.3% ( $n=7$ ) of Group2 patients experienced nausea and 5 of them also vomited. Even 66.7% ( $n=8$ ) patients in Group2 had itch while none patients of Group1 indicated this side effect. It was difficult to assess urinary retention as 30.8% ( $n=4$ ) Group1 and 66.7% ( $n=8$ ) Group2 patients were catheterized prior surgery. Finally, satisfaction level of both groups were evaluated very similarly:  $8.2 \pm 1.7/8.2 \pm 1.3$  ( $p > 0.05$ ).

**Conclusion:** VAS values at rest were very similar in both groups, but pain relief efficiency compared to the intensity of pain during movement was better with local ropivacaine infiltration, also patients with ropivacaine analgesia experienced no side effects.

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## PS134

### The role of cerebroplacental ratio in prediction of neonatal outcomes and route of delivery



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**Aim:** The aim of our study was to check the appropriability of cerebroplacental ratio (CPR) measured within 48 h before delivery in prediction of route of delivery and adverse neonatal outcomes.

**Introduction:** The cerebroplacental ratio is an important obstetric ultrasound tool used for assessment of foetal oxygenation. It is also a valuable predictor of adverse pregnancy outcomes. CPR is calculated by dividing the Doppler pulsatile indices of the middle cerebral artery (MCA) and the umbilical artery (UA).

**Methods:** The retrospective study included 1328 pregnant women who gave birth in Department of Obstetrics and Perinatology Jagiellonian University Medical College, Cracow, Poland. Main inclusion criteria were: singleton pregnancy and the interval between ultrasound examination and delivery within 48 h. Exclusion criteria consisted: active labour, multiple pregnancy, preeclampsia, foetal growth restriction and evidence of intrauterine infection. CPR value lower than 1.08 was classified as pathological. Participants were divided into 2 groups: control

(CPR  $\geq 1.08$ ,  $n=1228$ ) and study (CPR  $< 1.08$ ,  $n=100$ ). The differences in socio-demographic factors between control and study group were not statistically significant. Data were analysed using chi-squared test, independent sample 2-tailed T-test and logistic regression.  $p$  value  $< 0.05$  was statistically significant.

**Results:** In study group was observed statistically significant increased risk of delivery provided by cesarean section (OR = 1.8;  $p=0.015$ ), preterm delivery (OR = 2.91;  $p=0.0001$ ), birth weight  $< 2500$  g (OR = 5.87;  $p < 0.00001$ ) and APGAR score  $< 7$  in 1st (OR = 6.56;  $p < 0.0001$ ), 3rd (OR = 7.04;  $p < 0.0001$ ) and 5th (OR = 5.4;  $p=0.017$ ) minute after delivery, compared to control group. Moreover, low CPR was associated with lower incidence of foetus birth weight within normal limits (OR = 0.37;  $p < 0.0001$ ) and on-term delivery (OR = 0.61;  $p < 0.0001$ ).

**Conclusion:** Detection of low value of CPR in every case should be alarming signal for obstetrician. Normal CPR appears to suggest better foetal tolerance to the stress of labour. CPR may be used to stratify the risk of pregnancy before labour.

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## PS072

### Chronic subdural hematoma in aging population – How the age influence the outcome after surgical treatment



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**Aim:** The aim of our work is to examine how the age influence the outcome after surgical treatment of chronic subdural hematoma.

**Introduction:** Chronic subdural hematoma (CSDH) is a common condition, characterized by the collection of hemolyzed blood between dura and arachnoid mater of the brain surrounded by two pathological hematoma membranes – internal and external. The number of CSDH incidence increases with age and it is why more attention should be directed for surgical treatment in elder patients group.

**Methods:** Data on management and outcomes for patients with CSDH were collected retrospectively from years 2014–2017 and investigated using statistic methods. The study group was divided into two subgroups according to the age:  $< 75$  years and  $\geq 75$  years old. Age, gender, comorbidities, neurological status on admission and at discharge, pre-/postoperative epilepsy, surgical technique were investigated.

**Results:** We analyzed 257 patients with a diagnosis CSDH. Analyzed subgroups have not differ significantly except the gender and concomitant diseases according to the Chi2 and exact Fisher tests. We found craniotomy in patients  $\geq 75$  years old increases the risk of postoperative epilepsy comparing to the bur-hole (logistic regression analysis: 9.8 [95% CI: 1.9–49.8],  $p=.006$ ), same as the internal hematoma membrane removal during surgery (logistic regression analysis: 10.3 [95% CI: 2.0–52.15],  $p=.005$ ). These dependencies do not occur in the younger age group. Type of treatment have not influenced the mRS in patients younger than 75 years old. In elder patients reoperation and removal of the internal membrane of the hematoma worsened outcome measured in mRS (logistic regression analysis: 5.5 [95% CI: 1.4–20.90],  $p=.013$  and 3.1 [95% CI: 1.4–7.2],  $p=.007$ ).

**Conclusion:** Craniotomy and internal membrane removal increase the risk of epilepsy in elder CSDH patients. Reoperation