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## ABSTRACTS

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# PNAE



## NURSING CHILDREN AND YOUNG PEOPLE



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# Welcome to the PNAE Congress 2018

Dear colleagues,

We were delighted to welcome you to the 4th PNAE Congress on paediatric nursing which took place in Athens, 1-2 June 2018. The congress was organised by the Paediatric Nursing Associations of Europe (PNAE) in collaboration with the Hellenic Society of Paediatric Nursing.

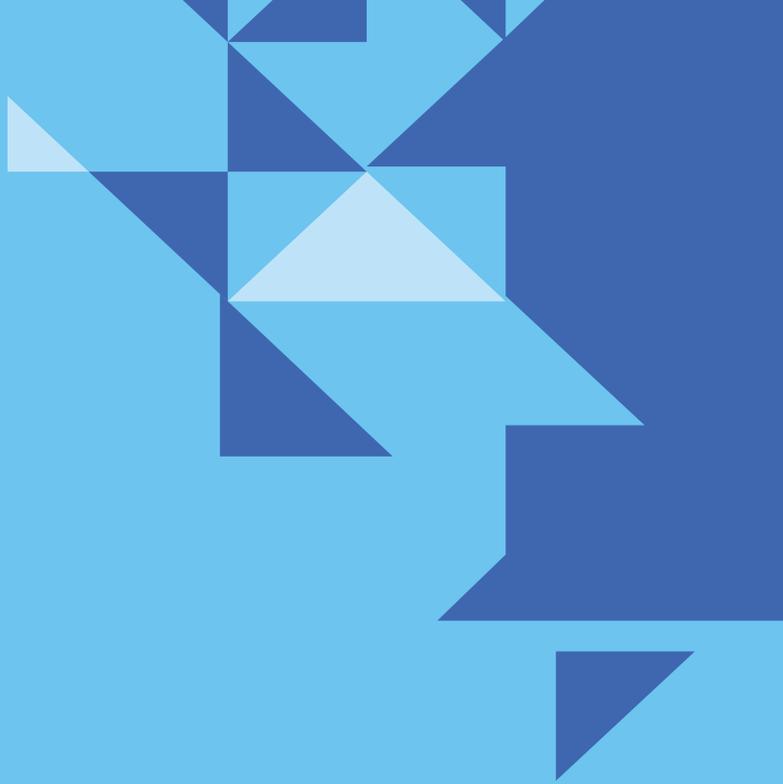
We joined forces to promote and ensure quality paediatric nursing care across Europe, keeping in mind the need for specialised care by healthcare professionals, with high levels of theoretical knowledge and practical skills.

The scientific programme of the congress included many educational and scientific events, along with more than 200 abstracts from distinguished paediatric nurses who shared with us their research findings, practical knowledge and experiences regarding the care of children, young people and their families.

We owe particular thanks to the National and Kapodistrian University of Athens and the Faculty of Nursing for their support in enabling this Congress to be held at the premises of the Department of Nursing in central Athens.

**Fiona Smith**  
Chair, organising  
committee and  
professional lead for  
children and young  
people's nursing, Royal  
College of Nursing, UK

**Vasiliki Matziou**  
Chair, scientific  
committee and  
professor in paediatric  
nursing, National and  
Kapodistrian University  
of Athens



# Oral abstract presentations

## ORAL PRESENTATIONS 1: CARE OF THE ADOLESCENT

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OP001

### **Association between sleep duration and sleep problems and school stress, self-perception and IT/media use among adolescents**

Malin Jakobsson, Karin Hogberg

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Sleep-related problems are growing among adolescents worldwide. The sleep recommendation for adolescents is at least 8-10 hours per night [1]. The brain becomes affected even after a few nights of sleep loss [2]. This is evident in learning ability, memory, concentration, reaction time and mood changes. Health risks such as self-injury, increased drug use, reckless driving, hyperactivity, aggression and severe sleep problems are effects of recurrent sleep deprivation [3]. Depression, anxiety, concentration difficulties, hyperactivity and poorer performance in school are proven consequences of sleeping problems among children and adolescents [4,5,6]. The aims of this study were to describe the prevalence of sleep duration and sleep problems, and their associations to IT/media use, IT/media use at bedtime, school stress and self-perception, among adolescents. This was a descriptive cross-sectional questionnaire study. The sample included 937 adolescents in last-year secondary school, in a municipality in the west of Sweden. Statistical analyses showed that 55% of the adolescents sleep less than the recommended eight hours per night and 11% have sleep problems. Based on the background variables, girls show worse outcomes in all measured variables. Adolescents who live with non-cohabiting parents sleep less and have more sleep problems than adolescents who live with cohabiting parents. Short sleep duration correlated with IT/media use and school stress. Sleep problems were also correlated with school stress and self-perception. There is a need to develop and implement adequate sleep prevention measures for adolescents. The results need to be taken seriously to promote adolescents' opportunities for good health and well-being. This knowledge should be disseminated, discussed and subsequently integrated into prevention and health promotion by school nurses.

#### References

- 1 National Sleep Foundation, 2015
- 2 Könen, Dirk and Schmiedek, 2015
- 3 Schmidt, van der Linden, 2015
- 4 Titova, Hogenkamp, Jacobsson, 2015
- 5 Sivertsen, Harvey, Lundervold & Hysing, 2014
- 6 Cleland Woods, Scott, 2016

## Determining adolescents' health locus of control and the variables that affect them

Gonca Karayagiz Muslu

*Muğla Sıtkı Koçman University, Faculty of Health Sciences, Nursing Department, Muğla, Turkey*

*Introduction:* This study was intended to identify adolescents' health loci of control and the variables that affect them.

*Methods:* This study was conducted in six randomly-selected high schools in Fethiye (Muğla, Turkey) during the 2017-18 academic year. The population of the study included 2,281 students from six high schools, and its sample included 1,254 students who agreed to participate. The study used stratified random sampling by schools and classes to ensure a homogeneous distribution of students. The study data were collected using a student information form and the Multidimensional Health Locus of Control Scale (MHLC). Group comparisons were conducted using student's T-test, ANOVA and the Scheffe test.

*Results:* Internal locus of control was higher for males than females and higher for those with nuclear families than for those with extended families. The differences between the two groups of each comparison were statistically significant. The mean scores on the chance subdimension were significantly higher for 16 and 17 year olds than for 14 and 15-year-olds, also higher for those with low economic levels than for those with high and moderate economic levels. As the students' perceptions of their own health status improved, their mean scores increased on the subdimensions of internal and external health locus of control scale, while their mean scores on the chance subdimension decreased. Their internal control subdimension mean score was significantly higher for cigarette smoking students than non-smokers, and the mean score on the chance subdimension was significantly lower for the first group. Alcohol drinkers had a lower internal control subdimension mean score than non-drinkers. The mean scores on the chance subdimension were higher for alcohol drinkers than for non-drinkers.

*Conclusion:* The results of this study show that adolescents' health locus of control depend on sociodemographic variables, and these variables also affect their choice of risky behaviors.

## Accuracy of clean-catch technique for urine collection in young children: a systematic review of literature

Andreia Almeida, Graça Aparício

*Polytechnic Institute of Viseu, Health School, CI&DETS, Viseu, Portugal*

*Introduction:* Urine collection in children should respect atraumatic care and child safety considering child/ family satisfaction and quality of nursing care. Clean-catch (CCU) has recently been described as a non-invasive, safe and quick urine collection method used in children lacking sphincter control, for urinary tract infections (UTI) diagnosis, in alternative to invasive methods such as bladder catheterisation/suprapubic aspiration (BC/SPA).

*Objectives:* To identify scientific evidence of the efficacy of clean-catch for the diagnosis of urinary infection in neonates/infants.

*Methods:* A systematic review of literature was conducted based on the Cochrane guidelines (Higgins and Green 2011) of studies comparing the urine contamination rates/ diagnosis accuracy between CCU and BC/SPA. We selected studies in PubMed, EBSCO, Web of Science and Scielo databases, published between 2000 and 2017 and according to previously established inclusion/exclusion criteria. Two researchers evaluated the studies quality.

*Results:* In a total of 297 studies, two randomised controlled trail were included that met inclusion criteria. A total of 117 samples by CCU and 122 by BC/SPA were obtained from infants with a suspected UTI but hemodynamically stable. In the first study (Labrosse et al 2016) it was verified that the contamination rates of the CCU group was 16% versus 6% for the BC / SPA, whereas in the second study (Herrerros et al 2015) it was 5% versus 8% for CCU and BC respectively. The CCU sample was obtained in less than five minutes.

*Conclusion:* The studies' results are encouraging. However, more research needs to be performed to determine the scientific evidence of this technique for nursing practice, given the limitations, mainly related to the reduced number of studies with methodological quality to diagnose UTI by the CCU method in children lacking sphincter control.

## Investigation of adolescents's self-perception, anger expression styles and empathy ability degrees, according to being hearing-impaired conditions

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*Introduction:* The aim of this study was to analyse adolescents's self perception, anger expression styles and empathique ability degrees according to being deaf.

*Methods:* Matched case control study was carried out in five schools by zmir Provincial Directorate of National Education (two deaf and three healthy individuals schools) between April-June 2016. In the study young people who were deaf were composed the case group ( $n=138$ ) and the hearing young people corrected according to some parameters were composed the control group ( $n=414$ ) (one case to three controls) in accordance with the paired case control. Data were collected with Identification Form, Rosenberg Self Esteem Scale (RSES), Trait Anger and Anger Expression Scale (TAAES), Empathic Tendency Scale for Children and Adolescents Turkish Form (ETSCA-TR Form). In the analysis of data, descriptive statistics, Kruskal-Wallis, Mann Whitney U and a chi-squared test.

*Results:* A total of 552 students, nine to 18 years old were included in this study. It was found that adolescents with hearing impairment age average was 14.46 ( $\pm 2.44$ ) years, healthy adolescents age average was 14.46 ( $\pm 2.43$ ) years', 73.2% of deaf and healthy adolescents were girls. In the analysis, it was found that the average score of RSES for adolescents who are deaf, was significantly higher than average score of RSES of healthy adolescents ( $P=0.008$ ;  $P<0.01$ ). There was a significantly difference between deaf and healthy adolescents getting average points from subscales of TAAES Trait Anger and Anger Control ( $P=0.000$ ;  $P<0.001$ ). The average score of adolescents who were deaf, who were getting from expressing one's TAAES Anger Out' subscale, was statistically higher in significance level according to healthy individuals's average score ( $P=0.028$ ;  $P<0,05$ ). Although deafness doesn't affect subscale of anger in ( $P>0.05$ ). It was determined that the average score of adolescents who are deaf of ETSCA-TR form was significantly low as to healthy adolescents ESCA-TR form ( $P=0.000$ ;  $P<0.001$ ).

*Conclusion:* It was concluded that there were differences between deaf adolescents and healthy individuals' self perception, anger expression style and empathy ability degree.

OP006

### Hereditary angioedema – Specificity of therapy – Case report

Marela Sain Tuka, Kristina Kuznik

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*Introduction:* Hereditary angioedema (HAE) is rare, but potentially dangerous disease caused by a deficiency or reduced function of the inhibitor C1 esterase. Disease is characterised by recurrent episodes of angioedema that can occur on limbs, genitals, abdomen, face and throat.

*Patient report:* Boy, 15 years and 10 months old. He was received as an urgent patient for the anaphylactic reaction to an unknown allergen. Aware, bad general condition, tachycardic and very dyspnoeic, the oedema of the face and extremities is present, speech is intense. First therapy is intravenous corticosteroids and antihistamines, a reduced concentration of C4 and C1 inhibitors is recorded and doubts are raised on HAE. For two months in the acute attack, the value of the complement C4 component was lowered again, as well as the C1 inhibitor, and the diagnosis of HAE type 1 is set. He is received 4,200 international units of the recombinant human inhibitor C1 esterase inhibitor to stop further progression of the angioedema of the palate. In one year of the diagnosis of HAE type 1, he had been hospitalised nine times for recurrence of illness. Family test on HAE was performed which proved that a mother and three other children had reduced C4 inhibitor concentration.

*Conclusion:* HAE is an unpredictable, painful and life-threatening condition, for each individual patient to develop an individualised care plan that would include preventive measures, self-treatment and emergency care. Nursing planning depends on the general and clinical condition of the patient, and interventions include 24-hour monitoring, skin condition evaluation, oedema, redness and rash enhancement, pain intensity estimation, signs of anxiety, application of prescriptive medicines, establishment of trust relationship, and education of patients and parents about illness and quality of life.

## Care strategies to a paediatric patient with Timothy syndrome: A case report

Biagia Accinni, Cristina Calandrella, Fabrizio Drago, Micol Scacchi, Corrado Di Mambro

*Bambino Gesù Children's Hospital, Rome, Italy*

Nursing care is based on care planning that allows the practitioner to be guided during the clinical process. A case report of the little patient, who is anonymous, who is suffering from an extremely rare genetic syndrome, is described to develop a personalized nursing care plan.

*Introduction:* The child was admitted in the first day of life to the paediatric department of cardiology and cardiac surgery at the Ospedale Pediatrico Bambino Gesù in Rome with a diagnosis of Timothy syndrome type 2. It is a very rare multisystemic genetic disease: only less than 20 cases in the world have been described. The prognosis of this syndrome is generally poor: most of the affected children die around two to three years due to cardiac arrest. Implantation of a cardiac defibrillator (ICD) is the only therapy currently possible: in infants this procedure requires the achievement of an optimal weight to perform it surgically.

*Methods:* A literature search was conducted on the main scientific databases (PubMed, CINAHL) and the patient's medical record was consulted to collect information about the pathology and the specific nursing care.

*Results:* The nursing care plan for the patient with Timothy syndrome includes the following assistance interventions: emergency management in patients with malignant arrhythmia, diet management and diet strategies, prevention of infections, administration of pharmacological therapy, especially antiarrhythmic, management of central vascular catheter in patients with poor venous heritage, taken care of by the family with different cultural impact.

*Conclusion:* The management of the patient with rare pathology and poor prognosis is often not well known for its uniqueness; the development of a nursing care plan increases the skills, allows the sharing among professionals and makes it possible to implement the best care strategies.

## Determination of the difficulties during paediatric medication preparation and administration

Özgül Balci, Dilek Ergin

*Manisa Celal Bayar University, Manisa, Turkey*

*Introduction:* The research was conducted to determine the difficulties experienced by nurses during paediatric medication preparation and administration.

*Methods:* The research is a descriptive cross-sectional study. By reviewing literature by the researcher as a data collection tool, socio-demographic questionnaire and, the survey for the determination of the difficulties during paediatric medication preparation and administration were used.

*Results:* The average score of the difficulties of nurses during medication preparation was 18.80 ( $\pm 7.22$ ) and the average score of the difficulties of nurses during medication administration was 22.58 ( $\pm 8.37$ ), respectively. The most commonly reported problems in preparation of drugs were found as there is no appropriate equipment for pill-splitting and my job is interrupted by the phone rang and patients' calls, etc. The least reported difficulty included 'the most time-consuming thing in medication preparation is withdrawing of medication from a vial and an ampoule and dilution process when preparing intramuscular drugs'. The most commonly reported problem experienced during administration of drugs included 'it isn't known how much children take drugs when they remove them from their mouth'. The least reported difficulty is 'by keeping tablets in the mouth, children act as if they swallowed them'. According to the institutions they work in, nurses working in Hafsa Sultan Hospital in Manisa Celal Bayar University have more difficulties in medication preparation and administration compared to the nurses working in Merkez Efendi Hospital.

*Conclusion:* In our research, it is determined that all nurses have difficulty in medication preparation and administration. It is found that nurses had at least one and maximum 30-32 difficulties in the medication preparations and at least four and maximum 35-35 difficulties in the medication administration respectively.

## The effect of using the web based double eye control program in the medication of high risk drugs in paediatric patients

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<sup>1</sup>Izmir Katip Çelebi University, Izmir, Turkey

<sup>2</sup>Ege University, Izmir, Turkey

*Aim:* The aim of the study is to examine the effect of checklists and web-based double-eye control program in the prevention of medication errors.

*Methods:* The study is designed the semi-experimentally with pre-test/post-test in one group. The study was conducted on 29 nurses working in paediatric surgical clinics, between June 2017 and March 2018.

All drugs, except vitamins, are included in high risk medicine in the clinic. Before the intervention, all the clinical nurses were observed by the researcher through checklists because of the frequency of medication error. After determining the medication error frequency, nurses were taught the use of the web-based double eye control program and were asked to use them during medication error. The program is a web-based drug dose calculation program. The site prepared by the web designer and programmer is an online program that allows the nurse to check some of the calculations that the nurse cares about in the web environment whether it is the amount of medication to be given and the safe dose range for the patient by entering some data such as age. In addition, there are drug check lists.

*Results:* A total of 62.89% errors observed during the drug preparation phase in observations made before the intervention; 47.85% error observed during drug administration phase; 58.98 % error observed in the post-implementation monitoring phase and the error rate observed in the recording phase were determined as % 43.94. Observations made during the use of the program assess the frequency of medication errors. The assessment is continuing.

*Conclusion:* Medication errors during the medication of high-risk drugs can be prevented by prevention strategies such as the web-based double-eye control program.

## Effectiveness of insertion and maintenance care bundle to prevent central line associated bloodstream infections at Paediatric Intensive Care Unit of Greece

Charalampia Nteli<sup>1</sup>, Despoina Koumpagioti<sup>1</sup>, Pantelis Perdikaris<sup>1</sup>, Georgios Fildisis<sup>2</sup>, Vasiliki Matziou<sup>2</sup>

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<sup>2</sup>National and Kapodistrian University of Athens, Greece

*Introduction:* Central-line-associated bloodstream infections (CLABSIs) are the most common nosocomial infections in paediatric intensive care units (PICUs) worldwide.

*Purpose:* The purpose of this survey was to quantify the impact of central-line care bundles (insertion or maintenance) to prevent these infections in a Greek PICU.

*Methods:* All patients with central venous catheter, tunnelled and non-tunnelled, admitted to the unit between October 2012 and October 2015 was included in the cohort study. After 26 months of surveillance, a CLABSI prevention bundle was introduced. The care bundle included education program for doctors and nurses and developed based on the Centers for Disease Control and Prevention recommendations for prevention of CLABSI.

*Results:* During the study were included 227 patients. Compared with the pre- intervention period, in the intervention period, the rates of CLABSI decreased from 11.38 to 8.01/1,000 central venous catheter-days ( $P= 0.78$ ). Particularly, the rates of CLABSI in non-tunnelled and tunnelled central venous catheters decreased from 11.48 to 3.39/1,000 central venous catheter-days ( $P=0.95$ ) and 22.12 to 17.81/ 1,000 ( $P=0.81$ ), respectively.

*Conclusion:* The results the implementation of central-line bundles has the potential to reduce the incidence of CLABSIs. A prevention strategy targeted at the insertion and maintenance of vascular access can decrease rates of vascular-access infections in PICU.

## ORAL PRESENTATIONS 3: CHRONIC DISEASES

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OP012

### **A qualitative study on the perception of safety issues regarding paediatric immigrant patients with cancer by paediatric nurses in an Italian hospital**

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Simona Montaretto<sup>1</sup>, Marco Deiana Giuseppe<sup>1</sup>, Orietta Vianello<sup>1</sup>,  
Silvia Scelsi<sup>1</sup>

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*Introduction:* Little is known about how paediatric immigrant patients with cancer (PIP) experience cancer in a foreign country (1). When dealing with cancer, PIP must face two major obstacles: language barriers and lack of knowledge of their disease (2) which could affect safety during the process of care also in the paediatric setting (3). Data show that five and a half immigrants (legal and illegal) were present in Italy in 2014: 22,6% were Romanians, 9,8% Albanians, and 9% Moroccans. There are few studies on the nurses' perception of factors in Italian which could have an impact on safety issues in PIP nursing care.

*Aim:* The aim of this study was to investigate paediatric nurses (PN) perception of the factors having an impact on safety in nursing care of PIP and their families admitted to an Italian paediatric haemato-oncology department (PHOD).

*Methods:* Qualitative design with a phenomenological approach. PNs working in the PHOD of an Italian paediatric teaching hospital were interviewed face-to-face on a voluntary basis in August 2016. Semi-structured interviews were recorded, transcribed verbatim, and analysed using qualitative techniques by two independent researchers for recurrent themes following five guiding questions.

*Results:* A total of 56 PNs out of 71 (78.8%) participated in the study. Three major themes emerged: Communication barriers; lack of resources, for example booklets and translation services; and lack of therapeutic education.

*Conclusion:* Our results show that communication barriers, lack of resources and of therapeutic education are seen by PNs as the most important factors that can affect safety in nursing care of PIP. PNs usually adopt strategies to overcome these obstacles. Organisations could support PNs by increasing resources, especially translation services. Semi-structured interviews proved to be useful to investigate perception by PNs of safety issues about PIP.

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## Healthy children's knowledge and perception of cancer

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*Introduction:* The aim of the study is to determine knowledge and perceptions of healthy children aged 10-18 years about cancer.

*Method:* This qualitative phenomenal typed research was conducted between February 2012 and 2013 in a primary and a high school. Twenty children were selected for research sample using criterion sampling method. The data were obtained using Child Information Form and Interview Form through interview and observation. 30-45 minutes records using in-depth interview method was another tool to collect data. After each interview, the voice recordings were converted into Microsoft Word documents and analysed by three researchers. These documents have been analyzed in terms of the description of children's knowledge and perceptions and revealing the themes.

*Findings:* The average age of the children was  $13.55 \pm 2.11$  (Min-Max = 11-16). Designated themes were formed as follows: Information (cancer definition, cancer causes, cancer treatment, cancer prognosis, cancer group, sources, unknowns/misidentified), emotions (what if he had cancer, what if his family had cancer), awareness (positive aspects of cancer, negative aspects of cancer) and solutions.

*Conclusion:* Most of the healthy children participating in this study have detailed, scientific, realistic knowledge and awareness of cancer disease. However, there are those who had misinformation. The children's most important sources of information are their family and close relationships. Children have often stated that they would experience the emotional reactions and mourning process emerging from fatal illness when they faced cancer. Nevertheless, there were children with hope and optimistic emotions. Children have traditionally demonstrated a high awareness of cancer with psychological stability and post-traumatic growth expressions aside from the negative aspects of chronic illness. They have proposed innovative and bright new solutions for cancer prevention and treatment.

## Complementary and integrative health methods used for the treatment of mucositis in children with cancer in Turkey

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*Introduction:* Parents often refer to complementary and integrative health (CIH) methods to protect their children from the side effects of cancer and cancer treatment. There is not any research into the CIH used for treatment of mucositis in children with cancer. To contribute to the literature, we aimed to determine the CIH methods for mucositis in children with cancer adopted by parents.

*Methods:* This study design is multiple-centre, cross-sectional study. It was carried out in six paediatric haematology oncology clinics in Ankara, the capital city of Turkey. The data were collected from the caregivers using written questionnaire to find out use of CIH methods for the treatment of mucositis. The parents ( $n=302$ ) of children with cancer who underwent at least one round of treatment of chemotherapy were included in this study.

*Result:* According to the parents' statements, mucositis developed in 91.1% of the children with cancer and CIH was used in 51% of them to treat its side effects. Parents stated that to deal with the mucositis, they used black mulberry (41.5%), carbonate (15.2%) and honey (11.6%) the most. Parents who used CIH for themselves, those whose income was more than their expenses, and those who believed that clinical care protocols were partially effective used CIH more for the treatment of mucositis in their children with cancer. Of the parents, 51.8% used CIH without informing the healthcare providers.

*Conclusion:* Most healthcare providers are unaware of the parents' use of CIH for the treatment of mucositis. Parents' opinions on these methods, of which the side effects and potential interactions with chemotherapy are not precisely known, and their use should be evaluated by healthcare providers.

## Systematic review: effects of diabetes education programs on children and adolescents with type 1 diabetes concerning the diabetes management

Frantzeska Xeniou, Maria Zisi

*University of Athens, Athens, Greece*

*Introduction:* Demands concerning the right management of type 1 diabetes, as well as, the continuous challenges created at all life fields, enforce correct and personalised diabetes education.

*Aim:* To synthesise evidence from randomised trials of educational interventions in children and adolescents with type 1 diabetes to inform the evidence-base for adoption of such interventions.

*Method:* A critical review of research articles was made using the electronic database PubMed (2008-2018), with the key words: type 1 diabetes, diabetes education, diabetes management, children, adolescents. Nine relevant primary research articles were found.

*Results:* Psycho-educational and psycho-social interventions by care ambassadors and personal trainers did not come up with statistically significant differences concerning the levels of HbA<sub>1c</sub>. However, improvements in quality of life, family conflicts and self-efficacy were reported, as well as motivation to keep trying. On the other hand, attending camps can have a positive and lasting metabolic impact on glycaemic control in young patients. Nutrition education by a registered dietitian, did not come up with statistically significant results concerning the levels of HbA<sub>1c</sub> either. Internet-based educational interventions were identified by high participation and satisfaction, with no significant results concerning the levels of HbA<sub>1c</sub>, but with highly positive outcomes concerning amelioration of social networking, family relationships and diabetes problem solving

*Conclusion:* Diabetes education has a likely positive effect on diabetes management among children and adolescents with type 1 diabetes, when corresponding to their problems and worries.

## Exploring new ways of working in terms of role confidence and competencies of nurses

Jane Coad, Nicola Ashley, Sam Smith

*Faculty of Health and Life Sciences, Coventry University*

*Introduction:* In delivering excellent care nursing role competency is intrinsically linked to professional experience, confidence, knowledge and skills (Bradshaw, 2000). However, there remains limited knowledge about this. In 2015, the UK charity, Teenage Cancer Trust launched the first Competency and Career Framework for Nursing as a toolkit to promote professionals' personal growth and care delivery support in the specialist field of paediatric and adolescent cancer (Smith et al 2014). An evaluation was commissioned alongside roll out at two large hospital trusts in the Midlands of the UK, over a 12-month longitudinal timeframe. This aimed to explore the impact of the framework on specialist nurse's role competencies.

*Methods:* Following successful ethical agreement, a before and after intervention study took place. Data sets included documentary analysis ( $n=15$ ), two focus groups and in-depth follow up with eight nurses using surveys, online blogs and one-to-one interviews.

*Results:* A Theory of Change analysis approach highlighted results that the new Competency and Career Framework for Nursing had ensured a positive impact on changing nurse's professional roles and enhanced confidence, increasing self-reflection and understanding about the value of training and education opportunities.

*Conclusion:* Impact on new ways of working in terms of role confidence was found. Initially confidence in nursing role competencies was high. However, ratings decreased in the first few months of implementing the Framework. Nurses were having to re-think roles, and the way care was performed, with the support of a mentor. Results showed that the framework aided as a self-reflection tool, enabling the nurses to re-evaluate their role competencies to become more confident in the long term. Personal and professional leadership was enhanced (McAllister and Lowe 2011). We will share the tool in our presentation and believe study results have resonance for European delegates in re-evaluating nursing roles across the settings they work in.

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Source of Funding: Teenage Cancer Trust, United Kingdom

## ORAL PRESENTATIONS 4: NEONATAL CARE

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OP018

### The effect of bath and massage on the findings of life in newborns

Emriye Hilal Yayan, Yeliz Suna Dağ

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*Objective:* The aim of this research was conducted to investigate the effects of bathing and massage on the findings life in newborns.

*Method:* The study was conducted experimentally from January 1, 2017 to December 31, 2017 with 192 newborn (massage 48, bath tub 48, wipe bath: 48 control) intensive care units of a university hospital. Before the applications, the vital signs of the infants were measured eight and 16 hours after the application. The data were recorded by the researcher in the Baby Tracking Form. Percentage, mean and ANOVA were used to evaluate the data.

*Results:* It was determined that 46.7% of newborns included in the study were female, 82.3% of them were born by caesarean section, 43.88 ( $\pm 3.58$ ) of height, 2,257 ( $\pm 712$ ) of weight average and 35.53 ( $\pm 1.55$ ) of gestational week averages. It was determined that there was no significant difference between the mean of vital signs (pulse, respiration, oxygen saturation, blood pressure, body temperature) according to massage, wiping, bathtub and control groups ( $P > 0.000$ ).

*Conclusion:* Massage, wiping and bathing in the newborns were found to be ineffective on the findings of life in the study.

## Examining the effect of bath and massage on newborns with hyperbilirubinemia

Yeliz Suna Dağ, Emriye Hilal Yayan

*Nursing Department, Malatya, Turkey*

*Objective:* The aim of this study was to examine the effect of massage, sponge bath and tub bath on newborns with hyperbilirubinemia.

*Materials and methods:* The research was carried out experimentally between 1 January and 31 August 2017 in the newborns of Inonu University Turgot Ozalj Medical Center where newborn intensive care units received phototherapy. The newborns that met the study criteria from the specified phase formed the sample of the study. The newborns were given a massage ( $n=35$ ), a tub bath ( $n=35$ ) and a sponge bath ( $n=35$ ) by the researcher. Except for routine clinical procedures, no other procedures were administered to the infants in the control group ( $n=35$ ). The total bilirubin values of the infants were measured using non-invasive bilirubin device before the procedures, and six hours and 12 hours after. The data were recorded on the Newborn Follow-up Form. In the evaluation of the data were used frequency distributions, ANOVA, chi square test.

*Results:* This study found that there was a significant difference between the bilirubin levels and the duration of receiving phototherapy mean scores in massage, sponge bath, tub bath and control groups ( $P=0.000$ ). Massage, tub bath and sponge bath practices for newborns were found to be effective in decreasing their bilirubin levels and reducing the duration of receiving phototherapy, respectively ( $P=0.000$ ).

*Conclusion:* The study found that massage, tub bath and sponge bath practices in newborns receiving phototherapy were effective in lowering bilirubin levels and reducing phototherapy receiving times. It was thought that due to the positive effects of the applications could be used in neonatal care.

## Effect of sunflower and almond oil on the skin moisture of the preterm infants: a randomised controlled trial

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*Introduction:* Skin of infant covered with vernix caseosa and other cellular debris at birth. To provide healthy developing of skin and protect skin from irritation and inflammation, special skin care practices need to be done. Thus, morbidity and mortality which may occur due to the immature skin barrier can be reduced. The objective of this study is to examine the effect of comparing sunflower and almond oil to routine care on the skin moisture of the preterm infants.

*Methods:* The data of this randomised controlled trial were obtained from 90 preterm infants randomly assigned in the neonatal intensive care unit of the Health Sciences University, Bakirköy, Dr Sadi Konuk Education and Research Hospital whose gestational age were 32-37 weeks (sunflower oil group  $n=30$ , almond oil group  $n=30$ , control group  $n=30$ ). Preterm babies were assessed by the researcher in terms of data collection form and neonatal skin condition score (NSCS) during pre- and post-intervention period. The skin moisture level was evaluated by using a skin moisture meter.

*Results:* When the average of skin moisture were compared between study groups, it was found infants' abdomen ( $P<.001$ ), lateral part of the upper leg ( $P<.01$ ) and upper outer quadrant of the hip ( $P<.05$ ) skin moisture who were in sunflower oil and almond oil groups were high among all groups during post intervention period. Besides, when the NSCS evaluated, the scale score in the control group was found significantly higher than the other groups, but there was no difference between sunflower and almond oil groups ( $P<.001$ ).

*Conclusion:* In this study, it was found the use of sunflower and almond oil has a positive effect on skin moisture in preterm infants. In all analyses, no significant difference was found between sunflower oil and almond oil applications.

## The effect of massage on newborns

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Massage therapy is one of the most used and effective methods in alternative therapies. Massage is also a therapeutic nursing method and affects the baby's behaviour status, respiration and stress level positively. In this review, it is aimed to examine the effect of massage on newborns. The benefits of massage are revealed through many researches and this method is a simple, inexpensive and effective way to support the development of the baby. Baby massage promotes sense of trust in the baby by maintaining the baby's body contact, helps to reduce the stress of the baby and supports the positive emotional bond between mother and baby. Besides, it has been reported that the massage helps the baby's needs to be recognized quickly by the caregiver and thus strengthens the parenting skills. Mothers who regularly massage their babies everyday have been reported to have high scores on emotional attachment on their babies. In addition to improving attachment behaviour, massage increases the mother's prolactin level and breastfeeding success rises with its nourishing feelings. In newborn pain management, massage is a non-pharmacological method, and a proven and efficient technique. The pain scores of infants who underwent massage during invasive intervention were found to be 50% lower than the untreated group. Colic which causes pain in the first months of life in infants is an uncomfortable condition. Massage has helped to reduce attacks in infants with colic episodes.

As a result, it is important that child health nurses, who have primary tasks in contributing to mother's infant attachment, supporting breastfeeding and clearing up painful complications that may arise in newborns, should contribute to this practical, cheap and effective operation by working together with parents.

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## When to apply skin moisturizer after bathing of newborn infants? A pilot study

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*Aim:* The skin of preterm infant plays an important role in adaptation to environment after birth. This study was designed as a randomised controlled experimental study, to determine the effect of moisturising time on skin moisture level and body temperature after tub bath in healthy newborn infants.

*Methods:* The population of the study consisted of newborns born above the 38th gestational week in Medipol University Hospital in Istanbul between March 2017 and February 2018, who met inclusion criteria and were determined by using randomised controlled method. The newborns in the control group ( $n=17$ ) were dried with a towel then moisturize immediately after bath and clothed. The newborns in the experimental group ( $n=20$ ) were dried immediately after bathing, worn a hat, swaddled with double blanket and after waiting for 10 minutes infants were moisturised and clothed. Skin moisture (forehead, abdomen, back, arm, leg, palm, sole) and body temperature of the infants were measured before bathing, immediately after bathing, and 10, 20, 40, and 60 minutes after bathing.

*Results:* The bath water temperature was 38°C for all infants. The average of the room moisture level was  $42,22 \pm 4,35$  %; the average depth of the bath water was  $11.62 \pm 0.76$  cm as high enough to cover the shoulder level of the infants. The average bath time of the infants was  $3.81 (\pm 0.46)$  minutes. As the groups were compared there is no statistically significant difference were found for skin moisture (forehead, abdomen, back, arm, leg, palm, sole) and body temperature measurements of the infants before bathing, immediately after bathing, and measurements after bathing ( $P=0.05$ ).

*Conclusion:* It was determined that even though there was not statistically significant difference, intervention administered to experimental group was positively affected skin moisture and body temperature.

## The effective of massage on preterm infants weight gain: systematic review

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*Introduction:* This systematic review was conducted to examine the effects of therapeutic massage implementations on the weight gain of very low birthweight preterm infants in intensive care unit.

*Method:* To find relevant articles on PubMed, Google Scholar and Science Direct databases were scanned using keywords such as preterm, massage, weight gain. Among 2002-2017, a total of 18 research articles were published in internationally published scientific journals for scientific purposes. A total of 5,453 articles related to the massage topic were found in the preterms and the articles that fit the criteria of inclusion in the study (experimental, semi-experimental and randomized controlled trials, full texts published, related to the study topic). The PRISMA checklist was used when preparing this systematic review.

*Results:* A total of 18 research articles examined the effects of therapeutic massage applications (Tactile kinesthetic practices, coconut, mineral oil and standardized massage) on weight gain. Akbarian Rad et al 2017, Singht 2011, Saeidi et al 2015, Bayomi and Nagger 2015, Tekgündüz et al 2014, Rangey and Sheth 2014, Kumar et al 2013, Abdallah et al 2013, Karbasi et al 2013, Ang et al 2012, Massaro et al 2009, Mohamadzadeh et al 2009, Field et al 2008, Sankaranarayanan et al 2005, Dieter et al 2003, while studies have shown that preterm babies who are massaged weight gain remarkably. With Aliabadi and Askary 2013, Smith et al 2013, Procianoy et al 2010 the effect of massage on weight gain was not proven.

*Conclusion:* It has been proven through studies that there is a positive effect of massage on weight gain massaging on weight gain, that is the weight gain of preterm infants with different physiological, sociological and cultural features effective all around the world. This systematic review is thought to contribute to the work to be done on the subject.

## ORAL PRESENTATIONS 5: ISSUES RELATED TO THE HOSPITALISED CHILD

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OP025

### Humanising care for sick children in Sweden

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*Introduction:* Good practice involves humanising children in hospital care [1]. Children require assistance in making sense of healthcare situations through play and preparation, access to family and friends, being treated with dignity and encouraged to participate in care [2,3]. The CHRC will be made law in Sweden 2020 and there is a dearth of studies to guide its implementation in paediatric care. Nursing staff's possibilities to care for children in hospital were ascertained using a known humanising framework [4].

*Methods:* Fifty three questions were translated and validated from English to Swedish and distributed to four centres for paediatric care in the West of Sweden. Respondents ( $n=69$ ) consisted of nurses and paediatric nurses.

*Results:* Nurses in paediatric care love their job but cannot always give care to children and families as they would want to. Recurring themes are lack of support to child and family, a wish for but lack of child-friendly environment and the nurse's way of working. Hindrances were expressed in supporting child and family care decisions, regular up-dates on care, everyday routines, contact with other children or families in similar situations or giving a named contact on discharge. Time and possibilities to reflect over aspects of the caring environment that the child and family may be unused to, adapting procedures to individual children's needs and situations or helping the child understand changes they may be going through, were limited. Respondent's expressed difficulties in formulating clear goals for caring and lack of opportunities for reflection. At present the findings from this study are being reviewed with focus on human rights and CHRC in particular [5].

*Conclusion:* The demands that implementation of CHRC as law will make on paediatric care and how can we meet these needs over the next few years are of utmost importance.

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## Facilitating participation. A joint use of an interactive communication tool by children and professionals in healthcare situations

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*Introduction:* Children's right to participation is highlighted in laws and convention texts. Likewise, children express the importance of being involved in situations affecting them. Being involved enables them to express the own perspective. In recent years, children's use of interactive technology in tablets and smartphones has increased. The use of technology is also increasing within healthcare and paediatric contexts.

*Aim:* To develop and test an application, as an interactive communication tool [IACTA], meant to facilitate young children's participation in healthcare situations when guided by professionals.

*Methods:* Children's perceptions of healthcare situations were sought through interviews, vignettes and drawings. A participatory design process transformed these perceptions into iteratively evolving prototypes of an application, IACTA. In healthcare situations, video observations captured cues of participation demonstrated by the children when using the application guided by professionals. Further a quantitative approach identified the distribution of the cue usage. In total, 114 children participated in the project, in two clinical settings and a preschool.

*Results:* The children perceived everyone involved in a healthcare situation as actors by their own. Their perceptions of what was important were transformed into the software of IACTA. The children were co-designers in the development process of the applications and contributed to its age-appropriateness, usability and likeability. When the final version of the application was tested in healthcare situations, the children demonstrated participation cues, meant as curious, thoughtful and affirmative. The distribution revealed that curious cues were mainly demonstrated. Age and earlier experiences of healthcare situations influenced how the cues were demonstrated.

*Conclusion:* Searching the children's perspective, when using IACTA, revealed a situated participation based on their inter-inter-action with the application itself and the professionals. This situated participation guided the professionals how to facilitate and best involve the specific child in the situation in an individualised way.

## Health professionals' experiences of guidance when interactive technology is used as a facilitator of young children's participation in healthcare situations

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*Introduction:* Children's options of participation in healthcare situations depends on their engagement. Professionals can promote or delay the children's involvement. Thus, children's active participation in a situation is an ambiguous challenge for the professionals to facilitate. Interactive technology has been assimilated into children's everyday lives, even the younger ones. During the last decade, the access of applications for children has grown exponentially, also within paediatric contexts. A recent project developed an application for children aged three to five years. This application, also addressed as an interactive communication tool [IACTA], is meant to be used in specific health care situations, such as physical examinations and needle procedures, to facilitate young children's participation. When introduced in situations, the use of IACTA is guided by professionals.

*Aim:* This study aimed to describe crucial aspects from the health professionals' experiences of bringing IACTA into play in the specific healthcare situations.

*Methods:* A critical incident technique was used in interviews with health professionals regarding their retrospective experiences of the situation when guiding the child using the application in specific healthcare situations. The interviews were later analysed using inductive qualitative content analysis.

*Results:* The preliminary results, from sensitive meaning units, codes and generic categories towards main categories, show that IACTA can contribute to involve the children and making them comfortable by limiting their fear and to learn and understand. IACTA also contributes to create a mutual relation between the child and the professionals and to contribute to health professionals making a situational adaptation of the event.

*Conclusion:* Interactive technology will support young children's participation in healthcare situations. However, their participation is also depended on health professionals' ways of guiding the individual child when using the technology, both regarding decisions on when using the technology as well as their specific technological skills.

## Satisfaction of parents of hospitalised children with communication with health professionals

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The study of satisfaction of parents of hospitalised children is important because the assessment of patient satisfaction and the satisfaction of their family members examines the quality of health care. Several factors can affect patient satisfaction, of which the interpersonal aspect of health care is a fundamental feature to which patients react directly and upon which they create value judgements more crucial to their satisfaction than the assessment of the technical aspects of care. Their experience of the disease and hospitalisation is necessary in identifying areas for improvement in the quality of health care.

*Aim:* This study aimed to assess the level of satisfaction of parents of hospitalised children with their communication with health professionals in the Department of Pediatrics at the Hospital Center Zagreb.

*Methods:* The study used a questionnaire which consists of 54 items which examined five aspects of communication with health care providers: the availability and accuracy of information, the attitude of staff towards patients, the ability, knowledge and skills (specific to the profession), working conditions, and attitude towards work obligations to assess a more complete perspective on the quality of communication that health professionals have with parents and children, but also with each other, and to include influences the structure of health care can have on the interpersonal aspect of the process of care. The questionnaire was completed by 52 parents.

*Findings:* Parents expressed high level of satisfaction with communication with health professionals in all examined aspects of communication.

*Conclusion:* Working conditions which influence the behaviour of health care professionals and therefore influence the manner of communication with parents and children, are estimated lowest of all areas of communication with health professionals. By creating better working conditions, health workers are enabled to provide quality health care in both technical and interpersonal terms.

## **‘When my child gets ill’ – Parents’ concerns and need for acutely physician assistance when their child is mildly ill – A qualitative literature study**

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*Introduction:* Many children experience febrile illness caused by viral infections and fever causes anxiety and concerns in parents. This is a main reason for parents seeking advice and reassurance from healthcare professionals. The literature in the field is broad and qualitative studies have been done over the last 20 years. Aim: This study aims to synthesize the qualitative literature upon the topic of parents’ insecurity and distress when their child becomes acutely ill with a virus infection.

*Method:* A systematic literature review was conducted in the search databases PubMed and CINAHL. From 282 studies, seven qualitative studies were identified to match inclusion and exclusion criteria. The results were analysed using a phenomenological-hermeneutical theory approach.

*Findings:* Three main themes emerged after a thorough examination of the selected studies: i) Parents’ knowledge and contact time to the physician, ii) Seeking advice from the physician, and iii) Initiatives for the future. Parents had various thoughts before calling the physician. What they feared most was fever, and if the child was in danger of developing meningitis. When they contacted the physician, it was because they felt they had lost control of the situation. The studies found divergent conclusions on how the problem should be addressed in the future. In three studies the suggestion was to follow the parents’ desire for more education and information while the remaining studies concluded that healthcare professionals must acknowledge parents’ need to have their children examined acutely as a factor that cannot be changed.

*Conclusion:* Parents’ anxiety when their child becomes acutely ill is a well-known phenomenon in the western part of the world. It is uncertain how to solve the problem, as parents have a desire to manage the illness themselves, but often are worried and let their feelings control rather than their reason.

## The experience of parents during their child's hospitalisation in Greek paediatric intensive care units (PICUs)

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*Background:* Parents are distressed by many factors when their child is hospitalised in a PICU and develop various strategies to cope with their distress.

*Aims:* This qualitative study is based on interpretative phenomenological analysis explores the parents' lived experience of having their child hospitalised in a PICU. The data were collected through semi-structured interviews with 23 parents of children aged from two months to 16 years old who were hospitalised in critical condition in the PICU of three Greek paediatric hospitals.

*Findings:* Four super-ordinate themes were identified:

- Trying to build a meaning
- Interaction with others
- Parenting the hospitalised child
- Life after the PICU.

Parents described intense emotional and physiological reactions and the coping strategies they developed. Spousal and social support and the communication with medical staff affected their coping strategies. This experience greatly influenced both their parenting role and attitude. The parents also expressed thoughts about the future after the PICU and the long-term effects of this experience.

*Discussion:* The PICU experience is hard to process both emotionally and intellectually. The findings of this study have clinical implications related to the deeper understanding of parental experiences that can help healthcare professionals provide appropriate support to parents.

## Investigation of sensitivity of children by some variables in surgical intervention

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*Introduction:* Children who have difficulty in perceiving abstract concepts such as illness and death may find surgical procedures traumatic and may experience anxiety. This study examines the anxiety levels of children before surgery according to some variables.

*Methods:* The study is a descriptive and cross-sectional type and consists of 51 children aged 9-12 years who had surgery in Manisa Celal Bayar University Hafsa Sultan Hospital paediatric surgery department between July 2017 and September 2017. The Socio-demographic Characteristics Data Form and State-Trait Anxiety Inventory for Children scale were used as data collection tools in the study.

*Results:* The mean age of the children was 10.5 ( $\pm 1.36$ ), 72.5% were boys, 67% had not had surgery before, and 45.1% had experienced day surgery. The mean scores of the state and trait anxiety scores of the children were 49.27 ( $\pm 4.11$ ), 33.29 ( $\pm 6.35$ ) respectively. There was no statistically significant difference between the state and trait anxiety total average scores and age, gender or parents' education status ( $P > 0.05$ ). Children who had previously undergone surgical procedures were found to have high levels of trait anxiety total points. There was no statistically significant relationship between the state and trait anxiety total scores of children who had undergone previous surgery or not ( $P > 0.05$ ). There was no statistically significant difference between the state and trait anxiety scores of children who underwent day surgery and children who were hospitalised after surgery ( $P > 0.05$ ).

*Conclusion:* Children's anxiety levels were found to be high before surgical interventions. Nurses should provide guidance, counselling and education to help reduce the anxiety levels of children before a surgical procedure.

OP032

### Medicines or other practices used for children before an emergency service application: a pilot study

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*Aims:* This descriptive study was conducted to investigate the use of medicines and other interventions for children before paediatric emergency care.

*Methods:* The sample of the study consisted of 91 families who were seen at the paediatric emergency service of an educational and training hospital between in Istanbul between July and December 2017. All participants who volunteered were included in the study. A questionnaire form was used for data collection. Mean, standard deviation, Chi-square test, Continuity (Yates) correction and Fisher's exact Chi-square test were used for statistical analysis ( $P < 0.05$ ).

*Results:* The mean age of the children was 20.08 ( $\pm 49$  months), 51.6% were girls and 48.4% were boys. It was found that 61.5% of the children had taken medication before they were cared for at the paediatric emergency service and most of these medicines (82.1%) were given by the families because of high fever. The rate of using medicines before arriving at the paediatric emergency service was higher in children who were older than six months and this difference was statistically significant ( $P = 0.038$ ,  $P < 0.05$ ). There was no significant difference between status of parents who used medicines when compared with their educational level, age, occupation and economic situation ( $P > 0.05$ ).

*Conclusion:* The prevalence of the use of medicines in children was common practice among families before attending the paediatric emergency clinic and the most common reason for using medicines was to treat high fever.

## Evaluation of nurses' perception and knowledge in Basic Paediatric Life Support (BPLS)

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*Introduction:* Basic Life Support (BLS) is the first response needed to support life in adults and children after cardiac arrest. Nursing staff are usually the first responders when these incidents occur in hospital. The aim of this study was to evaluate nurses' perceptions and knowledge in Basic Paediatric Life Support (BPLS)

*Methods:* Data collection was conducted by an anonymised 37 multiple-choice questionnaire completed by nurses working in paediatric hospitals in Athens.

*Results:* In total, 100 paediatric nurses (8 men, 92 women) participated in the pilot study with a mean age of 40.96 ( $\pm 9.31$ ) years and mean total working experience of 16.18 ( $\pm 10.82$ ) years. The majority (62%) had attended a BPLS course during their training and more than half (58%) stated that this training took place more than three years before. 90% of the participants rated the systematic BPLS training as absolutely important. More than one in two (56%) responded according to the current guidelines and 20% stated no knowledge of the current PBLS guidelines. The average theoretical knowledge of PBLS was satisfactory. Duration from last BPLS training ( $P=0.024$ ) and total years of experience ( $P=0.048$ ) were negatively associated with theoretical knowledge of PBLS.

*Conclusion:* The results of this study demonstrate the limitation of nurses' knowledge of BPLS guidelines. However, they indicate that nursing personnel are willing to obtain the necessary skills and knowledge of BPLS algorithm to deal with any case of paediatric cardiorespiratory arrest in a safe way.

## Ten years of experience with the newborn life support seminar in Greece

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*Introduction:* The Newborn Life Support (NLS) seminar is organised by the Hellenic Society of Cardiopulmonary Resuscitation and is based on guidelines issued by the European Resuscitation Council (ERC). Healthcare professionals involved in the perinatal care of the newborn need to have up-to-date theoretical knowledge on the pathophysiology of apnoea and bradycardia in newborns with asphyxiation and the technical skills required for effective intervention when needed. The NLS was first established in Greece in 2008 with the aim of educating this group of personnel and providing a unique resuscitation strategy.

*Methods:* We present our experience with the NLS in Greece. The archives of the Hellenic Society of Cardiopulmonary Resuscitation served as the source for this retrospective study.

*Results:* The first NLS seminar in Greece was in 2008 and since then a total of 38 seminars have been held. Each seminar has lasted for eight hours. Candidates are initially trained theoretically in the physiology/pathophysiology of apnoea and bradycardia at birth and in the resuscitation algorithm as well as in the resuscitation of the premature neonate. Three skill stations are presented (airway management, chest compressions, familiarisation with the required equipment and venous access). So far, a total of 865 healthcare professionals have been trained and 63 of them have become NLS instructors, having taken the required generic instruction course. A significant percentage of the people we have trained work in rural Greek Hospitals. The certification has a duration of five years.

*Conclusion:* It is necessary to educate healthcare personnel involved in perinatal care and implement newborn resuscitation guidelines. The NLS seminar has steadily gained greater popularity and acceptance among healthcare professionals and is becoming a useful tool in practising their everyday work.

## Preliminary results of theoretical knowledge retention after newborn life support seminar

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*Introduction:* The Newborn Life Support (NLS) seminar is organised by the Hellenic Society of Cardiopulmonary Resuscitation and is based on the current guidelines issued by International Liaison Committee on Resuscitation (ILCOR) and the European Resuscitation Council (ERC). The seminar is for healthcare professionals involved in the perinatal care of the newborn and it provides theoretical knowledge on the pathophysiology of apnoea and bradycardia in the asphyxiated newborn at birth, and teaches technical skills required for effective intervention, using a unique strategy of resuscitation.

*Methods:* This is a retrospective study involving 45 participants from the seminar. On the certification day they were examined for their theoretical knowledge using a multiple-choice questionnaire with 50 questions, with an examining time of 40 minutes, after studying the ERC NLS manual. The participants answered the same questionnaires at three and six months post-certification over the telephone and without any preparation.

*Results:* The average score of newly-certified NLS providers on the day of certification was 88.7%. Three months later there was a slight decrease to 83.11% a reduction of 5.64% and six months later it reduced to 82.14%. Retention of theoretical knowledge remained constant at 33.77% after three and six months from the certification. Doctors exhibited the lowest rate of loss of theoretical knowledge.

*Conclusion:* It is imperative to further study the newly resuscitation providers over a longer period to try and find ways of maintaining theoretical knowledge, particularly as the certification lasts for five years. There is also a need to investigate the causes and factors contributing to the reduction in theoretical knowledge. Retention of the theoretical framework over time can ensure that the resuscitation teams will be able to provide optimal resuscitation and improve perinatal outcomes.

## Nurse management of patients affected by accidental caustic ingestions in a paediatric emergency department (ED): creation of an operative procedure

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*Introduction:* The accidental ingestion of caustic substances is one of the most common paediatric emergencies. In the Italian context, the knowledge concerning the ingestion of caustic substances in children is still limited and this has a negative impact on the management of these patients in emergency departments (ED).

*Aims:* The present study aims to create a nursing procedure for patients who ingest caustics, from the arrival at the ED to admission or discharge, which will improve health outcomes and ED performances. [1-4]

*Methods:* A bibliographic search has been conducted using PubMed and CINAHL scientific databases. Data concerning patients aged up to 14 years who were admitted to the Regina Margherita Hospital (Turin, Italy) after ingesting caustics and visited at Paediatric ED from 2012 to 2016 were also collected. The procedure layout refers to the procedures of AOU Citta della Salute e della Scienza in Turin, Italy. [5-15]

*Results:* An operative procedure based on the latest scientific evidence has been created that helps health professionals to reach early diagnosis and treatment of the patient with caustic ingestion, as well as directing the multidisciplinary approach to get best results in terms of efficiency and children's quality of life.

*Conclusions:* Nurses can rely on an operative procedure and make fewer assessment errors during triage. There's also the possibility to adopt a course of action that has the comfort and children's health protection as the main objective. [5,11-15]

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**OP037**

## Inter-rater reliability of two paediatric early warning score tools

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*Introduction:* Paediatric early warning score (PEWS) assessment tools can help healthcare providers in the timely detection and recognition of subtle changes in patient condition that indicate clinical deterioration. However, PEWS tools instrument data are only as reliable and accurate as the caregivers who obtain and document the parameters.

*Aims:* To evaluate inter-rater reliability among nurses using PEWS systems.

*Methods:* The study was carried out in five paediatrics departments in the Central Denmark Region. Inter-rater reliability was investigated through parallel observations. A total of 108 children and 69 nurses participated. Two nurses simultaneously performed a PEWS assessment on the same patient. Before the assessment, the two participating nurses drew lots to decide who would be the active observer. Intraclass correlation coefficient, Fleiss'  $\kappa$  and Bland–Altman limits of agreement were used to determine inter-rater reliability.

*Results:* The intraclass correlation coefficients for the aggregated PEWS score of the two PEWS models were 0.98 and 0.95, respectively. The  $\kappa$  value on the individual PEWS measurements ranged from 0.70 to 1.0, indicating good to very good agreement. The nurses assigned the exact same aggregated score for both PEWS models in 76% of the

cases. In 98% of the PEWS assessments, the aggregated PEWS scores assigned by the nurses were equal to or below 1 point in both models.

*Conclusion:* The study showed good to very good inter-rater reliability in the two PEWS models used in the Central Denmark Region.

OP038

## The development of know-how during resuscitation simulation training among staff working with newborns

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*Introduction:* Newborn resuscitation skills are of great importance from the viewpoint of patient safety and the prognosis of the infant.

*Aims:* To investigate the efficiency of 1.5-hour long structured simulation training in the development of technical and non-technical skills and to evaluate the feasibility of the education format.

*Methods:* The target group consisted of neonatal nurses, paediatricians and neonatologists, midwives of the delivery room and the maternity ward and the staff of the operation theatre at the Central Finland Healthcare District. The data ( $n=396$ ) were collected with a semi-structured questionnaire before and immediately after the training.

*Results:* Each competence area developed statistically significantly when the results were compared before and after the simulation training. The development of know-how was especially seen in the areas of knowing the resuscitation guidance (+13.8%,  $P<.001$ ), knowledge (+13.6%,  $P<.001$ ), and skills (+12.4%,  $P<.001$ ). Education format was perceived feasible. Literature demonstrates that there is lack of knowledge and inadequate communication during newborn resuscitation and it is demonstrated that simulation training gives a chance to practice the non-technical skills needed in newborn resuscitation situations. Our study results are in line with earlier reports.

*Conclusion:* This study demonstrated that short neonatal resuscitation simulation training is an effective method to enhance both non-technical and technical resuscitation skills. The education format was considered efficient and feasible. Based on these promising results full-scale simulation training will continue to be part of our newborn resuscitation training programme. Simulation training is effective in developing both technical and non-technical skills needed in the resuscitation of the newborn according to self-assessment. The staff working with newborns perceived the education format to be feasible.

## ORAL PRESENTATIONS 7: PAEDIATRIC CARE IN THE COMMUNITY

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OP039

### Psychosocial behaviours of children who continue primary and secondary school according to parents

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*Introduction:* Psychosocial problems can be seen in childhood due to parental and environmental factors.

*Methods:* This descriptive study evaluated parents' perspectives about psychosocial and behavioural problems of their 8-15-year-old children. The study consisted of 1,651 students' parents from five primary and five secondary schools who were randomly selected from the Sisli province in Istanbul. Data of the study were collected by using a demographic data form and the Psychosocial and Behavioural Problem Checklist (PSC-17).

*Results:* Most of the participants were mothers (78.8%). Mean academic point of children was 84.27 ( $\pm 10.02$ ) and mean age was 11.36 ( $\pm 1.24$ ). Demographic characteristics: 56% of children were girls, 6.9% of children's parents were divorced and 85.1% of these children were living with their mothers. The parents reported that their children have shyness (47%), over-dependence on mother (29.7%), over-dependence on father (19.3%), sleeping problems (16.2%), tantrums (9.2%), difficulties interacting with peers (6%) and aggression (3.6%). The mean PSC-17 score of children was 7.23 ( $\pm 4.66$ ) and 17.2% of children's scale score were 12 or more. A negative and statistically significant relationship was found between children's mean academic point and PSC-17 scores ( $r: -0.228$ ;  $P < 0.01$ ). PSC-17 scores of boys were statistically significantly higher than girls ( $P < 0.01$ ). PSC-17 scores of children with shyness, tantrums, aggression, sleeping problems, difficulties with peers, over-dependence on mothers and over-dependence on fathers were statistically significantly higher than children who did not have any problem ( $P < 0.01$ ).

*Conclusion:* In our study parents stated they saw mostly shyness and over-dependence as behavioural problems in their children. It was determined most of the children were not in high risk groups for psychosocial and behavioural problems and as the scale scores of children increased, their academic points decreased.

## Investigation of the accidents occurring at elementary and secondary schools and the effectiveness of a preventive programme

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*Introduction:* Unexpected events that occur out of human will and cause physical and mental damage are called accidents [1]. School-age children can often experience accidents due to the increase in physical activities, lack of precautions and meeting traffic problems when walking to school [2,3]. This study was performed to analyse the causes of school accidents and investigate the effectiveness of a preventive programme.

*Methods:* The study used a descriptive cross-sectional design in the first part and a semi-experimental design in the second part. Four provincial elementary schools and four public secondary schools in a city were included in the study. During the first part of the study, The Scale for Knowledge and Behaviors for the Safety Precautions at School Accidents, including a survey of demographic characteristics, was used in the beginning of the 2015-2016 academic year and for one month, school management reported accidents through a declaration form for accidents and their characteristics, which described the characteristics of the accidents occurring in the school which was used to prepare a preventive programme. Root cause analysis of the accidents was carried out and a preventive programme was generated for the accidents and training was given which was supported by banners and brochures. Post-test data were collected at the end of the academic year.

*Results:* A total of 857 students were enrolled in the study. Mean age of the students was 11.2 ( $\pm$ 1.4) years old, 50.8% were girls ( $n=435$ ) and 50.3% were studying at elementary school ( $n=431$ ). The total number of accidents that were detected during the 2015-2016 academic year was 26. It was found that the most frequent accidents were falling, crashing and extremity flexions, respectively and accidents have most commonly occurred in school garden during gym class and the most frequent cause of the accidents was carelessness. It was reported that all accidents were reported because of injury ( $n=26$ ). When physical conditions of the schools were examined, it was detected that there was not a security guard responsible for the safe passage of the students, there were no instructions for safe use of sport facilities and the fields allocated for sports were below the ideal size. Based on these findings, a technology-supported preventive program including student training was prepared and implemented. Meanwhile, the physical conditions detected in the schools and inappropriate fields were improved.

Mean pre-test score of the students from the scale of knowledge for safety precautions at school accidents was found to be 68.15 ( $\pm$ 9.34), and their mean post-test score was

116.15 ( $\pm 9.22$ ); their mean pre-test score from behaviour scale was 114.89 ( $\pm 20.47$ ), and their mean post-test score was 171.62 ( $\pm 16.4$ ). After the preventive programme, a statistically significant difference was found between their total mean scores of both knowledge and behaviour at pre-test and post-test practice of Knowledge and Behaviour Scales for Safety Precautions at School Accidents ( $P < 0.05$ ).

**Conclusion:** School buildings should be designed to minimise factors that may lead to the accidents and each accident that occurs in school should be analysed in detail.

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#### OP043

## Educational project dedicated to school teachers for the correct management of epileptic seizures in school-age children

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**Background:** The background of this study comes from scientific literature analysis, from families demanding that school staff are trained in managing epileptic seizures after repeated admissions to hospital among children who experienced seizures during school time. Data coming from literature reveal that despite knowledge of epilepsy being widespread, it is difficult to properly train school staff to manage seizures. These difficulties are also due to the emotional involvement that prevents. Evidence shows that 80% of the seizures lasting more than five minutes lead to 'status epilepticus', resulting in hospitalisation and intensive care. Epileptic seizures might be stopped by administering rescue drugs within five minutes of the beginning of the seizure. However, this requires training, awareness and education of school staff. In Italy teachers are unable to administer drugs and this causes incongruous hospital admissions for seizures that might be stopped pharmacologically. The advent of easy-to-use drugs through oro-mucosal administration has changed the approach to acute seizure management, but still there is a strong resistance of teaching and support staff in schools.

**Aims:** To discuss an educational project regarding the correct management of epileptic seizures in children and adolescent in the school environment.

**Methods:** The project included 610 teachers from more than 100 primary and secondary

schools in the city of Rome and the surrounding region. The project involves an educational/information programme and a pilot study. We asked teachers to answer questionnaires before and after the training session. The nursing staff of Neurology and Neurosurgery Units of Department of Neuroscience of the Bambino Gesù Children's Hospital conducted all the activities related to the project. Slide shows, practical examples and ad hoc videos filmed by nurses and physicians were used.

*Results:* We will present the outcomes achieved with the before and after questionnaires, which have so far demonstrated an almost complete acquisition of correct conduct, a significant reduction in anxiety and a willingness to administer drugs during seizures 91% versus 55%. Furthermore, it will be documented through semi-structured interviews at schools that have participated in the training, along with the outcomes about avoided hospitalisations because of the training of the school's staff.

*Conclusion:* Our study confirms the efficacy of using an educational programme about the management of seizures in schools.

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#### OP044

## Paediatric nurses' perceptions of implementing family-centred care model

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*Introduction:* Family-centred care is a nursing care model that seeks to involve the family in the care of their children.

*Aims:* To investigate the perceptions of nurses regarding the implementation and the importance of a family-centred care model in their daily work.

*Methods:* The study used the Family Centred CARE Questionnaire-Revised (FCCQ-R) for a convenience sample of 183 paediatric nurses working in hospitals in Athens. Data collection took place from March to June 2014. The collection was made after obtaining a license from the Scientific Council of the Hospital. The analysis was tested using the statistical program SPSS 18.0.

*Results:* The results of the study showed that the participants considered the philosophy of care with a focus on the family as important ( $P=0.01$ ). The education level of nurses was associated with all dimensions of family-centred care model ( $P<0,001$ ) as nurses and postgraduate or doctoral degree holders were all applying family-centred care. Also, those who had ten years' experience had greater recognition and understanding of the necessity of a family-centred care philosophy ( $P=0.006$ ). In addition, nurses younger than 30 years found the family-centred care model easier to adopt ( $P=0.05$ ), compared with older nurses. Finally, married nurses and those who had children were engaged in a significantly higher proportion of care centred on the family ( $P=0.023$  and  $P=0.002$  respectively).

*Conclusion:* Although nurses find the family-centred care model important in their daily lives, they do not apply it in all its dimensions.

## ORAL PRESENTATIONS 8: FAMILY-CENTRED CARE

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OP046

### Examining the premature caring knowledge level of mothers who have premature babies in intensive care unit

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*Introduction:* It is known that premature babies need more attention and care than full-term babies as they have a higher risk of death. Neonatal nurses should help mothers by informing and teaching them how to care for a premature baby care, during the hospital stay and after discharge.

*Aims:* To examine the nature of knowledge about premature baby care in mothers with pre-term babies at an intensive care unit of a private hospital in the province of Samsun.

*Methods:* The research involved 62 mothers of premature babies over a period of four months. They completed a survey with 28 questions related to feeding premature babies, care after feeding, appropriate sleeping environment, bathing, dressing, navel care, and skin-mucosa care needed for different temperatures. Statistical analysis was performed using SPSS 20.0 packaged software. Number, percentage, frequency, mean and standard deviation were used as parameters for data analysis. Non-parametric Mann-Whitney U and Kruskal Wallis tests were applied to determine the knowledge level of the mothers.

*Results:* According to the data obtained from the survey, the most well-known topic is skin-

mucosa care with the ratio of 68.3% and the least known topic was the appropriate sleeping environment with the ratio of 17.7%. The average of correctly answered questions was 57.2%.

*Conclusion:* No significant correlation was found between knowledge level and mother's age, educational level, family type, perception of income and expenses. On the other hand, a significant correlation was found between knowledge level of mothers and the previous experience of having a premature baby. The knowledge level of mothers who had the premature birth history was higher than the others.

**OP047**

## **Predictors of quality of life for families of children and adolescents with severe physical illnesses who are receiving hospital-based care**

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*Introduction:* There is strong evidence regarding the impact of medical treatments on hospitalised children and their families following diagnosis with a severe illness. Even though survival rates have increased for children and adolescents with severe illnesses such as cancer, kidney, liver and gastrointestinal diseases, lengthy medical procedures and symptom management may have a great impact on the well-being and quality of life for the family. Little is known, however, about promoting family quality of life in hospital-based paediatric settings. The purpose of this study was to evaluate the predictors of quality of life across physical health conditions among families of children and adolescents with cancer, kidney, liver and gastrointestinal diseases.

*Methods:* The study design was cross-sectional. Thirty-eight families of children with cancer, kidney, liver or gastrointestinal diseases participated at the Children's Hospital at Landspítali University Hospital. Data were collected using valid and reliable instruments to measure the study variables from March 2015 to May 2016.

*Results:* The main finding from the hierarchical regression analysis indicated perceived family support and illness beliefs (controlling for the cancer diagnosis), significantly predicted quality of life of the family; approximately 44% of the variance in the families' perception of their quality of life was explained by the model.

*Conclusion:* The findings emphasise the importance of developing effective interventions for families of children with severe illness. Therapeutic conversation as an intervention needs to specifically focus on illness and symptom management, using the support network of the family, offering emotional support, and exploring illness beliefs.

## The effect on the quality of life and family function for children and parents when children have an organ transplantation

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*Aim:* To investigate the effect on family functions of children with organ transplants and the child's and parent's quality of life.

*Methods:* The research was carried out as a descriptive cross-sectional study of 74 children from the outpatient clinics at Inonu University Liver Transplant Institute between 1 June 2017 and 24 January 2018. Data were collected using the Child Information Form, Parent Information Form, Quality of Life Scale for Children, Quality of Life Scale and Family Assessment Scale. In the evaluation of the data, the Kruskal Wallis correlation and student t test were used.

*Results:* The average age of the children participating in the survey was 12.62 ( $\pm 2.87$ ), while the average age of the parents was found as 37.55 ( $\pm 7.20$ ). It was found that 91.9% of the children in the study had liver transplantation, 56.8% were boys, 40.5% of the children had never been to school, 36.5% of children had donations from their mother and 50% had family relationships that were adversely affected. The total scores of the children were found to be 47.28 ( $\pm 12.18$ ) and the parental quality of life was 33.01 ( $\pm 18.23$ ). It was found that the life quality of children with organ transplantation and their psychosocial health were correlated positively with the quality of life of their parents. Negative correlations have been found between the psychosocial health of children with organ transplantation and the quality of life of parents and their role in family functioning, emotional responsiveness, behaviour control and improvement in areas of general functioning.

*Conclusion:* It has been determined that the quality of life of children who have transplants is low, that the quality of life of their parents is affected by the quality of life of their children and that their family functions are impaired.

## Communicating with parents who have difficulty understanding and speaking Swedish: an interview study with healthcare professionals

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*Introduction:* Neonatal units care for sick and premature newborns and staff communicate with the children's parents every day. Some parents are immigrants and do not speak or understand the local language and this hampers verbal communication and the parents' opportunity to be involved in their child's care and treatment.

*Methods:* Individual open-ended interviews were conducted with 60 healthcare professionals at five neonatal care units in western Sweden: 10 physicians, 25 nurses, and 25 nursing assistants. The interviews were analysed using qualitative content analysis.

*Results:* The healthcare professionals' experiences were summarised in one main category: Powerlessness in the face of inadequate care routines leading to failure to communicate. The main category was constructed through three categories. 'Inability to perform their work properly' meant that staff experienced frustration when they could not convey important information to parents. 'Finding their own strategies' meant that staff found their own ways to communicate using body language and assistive technology. 'Dependence on others' meant that staff were dependent on others, primarily talking through an interpreter over the phone or in person.

*Conclusion:* There is a need for organisational changes to increase parents' participation in their child's care in daily practice at neonatal care units. Healthcare professionals experience frustration in relation to their inability to communicate with parents. Routines must be established in which interpreters are used more frequently, to ensure that parents who do not speak or understand Swedish are given sufficient time and possibilities. Interpretation must also be established in daily nursing practice such as basic care of the baby.

## Centredness in healthcare: A discussion of relationships between family-, person- and child-centred care

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*Aims:* To explore the similarities and differences between family-, person-, and child-centred care concepts.

*Methods:* Concept analysis to identify antecedents, attributes and relationship between the three concepts. Databases PubMed and CINAHL were searched for relevant articles from 2012-2017 and a total of 36 articles were included.

*Results:* Both person- and child-centred care are focused on individuals, a symmetric relationship and the tailoring of care to individual needs while family-centred care is focused on the family system of which the child is included. Person-centred care focuses on an adult person with autonomy, while the focus in child-centred care is the individual child as an own actor with rights but still dependent and close to a family.

*Conclusion:* At a conceptual level the concepts contain more similarities than differences. Finding ways to structure the delivery of care that respects the dignity and humanity of a person is essential in healthcare and should be a major goal of health policy and health systems worldwide.

*Practice implications:* This concept analysis illustrates the key attributes considered essential in healthcare relationships and how important it is to know which approach to apply in different situations so that the high-quality care is enabled for persons, children and families.

## ORAL PRESENTATIONS 9: THE EXPERIENCE OF CHRONIC DISEASES

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OP053

### Quality of life in children and adolescents with congenital heart disease

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*Introduction:* Over the past few years, quality of life (QoL) in children with congenital heart disease (CHD) has been part of the research agenda of many scientists who attempt to identify the main determinants that affect QoL, to improve everyday life of patients with CHD.

*Aims:* The main purpose of this study was the evaluation of QoL in children and adolescents (aged 2-18 years) with CHD, in Greece.

*Methods:* The sample of this study comes from the Onassis Cardiac Centre and is comprised of children and adolescents with CHD along with their parents. The total sample was 224 children and adolescents and 292 reports for their parents. This sample is classified according to the disease severity in four subsamples. The main instrument of the analysis was the PedsQL-Cardiac Module 3.0 questionnaire, which is linguistically validated and statistically assessed for reliability and validity for the Greek population.

*Results:* Statistically significant ( $P < 0.05$ ) negative determinants of QoL of children and adolescents are: CHD severity; frequency of medication; frequency of staying home; family income and father's profession. On the other hand, the statistically significant ( $P < 0.05$ ) positive determinants of QoL of children and adolescents are: the frequency of urgent hospitalisation; frequency of absence from school; the marital status of the parents and the level of education of the father. In addition, the degree of concordance (Lin's correlation of concordance  $< 0.99$ ) between the reports of children and adolescents and their respective parents was found to be low, since in most cases parents overrated the QoL of their children. Finally, the analysis of the classification of the sample based on their CHD severity, showed that statistically significant differences exist between most of the CHD severity groups, for parents and children.

*Conclusion:* Studies on the QoL of children and adolescents in the Greek population could significantly aid the better understanding of the disease-specific problems that this population faces; improve the quality of health services for this population; educate families about the potential problems that this population faces and create a personalised care plan at home for each person in this patient group.

## The effect of planned education on the quality of life and sleep quality of children with epilepsy

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*Aims:* The purpose of this study is to assess whether planned education in epileptic children has an impact on quality of life and sleep quality.

*Methods:* The experimental type study was carried out in the child neurology clinic of Manisa Celal Bayar University Hafsa Sultan Hospital. The sample of the study consisted of 74 children with epilepsy with an experimental and control group. The study included a children's presentation form, the General Child's Quality of Life Scale, the KINDL Epilepsy Quality of Life Module for Children, the Pittsburgh Sleep Quality Index with face-to-face interviews. Questionnaires were given before the training for the experiment group and one month after the training to assess educational effectiveness. Questionnaires were given to the control group who did not receive training, and again after one month. Percentage distributions of the data were done and the T-Test in Dependent Groups, T-Test in Independent Groups, Mann Whitney U-Test, Wilcoxon Signed Rank Tests. Pearson Correlation analysis was performed to evaluate the relationship between the scales

*Results:* It was found that for the experiment group The General Child Quality of Life Scale score, KINDL Epilepsy Quality of Life Module for Children score increased and Pittsburgh Sleep Quality Index score decreased. The General Child Quality of Life Scale and the KINDL Epilepsy Quality of Life Module for Children correlated negatively with the Pittsburgh Sleep Quality Index. A positive relationship was found between the KINDL Epilepsy Quality of Life Module for Children and General Child Quality of Life Scale.

*Conclusion:* The quality of life and sleep quality increased with planned education for children with epilepsy and the planned training was found to be effective for children.

## Determination of the knowledge level about abuse and neglect and awareness level about emotional abuse of mothers of child with intellectual disabilities (ID)

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*Introduction:* The purpose of this study is to determine the knowledge level about abuse and neglect and awareness level about emotional abuse in mothers of children with intellectual disabilities (ID).

*Methods:* In the province of Izmir, 128 mothers of children with ID were studied in a descriptive manner. The data were collected from volunteer mothers using the Family Information Form, Abuse/Neglect Knowledge Form and Recognition of Emotional Maltreatment Scale (REMS)

*Results:* The mean age of the participants was 38.74 ( $\pm 6.8$ ). It was determined that the disability level of 46.1% of the children was moderate. Some of the mothers said that they did not know that the following actions constituted abuse and neglect: pushing the child (5.5%); slapping the child (3.9%); hitting the child with materials (3.1%); force-feeding pepper (3.9%); threatening the child (3.1%); not wanting the child to be born at all (3.9%); swearing and insulting the child (3.9%); mocking the child (7.8%); locking the child up and leaving the child home alone (8.8%); not meeting the child's nutritional needs (7.8%), not meeting the child's needs (12.5%); not taking the child to a doctor when the child is sick (3.9%); not taking the child to health checks (10.2%); not giving the child his/her prescribed medications (5.5%). Of the mothers REMS-inappropriate expectations, insensitivity, terrorizing, rejecting/isolation subscale scores was found as 18.92  $\pm$  3.78-7.62  $\pm$  2.02-9.46  $\pm$  2.45-5.59  $\pm$  1.75 respectively. It was determined that the average REMS-rejecting/isolation and rems-terrorizing subscale scores of the mothers of children with moderate disability were higher. The average REMS-Rejecting/Isolation subscale scores of the mothers whose husbands graduated from high school were found to be higher.

*Conclusion:* It is seen that a low rate of mother's knowledge levels about abuse and neglect was inadequate. It was found that there was a relationship between a child's disability level and their father's educational status. It is important for nurses to organise abuse and neglect prevention programmes for families of children with ID.

## Effect of self-efficacy of children and adolescents with asthma on their quality of life

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*Introduction:* Asthma seriously affects individuals, family and society. The rational control of asthma will ensure that the child's school absenteeism is reduced, the quality of life of the patient is improved and the physical and moral burden on the family is alleviated.

*Methods:* This was a descriptive study. The data collection tools were the Children and Adolescents with Asthma Information Form which the researcher created using a face-to-face interview technique for children and adolescents with asthma, a Self-Efficacy Scale for Children and Adolescent with Asthma and the Paediatric Asthma Quality of Life Questionnaire (PAQLQ). The study sample consisted of 137 10-18 year olds with asthma who were followed up at the Respiratory-Allergy Disease Policlinic who volunteered to participate in the study.

*Results:* 137 children and adolescents were included. The study results indicated that 34.3% of children and adolescents with asthma were girls and 65.7% of them were boys with a mean age of 13.7 ( $\pm 2.2$ ); 35.8% of the children and adolescents with asthma were exposed to tobacco smoke at home, school, or on the streets and 21.2% of them had pets; 77.4% of them were monitored for one to 50 months. Factors that triggered asthma crises were pollens (34.3%), house dust mites (27.7%) and pets (16.8%). The mean scores of PAQLQ of children and adolescents with asthma symptoms was 55.16 ( $\pm 1.30$ ), activity confinement score was 23.35 ( $\pm 5.03$ ), emotional function score was 45.73 ( $\pm 9.34$ ) and total PAQLQ score was 124.24 ( $\pm 24.64$ ). There was a negative, weak and insignificant correlation between levels of self-efficacy of children and adolescents with asthma and symptoms

*Conclusion:* Nurses should inform children and adolescents with asthma with printed and visual education materials to increase levels of self-efficacy and quality of life as early as their initial diagnosis.

## Self-esteem and self-perception: the influence of growth hormone treatment

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*Introduction:* The influence of growth hormone treatment on psychological adaptation in childhood and adolescence is controversial.

*Methods:* The Self Perception Profile (SPP) questionnaire was administered to 272 children and adolescents, aged 4-18 years who had growth hormone deficiency and were being treated with growth hormone. The examines 12 domains, eight of which were used in the present study: Relationships with peers; Relationships with parents; Athletic competence; Physical appearance; Attitude; Close friends; Emotional relationships; and Self-esteem. Student's t-tests and analysis of variance (ANOVA) were computed for the comparison of mean values. Pearson correlations coefficients were used to explore the association of two continuous variables.

*Results:* Participants scored above average in all studied parameters. In both children and adolescents, all self-perception scores along with total, were positively correlated with self-esteem, indicating the close relationship among all studied parameters ( $P < 0.050$ ). Boys were found to have a better relationship with peers, better athletic competence and worse attitude than females ( $P = 0.010$ ;  $P = 0.013$  and  $P = 0.023$  respectively). Mothers' high educational level was positively related with participants' self-esteem and opinion about their physical appearance ( $P = 0.025$  and  $P < 0.001$  respectively). Fathers' low educational level was negatively associated with patients' attitude ( $P = 0.043$ ). Adolescents with shorter stature ( $< -2SD$ ) had significantly lower scores in Physical appearance ( $P = 0.05$ ) compared with other children. Adolescents scored lower than children in all SPP parameters apart from the 'Close friends'.

*Conclusion:* The scores of children receiving growth hormone treatment reflect uncomplicated psychosocial development of participants. However, it is interesting to note that the personality functioning of children treated with growth hormone is affected by certain demographic parameters.

## Accepting uncertainty: the experiences of children with an intellectual disability of undergoing clinical procedures in healthcare settings

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*Introduction:* Clinical procedures can be painful and evoke fear and resistance among children. Children with an intellectual disability commonly undergo various clinical procedures from an early age. There is little empirical evidence to determine how procedures are experienced by children with an intellectual disability and no known study has solicited their first-hand reports.

*Methods:* This study adopted a qualitative research design underpinned by the principles of Grounded Theory to explore how clinical procedures are experienced by children with an intellectual disability. Semi-structured face-to-face interviews using augmented methods to facilitate involvement were conducted with 13 children with a mild to moderate intellectual disability aged between 7-15 years. Interviews were digitally recorded and data was coded, categorised and subjected to constant comparative analysis in accordance with Grounded Theory. Ethical approvals were obtained.

*Results:* Children were given few opportunities by parents and healthcare professionals to get involved in choices and decisions relating to clinical procedures. Children reported that they were unable to imagine or retain information about how a procedure would be carried out and some were uncertain of what would happen as their parents withheld all information about the procedure from them. With limited information and opportunities to make choices, children showed if they 'accepted' the situation through their behaviour. On some occasions, children refused to co-operate while on others they accepted instructions and the procedure was completed.

*Conclusion:* Children with intellectual disabilities are able to report on their experiences of clinical procedures. Healthcare professionals and parents should recognise the developing agency of this group of children and where possible should promote their inclusion within conversations and choices around procedures. This study was funded by a PhD studentship from Edge Hill University and by grants from the Eaton Fund and the Professionals Aid Council.

## Parental anxiety during their child's hospitalisation for congenital cardiac surgery and nursing care's impact on stress relief

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*Background:* Some infants and children with congenital heart disease will require surgical treatment. However, except for its therapeutic effects, congenital cardiac surgery has a great psychosocial impact on patients and their families. According to recent studies, surgery generates anxiety in parents, and hospitalisation of their children can be a quite traumatic experience.

*Aims:* To investigate anxiety levels in parents of surgical patients and identify factors that affect parental anxiety and define whether assistance provided by healthcare professionals and especially nurses can affect their pre- and postoperative anxiety levels.

*Methods:* A search was made using PubMed and Google Scholar online databases using the key words paediatric cardiac surgery, parents and anxiety. There were 12 research studies which refer to parental anxiety and their need for detailed information, guidance and support from nursing staff published in English from 2012-2017.

*Results:* According to these studies, when parents are faced with their child having a congenital heart defect and are having planned heart surgery, the whole family live through a stressful time and must handle many difficult situations. Structured interviews were conducted and parents reported that relationships with hospital staff are the most common source of support during this challenging time. This fact indicates the potential for each professional to affect families' experiences.

*Conclusions:* Paediatric congenital cardiac surgeries affect parents' emotions and anxiety levels to a great degree. Parental anxiety management is achieved through pre-operative information, guidance and emotional care. The contribution of nurses to stress relief is of major importance. Further scientific education and training for nursing staff in paediatric cardiac surgery are required.

## ORAL PRESENTATIONS 10: PAEDIATRIC CARE IN THE COMMUNITY

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OP060

### Sleep in children and health

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*Introduction:* Children's sleep changes with age. Before the third month of life they pass from alertness to sleep with REM sleep directly, whereas after their third month with NREM, like adults. The REM sleep rate changes as well. For a newborn, it is 50% while gradually it falls to 20-25% until the child is three years old. Normal sleep duration also changes with age.

*Methods:* An extensive review of the relevant literature was performed via electronic databases (Medline, PubMed, CINAHL and Google scholar) and Greek and international journals using the following key words: sleep, health, child, children and a combination of these. The exclusion criterion for the articles was being written in a language other than Greek and English.

*Results:* Sleep is a vital part of children's healthy development and is related to their physical, cognitive, emotional and social growth. In most cases sleep disorders are temporary, without long-term results. For some children, however, they can be very important. In children sleepiness due to lack of sleep manifests as lack of attention, hyperactivity or aggressiveness. Lack of attention then has consequences on memory and learning. Quite often parents do not mention their child's sleep problem to a paediatrician or do not see the relation between sleep disorders and behaviour during daytime. Thus, questions about sleep need to be asked during routine visits to the doctor. Parasomnias are common in pre-school children, for instance nightmares, talking through sleep or night terror. Their frequency gradually decreases during the first ten years of life.

*Conclusion:* Parents are the only ones who can understand the disturbances of their children during the sleeping period and they must inform the doctor to properly address them. In this way, they will achieve a better quality of life.

## Presentation of a general framework for paediatric palliative care implementation in community settings

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*Introduction:* Globally, it is estimated that 0.001% of the general paediatric population (0-18 years of age) experience serious, irreversible diseases that lead to death. In these cases, specialised holistic care should be provided to the child and his/her family. Palliative care focuses on quality of life and symptom management in patients living with chronic and life-threatening diseases.

*Aim:* The construction of a unified theoretical framework for the implementation of paediatric palliative care in community settings across Europe.

*Methods:* Review of current bibliography in electronic databases (PubMed, Cochrane, Scopus, Google Scholar) and selected sites with adequate key words.

*Results:* The organisation of relief programmes in the paediatric population varies greatly across European countries and settings. Regardless of their geographic, cultural, social or organisational origins, three basic pillars of care are emerging. It is the preference for home care, the requirement for better cooperation and communication among collaborating healthcare professionals and the involvement of the family in care are the core concepts that lead the change. At the level of community care, paediatric relief centres have been developed, as well as systems based on the child remaining in the home environment. However, there is evidence that they underestimate the needs of these children and their families or, in some cases, their desires are neglected. It is estimated that on average 50/100,000 children need palliative care and a very small percentage of them gain access to appropriate structures. The experience of applying different patterns of palliative care in different countries provides essential data. The proposed unified framework is presented, with the paediatric patient and family at the centre of care.

*Conclusion:* Palliative care should be more family-centred, symptom guided, focused on the provision of care at home rather than the hospital. Applying weighted tools for the evaluation of the symptoms and the incidence of the disease is essential for the effective organisation of adequate palliative care.

## Parents' reasons for refusing to vaccinate their children and the role of healthcare professionals in shaping vaccination decisions

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*Introduction:* The refusal by parents to agree to childhood vaccinations according to the National Immunisation Schedule have received a lot of attention in recent years. More and more parents are questioning the safety of vaccines and are worried about their children's health. Different sources of information about vaccines play a key role in parents' decisions. Parents often gain information that has no scientific evidence and that is the reason why they are hesitant to vaccinate. An important part of improving the existing problem is the healthcare professionals who provide science-based information to parents and can reduce the number of people who refuse vaccination.

*Aims:* This thesis is a theoretical literature review which aims to describe parents' decisions about vaccinations and the reasons why they are hesitant to vaccinate children and to describe the role of healthcare professionals in shaping decisions about vaccination.

*Methods:* A literature review found 25 sources, of which 21 were scientific articles. The sources used in this thesis were in Estonian and English which were published in 2007-2017.

*Results:* This study found out that the main reasons why parents are hesitant to vaccinate are family and friends, the internet and social media, the lack of evidence-based information, negative side effects of vaccines and the benefits that parents have given to avoid vaccination.

*Conclusion:* The study revealed that the most trustworthy source of information for parents are healthcare workers. Health professionals play an important role in establishing a trusting relationship and providing vaccine information among parents.

## Hyper-parenting styles of Turkish mothers

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*Introduction:* Hyper-parenting is a parenting style which interferes with the child's management of their lives. The parent aims to do their best to ensure a happy and healthy development for their child, however it might cause a serious self-esteem disorder for the children. Hyper-parenting becomes a problem for the child and the parents.

*Aims:* The purpose of this study was to explore the hyper-parenting styles of Turkish mothers.

*Methods:* The sample of this study included 629 mothers of children aged 6-18 years. The data were gathered using the Hyper-parenting Styles Questionnaire. The questionnaire included 20 items and four hyper-parenting styles. Those styles are: helicopter parenting; little emperor parenting; tiger mom parenting; and concerted cultivation parenting. Each style constitutes a subscale. The questionnaire was designed as a Likert scale where 1=don't agree, 2=undecided, 3=agree, and 4=strongly agree. Total score and subscale mean scores increase for hyper-parenting behaviours. Turkish validity and reliability of the questionnaire were tested.

*Results:* In total, 629 mothers participated in the study and their mean ages were 39.1 ( $\pm 7.8$ ). The mean age of children were 12.3 ( $\pm 3.3$ ). Total mean score of mothers was 56.3 ( $\pm 9.5$ ) and their mean scores from subscales were: helicopter parenting 16.7 ( $\pm 2.8$ ); little emperor parenting 12.0 ( $\pm 3.0$ ); tiger mom parenting 14.9 ( $\pm 3.8$ ); concerted cultivation parenting 13.5 ( $\pm 3.2$ ), respectively. A negative correlation was detected between hyper-parenting styles and ages of children whereas a positive correlation occurred between hyper-parenting styles and the age of the mother.

*Conclusion:* The psychosocial development of the child is shaped primarily by his or her parents thus hyper-parenting styles have a great effect. Identifying parenting styles might be a guide for the planning of proper nursing interventions.

## An examination of the effectiveness of educating adolescents about thalassemia

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*Introduction:* This pre-experimental study was conducted using a single group pre-test and post-test model to raise awareness about thalassemia among high school students.

*Methods:* The study consisted of 170 twelfth graders at a high school in Fethiye, Turkey, and the study was conducted with the participation of 154 students. The research data were collected using a personal information form and the Thalassemia Information Form. Two sessions of training and a counselling programme were provided to the participants who were pre-tested using the Thalassemia Information Form. The educational content of the programme was planned to include thalassemia's natural course, treatment, diagnostic tests, risk of recurrence and prenatal diagnostic possibilities. After 10 days of training, the students were asked to fill out the Thalassemia Information Form for the second time. A scoring system was used in the evaluation of scale. The scale score ranges between 0 and 20. The thalassemia knowledge levels are: low=0-6 points, intermediate=7-13 points and high=14-20 points. The research data were evaluated using descriptive statistics and the Mann-Whitney U, Kruskal-Wallis H and Wilcoxon tests with SPSS 22.0 software.

*Results:* Of the participants, 51.9% considered thalassemia a public health problem. Before the training, 64.3% of the students had low levels of knowledge about thalassemia, whereas only 4.5% had high levels of knowledge on thalassemia. However, after the training, the ratio of students with low levels of knowledge on thalassemia decreased to 0.6%, whereas the ratio of students with high levels of knowledge on thalassemia increased to 76%. The students' thalassemia knowledge mean score was found to be 4.55 ( $\pm 4.46$ ) before training and 15.34 ( $\pm 2.74$ ) after training. A statistically significant difference was determined between their pre- and post-training scores ( $P=0.000$ ).

*Conclusion:* Training and counselling about thalassemia should be provided to the residents of Fethiye, where thalassemia disease and carriers are frequently observed.

OP067

### The effect of abdominal massage on transcutaneous bilirubin level in newborn infants

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*Introduction:* This was a randomised controlled study to determine the effect transcutaneous bilirubin level of abdominal massage to the newborn.

*Method:* The study group consisted of 90 healthy newborn (experimental group  $n=44$ ; control group  $n=46$ ) who was followed in university hospital after birth between March to August 2017 in Istanbul. The Descriptive Information Form and the Observation Form was used for descriptive characteristics of the newborn infants. A transcutaneous bilirubin meter was used to determine bilirubin level of the newborn infants. The Ethical and Institutional Permission were granted to conduct the study from the hospital. The families of newborn infants were informed and received informed consent before they participated in the study. Bilirubin values were measured one hour after first feed after birth in both study groups. The abdominal massages were performed for five minutes in each session continuing for three sessions per day and completed in two days with a total of six sessions in the experimental group. The second bilirubin measurements were repeated at least six hours after the last massage in the experimental group and 48 hours after birth in the control group. The bilirubin values of the infants in the experimental and control groups were compared. Student t-test was used in evaluating the data in normal distribution and Mann Whitney U test was used to statistics in non-normal distribution of quantitative data.

*Results:* The bilirubin levels of the groups were experiment group 1.06 ( $\pm 0,92$ ) and control group 1.01 ( $\pm 0,98$ ) statistically similar ( $t=0,250$ ;  $P=0,803$ ). The second bilirubin levels were statistically higher in both groups 48 hours after birth ( $P<0,01$ ). The difference of the second and first bilirubin values compared with the bilirubin level were increased 1.96 ( $\pm 1,69$ ) in the experimental group and 2.80 ( $\pm 2,30$ ) in the control group. A statistically significant difference was found between the groups ( $t=-1.974$ ;  $P=0.048$ ).

*Conclusion:* Abdominal massage was found to be effective in preventing postpartum bilirubin increase in the newborn.

## Effects of pacifier use on transition to full breastfeeding in preterm infants: systematic review

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*Introduction:* Although pacifiers are widely used by infants, limited information is known about the effects.

*Aims:* To study the effects of pacifier use on transition to full breastfeeding in pre-term infants.

*Methods:* In this systematic review, experimental, quasi-experimental and randomised controlled studies in research articles on PubMed, Google Scholar and Science Direct that were searched for that had the experimental group of preterms within the main topic of the usage of pacifiers between the years 2002-2017. The key words preterm infants, non-nutritive nursing, pacifier, mother nursing skills, fully breastfeeding, that were identified by Medical Subject Headings (MESH) were used and the PRISMA control list was used. We found 90 articles and found that 10 of them fit the research criteria and they were included in the review.

*Results:* While pacifiers were found to be effective in transition to feeding to full maternal breastfeeding in preterm infants in five of the studies, it was found to be non-effective in four of the studies. Although the effect of using pacifier was not significant in these four studies, it was found that using a pacifier reduces the length of stay in hospital.

*Conclusion:* The investigated studies showed that the use of pacifiers has effects on the development of breastfeeding ability, to facilitate digestion, to improve preterm newborn sucking skills, to shorten the transition time to full nutrition, to facilitate digestion and to shorten the length of hospital stay. The pacifier can be used during gastric tube feeding in the neonatal intensive care unit to improve the sucking ability when sucking, swallowing and breathing coordination is not developed until the transition to full feeding.

## The factors associated with sleeping habits and sleeping problems of infants aged 3–12 months

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*Methods:* This study is a descriptive, correlational study carried out to determine the sleeping habits and sleeping problems of 3-12-month-old infants and also to examine the factors related to sleeping habits and sleeping problems. The study was conducted between April 2016 and December 2017 at the Family Health Centers in Aydın, Turkey. The study included 252 mothers and infants. Descriptive statistics, Chi-square test, Mann-Whitney U test, Kruskal-Wallis test and binary logistic regression analysis were used in the evaluation of the study data. Permission has been obtained from the institution from which the study was carried out and from the ethics committee.

*Results:* It was found that the median night waking-up frequency of the infants included in the study was three times, the night-time awake duration was 30 minutes, the day-time sleep duration was 120 minutes and the total sleep duration was 617.5 minutes. It was determined that 11.9% of the infants woke up at night more than three times, 30.2% of them woke up at night and were awake for more than one hour, the total sleep duration of 35.7% of the infants was less than nine hours, and 52.8% of them had sleeping problems. It was found that the factors reducing the sleeping problem were that the mother was literate or had graduated from primary school ( $P=0.030$ ), the infant was only breastfed ( $P=0.001$ ), and the infant was rocked to sleep ( $P=0.029$ ).

*Conclusion:* In this study more than half of the infants aged 3-12 months had sleeping problems, and the education level of the mother, the diet of the infant and the ways that parents put their infants to sleep affected the sleeping problem. Paediatric nurses should provide parents with education and counselling on safe sleep, sleep ecology and appropriate behaviour to prevent sleeping problems.

## In baby care: is traditional swaddling safe?

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*Introduction:* For centuries swaddling was universally used in many communities [1,2]. Swaddling was applied to restrict the movement of the baby by the Ancient Greeks, Romans and the Jews [3]. Nowadays it is still being used in many countries and cultures [4].

*Methods:* This was a review of the literature related to swaddling.

*Results:* Swaddling has come into question again especially in developed countries particularly in relation to safety [4,5]. Safe swaddling can be applied to baby for non-developmental dysplasia of the hip [6]. Safe swaddling is suitable for the natural, anatomical position of the newborn. Safe swaddling can be applied with legs in flexion and abduction position without causing any movement restriction and the baby's body is swaddled loosely. Traditional swaddling is contrary to the baby's anatomical position and natural posture and arms and legs are straight. Traditional swaddling is quite tight. Tightness of traditional swaddling prevents movements of the baby's chest and the whole body.

*Conclusion:* It is important to know the difference between safe swaddling and traditional swaddling. While providing significant benefits for baby care with safe swaddling, there are many risks associated with unsafe swaddling and traditional swaddling. Nurses should inform to parents about safe swaddling technique and the positive effects for the baby.

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## Determining the Aflatoxin M1 level in breast milk: Fethiye case at Turkey

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*Introduction:* Mycotoxins are among the chemical contaminants that are transmitted in breast milk. Mycotoxins have carcinogenic, genotoxic, hepatotoxic, nephrotoxic, oestrogenic, immuno-suppressive and irritant effects.<sup>1</sup> Aflatoxin is one of the most important mycotoxins that affect human health. Aflatoxins are secondary metabolites that are mainly generated by *Aspergillus* (*A. flavus*, *A. parasiticus* and *A. nomius*) type fungi in suitable environments. Among aflatoxins, the one with the strongest hepatocarcinogen and hepatotoxic effect is aflatoxin B1 (AFB1). In human beings and animals that consume AFB1-contaminated foods during lactation, AFB1 is hydroxylated in the cytochrome P450 enzyme system.<sup>2</sup> As a result of this hydroxylation, AFB1 is transformed in 12-24 hours into aflatoxin M1 (AFM1), which is the main metabolite of AFB1 with 10 times less carcinogenic effect, and AFM1 is expelled from the body in urine and breast milk.<sup>3</sup> In many countries<sup>3-8</sup> and in Turkey<sup>9-14</sup>, a number of studies have been carried out to determine the AFM1 level in breast milk. No studies of the AFM1 levels in breast milk have been conducted in Fethiye.

*Aims:* The purpose of this study was to determine the AFM1 levels in breast milk samples collected from mothers who gave birth in Fethiye, interpret the health risks to which newborn infants will be exposed, and make suggestions for taking necessary precautions to eliminate them.

*Methodology:* The researcher collected breast milk samples from 100 mothers who gave birth in Fethiye (Mugla, Turkey) in October and November 2017 after obtaining their informed consent. The AFM1 amounts in the samples were determined using a commercial test kit (Ridascreen®) based on the ELISA method. The breast milk samples with an AFM1 level under 5 ng/L were deemed to be negative.

*Results:* Of the breast milk samples examined in the study, 53 were positive. In the positive samples, the mean rate of AFM1 was 6.36 ng/L (ppt) (min-max; 5.10-8.31ng/L).

*Conclusion:* The study concluded that the AFM1 found in the breast milk samples could be an important risk factor for infant health. Informing the public about food safety may help reduce the level of AFM1 that is conveyed to breast milk by foods.

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## The therapy of neonatal diseases is science and the treatment of preterm neonates is an art

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*Introduction:* We believe that curing diseases is a science and the treatment of patients is an art. Understanding the roots, effects and long-term consequences require lifelong learning of nurses and paediatricians to treat diseases. Understanding health beliefs, sorrows and suffering of young patients requires curiosity and compassion. The communication between babies and their caregivers is unique and involves specialised skills, knowledge and sensitivity.

*Methods:* This paper reviews the major concerns about children's rights.

*Results:* According to UN Declaration of Human Rights all human beings are equal. International Convention on the Rights of the Child says 'The child, by reason of his physical and mental immaturity, needs special safeguards and care' putting newborns into a unique place because of their vulnerability and total dependence on external help. A newborn is a person and is entitled to respect and dignity. Awareness of this rule constitutes the basis for protecting its rights. Newborns are in constant communication with their environment. Caregivers must understand the communication methods to 'read' what newborns are 'saying' when they are in neonatal intensive care units (NICUs). The Synactive Theory of Infant Development provides a framework to understand their behaviour. The concept is based on the protection of infants from inappropriately timed stimulation or intense stimulation. Family-centered developmental care recognises families as active and vital members of the NICU team.

*Conclusion:* Why do we conclude that treating neonates is an art? Art is anything that is well made by humans. Like artists, caregivers are supposed to develop sensors for non-verbal communication, subconscious feelings and health beliefs of patients and their families. Practising communication with the participation of children and parents in medicine needs time. Reduction of tensions will create an atmosphere of mutual trust.

## Does skin-to-skin care improve interaction between premature infants and their mothers?

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*Introduction:* Skin-to-skin contact between parents and infants is often used in neonatal intensive care of preterm infants. The Aim: of this study was to evaluate interaction between preterm infants and their mothers after continuous skin-to-skin contact from birth to discharge compared to standard care. Skin-to-skin contact was defined as almost continuous, beginning in the delivery room and continuing almost 24 hours a day until discharge. Standard care was defined as parents having the opportunity to practice as much skin-to-skin contact as they liked (i.e. intermittent skin-to-skin contact).

*Methods:* The design was a two-centre, single blinded, randomized study with two groups at two hospitals in Sweden. Forty two families were randomly allocated to almost continuous skin-to-skin contact or standard care in relation to delivery. Seventeen families randomized to skin- to- skin contact and fourteen families to standard care were followed up at four months. The infants were born vaginally, they were singletons and between gestational week 32+0–35+6. The interaction was filmed during a still-face procedure at four months corrected age and analysed with the observational tools MSRS-R and The Ainsworth scales. The MSRS-R is measuring three major components; consistency, contingency and appropriateness and the Ainsworth scales are measuring sensitivity, cooperation, availability and acceptance.

*Results:* Preliminary results show no differences between the groups in interaction.

*Conclusion:* Continuous skin-to-skin contact does not seem to be superior to intermittent skin-to-skin contact concerning interaction between premature infants and their mothers. More studies are needed to find out how interaction between parents and preterm infants can be supported in the neonatal intensive care unit.

OP074

### Parents' sleep and mood in family-centred paediatric care

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*Background:* Family-centred care includes accommodation for parents in the paediatric ward. However, frequent interruptions, ward noise and anxiety may affect parents' sleep quality and mood negatively, which decreases the parents' ability to sustain attention and focus, and to care for their sick child.

*Aim:* 1) To describe sleep quality and mood in parents accommodated with their sick child in a family-centred paediatric ward. 2) To compare mothers' and fathers' sleep quality and mood in the paediatric ward. 3) To compare the parents' sleep quality and mood between the paediatric ward and in a daily-life home setting after discharge.

*Methods:* Eighty two parents (61 mothers and 21 fathers) with children admitted to six paediatric wards at four hospitals in Sweden participated in the study. A sleep diary, Uppsala Sleep Inventory, and The Mood Adjective Checklist were used to measure sleep quality and mood.

*Results:* The parents had a good sleep quality in the paediatric wards even though they had more nocturnal awakenings compared to home. Moreover, they were less alert, less interested, and had reduced concentration, and were more tired, dull and passive in the hospital than at home after discharge. Vital sign checks, noises made by the staff and medical treatment were given reasons influencing sleep. Poor sleep quality correlated with negative mood.

*Conclusion:* When parents are accommodated in the paediatric ward with their sick child, paediatric nurses should acknowledge parents' sleep and mood; care at night should be scheduled and sleep promoted for the parents to maintain health and well-being in the family.

## Mothers' views on family-centered care in neonatal intensive care unit

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*Introduction:* Parental presence during paediatric invasive procedures is an important issue in family-centred care. In the Neonatal Intensive Care Unit (NICU), staff should help parents participate in feeding, procedures, and daily care. The objective of the present study is to evaluate the views of mothers of infants, hospitalised in NICU, on family involvement during care and treatment practices.

*Methods:* The data of the descriptive study were obtained from 63 mothers whose infants were hospitalized in NICU of the Istanbul University Istanbul Faculty of Medicine between January-June 2017 and who were voluntary to participate in the study. After making the mothers watch videos regarding invasive interventions frequently applied in NICU, their views on family-centred care during care and treatment practices were received.

*Results:* It was determined that more than 73% of the mothers wanted to be with their infants during the practices like feeding, measuring body temperature, changing diapers, bathing, changing the sheets, dressing, preparing formula, observing their general condition, participating in decisions, giving approval and do these practices themselves; however, more than half of them (55,6%) did not want to be with their infants during procedures like inserting a feeding tube, establishing a vascular access, inserting an umbilical catheter, resuscitation and surgery; more than half of them stated that they were satisfied with practices Aimed at family-centred care in the unit; however, they were not satisfied with post-discharge support (76.2%), participating in decisions (71.4%) and being with their infants during treatment practices (44.4%).

*Conclusion:* It was determined that the mothers whose infants were hospitalized in NICU wanted to be with their infants during care practices and involve in the procedures actively; however, they did not want to be with them during treatment practices

## Sociodemographic and health status predictors of parental role strain

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*Introduction:* Numerous studies indicate that stressors associated with parenthood can adversely affect well-being and children's psychosocial development.

*Aim:* The aim of the present study is to analyse socio-demographic differences in parental role strain in the general population.

*Methods:* The study is based on a random sample of 591 Icelandic parents of children under 18 years of age, who were among adult participants in a national health survey of Icelanders conducted in the Spring of 2015 (response rate nearly 60%). The questionnaire asked about socio-demographic background and ongoing stressors in the parental role. The data were analysed using multivariate statistical methods.

*Results:* Parental role strain was related to young parental age at first birth, female gender, non-married status, age of youngest child, age range of children, and number of children in the household. Furthermore, chronic illness or disability of a child was markedly related to higher parental role strain, although the relationship was partly reduced with parental employment. The parent's own chronic illness was also related to increased parental role strain.

*Conclusion:* Preventing and addressing parental role strain not only contributes to improved parental mental health, but also helps create a family environment that enhances the psychosocial development of children.

## Involving pre-adolescents across disease categories and their families in Design-Based Research to improve resilience

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*Introduction:* Common challenges across disease categories in adolescents with chronic illness exist (1). High support in the family is protective against potential risk behaviors and low adherence. However, research describing protective and resilience factors across disease categories in pre-adolescence is scarce.

The purpose of this study was to identify protective factors, to 1) increase health and quality of life in pre-adolescents, and, to 2) boost positive and sustainable family support.

*Methods:* A Design-Based Research approach (2), with participatory workshops with families, was used to gain perspectives on: a) Families' everyday life and daily illness management, b) How to address problems and challenges regarding familial involvement in healthcare practice. Purposive sampling in a paediatric outpatient-department recruited ten pre-adolescents aged 10-13 years with diabetes, epilepsy and asthma of mixed gender.

*Results:* Five themes emerged in the analysis: 1) Involvement of the extended family is important, 2) The role of siblings must not be underestimated, 3) The role of intra-familial differences in perceived illness significance, 4) Significant healthcare contacts often define familial involvement, and, 5) The peer-to-peer sharing of experiences with other families is valuable.

*Conclusion:* This study has identified siblings, together with other themes, as a potential protective factor to increase resilience in the family. Siblings are therefore included in planned workshops with families and healthcare-professionals during spring 2018. These results will be presented at the PNAE Congress on Paediatric Nursing 2018. Interventions across disease categories are likely to boost family support, perhaps due to increased insight in common challenges and resilience factors across disease categories. A design-based approach seem to be a useful tool.

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## An overview of food consumption and outside school sport activities in Portuguese school-aged children

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*Introduction:* Childhood obesity is a public health problem that must be warned with early strategies of transdisciplinary health promotion. Integrated in a largest project about educational healthy lifestyles among school-aged children, this study Aims at describing food consumption and sport activities of Portuguese children to analyse its association with each other and with the body mass index.

*Methods:* Third grade students from two Portuguese primary schools were analysed. Data were collected during a class through a self-filling form focusing on socio-demographic and anthropometric variables, and sport activities. Child's food consumption was registered through a booklet, during five consecutive days. This project was approved by an ethics committee. An informed consent was signed by the child's legal representative. Data were analysed using the SPSS®-version 24.0.

*Results:* Participants included 109 children, of which 65.1% were considered to have normal weight, 11.9% overweight, 8.3% obesity, and 14.7% underweight. 77.1% performed at least 60 minutes/week of sport activities outside school. Food consumption was not significantly different between children that practiced extra school sports comparing to the children who didn't ( $P>0.005$ ). The consumption of fruit/vegetables was significantly greater in underweight children comparing to normal weight ( $P=0.027$ ), and to overweight/obese children ( $P=0.005$ ). Though not statistically different ( $P>0.005$ ), the average consumption of fat/oil, and sugary/salty products appeared smaller in underweight children and greater in overweight/obese children, while the consumption of dairies, meat/fish/eggs, cereals and their derivatives, tubers and water seemed similar.

*Conclusion:* More than one third of the analysed third-grade students present abnormalities in body composition (underweight/overweight/obesity). Food consumption does not seem to differ between children that practice extra school sports from children who don't. The consumption of fruit/vegetables appears to be increased in underweight children and decreased in overweight/obese children, a finding that deserves further analyses.

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**OP080**

## **Comparing the effects of kangaroo care and breastfeeding in reducing the pain due to hepatitis B vaccination in newborns**

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*Introduction:* It is known that infants can feel pain during interventions like vaccination. Physiological symptoms like oxygen saturation (SpO<sub>2</sub>) and heart rate (HR) are affected negatively in infants and there are also behavioural symptoms such as crying during invasive procedures.

*Aims:* The study was designed as a randomised controlled experimental to compare the effects of breastfeeding and kangaroo care on the level of pain and some physiological symptoms associated with the hepatitis B vaccination.

*Methods:* The data were collected at a training and research hospital between August 2016 and February 2017. Inclusion criteria was newborns whose parents volunteered to participate in the study and who were born full term, weighing 2500-4000g with an Apgar score >7, within 24 hours after delivery. They were healthy and had no skin lesions. A data collection form was used to record descriptive and physiological characteristics of infants. The infants were divided into groups and randomised into a kangaroo care group (KCG) and breastfeeding group (BG). The infants in both groups were compared in terms of SpO<sub>2</sub> values, HR levels, pain scores obtained with the NIPS scale and durations of crying due to vaccination.

There was no statistically significant difference found between the groups in terms of pain scores ( $Z=0.949$ ;  $P=0.343$ ), SpO<sub>2</sub> values ( $Z=1.032$ ;  $P=0.302$ ), HR ( $Z=0.206$ ;  $P=0.837$ ) and durations of crying ( $Z=0.135$ ;  $P=0.892$ ). It was observed that pain score and HR of all infants increased, their SpO<sub>2</sub> decreased after the vaccination. There was no significant difference between the groups and infants in the BG had a lower increase in HR and pain scores and shorter duration of crying.

*Conclusion:* Breastfeeding played an effective role in reducing the infants' pain and was the preferred way to reduce pain during vaccinations.

## Does culture influence pain-related parent behaviours?

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*Introduction:* Studies suggest that cultural models of parenting (CMP) influence parental behaviours. Predominant cultural values are believed to inform the parenting styles caregivers adopt. Cultural values were expected to affect parental behaviours indirectly through parenting styles. We believed this would be moderated by eco-social context.

*Aims:* The present study aimed to examine cultural influences on pain-related parent-behaviours (PRPB). We hypothesised that the eco-social context would moderate the relationship between cultural values, parenting styles, and PRPB and parenting styles mediate the effect of cultural values on PRPB.

*Methods:* A cross-cultural survey design was employed using a convenience sample of 547 caregivers of 6-12-year-olds living in Canada ( $n=183$ ), Iceland ( $n=184$ ), and Thailand ( $n=180$ ).

The individualism-collectivism scale measured vertical and horizontal individualism and collectivism. The parenting styles and dimensions questionnaire measured authoritative and authoritarian parenting styles. The inventory of parent/caregiver responses to the children's pain experience scale measured solicitousness and discouraging.

*Results:* Multigroup structural equation modelling, showed that country did not affect which CMP caregivers adopted. Parenting styles mediated the relationship between cultural values and PRPB. Vertical/horizontal individualism, collectivism, and authoritative and authoritarian-parenting styles positively predicted solicitousness. Vertical individualism and authoritarian-parenting style positively predicted discouraging, whereas other predictors did not.

*Conclusions:* Unexpectedly, ecosocial context did not influence which CMP caregivers adopt, including their PRPB. As expected, parenting styles were mediators. The results support others' claims of solicitousness universality in a paediatric pain context. However, solicitousness may have different cultural meanings among individuals, and may be used in conjunction with discouraging.

## Attitudes and practices of mothers who have children with cancer for pain management and analgesic drug use at home

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*Introduction:* Children with cancer are dependent on mothers who have primary responsibility for pain management and analgesic use at home. For this reason, it is important to determine mothers' practices at home and the factors that affect these practices.

*Methods:* A descriptive cross-sectional study consisted of mothers of 0-18-year-old children who were followed up for solid tumour treatment in a paediatric oncology service and outpatient clinic ( $n=112$ ). Data were collected with a questionnaire that included sociodemographic information, mothers' practices for pain management, knowledge about pain and analgesic drugs, the Spielberger State Trait Anxiety Inventory (STAI) and the Pain Catastrophising Scale (PCS).

*Results:* It was found that 77% of the children had pain in the last month and 31% of them had continuous pain. When asked about their knowledge levels of analgesic drugs, 82% of mothers said that analgesic drugs should be given less often due to their side effects, 73% of them said that it was more effective when analgesic drugs were only used for quite severe pain, 65% them said that analgesic drug made children addicted, 52% of them said that analgesic drugs were more effective when it was given as little as possible. It was determined that 32% of mothers continued to give analgesic drugs and 42% of mothers took their children to the doctor when practices for reducing child's pain didn't work. The PSC mean score was 18.82, SAI mean score was 37.86, TAI mean score was 47.02.

*Conclusion:* The mothers in the study didn't have an effective practice for pain management at home except giving their child analgesic drugs and their knowledge level about analgesic drugs was insufficient.

## Pain and self medication among 12–16–year–old Icelandic children

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*Introduction:* Recent studies show that the prevalence of pain has increased substantially in children. Little is known of pain medication and self-medication in this group. The main purpose of this study is to explore the prevalence of pain and self-medication of pain medication among children and adolescent aged 12-16 years in Iceland.

*Methods:* Data from the Icelandic part of the Health Behaviour in School-aged Children (HBSC) 2014 survey was used. The sample was 11,019 school children in 6th, 8th and 10th grade (87% response). The study considered age, gender, and socio-demographic background. The students were asked how often they had experienced headache, back pain, stomach pain, neck and shoulder pain and pain in extremities and the frequency in the past 6 months. The main parameters were gender, class, social status, the frequency and type of pain and pain medication used.

*Results:* Forty per cent of children experienced pain monthly and the most common pain was headache. More than half of the children reported having taken pain medication within the past six months due to pains and 37% having taken pain medications at least monthly and 16% on a weekly basis. Girls were significantly more likely to experience pain and took pain medication. Age and socioeconomic status significantly interacts with the use of pain medication. The monthly prevalence of general self-medication of pain was found to be 37%, but when specifically asked about identified pain sites, prevalence rose to 61.2% for headache, 58.1% for stomach pain, and 56% for pain in neck, shoulder and extremities. Weekly use of pain medication was between 25-34% for any type of pain.

*Conclusion:* The prevalence of pain and the use of pain medication is consistent with international findings showing that children do experience pain affecting their daily life and use of medications. The findings should encourage further research on the prevalence of pain and self-medication of drugs in this important population in the light of a scarcity of studies on the subject. Nurses are in an important position to foster secure dispensing of pain medication to children that increasingly is in the hands of the children themselves.

## Perception of pain in children during needle insertion procedures

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*Introduction:* Children often experience pain from needle insertion procedures. Painful medical procedures in childhood may have long-term negative effects on development and future tolerance of pain. A significant number of children receive less than optimal management of procedure-related pain. Nurses tended to rate pain levels higher and adequacy of pain control lower compared with other healthcare providers. These ratings perhaps reflect the greater amount of time nurses spend with the patient and family, including greater exposure to the psychological aspects of pain. This highlights the importance of comprehensive pain management and the need to address psychological as well as physical pain.

*Aims:* To investigate psychological aspects (fear, parental presence) and the efficacy of two intervention methods (distraction and application of local anaesthetic EMLA) on perception of pain associated with needle insertion procedures in a group of paediatric patients.

*Methods:* A prospective, clinical trial with children aged 3-12 years who required needle insertion procedures (venepuncture, intramuscular/subcutaneous injection, lumbar puncture and joint puncture). Data were obtained by conducting interviews with the children and their parents. The pain levels of the children were assessed by self-report using the Oucher pain scale.

*Results:* One hundred and twenty children (mean age, 8.07  $\pm$ 2.99 years) were included. We found statistically significant differences in the perception of pain in relation to the presence of the parent when conducting the procedures ( $P=0.001$ ) and fear on pain perception ( $P=0.001$ ). There was a trend for lower pain scores for those receiving EMLA or distraction, but these differences were not statistically significant ( $P=0.835$ ).

*Conclusion:* The results suggest that fear and parental presence affect pain perception in children. Despite only minimal pain reduction achieved using EMLA or distraction in this study, other results from previous research suggest it may have important and long-term effects for future experiences.

## Using a headache diary as an important diagnostic criterion

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*Introduction:* Headache is very common, and non-specific symptoms occur in all age groups, regardless of race, gender and social circumstances. Headaches can form part of a good medical history, evaluation of clinical status, and contribute to various diagnostic methods. As an addition to the diagnostic evaluation, in our clinic we use a headache diary.

*Case:* Using a headache diary in an addition to the whole diagnostic procedure in evaluating a headache in children is sometimes beneficial due to difficulties in defining the pain characteristics and intensity when children report pain. Using numerical, visual analogue pain scales found in the diary, the patient can define a subjective level of pain. Headache is often present during stressful situations so it is important to ask the child what they were doing and how they felt during the onset of headache, especially in school-aged children. It is also important to notice circumstances during which the headache occurred and record activities and interventions that alleviated the headache. From the diary, sometimes it is enough to take a rest or eat a meal. At the same time, we can follow the frequency of taking analgesics during the observed period. One page in a diary is divided into seven days and for each day they enter date, time of pain onset and cessation, localisation of the pain, type of pain, activities that preceded the pain, intensity of the pain, presence of other symptoms, activities that helped alleviate the pain, intake of analgesia and which one. We also take notice of sleep rhythm, eating times, stressors and menstrual bleeding in girls.

*Conclusion:* By using and appropriately entering the data in the headache diary it is possible to contribute accurate follow-up on headache which will in turn help decide further diagnostic procedures or treatment.

## Cooperation with parents when their children have a clinical procedure

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*Introduction:* Children who are in hospital often have procedures that might seem frightening or painful and restraint may be used. Studies find that restraint has adverse emotional effects on children and parents, in the short and long term. [1,2]

Parents' behaviour and support during the procedures has a great influence on the children's ability to cope with the procedure. Some parents give great comfort to their children, others are anxious and unsure how to support their children [2]. The same results emerged in a minor observation study on our ward.

Before the study we informed the parents about the clinical procedure, but did not tell them how to support their children. In this study we investigated the impact of a booklet to prepare parents to support their children.

*Methods:* First, we developed a booklet, which describes topical preparation, how feelings are affected, having choices, distraction techniques, reassurance and praise. The booklet was handed out to the parents at the admission to the ward together with information. We used a qualitative design and used observe-view what happened [3]. During the clinical procedures we observed the behaviour of the parent and the child and how the parents supported their children to cope with the procedure. Afterwards we interviewed the parents to find out whether the parents found the booklet useful and whether it supported them during the procedure, and other information they needed in the booklet.

*Results:* The study is ongoing and results will be presented at the conference.

*Conclusion:* Our hypothesis is that preparing parents in this way can help them to support their children during clinical procedures.

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## 'Good practice' in procedural pain management in paediatric emergency departments

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*Introduction:* Paediatric pain management has been widely studied and it is certainly one of the main principles of care for paediatric healthcare professionals. Despite this recognition, children's pain in emergency departments (ED) is still not treated adequately.

*Aims:* Recommendations and strategies for procedural pain management will help the physicians, nurses, and professionals to ensure if the child's right to have the best pain management is always met. The recognition of painful and/or stressful procedures in EDs such as needle pain and lacerations, the 'good practice' and the use of innovative methods for reducing paediatric pain, stress and anxiety would be provided.

*Methods:* The most recent literature and available guidelines via electronic records and medical databases were studied. Included criteria were articles in the English language from past ten years and the children were aged 0 to 18 years old.

*Results:* Pharmacological and non-pharmacological analgesia techniques, including the use of topical anaesthetics and distraction, are available and are recommended to be used from triage onwards. Although there are plenty of clinical guidelines and strategies for preventing or reducing procedural pain and distress in children across the world, there is a significant gap in the application of knowledge and actual practice.

*Conclusion:* The inadequate prevention and relief of children's pain is still widespread. The reasons for this failure should be discussed and explored. Innovative methods and effective strategies should be introduced to healthcare professionals. We have the knowledge to provide effective pain management. We need to follow 'good practice' to ensure that no child will experience unreasonable medical pain.

## The use of virtual reality in the reduction of pain and anxiety during venepuncture in children with cystic fibrosis: a randomised controlled trial

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*Introduction:* Cystic fibrosis patients undergo at least one blood sample per year. As shown in previous studies, children with CF display distress during invasive procedures. Virtual reality (VR) is an effective distraction technique during painful procedures but its efficacy in reducing needle-related pain and distress in children has not been extensively explored and there are no CF-related studies.

*Aim:* To assess the efficacy of VR as a distraction technique during venepuncture for blood tests in children with CF regarding anticipatory distress and pain.

*Methods:* CF patients between 6 and 16 years were randomised to the experimental group A (routine care and VR) or the control group B (routine care only). Behavioural distress was measured with the OSBD-R scale and anticipatory anxiety with the M-YPAS scale, while fear, pain and collaboration were measured with VAS.

*Results:* 21 patients (11 in group A; 10 in group B) were randomised. Before the procedure, OSBD-R and m-YPAS rates were similar. At 30 seconds after the beginning of the procedure distress (0.1 vs. 8.9  $P=0.018$ ) child's pain (0.6 vs. 4.1  $P=0.013$ ), parent's evaluation of child's pain (0.7 vs. 3.44  $P=0.018$ ) nurses' evaluation of behavioural distress (1.1 vs 4.1  $P=0.04$ ) in group A were significantly lower.

*Conclusion:* The study will continue until the completion of the required numbers. Preliminary data suggest that the use of VR during venepuncture may be an effective tool to reduce pain and distress caused by venepuncture in patients with CF.

## The management of children's pain at home

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*Introduction:* Pain is a subjective phenomenon which expresses people's physical and mental discomfort after true or possible damage of body's tissues. It is divided into two categories: acute and chronic. Pain is the most unpleasant experience for children and adolescents. The parent's role determines children's pain management at home.

*Methods:* A systematic review of epidemiological studies was conducted using PubMed and PMC databases. Following the application of the eligibility criteria, eight appropriate studies published after 2012 concerning patients between 6 and 17 years old were identified.

*Results:* Based on several studies, it has been proved that the most prevalent symptoms reported by paediatric patients was pain (67%) and parents' participation in their children's treatment at home, has a positive impact on them, as they become more accepting of analgesic treatment. To be precise, evidence for the psychological treatment of persistent pain in childhood is strong and constantly evolving. According to the findings of the University of Wisconsin, Milwaukee, the majority of parents (98.9%) reported providing their children with non-pharmacological techniques to alleviate pain. The most common techniques used were sleep, ice, comfort, rub/massage and art therapy, which was mostly enjoyed by parents, who found it to be a very helpful, supportive and validating. In addition to this, there was a positive result on hindering or even eliminating memories of pain. Although most parents' information needs were met during the conduction of these studies, they still struggled to manage their child's pain. This resulted in many parents allowing self-administration of pharmacological techniques by the age of 16 years, and self-management of non-pharmacological techniques as early as age six years.

*Conclusion:* Childhood pain is a common experience. However, an increase in understanding of these pain experiences and continued education for medical providers and parents can lead to increasingly effective treatment of these experiences of pain.

## ORAL PRESENTATIONS 14: QUALITY IN PAEDIATRIC NURSING CARE

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OP090

### Determining the effect of compliance with the Central Line Insertion Checklist during CVC insertion during complicated situations at the paediatric intensive care unit

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*Aims:* This study was conducted to determine effect of compliance with the Central Line Insertion Checklist (CLIC) during CVC insertion during complicated situations at the paediatric intensive care unit (PICU).

*Methods:* The experimental and interventional type study was conducted with 60 hospitalised patients between one month and 18 years old between February and August 2017 in a university hospital's PICU in Izmir. The data was collected in working hours. In the research, first CLIC was developed by researchers in accordance with current literature and to test content validity, expert opinions were taken from 10 experts in this field. To assess the inter-expert compatibility, the Kendall Compatibility Coefficient (W) was calculated and the final version of the CLIC (45 items) was given. Before the data was collected, an education seminar for doctors and nurses working in PICU, who performed CVC insertion and follow-up procedures, was organised and information was given about the CLIC, which should be completed during CVC insertion. Data were collected with a Patient Information Form, CLIC and the List of Complications Related to CVC. To determine whether the investigator was objective when observing during CVC insertion, data for the first 25 patients were collected by two people simultaneously and unannounced by the team to determine coherence between the observers, and the other data were collected by the investigator only, after the inter-observers' coherence was found to be 100%. In the analysis of the data, descriptive statistics, Kendall Compatibility Coefficient (W), Kuder Richardson reliability coefficient for CLIC's internal consistency, Correlation, Kappa, Mann Whitney U, Chi-square and Independent Samples Tests were used.

*Results:* Of the patients included in the research were 51.7% male, age mean 3.76(±4.77) years and CVC duration mean 8.98(±6.75) days. In the research it was found 68.3% of the patients' CVC was closed because of transferring to the clinic and reproduction was found in 25% of the closed CVC. It was determined 56.7% of the CVCs has double lumen, 45% of them had three lumen and 51.7% of them were inserted by an assistant doctor, 95% with two people and 56.7% were on the femoral vein, 41.7% jugular vein, 76.7% left side. In the study, it was found that various complications developed in the patients during the CVC insertion procedure. The Kuder Richardson reliability coefficient of the CLIC was found to be 0.60 in the analyses made. It has been detected that during CVC insertion, the mean number of items applied in the CLIC was low as 38.55(±2.27), and 41 of 60 patients developed complications (38.66±2.19). There was no statistically significant difference between complication development status and compliance during CVC implantation ( $P=0.898 >0.05$ ).

Conclusion: It is thought that complication development may not have been affected because of the low compliance with CLIC at the time of insertion of CVCs in the PICU.

OP091

## Italian validation of the Humpty Dumpty Fall Scale and realisation of a modified version. Creation of the new scale Meyer–Tuscany Fall Scale

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*Introduction:* Falls are a relevant problem in paediatric hospitals. The prevention of falls is only possible with an appropriate falls risk assessment tool that can identify those children who need specific prevention measures. The only fall risk assessment scale existing for children, the Humpty Dumpty Fall Scale (HDFS), is validated only in English.

*Methods:* The study had four steps. Step 1: linguistic and cultural validation. Step 2: evaluation of the predictive properties of the Italian version. Step 3: modifications of the scale to improve its performance. Step 4: creation of a new scale with a better predictive performance, using epidemiological and clinical data gathered in step 2. For the validation we have used the forward-backward translation and a pilot test with nurses. Reliability of the Italian version was tested on 100 paediatric inpatients. In step 2 the Italian HDFS was used on 1,500 hospitalised children.

*Results:* The Italian version, HDFS-ita, showed a Cohen's Kappa=0.965 for inter-rater reliability. The predictive performance was poor (sensitivity 77.8%, specificity 36.6%, ROC curve AUC: 0.593). A new version of the HDFS-ita, the HDFS-ita-M with only three items and a cut off of 7 was created to be used in subjects between 1 and 16 years. This scale had a better but still not satisfying performance regarding predictivity (sensitivity 77.8%, specificity 53.3% ROC curve AUC:0.670). With the data collected during step 2 a new scale was developed with satisfying statistical and clinical performances (sensitivity 88.9%, specificity 41.9% ROC curve AUC:0.820). This six-item scale with cut off 7 can be used on subjects 1 to 16 years. Its temporary name is the Meyer-Tuscany Fall Scale (MTFS).

*Conclusion:* The HDFS-ita-M can immediately be implemented deleting four of the seven items of the HDFS-ita. The MTFS will undergo a test period to confirm its predictive performance.

## Paediatric early warning score systems: the nurse's perspective – a focus group study

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*Introduction:* Paediatric early warning score (PEWS) systems are used to monitor paediatric patients' vital signs and facilitate the treatment of patients at risk of deteriorating.

*Aims:* To gain knowledge about nurses' experiences with PEWS and to highlight factors facilitating and impeding the use of PEWS tools in clinical practice. We aim to obtain knowledge about nurses' experiences with PEWS.

*Methods:* An exploratory qualitative design was chosen using focus group discussions to gain a deeper understanding of nurses' experiences with PEWS. A total of five focus group discussions were conducted at three hospitals, and the analyses performed were inspired by Kvale and Brinckman.

*Results:* Seven themes were identified, including i) lack of interdisciplinary awareness, ii) clinical judgment and PEWS – a multi-faceted approach, iii) PEWS supports a professional language, iv) monitoring equipment – a challenge, v) PEWS helps to visualise the need for escalating care, vi) an inflexible and challenging tool, and vii) supportive tools enhance the nurses' experiences of PEWS positively.

*Conclusions:* Our findings suggest that attention should be given to nurses' perceptions of how both clinical judgement and PEWS should be essential in providing nurses with information about the patients' conditions. If not, the risk of failing to recognise patients' deteriorating conditions will remain. From the nurses' perspective, medical doctors seemed unaware of their role in using PEWS.

## The paediatric nursing activities score as a predictor of patients' length-of-stay in the PICU

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*Aims:* To test the hypothesis that the nursing workload in paediatric intensive care units (PICU) can be correlated and can predict the patients' PICU length of stay (LOS).

*Methods:* A correlational study was performed in three PICUs of Athens-Greece from November 2015 to March 2016 (15 weeks), with a sample of 53 paediatric patients, who had been admitted to the PICUs. Data collection was performed for at least 30 consecutive days in each PICU, by using a short questionnaire (for basic demographic information) and two instruments: the Paediatric Nursing Activities Score (P-NAS), for assessing the nursing workload on the first day of hospitalisation and the Paediatric Risk of Mortality (PRISM). Descriptive statistics, parametric and non-parametric correlation analyses and logistic regression ( $P$ -value  $\leq 0.05$ ) were carried out (SPSS 22.0,  $P \leq 0.05$ ).

*Results:* Twenty seven (50.9%) patients were male. Participants' mean age was 71.55( $\pm 68.39$ ) months and 35.8% of them were infants, 41.5% children and 22.6% adolescents. The median LOS in PICU was four days and the observed mortality rate was 3.8%. The median PRISM score and the predicted mortality were 7 and 2.8%, respectively. The mean P-NAS score of the first day of hospitalisation was 73.72( $\pm 14.89$ ), with a median equal to 72.5. P-NAS was significantly correlated with PRISM score ( $r=0.576$ ,  $P<0.001$ ) and LOS ( $\rho=0.624$ ,  $P<0.001$ ). Logistic regression analysis showed that patients with a first day P-NAS of more than 72.5 had an almost 14.93 times greater probability to stay in the PICU for more than four days (OR 14.93, 95% CI 3.78–58.94,  $P<0,001$ ).

*Conclusion:* P-NAS nursing workload measurement is an independent nursing assessment that may facilitate the early identification of paediatric patients with prolonged PICU LOS.

## Compliance with a central line-associated blood stream infection bundle in neonatal intensive care units in Greece

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*Introduction:* High CLABSI rates are noticed in Greek NICUs, thus there is a great need for intervention. The aim of this study is to describe the rates of compliance with evidence-based practices for insertion and maintenance of central lines (CL) using checklists in 10 NICUs in Greece.

*Methods:* Validated CL insertion and maintenance checklists, based on the standard checklist of CDC for prevention of CLABSIs, were completed by nursing and medical staff of NICUs on a random day every week from March to December 2017 at each participating NICU as part of an intervention to reduce CLABSIs. Ten of 17 public NICUs throughout Greece participated in the study. Pooled rates of overall and step-specific compliance were calculated.

*Results:* A total number of 287 observations for CL insertion and 786 CL maintenance

checklists were completed. Overall compliance with insertion and maintenance checklists was 40.7% and 77.3% respectively. Hand hygiene compliance (HH) was 96.3% and rate of proper skin preparation was 88.2%. Moreover, compliance with the use of maximum sterile barrier precautions was 64.8% and the maintenance of aseptic technique during the insertion process was 92.5%. Concerning the maintenance of CL, the compliance with HH was 98.5% and the disinfection of catheter hubs rate was 79.6%. Furthermore, none of 10 and only 3 of 10 NICUs present  $\geq 95\%$  compliance with all preventive practices at the insertion and maintenance of CL respectively. Finally, compliance with daily assessment of CL necessity was 48.1%.

*Conclusions:* This is the first study to examine adherence to insertion and maintenance bundles and use of checklists for CLABSI prevention at national level. The compliance rates of the CLABSI bundle are low and interventions should focus on identifying barriers to adherence.

## ORAL PRESENTATIONS 15: PSYCHOSOCIAL ISSUES IN PAEDIATRICS

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OP096

### **Perception of family support and quality of life among families of children and adolescents with severe mental illnesses or disorders who are in active psychiatric treatment at an outpatient children's psychiatry unit**

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*Introduction:* Parents of children and adolescents with severe psychiatric illnesses or disorders, are daily loaded with complex caregiving tasks and this can have an impact on their quality of life. Parents may also be coping at the same time with variety of different psychiatric illnesses or disorders in their child or adolescent, such as anxiety, depression, attention deficit hyperactive disorder (ADHD) or eating disorders. Anxiety in children and adolescents are common and may become a life-long psychiatric disturbance but, anxiety in childhood can predict a range of psychiatric disorders' in adolescence. Little is known, about promoting quality of life across mental illnesses, among families of children and adolescents with severe psychological illnesses or disorders. The purpose of this study was to evaluate the predictors of quality of life among families of children with severe mental illnesses/disorders who are in active psychiatry treatment.

*Method:* The study design was cross-sectional. Sixty eight families of children with anxiety, depression, ADHD, eating disorders, autism and Asperger syndrome, who were in active psychiatric treatment at a university hospital participated. Data were collected from March 2015 to December 2016, using valid and reliable instruments to measure the study variables.

*Results:* The main finding from the hierarchical regression analysis indicated perceived family support predicated 21% of the variance in the family perception of their quality of life when controlled for by the anxiety and depression illness types (these illnesses affected the families' QOL least).

*Conclusion:* The findings emphasise the importance of developing effective interventions for families of children with severe psychiatric illness/disorders. Therapeutic conversation as an intervention needs to specifically focus on illness and symptom management, use the support network of the family, offer emotional support and explore illness beliefs.

**OP097**

## **Post-traumatic stress disorder in children after hospitalisation: a review of the aggravating factors and the assessment tools**

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*Introduction:* Post-traumatic stress disorder (PTSD) is a mental disorder caused by several trauma- and non-trauma-related events. It is very frequent in childhood and untreated traumatic stress symptoms in children and adolescents often result in debilitating consequences on development, with increased risks for a variety of physical and mental disorders. It has been found that PTSD symptoms are reduced as soon as therapeutic interventions have been applied [1]. This review summarises the available literature regarding aggravating factors associated with the development of PTSD in children after hospitalisation and assessment tools for a quick and reliable screen of children who are at risk for developing PTSD.

*Methods:* A review of papers published in the last ten years was conducted. Search was performed on PubMed with the key words: PTSD and children and hospitalisation, using the filter: human. Of the 96 articles reviewed, 11 relevant articles were included.

*Results:* Significant aggravating factors associated with the development of PTSD are: trauma and non-trauma-related hospital admission, previous health problems, hospitalization in a paediatric intensive care unit (PICU), attendance at a hospital for child and adolescent psychiatry and psychotherapy and initial high post-traumatic stress symptoms (PTSS) in parents [2-8]. As for assessment tools, it has been observed that the Child Trauma Screening Questionnaire (CTSQ)-Heart Rate (HR), the alternative PTSD algorithm (PTSD-AA), the Child Stress Disorders Checklist-Short Form (CSDC-SF) and the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) model for PTSD symptom categories, may increase identification of children who are likely to or have already developed PTSD symptoms, in the study population wherein each was implemented [1,9-11].

*Conclusion:* Overall, there is a variety of aggravating factors associated with the development of PTSD in children after hospitalisation. Assessment tools should be able to identify immediately the children who are likely to or have already developed PTSD symptoms.

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## Animal-assisted therapy in children with autism spectrum disorder

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*Introduction:* Children with autism spectrum disorder (ASD) present a specific set of behavioural and developmental problems. They often have social problems that include difficulty communicating and interacting with others, for example at school, repetitive behaviours as well as limited interests or activities and reduced play skills. In animal-assisted therapy(AAT), an animal (horse, dog, dolphin) can play several roles in the life of a child, from brightening their day to protecting them from harm.

*Aims:* To present the impact of animal-assisted therapy in autistic children and evaluate the potential ability of the therapy to enhance the progress and health of patients.

*Methods:* The search of relevant articles for the period 2000-2015, was performed using Medline, PubMed and Google databases, with the following key words: Animal-assisted therapy, Autism spectrum disorder, horse, dog, children.

*Results:* According to the existing literature, a variety of animals can provide actual therapy for children with ASD. It has been claimed that they can soothe the emotionally distressed, reduce stereotyped behaviour (hand-posturing, humming and clicking noises, spinning objects, repetitive jumping, roaming), lessen sensory sensitivity, and increase the desire and ability to connect socially with others (joining the therapist in simple games, initiating activities by giving the therapist balloons to blow up, balls to throw, reaching up for hugs). The presence of an animal makes children more playful and joyful, more focused, and more aware of their social environments.

*Conclusion:* Animal-assisted therapy (AAT) is a healing modality involving a patient, an animal therapist, and handler with a goal of achieving a specified therapeutic outcome. Many AAT studies claim that they provide substantial benefits but evidence is needed to support more widespread acceptance and use of such therapy.

## Determination of parenting stress levels in mothers of babies with cleft lip and palate

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*Aims:* In this study, the parenting stress and the factors affecting the mothers who have babies with cleft lip and palate anomalies were examined.

*Methods:* The study population consisted of mothers whose babies had cleft lip and palate anomalies followed in the outpatient clinics and services of a university. There wasn't a statistically significant difference between two groups according to individual characteristics (age, gender, and socioeconomic status) of the mothers of 90 healthy and 90 cleft lip and palate babies ( $P>0.05$ ). Data collection form, the Parenting Stress Scale and the Multidimensional Scale of Perceived Social Support were used as data collection tools.

*Results:* It was determined that the mothers who had a baby with a cleft lip palate had higher parenting stress mean scores (104.9, 64.3) than the control group. There was a negative relationship between perceived social support scores and parenting stress scores for mothers with cleft lip-palate babies ( $r=-0.753$ ,  $P<0.001$ ). The mean for parenting stress scores of mothers who had babies who were not operated for cleft lip and palate anomaly was higher than mothers who had babies who had surgery ( $P<0.001$ ). Parenting stress scores were found to be lower in the parents who knew the diagnosis before birth ( $P<0.05$ ). Mothers who had difficulties in feeding their babies were found to have higher parenting stress scores and as the degree of difficulty increased, the parenting stress means score increased significantly ( $P<0.001$ ). Mothers who were breastfeeding were found to have lower parenting stress scores than those who were not breastfeeding ( $P<0.001$ ).

*Conclusions:* Mothers who have babies who hadn't had surgery and did not know the diagnosis before birth have higher parenting stress scores. For this reason, it is important to apply adequate and supportive nursing interventions to mothers that will reduce stress until the baby has surgery.

OP103

### **Nursing students and children talk about physical activity and sport: a pre–post intervention study in a primary school in Rome (Italy). Students' feeling and perspectives**

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*Introduction:* Health promotion is an important task and a crucial responsibility for nurses. Communication is a fundamental skill, especially if oriented to children's health issues. Learning and improving communication is a long process. For this reason, high-quality nursing care should start at the early phases of academic education, with the aim of filling the gap between theory and practice and supporting different specific educational experiences.

*Methods:* Thirty three second-year nursing students conducted a pre- and post intervention study in a primary school to investigate the general habits of the children and to inform them about the importance of physical activity and sport. Authorisation was obtained from parents. Anonymous structured questionnaires, including general and specific information, were administered before and after the intervention. At the end, the students filled an anonymous satisfaction questionnaire.

*Results:* Forty five children (mean age 9.33 years, SD±0.57), attending the fourth (64%) and the fifth (36%) degree of primary school were considered. 42/45 students (93%), 25/45 were boys (56%), 20/45 were girls (44%) practice sport 2 or 3 times a week (76%). Children spent at least 1 hour/day playing video games (13/45, 34%) and watching TV (24/45, 54%). Before the intervention, even if physical activity and sport were considered important for 43/45 (95%) and 45/45 (100%) students, respectively, 7/45 (16%) children did not know the difference between the two topics. After the intervention, physical activity was stated to be important for all children and only 1/45 (2%) continued ignoring the difference ( $P=0.031$ ). All nursing students, including four males (13%) and 29 (88%) females (mean age 21.82 years, SD±3.55), were satisfied and would repeat the experience.

*Conclusion:* Nursing students can effectively contribute in promoting healthy lifestyles in childhood. Specific education of communication skills should be considered of primary interest during nurse training.

## Developing the future workforce: successful implementation and completion of the post registration child and young person's nursing programme

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*Introduction:* The initiative arose from the identification of a workforce development need in the Royal Manchester Children's Hospital (RMCH), part of Central Manchester University Hospitals NHS Foundation Trust (CMFT). CMFT secured funding, in August 2015, from Health Education England (HEE) working across the North West of England in conjunction with the University of Salford to co-design, pilot and evaluate a curriculum and commissioning specification for a 12-month accelerated children and young people's (CYP) programme. The funding bid was submitted in response to the changing complex health needs of children and young people and the challenges within CMFT of recruiting and retaining children and young people's nurses to meet workforce demands. The bid acknowledged the issue that the current nurse education system reduces career flexibility for registered nurses wishing to expand the scope of their knowledge and skills into other fields of nursing. To change their field of practice, registered nurses have no option other than to leave their salaried employment to undertake a second registerable qualification in children's nursing as a nursing student. The need to return to unsalaried student status and the length of the current three-year programme acts as a disincentive.

*Methods:* The programme's aim was to prepare experienced adult nurses, registered with the Nursing and Midwifery Council (NMC), to undertake an accelerated course leading to a second registerable qualification as a children's nurse as well as a top up degree or postgraduate certificate (depending on entry qualifications). The project addressed the urgent requirement to grow a workforce of nurses with unique skills to understand and respond to the complex health needs of children and young people. Experienced adult nurses bring transferable clinical and leadership skills which greatly enhance the skill mix within the workplace.

The programme aligns to the principles outlined in the Shape of Caring Report (2015) with the need to improve nurse training and to create flexibility to work across a range of disciplines. The need for the Royal Manchester Children's Hospital to comply with the Royal College of Nursing (2013) guidance on safer staffing levels for children and young people within acute and community environments, ensuring safe child to registered child nurse ratios are met, was an additional driver supporting the programme.

Funding was obtained for a pilot cohort of ten, who would be employed as Band 5 post-registration nursing students during the programme, with the offer of a substantive post within Royal Manchester Children's Hospital upon successful completion of the programme. Initiatives began in September 2015 regarding the development of the programme, including consultation with the Nursing and Midwifery Council (NMC), the Royal Manchester Children's Hospital Youth Forum, to inform content and collaborative working between RMCH and the University of Salford. The pilot cohort commenced in June 2016 and completed in June 2017.

*Results:*

- To develop an NMC-validated curriculum to enable children's nurses to work flexibly across hospital and community locations.

- To recruit a cohort of ten nurses with a minimum of two years post registration experience. This was achieved; however, one student did not start due to personal circumstances and one student left midway in the programme due to an unexpected personal issue.
- For the pilot cohort of accelerated CYP nursing students to gain registration as children's nurses.
- The graduates from this programme can elect to gain employment at the RMCH. 87.5% of the students went onto work for the trust.
- Patient and staff engagement was embedded throughout the involvement the programme by involving; Children's Youth Forum, Band five reference group, university link lecturer involvement across the North West UK.

*Conclusion:* Key learning surrounding the short development time frame for the curriculum content, recruitment and selection of the pilot cohort has been a steep learning curve for both educators and practitioners. Steering and Implementation Groups were set up to share ideas and determine actions in relation to programme development, evaluation strategies and information sharing. This has been shared in the form of minutes, action logs and Gantt charts to enable all members to be aware of developments and learn what was required for this new venture. Any issues that arose were shared and joint solutions generated.

Student and staff expectations were ascertained at the outset and it became clear that there was a mismatch between the two in relation to perceived competence in caring for children which has implications for staff and mentor preparation for future courses.

Overall the programme was a resounding success both for the CYP post registration nurses who undertook the course and the employing organisation. Moving forward this model of recruitment to the field of CYP nursing is adaptable and can be used in a number of care settings.

## Patient safety: numerical skills and drug calculation abilities of nurses and nursing students

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*Introduction:* The research addresses comprehension and knowledge of practising nurses and nursing students about patient safety and drug administration. Healthcare providers have to constantly watch over and ensure secure use of medications, practice environment and error management. Generally, drug administration in healthcare is performed by nurses who are responsible for giving medications to patients. Poor mathematical skills of nurses complicate the drug administration process as it has already been pointed out in several studies conducted in Europe. Miscalculations can lead to errors in dose calculation and may potentially harm patients.

*Aims:* To find out how nursing students and practising nurses apply their mathematical skills for calculation of drug dosage. The research hypothesis was that patient's safety aspects and mathematical skills to calculate drug dosage are better governed by practising nurses than students of the nursing programme.

*Methods:* A quantitative method was used. Students of the nursing programme were asked to fill out a survey that consists of 26 questions and practising nurses were asked to fill out a survey that consists of 28 questions; the survey covered such aspects as awareness of patient's safety, conversion of units of measurement, per/os dose calculation, i/v dose calculation, infusion speed calculation, dosage calculation for children, etc. 200 surveys were handed out to practising nurses and 67 surveys were returned ( $n=100\%$ ), the same amount was handed out to medicine students and 119 surveys were returned ( $n=100\%$ ). Respondents were randomly selected at hospital X, including employees who were ready to participate, while at medicine college, second and third-year nursing students were selected as survey respondents.

*Results:* The number of errors in tasks where respondents were asked to calculate doses (among students the number of errors was 220, on average 1.8 error per student, while among practising nurses there were 138 errors, on average 2.1 per nurse). This reveals insufficient mathematical skills that may lead to miscalculation of drug dosage and harm patients.

## Nursing students' satisfaction with their clinical practice in paediatric nursing

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*Introduction:* Learning in the clinical environment during nursing students' clinical training provides the opportunity to test their skills and knowledge. However, the satisfaction with their clinical practice seems to influence not only their experience but also their professional identity and the relationship with paediatric patients.

*Aims:* To evaluate nursing students' satisfaction with their clinical practice in paediatric nursing.

*Methods:* An evaluation form questionnaire was used to collect data at the end of clinical training in paediatric nursing. The fourth-year university nursing students were volunteered to fill it in anonymously. In total, 584 questionnaires were completed in a three-year period (2014-2017). The response rate was 80-85% per academic year.

*Results:* The majority (86.8%) rated the clinical training as very good to excellent. However, those who rated training with low scores wanted more clinical practice days, fewer individuals per clinic, and a wider range of clinical cases to study. In relevance to the content of training, 87 students (14.89%) preferred a broader range and further analysis of items in their clinical practice thus the majority ( $n=485$ , 83.05%) were satisfied with the content provided and the planning of clinical practice. The existence of trainers and their guidance, the small groups of students, structured training with a combination of theoretical knowledge (lectures) with the clinical training and a family-centred approach with direct contact with paediatric patients and family, were rated as the most important advantages from clinical training. However, the heavy workload in some departments along with a shortage of nurses has prevented clinical nursing staff from devoting time to students to train them in clinical practice. The main disadvantages were the reduced ability to perform nursing interventions due to lack of experience and the strict timeline.

*Conclusions:* It is acknowledged that clinical training is an essential aspect of student nurse education and is highly rated by the students and this was expressed through their positive learning experiences. The important role of the clinical trainer was also stressed along with the need for adequate management of negative reactions and negative experiences.

## The lived experience in of clinical training in paediatric nursing. Students' clinical diaries analysis

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*Introduction:* Nursing students' experiences seem to partly affect their professional identity based on the challenges and responsibilities they face even during their clinical training, the theory–practice gap and the reality shock.

*Aim:* To analyse in a qualitative way the experiences of nursing students during their paediatric clinical practice.

*Methods:* A qualitative content analysis by two independent analysts was performed using 82 diaries from the monthly paediatric clinical nursing exercise of year four nursing students. An interpretative phenomenological analysis was performed that led to a thematic synthesis. Codes were generated from the data rather than using pre-existing hypotheses or theories.

*Results:* The main thematic categories that derived from data included: positive or negative feelings prior to clinical training, contact with children, management of painful interventions, reactions to parental presence, provision of information to parents and children, need for autonomy in clinical training, clinical aspects of training, reactions to severe disease, near end care and bereavement in paediatrics, assessment of working environment, quality of clinical mentoring, collaboration with nursing staff, collaboration with other healthcare professionals, satisfaction from clinical training, sources of dissatisfaction from clinical training and thoughts concerning nursing profession. A theoretical model of interactions between the most important determinants of the overall experience is presented. According to this model the experiences of student nurses are influenced by several determinants that derive from the student's atomic characteristics but also influenced by organisational, environmental and cultural factors.

*Conclusion:* Each of the core themes has dimensions that can be separately supported from the data. In general, it seems that nursing students evaluate their clinical training highly but they stress many barriers that influence their overall experience.

## Analysis of main orthopaedic pathogenes and methods of rehabilitation in children

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*Background:* In recent decades, there have been cases of children and adolescents who report chest and back pain or have musculoskeletal disorders affecting the thoracic area. According to international surveys, 1-2% of children present a real scoliosis. Equally large dimensions show kyphosis, at a rate of 2-3%, according to the International Scientific Organisation of Scoliosis-Killing and Rehabilitation SOSORT.

*Aim:* The analysis of specific spinal cord diseases and the evaluation of educational interventions for rehabilitation, through a review of the literature.

*Method:* Revised articles and research papers published in English and Greek in the last decade were searched in the electronic databases PubMed and Google Scholar, which were related to the study of kyphosis-scoliosis.

*Results:* Recent research has shown that educational intervention significantly improves the outcome and quality of life of children and their families. Patient satisfaction is also important when personalised information is commensurated according to the age of the child and the severity of the disease.

*Conclusions:* Childhood orthopaedic disorders are complex and require a personalised approach and management of both the disease and the child's psychosocial condition. Parenting information given by healthcare professionals is a cornerstone of treatment.

## Type I diabetes and children and the role of the nurse educators

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*Introduction:* Type I diabetes is a clinical syndrome which has increased recently, posing a challenge to healthcare specialists, especially educator nurses. The nurse's role is multiple and indispensable both for the child and his/her family.

*Methods:* A systematic review of epidemiological studies was conducted within PubMed and Web of Science databases. Following the application of the eligibility criteria, we identified six appropriate studies published after 2012 concerning patients between 11-15 years old suffering from type 1 diabetes.

*Results:* Results showed that expert nurses with the appropriate education managed to teach parents and their young children in a successful way about how to pump injections, avoid disease complications and clinical outcomes, such as diabetic ketoacidosis (DKA). A well-organised study among a sufficient number of young patients revealed that the hospital admission rate showed a downward trend among those who had been taught by a highly-trained nurse. Additionally, telephone follow-up intervention by nurses has yielded good results, as glycosylated hemoglobin (HbA<sub>1c</sub>) levels were lower. The studies show that certified diabetes educator nurses can provide better healthcare to help young patients show good metabolic control, fewer hyperglycaemic episodes, as well as appropriate use of equipment for measurements and injection.

*Conclusion:* It is vital we realise that paediatric patients can successfully manage their disease due to the training provided by the education nurses. Chronic diseases do not affect only children's lives but their families as well. Therefore, only certified and specialised nurses can help those paediatric patients lead a life which shares the same quality characteristics as the life of a healthy adolescent.

## Evaluation of parental anxiety related to their presence during induction to anaesthesia

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*Introduction:* Hospitalisation is a traumatic experience for both the paediatric surgical patient and his/her parents. Parental anxiety is correlated to their level of knowledge and their ability to cope along with several other determinants.

*Aim:* To assess parental anxiety related to their presence during induction to anaesthesia.

*Methods:* The study was conducted during 2017-18 at two public paediatric hospitals of Athens after receiving research approval from their Ethics Committees. Parental anxiety was assessed using Spielberger's State-Trait Anxiety Inventory-Scale (STAI-S). Informed consent was signed and anonymity and voluntary participation was assured.

*Results:* 102 parents of 48 boys and 54 girls with mean age 5.98 ( $\pm 4.22$ ) years participated in the study. The mothers' mean age was 37.7 ( $\pm 6.67$ ) years and the fathers' mean age was 41.5 ( $\pm 7.41$ ) years. There was a variety of surgical patients with the majority 86.3% ( $n=88$ ) receiving general anaesthesia and with a mean duration of operation 120 ( $\pm 28.250$ ) minutes. Previous presence in the operation room was stated by 39 parents (38.2%) and the majority expressed their desire to be present during induction to anaesthesia ( $n=67$ ; 65.7%). The overall satisfaction from induction to anaesthesia was high ( $n=76$ , 74.5%) and just eight parents rated it as low (7.8%). Desire for more information regarding anaesthesia was expressed by 44 parents (43.1%). However, no information was reported by 10.8% of the parents and the preferred source of information for anaesthesia were anesthesiologists (85.3%). The mean State and Trait anxiety scores were 49.98 ( $\pm 13.5$ ) and 41 ( $\pm 9.41$ ), respectively. The State Anxiety levels were correlated with the sex of the parent ( $P=0.049$ ), the maternal educational level ( $P=0.034$ ) and the desire for more information ( $P=0.048$ ). The Trait Anxiety levels were correlated with the sex of the parent ( $P=0.079$ ), the educational level of both parents (mother  $P=0.001$ , father  $P=0.048$ ), the desire for more information ( $P=0.042$ ) and the level of satisfaction from anaesthesia provision ( $P=0.003$ ).

*Conclusions:* According to the survey results, parental presence was associated with average and high levels of anxiety. Previous experiences influenced positively the anxiety levels along with parental educational and socioeconomic status. Mothers seem to be significantly more anxious than fathers and overall the level of information influences their anxiety levels.

## Development and evaluation of hand-made nursing dolls for paediatric nursing education

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*Introduction:* Dolls allow students to apply theory in practice and to transfer and adapt skills and interventions to meet children's needs. This study focuses on hand-made nursing dolls and nursing doll stories based on the experiences of nursing students to develop teaching and learning strategies in the paediatric nursing.

*Aims:* To develop student nurses' perspectives towards learning to become a paediatric nurse, as revealed through the content of their written nursing doll stories and hand-made nursing doll.

*Methods:* An interpretive, constructivist approach was used to collect, analyse and create stories from student nurse's hand-made nursing dolls, in line with narrative inquiry. Forty-six nursing students in the third year of an undergraduate nursing programme were selected by purposive sampling. Dolls and stories were undertaken within one week following placement completion in university. Data were collected using hand-written nursing stories and hand-made nursing dolls. Narratives were obtained by hand-writing paper. The nursing doll stories extracted from the nursing students hand-made nursing dolls were combined and summarised according to their common meanings to provide an understanding of the overall process of reframing.

*Results:* Nursing dolls showed 24 different type of disease relating to 12 systems of the body. It was also implemented 19 types of nursing care on hand-made nursing dolls. Key themes emerged relating to the insight and learning of student nurses and the paediatric journey they had experienced, including the nature of childhood health and disease, childhood growth and development, and therapeutic toys.

*Conclusions:* The research outcomes of this study have value to teaching and learning by enabling an appreciation of how narrative can be used to portray the experiences of learners. The anticipated contribution of this study to learning and teaching practice relates to how nursing dolls and storytelling could be an alternative and innovative approach for understanding the paediatric lesson experience through the eyes of learners.

## Paediatric nurses' attitudes towards the use of disposable toys made from medication packaging: a phenomenological study

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*Aims:* As individual toys are recommended for each inpatient in paediatric settings to prevent cross-contamination, the study investigates paediatric nursing student's attitudes towards using disposable toys made from medication packaging and assess its potential as a viable nursing intervention.

*Methods:* This qualitative study employs a phenomenological approach to sample Turkish nursing students' ( $n=80$ ) attitudes towards using unused, clean medication packaging made of paper/cardboard to create their own disposable toys for child patients. Descriptive analysis was used to categorise the types of disposable toys created, while thematic analysis was used to aggregate the nursing student's attitudes towards their perceived usefulness.

*Results:* From a total of 85 disposable toys, six different types were identified (i.e. general, humanoid, animal-like, vehicles, education material and medical objects). Three main themes emerged from the participant's opinions: the value of recycling unused medical packaging; the benefit of providing sick children with specialised toys; and the benefits for primary nursing.

*Conclusion:* In conclusion, this intervention was viewed as beneficial by reducing the risk of cross-infection, providing nurses with a means of creating better relationships with patients and improving hospital's environmental impacts.

*Practical implications:* Paediatric nurses may use natural, uncontaminated, unused clean pharmacy boxes suitable for children's ages to support normal development. Nursing research should attach more importance to the use of such toys and perform further studies into the benefits this provides for primary nursing.

## ORAL PRESENTATIONS 17: PROMOTING THE QUALITY OF PAEDIATRIC CARE

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OP113

### Assessment of paediatric hospitals using the data envelopment analysis (DEA) method

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*Introduction:* Assessment of health services is a particularly important process in the healthcare sector that is made by comparing hospital units with predefined objectives. There are many assessment methods used by researchers. The most important of these is data envelopment analysis (DEA), which is a parametric method of linear programming.

*Aims:* To evaluate the efficiency of Greek paediatric hospitals. Specifically, attempts to answer the following inquiry question 'How effective is the use of inflows of doctors, nurses and day hospital patients in Greek paediatric hospitals?'

*Methods:* The collection of data was done from the internet and specifically from the official website of the Ministry of Health under the link Presentations - reports of functional specific data and set' and the calculation of the degree of efficiency was made using the DEA-P program and version 2.1, which is available for free on the internet. The size of the sample was three purely paediatric hospitals

*Results:* According to the results obtained by the average efficiency in stable economies of scale it was 99% and in the 100% variables. The average efficiency of the scale was also 100%. It is also noted that the sample appears to be homogeneous and that the evaluated units use the inputs available to them in a rational manner.

*Conclusions:* For healthcare executives it is ideally important from an information point of view. The conclusions are particularly useful for the execution of a very important function by the executives of the decision-making process.

OP114

## Opinions about themselves after paediatric nurses become parents

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*Objective:* This research is a qualitative study to determine the opinions about themselves after paediatric nurses become parents.

*Method:* When we started to work in the paediatric service, we had 25 nurses who did not have children and became parents while in post. The semi-structured interview form developed by the researcher was used as data collection tool in the research. The interview form comprised questions covering six sections: personal information; clinical environment; attitudes towards parents after parenting; attitudes towards children after parenting; nursing interventions and practices after parenting; and nursing roles after parenting. Descriptive analysis technique was used to analyse the data.

*Conclusion:* It can be said that nurses are more empathic in their nursing initiatives and practices after becoming a parent, and they take on educative and advocacy roles.

## Paediatric patient safety culture–related perceptions on employee health services

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*Introduction:* In the study, the health workers working in paediatric services measure their perceptions of the patient safety culture, compare these perceptions with their own factors, improvement of existing cultural fields: identifying the subjects, informing employees about patient safety and identifying the security culture, controlling systems developed in the process of patient safety, the security culture created in other institutions. Within the framework and in its own structure, to fulfil the requests for safety and to make new arrangements to be done. With the factors that play a role in the formation and development of the patient safety culture, it is thought that hospital administrations will be able to help determine the considerations for establishing security culture policies.

*Aims:* To investigate the perceptions and factors affecting the patient safety culture of healthcare workers working in paediatric services.

*Methods:* The descriptive study was conducted between 2016-17 with 461 healthcare workers in four hospitals in Bursa. The research data was collected using Patient Safety Culture Hospital Questionnaire (Hgkha). The alpha value of the scale is 0.91.

*Results:* Health workers working in paediatric services, hospital safety culture, the highest positive response to the hospital questionnaire teamwork within units being a lower size (45.2%) and the lowest answer was non-punitive responses to fault (29.3%).

*Conclusion:* The majority of healthcare workers working in paediatric services were determined to know the concept of patient safety and to implement patient safety initiatives while on duty.

## Sizing of nursing in paediatrics: use of a classification instrument of paediatric patients

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*Introduction:* the sizing of nursing staff in paediatrics, as a management tool, bases the planning and evaluation of the number of professionals needed to provide nursing care, according to the particularities of each health service. Starting the sizing process involves the calculation of the workload and for this, it is necessary to adopt a Paediatric Patient Classification Instrument (ICPP). ICPP allows the classification of patients into five categories of care: minimum, intermediate, high-dependency, semi-intensive and intensive care. The objective of this study was to determine the amount of nursing staff needed in the inpatient unit of a paediatric hospital, certified by the Joint Commission International, and a national reference in paediatric care.

*Methodology:* The study used a descriptive, cross-sectional, quantitative approach. The study participants were all children admitted to the inpatient unit during a complete, uninterrupted month of data collection. Participants were assessed daily according to ICPP. The total number of classifications during the period was obtained, using the parameters of the current resolution (453/2017) of the Federal Nursing Council, followed by the estimate of the staff to be scaled.

*Results:* The study included approximately 1,600 classifications among inpatients in the period, the occupancy rate was approximately 80%, the average stay was three days and the vast majority of patients were classified in the intermediate care category. The actual staffing of the unit was close to scaling.

*Conclusion:* The study was carried out by a nationally validated scientific method and strengthened the nursing management and supervision areas of the institution, with technical arguments and critical discussion regarding sizing of nursing staff in paediatrics.

OP117

## To determine the views of nurses regarding their interaction with babies in neonatal intensive care: a qualitative study

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*Aims:* To determine the opinions of nurses working in neonatal intensive care unit with infants.

*Method:* The study was conducted with 21 nurses working in a premature intensive care unit of a hospital. All nurses working in the clinic participated voluntarily. A semi-structured interview form developed by the researcher was used as data collection tool in the research. The interview form comprised questions on seven sections: personal information; clinical environment; premature infants' opinions; the effects of the infant passing by the baby; experience with the infant; attachment to the baby; and departure from the baby. A descriptive analysis technique was used in analysing the data

*Conclusion:* Experiences of nurses with infants and parental attitudes affected nurses' attachment to infants.

## Assessing research capacity and capability (RECAP) among qualified health professionals: a feasibility study in a tertiary children's hospital

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*Aims:* To report on a study to convert the paper-based research and development (R&D) Culture Index (1) (a valid, reliable, 16-item tool, previously used nationally/internationally for assessing personal and organisational R&D development across registered healthcare professional groups), into electronic format (eR&DCI), and assess the feasibility of:

- administering the eR&DCI to registered healthcare professionals in a tertiary children's hospital
- assessing the potential of the eR&DCI for guiding a research capacity and capability-building strategy

*Methods:* The eR&DCI was created using Bristol Online Survey; an embedded e-mail link was circulated to all registered healthcare professionals. Data were analysed using descriptive statistics (item-responses) and thematic-analysis (free-text responses).

*Results:* 156 respondents (doctors  $n=38(24.36\%)$ ; nurses  $n=75(50.64\%)$  and allied health professionals (AHPs)  $n=43(24.36\%)$  completed the eR&DCI. Of all participants, 128 (82%) were women, 89(57.1%) worked full-time, and 46(25%) had no formal research training. Twenty four (15.4%) had a diploma, 47(30.1%) a degree, 19(12.2%) a postgraduate certificate/diploma 45(28.8%) a master's/MD, and 18(11.5%) a PhD. Fourteen out of 38(36.8%) doctors had a PhD compared to 0% of nurses, and 4(10.5%) of AHPs. Thirty-three (21.2%) were a named applicant on a grant, 49(31.4%) on a research ethics application, and 64(41%) had authored peer-reviewed publication/s. The median R&D score was 32 (range 13-48) thus indicating a positive attitude towards research. In response to the free-text question: What research training would help you become more involved in R&D? Two themes emerged: broad opportunities and specific courses to facilitate involvement in R&D. Seven respondents answered – none; 10 said don't know/not sure; 20 said insufficient time for research. The results are informing the children's hospital's research strategy and will be reported in more detail in the paper.

*Conclusions:* It is feasible to survey the multi-disciplinary workforce in a tertiary children's hospital using the eR&DCI, and guide strategy to promote research capacity/capability building. Our methodology has potential application across all UK children's hospitals to support workforce research capacity-building at the national level.

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## Communication skills in nursing practice with blind people

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*Introduction:* Communication skills are essential in the nursing process and they include sending, listening and receiving information. Nurses play a crucial role in helping the blind to adapt, especially when they arrive in health institutions.

*Aims:* To investigate the skills of communication placing the emphasis on the ways nurses communicate and the difficulties they encounter in the communication with blind patients.

*Methods:* A total of 121 registered nurses from 14 departments of the Zadar General Hospital in Croatia participated in this cross-sectional study. The original paper-and-pencil questionnaire was designed for this study. The questionnaire included questions about communication skills and the nurses' perception about difficulties in communication. The differences between variables were assessed using the Mann-Whitney U test and the Kruskal-Wallis test, while the correlation was assessed using the Spearman's coefficient. Statistical significant considered at  $P < 0.05$ .

*Results:* There was a connection between the open communication and the nurses introducing themselves to the blind person ( $r=0.60$ ;  $P < 0.001$ ). Difficulties in communication highlight 35.6%, and the lack of experience, 46.3% of nurses. The lack of experience resulted in a greater perception of the lack of knowledge and skills ( $r=0.84$ ) and a greater need for improving communication ( $r=0.45$ ), resulted in communication difficulties;  $P < 0.001$  (Table 1). Nurses with paediatric and psychiatric experiences showed better communication perception and other skills in the communication process with blind people ( $P=0.044$ ).

*Conclusion:* Paediatrics and psychiatric nurses focus significantly more on communication skills than nurses from other departments. The communication difficulties the nurses encounter with the blind is connected to the level of knowledge, skills and experience that the nurses have. The education of nurses in communication is a high priority for elevating the quality of healthcare for the blind.

		Lack of experience	Lack of knowledge and skills	Need for help in communication	Need for increase of expertise
Communication difficulties	rs*	0.691	0.604	0.407	0.368
	P	<0.001	<0.001	<0.001	<0.001
Lack of experience	rs*		0.839	0.433	0.576
	p		<0.001	<0.001	<0.001
Lack of knowledge/ skills	rs*			0.445	0.676
	p			<0.001	<0.001

rs\* - Spearman's coefficient correlation;  $P < 0.05$ .

## The role of advanced paediatric nurse practitioners in four different countries – a qualitative study

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*Introduction:* Advanced education in nursing sub-specialties is offered in many countries. Among these are advanced paediatric nurse practitioners (APNP) working in acute settings and are represented in paediatric wards around the world, where they work independently and autonomously.

*Aims:* To compare the role of the APNPs in four different countries to gain more knowledge on the qualifications and experience of the practitioners and their impact on paediatric patients and families.

*Method:* The study was based on a qualitative design with semi-structured key-informant interviews with four nurses from Sweden, Norway, UK and the United States. Coding and analysis were conducted using thematic analysis inspired by Braun and Clark.

*Results:* Three themes were identified: Qualification and Competencies; Responsibility and Autonomy; and Holistic Nurse Perspective. Qualification and Competencies illustrated parallels within the education and daily practice, as told by the informants. Responsibility and Autonomy differed between the countries. Even so the informants experienced a mutual understanding of the concepts of advanced practice. Collaboration with the physician was crucial to ensure best practice by inter-professional collaboration. Cooperation generated a better environment for the child and the parents, where they felt acknowledged and seen. Nurse perspective and holism created a room for some central terms in nursing. Holism is a cornerstone in general nurse education and combined with new knowledge from education and experiences it enabled the APNP in a daily setting with competencies to make holistic and family-centred decisions at a higher level.

*Conclusion:* From the perspective of four nurses interviewed, advanced paediatric nursing practice is beneficial to the patient, family and professionals. The formal education varies in the four countries studied, but the basic tenets of practice are the same. Family-centred practice and holism are basic to APNP, as they define the nursing aspect.

## **A Multidimensional Sense of Humor Scale for School-aged Children: Turkish version of reliability and validity (T- MSHSC)**

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*Adnan Menderes University, Nursing Faculty, Paediatric Nursing Department, Aydın, Turkey*

*Aims:* To test the validity and the reliability of Multidimensional Sense of Humour Scale for School-Aged Children in Turkish school children.

*Method:* This methodological, descriptive and correlational study included 210 students aged 6-12 years old and studying in two primary schools in the west of Turkey. Data were gathered with General Characteristics Form and Multidimensional Sense of Humour Scale for School-Aged Children at face-to-face interviews.

*Results:* Factor analysis revealed that the scale had three factors. The factor load of the items in the scale was higher than 0.30 and item-total correlation coefficients ranged from 0.416 and 0.683. Cronbach alpha for the internal consistency was 0.906 for the scale and ranged between 0.805 and 0.872 for the subscales. The split-half reliability coefficient for the scale was 0.920.

*Conclusion:* Based on the internal consistency coefficient, the explanatory factor analysis and the item-total correlation analyses, T-MSHSC is a valid and reliable tool for Turkish children aged 6-12 years old.



# ePoster presentations

PP01

## Health perception, obesity risk awareness and eating behavior in adolescents

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*Aims:* To determine the relationship between health perceptions, obesity risk awareness and eating behaviour in adolescents.

*Method:* This study was a cross-sectional design. The 579 participants consisted of adolescent students studying in the high schools in a city located in the west of Turkey. Stratified and simple random sampling methods were used in the selection of sample group. The data was collected through socio-demographic information form, Health Perception Scale and Dutch Eating Behavior Questionnaire.

*Result:* In this study, 56.5% of the adolescents were male, mean age was 15 ( $\pm 0.59$ ) years and body mass index was 20.43 ( $\pm 3.20$ ) kg/m<sup>2</sup>. While 11.6% of the adolescents were overweight or obese, 33.5% of them considered themselves as overweight/obese. It was determined that 49.6% of the adolescents knew the cause of obesity correctly. It was found that the mean score of health perception of the adolescents was 52.34 ( $\pm 7.59$ ). It was found that there was a positive correlation between total health perception score and emotional eating behavior ( $P=0.003$ ), and a negative correlation between restricted eating behavior ( $P=0.029$ ) and external eating behavior score ( $P<0.001$ ). The emotional eating behavior ( $P=0.007$ ), external eating behavior ( $P=0.001$ ) and total eating behaviour score ( $P<0.001$ ) of the adolescents who think that they have an obesity risk were found to be higher than the adolescents who think that they do not have an obesity risk.

*Conclusion:* The adolescents having a better health perception are less affected by the environment, and they restrict their food choices. The adolescents who think that they have an obesity risk consume more food due to their emotional state and external exposure.

PP02

## Transition of adolescents with congenital heart disease to adult units: barriers identified by adolescents, parents and healthcare providers

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*Introduction:* Advances in medical and surgical treatment have improved the life expectancy of children with congenital heart disease. Despite their survival to adulthood, leading productive and quality lives, most of these patients require specialised life-long care. Continuity of care is essential, through a well-planned and well-executed transition process, overcoming the barriers hindering this process.

*Aims:* To identify what barriers may hinder the transition of adolescents from paediatric cardiology services to adult healthcare.

*Methods:* Data collection was carried out in three reference hospitals for congenital heart disease, with a questionnaire developed by the authors and based on a literature review, with versions adapted to Adolescents, Parents Caregivers and Health Professionals. The sample consisted of 60 adolescents, 60 parents and 30 health professionals.

*Results:* The main barrier identified by the three groups was the connection that the adolescent/family has with paediatric cardiology health professionals (65% of health professionals, 37% of adolescents and 37% of parents). Changing to another hospital because the adult cardiology service is in another institution is a barrier identified by 17% of adolescents, 17% of parents and 35% of health professionals. It should be noted that 38% of adolescents and parents stated that there is no problem in the transition to adult cardiology. Only 13% of health professionals have this perception.

*Discussion:* It is worth noting that health professionals show more concern with difficulties in the transition, than adolescents and parents. To our knowledge, this is the first study to identify adolescents' and parents' perspectives regarding the barriers to the transition to adult healthcare in children with congenital heart disease, but the data is corroborated by studies with adults with congenital heart disease who have abandoned health surveillance.

## CHILD MENTAL HEALTH AND THE PROMOTION OF WELL-BEING

PP04

### Nordic network for research in children and parents' sleep

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*All the members of the Network are co-authors of this abstract.*

*Introduction:* Sleep is a human need essential to health, quality of life, and family functioning. Insufficient sleep is a significant public health concern. Sustained disruptions of sleep in children and parents may have serious physiological and mental consequences. Our vision is to increase the knowledge regarding children's and parents' sleep in different life situations and contexts, to identify various models of care, and to develop and evaluate interventions in relation to health, quality of life and family functioning.

*Methods:* The network started November 2015, after the idea was conceived in a collaborating meeting with three universities in Oslo. The members were recruited with a snowball-sampling technique and 16 researchers from universities and hospitals in Norway, Sweden and Denmark are now represented.

*Results:* The network has developed a research programme named 'Sleep in children and

parents, knowledge development and translation to care practice in Nordic countries'. So far, two systematic reviews have been performed; one to identify the existing evidence about sleep of parents of premature infants, and one about parents' experience and perception of sleep when they stay overnight in hospital together with their child. We have started interviews in Norway and Sweden illuminating parents' experiences of staying overnight at the hospital with their child. We are also studying infant crying and sleep problems and how this affects mothers' health, using data from the Norwegian Mother and Child Cohort Study.

*Conclusion:* The network has started with research to increase knowledge about children's and parents' sleep. The overall goal is to identify gaps and to increase knowledge about sleep for the best of children and families, and services in healthcare and provide methods of prevention and interventions, informing health policies, and estimating the costs for society.

**PP06**

## Factors affecting the quality of life of children with cystic fibrosis

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*Introduction:* A diagnosis of cystic fibrosis disturbs the life of the child himself and his family, emotionally, socially, physically and economically.

*Aims:* The purpose of this study is to evaluate the quality of life for children with cystic fibrosis, as well as the factors that affect it.

*Material-Method:* The study involved 102 cystic fibrosis patients. The quality tool used in this study was the Cystic Fibrosis Questionnaire (CFQ), the Greek version, the design of which is adapted to age.

*Results:* Data analysis revealed statistically significant positive correlations between the age of 6-11-year-old children and the physical/physical, emotional and social dimensions, diet and treatment. Girls reported better treatment of the disease than boys in terms of their treatment ( $z=-2.74$ ,  $P=0.01$ ). For children 12-13-years-old, with respect to gender, there was no statistically significant difference between boys and girls in any of the scale dimensions. No statistically significant correlation between the age of the participants and the dimensions of the scale was observed. Also, statistically significant differences were observed with respect to the gender and dimensions of the daily activities ( $z=-1.78$ ,  $P=0.04$ ), treatment ( $z=-3.17$ ,  $P=0.001$ ) and health ( $z=-1.74$ ,  $P=0.04$ ). The male rating outperformed the three dimensions of the scale, compared with the girls who participated in the study.

*Conclusions:* There are positive correlations between the quality of life and its factors that vary by age.

PP08

## Indoor pollution factors and their relation to pre-schoolers' health

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*Introduction:* Indoor pollution is the first out of six major health risk factors and the first of 18 known risk factors for cancer, which can cause thousands of deaths every year.

*Aims:* To investigate the relation between indoor pollution factors and the health level of children of pre-school age (3-6 years old).

*Methods:* The sample comprised 126 parents of children of pre-school age who had previously sought the services of a primary healthcare setting in the Prefecture of Corinth, Greece. The collection of empirical data was realised by using anonymous questionnaires. Pearson's correlation coefficient was used to check any linear relationship among the quantitative variables. The SPSS 22.0 was used for the statistical analysis.

*Results:* The parents who participated assessed their children's health as excellent (49.2%) and (very) good (49.2%), without any limitations in everyday activities or behavioural problems. According to the participants, the majority of the children had shown no signs of asthma (92.9%), although some allergic reactions to medicines had appeared (15.1%). Most of the families had four members (46%), resided in five-room (29.4%) and four-room (27.8%) houses, while almost half of the children did not have to share a room with another person (48.4%). Most of the parents reported that the house had air conditioning (70.6%), and no pets were living in the house (73%). More than half of the participating parents were the only smokers in the house (53.7%) and they did not smoke indoors (67.5%).

*Conclusions:* Improving air quality is a complicated issue, since pollutants may be created both indoors and outdoors, which makes it very difficult to reduce them. Yet this is necessary, given the negative effects of pollution on human health, especially on the more vulnerable groups, such as children.

PP09

## The effect of massive circulation and swinging massage on the amount of breast milk: a preliminary study

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*Aims:* To investigate the effect on the amount of breast milk produced of using circular and swinging massage applied to the breasts of mothers.

*Method:* This research is an experimental research in pre-test-post test model. It was conducted with 21 mothers who applied to the milking room of a university hospital between 1 December 2017 and 31 January 2018. Circular and swinging massagers were used three times a day for three days a day for 10-15 minutes to each of the mothers and the daily amount of milk was measured.

*Results:* Mothers participating in the study have a mean of 30.95 ( $\pm 5.96$ ) years, and babies have a mean of 30.33 ( $\pm 4.2$ ) weeks. The amount of milk increase on the first day after the process was 11.32%, 5.66% on the second day and 3.98% on the third day. The amount of increase in total milk before and after the process (three days) was found to be 22.20%.

*Conclusion:* The circular and swinging massage applied to the mother was found to increase the mother's production of breast milk. The survey will be continued with the current sampling according to preliminary study results.

**PP10**

## **Suicidal ideation in anxiety-disordered youth: A systematic review**

**Maria Damilakou**

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*Introduction:* Internationally, suicide has become an increasing public health challenge, with growing incidence among youth.

*Aims:* To study the level of association between various types of anxiety disorders among youth and suicidal ideation.

*Methods:* A thorough literature review was conducted in electronic healthcare databases such as PubMed, CINAHL, Web of science, using adequate key words for articles investigating the correlation between anxiety disorders and suicidal ideation, published after 2000.

*Results:* Suicide is one of the most common causes of death in youth, while anxiety disorders are the most common childhood psychological disorders. After content analysis, 28 articles included in the analysis. There are a number of studies correlating several demographic factors with mood and anxiety disorders that seem to increase the risk for suicidal ideation independently. The majority of studies associate anxiety disorders and suicidal ideation determined by the presence of comorbid depressive disorders. However, most recent studies suggest that anxiety disorders, such as generalized anxiety disorder and social phobia, are independent predictors of suicidal ideation among youth. Based on adolescents diagnosed with anxiety statements, they feel trapped and overwhelmed in their symptoms and suicide acts as a means of escape.

*Conclusion:* There is a limited evidence of correlation between anxiety disorders and suicidal ideation in youth. Recommendations for future research along with advice for early assessment and treatment of anxiety disorders in youth are presented.

PP11

## Fears and children

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*Introduction:* Common fears are a normal part of the developmental path of children. During early childhood (2 and 3 years) the fear of strangers, loud noises or the fear of certain animals is commonplace, as in the coming years they often bring fears of fantastic creatures and darkness.

*Methods:* An extensive review of the relevant literature was performed via electronic databases (Medline, PubMed, CINAHL and Google scholar) among Greek and international journals using the following key words: fear, children, child fears. The exclusion criterion for the articles was language other than Greek and English.

*Results:* Fears cause a child to repeatedly avoid certain situations, or when they persist in an unusual way for a long time or appear at an inappropriate age, they are considered phobias. For the clinical diagnosis of a phobia in a childhood or adolescence, the fear must persist for a period of at least six months. While adults with fears know that their fears are excessive and unfounded, this is not always the case with children. Phobias can have various possible causes. Some children, due to their temperament, become prone to developing phobias, even when there is no distinct external cause. This is a fact that today's researchers and hospital doctors often see from the point of view of brain chemistry.

*Conclusion:* Childhood phobias overwhelm a large percentage of the child's population, with the effect of preventing them from acting in their daily lives, but also in their habit.

PP12

## Psychotherapy of children with animal-assisted therapy

Vasiliki Rapti, George Kallergis

*Introduction:* Animal-assisted therapy has several forms and takes place in various contexts. It is determined by the environment, the therapist, the disease, the animal used and the goals of treatment.

*Methods:* This study of the literature is concerning the application of animal-assisted therapy on subjects with psychiatric disorders. Search in libraries as PubMed, Medline and others, yielded positive outcomes which favour the applying of such treatments. It has been successfully implemented on people suffering from dementia, autism, mental impairment, emotional disturbances and learning disabilities in children, people suffering from depression, psychosis, substance abuse disorders, PTSD and those with psychiatric problems in prison. Animal-assisted therapy makes the therapist seem approachable, facilitates the therapeutic

bond, calms patients and makes it easier to talk. In other situations, it can help with stability, movements and organising procedures. It facilitates the learning process and the emotional expression.

*Results:* A large number of studies indicate the positive effects of this therapeutic approach. However, it is widely cited that the study design is problematic. The positive influence on the psyche, quality of life and the facilitation of therapeutic goals are stated in all studies. Problems are encountered in each survey individually and in the overall literature in the field.

*Conclusion:* The need for further development of research in the field is imperative as this kind of therapeutic approach appears to be very promising.

### PP13

## Adoption by same-sex couples

Vasiliki Rapti, Ioanna Pavlopoulou

*Introduction:* Children all over the world need a loving and stable family to grow up in. A large number of children are in need of adoptive families. A new kind of family structure has emerged in the last few years and there are more families with parents of the same sex. They have exercised their right to have children in many countries, and some of them have chosen adoption.

*Methods:* Searching through the literature existing, 33 articles have been chosen to explore the outcomes of such adoptions. The articles had to involve families who had adopted at least one child from birth to adolescence and there was a comparison group with either a heterosexual couple or a single-parent family.

Same-sex couples encounter multiple problems throughout the procedure of creating and maintaining a family through adoption. First, there is the lack of legal documents permitting such an action and even if there is a law about it, the parents have to deal with the stigmatisation and the unwillingness of some agencies to place a child with them. Open adoptions are more common these days and the birth parents' negative opinion about homosexuality may negatively affect the attachment and the family function. Social, family and friends' support are crucial to family function. Schools can help lower the stigma that follows children from families with same-sex parents. Parenting a foster or adoption child is a strenuous process that affects the relationship of the parents and increases divorce rates, especially through the first year of adoption. On another issue, children's well-being is affected by the economical and demographical characteristics of their parents instead of their sexual orientation. Child attachment to parents is easier at a younger age. The child-parent relationship is more open, especially with lesbian mothers. As for the sexual orientation of the child, there seems to be an impact of the sexual orientation of the parents. The literature is divided about it, but in general the adult children and adolescents of such families seem to be more open and accepting of sexual permissiveness and homosexuality.

*Conclusion:* Adoption of a child by a same-sex couple is a process that has arisen in recent years with some difficulties but with promising results. The child's well-being seems to be assured and prioritised by the family and society. More research is required to explore the function of the families and the child outcomes.

PP14

## The burden of having a child with autism spectrum disorder (ASD) on mother's quality of life (QoL): a Greek study

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*Introduction:* The burden of having a child with ASD usually includes an increased need for support that is not met, and psychiatric problems of the caregivers. The purpose of the present study was to examine the impact of having a child with ASD on everyday life and maternal QoL.

*Methods:* Sixty one mothers mean age: 43.69(±5.84) years of children with ASD (86.9% boys, mean age: 10.33(±2.9) years) followed in an ASD clinic completed a questionnaire based on Family Needs Survey, (Bailey and Simeonsson, 1988), the Center for Epidemiology Studies Depression Scale (CES-D, Radloff, 1977; Madianos and Stefanis, 1992), and the WHOQoL-BREF (WHOQoL Group, 1998).

*Results:* All mothers were the main caregivers and 20% of them spent over seven hours with their child. Seventy two per cent of families were spending more than 800 euros per month while less than half of their expenses were reimbursed to them. Half of mothers had a major physical or mental health problem, with 67.5% of them presenting with depressive symptoms. QoL score was lower when a health problem was present in mothers. Maternal QoL and health status were negatively correlated with the child's age. Maternal QoL was positively correlated with depressive symptoms.

*Conclusions:* Mothers of children with ASD present with frequent physical and mental health problems. It is crucial to address the needs for support, funding as well as accessibility and quality of public services regarding mental health and for the families of children and adolescents with ASD.

PP15

## Coping and health in mothers of children with autism spectrum disorder (ASD): A Greek study

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*Introduction:* The pervasive deficits of children with ASD have a critical effect on daily life of parents.

*Aims:* To examine parental coping strategies in relation to maternal health and quality of life.

*Methods:* The present study included 143 mothers aged 30-67 years old, mean age 43.6 ( $\pm 5.8$ SD). Participants completed a demographic questionnaire and the Family Crisis Oriented Personal Evaluation Scales (F-COPESs) (McCubbin et al 2001). The Center for Epidemiology Studies Depression Scale (CES-D, Radloff 1977; Madianos and Stefanis 1992) and the WHOQoL-BREF (WHOQoL Group 1998).

*Results:* The children's ages were 4-18 years old, with mean age 10.3( $\pm 3.1$  SD); 79% were boys and 21% girls. More than 50% of mothers reported they are in good health (65.1%), while 54.5% said they had some health problems. Depression scores ranged from 0 to 53 with an average of 18.3 (SD=11.0). The Physical Health dimension of the WHOQoL was positively associated with the reframing dimension more over while the Passive Appraisal dimension of the F-COPES showed a positive correlation with the depression scale. Quality of Life (QoL) score is lower when a health problem is present in mothers. Mothers' total QoL score was positively correlated with their depressive symptoms. Best overall QoL is reported by mothers receiving growing support from specialists.

*Conclusions:* Mothers of children with ASD present with frequent physical and mental health problems and it seems that the presence of a child with ASD has substantial impact on coping strategies such as reframing and passive appraisal correlating with physical and mental health dimensions respectively.

## CHILD PROTECTION AND MANAGING RISK

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PP16

### Effectiveness of play therapy in children with autistic disorders: a systematic review

Zoi Katopodi, Chliara Joanna-Ilia

*Introduction:* This is an updated systematic review which focuses on the analysis of the importance of implementation of various types of play therapy interventions for children (0-12 years old) with autism spectrum disorder (ASD), to improve the behaviour, communication, cognitive and social skills of each individual.

*Methods:* A thorough literature review was conducted in electronic health care databases (PubMed, CINAHL, Web of Science, Cochrane library) concerning the effectiveness of play therapy in children with autism, published after 2000.

*Results:* In total 22 articles met the study criteria. Cognitive functioning and language skills were associated with play therapy interventions based on applied behaviour analysis and inter-related positive developments and outcomes. However, the level of the measured or expected effectiveness of play therapy varies among studies, indicating a moderate but satisfactory effect on the attention and conception skills. Overall, it was noted that improvements in play skills increase positive social interaction and decrease inappropriate behaviour. The level of evidence concerning specified play therapy interventions are discussed.

*Conclusion:* Changes in the quality of practical skills in occupational therapy have also positively affected the play therapy interventions across settings and their methodological precision. There is a moderate level of evidence concerning effectiveness of play therapy in

children with autistic disorders. Further studies concerning the methodology of interventions are needed to support the existing evidence.

#### PP17

## Individual developmental supporting activity: investigation of position materials on care

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*Introduction:* There are positional materials used in neonatal individualised developmental supportive care. These materials are Zaky, Bendy Bumper, Fredrick T Frog, Prone Plus, Snuggle Up, Snoedl, Dandle Roo, Dandle Roo Lite, Dandle Pal, Dandle Wrap and Z Flo.

*Aims:* To examine the materials used in individualised developmental supportive care in newborns.

*Results:* While Z Flo is used up to a certain stage of development, other materials can be used at each stage. The purpose of Snoedl material is to provide only parental odour while the purpose of zaky material is to provide both position and parental smell. Zaky, Bendy Bumper, Snuggle Up, Dandle Wrap and Z Flo materials provide full body aesthetics, while others do not. Prone Plus and Snoedl materials cannot be placed on the back, Bendy Bumper, Prone Plus and Snoedl materials cannot be placed on the newborn. The only materials that can be adjusted according to the size and condition of the newborn are Zaky and Fredrick T Frogs. Prone Plus, Snoedl, and Z Flo cannot be used without restricting movement. During the use of Zaky, Bendy Bumper, Fredrick T. Frogs, Prone Plus, Snuggle Up and Dandle Pal, all of the newborn body can be easily observed. Zaky, Fredrick T. Frogs, Prone Plu, Snoedl, Dandle Roo, and Dandle Pal have no metal rods and edges that can create pressure on the newborn skin. Zaky and Snoedl materials reduce parental stress. Zaky, Fredrick T. Frogs, Snoedl and Dandle Pal have soothing and therapeutic effects.

*Conclusion:* The different position materials used will be given in detail in the study.

#### PP18

## Individual developmental supporting activity: the importance of position

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*Introduction:* Individual developmental supporting activity is the intervention in developmental care that promotes parental and other caregivers' interactions with the baby to develop relationship-based care in neonatal intensive care unit. The basic measures of individualised developmental supportive activity; sleep, pain and stress assessment and management, developmental supportive activities (position, nutrition and skin care), family-centred care and recovery.

*Aims:* To convey the study of the different positions in individualised developmental

supportive care in the newborn.

*Results:* It is important to give appropriate positions for the behaviour organisation and stability, posture and movement development of infants in the neonatal intensive care unit. Research has shown that changing positions is important for comfort in the newborns. The prone position given to newborn after interventional procedures such as taking blood from the mouth reduces pain and stress, provides stability and the fetal position was effective in decreasing pain and crying time after an interventional procedure. The position to be given to the baby will help to relieve the baby's breathing difficulties, facilitate gastric emptying, reduces sudden infant mortality risk, helps to increase oxygenation, reduce desaturation episodes, contribute to respiration, sleep wakefulness rhythm, energy consumption and healing in other physiological functions. The regulation has the effect of making the baby feel safe and supports the development potential.

*Conclusion:* It appears that newborn individualised developmental supportive activity and positioning effects such as improvement in physiological parameters, stress reduction, physical, physiological and psychological recovery, reduction in hospitalisation and maintenance cost, minimisation of complications, decrease in parents' stress levels and increase in parental role. More studies should be done on positioning in neonatal intensive care units.

**PP19**

## **Knowledge, attitudes and practices regarding complementary feeding of mothers who have children 0–24 months**

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*Introduction:* it was conducted to determine the knowledge, attitudes and practices about complementary feeding of the mothers who have children between 0 and 24 months at the Child Service at Manisa Celal Bayar University Hospital.

*Methods:* By reviewing literature by the researcher and expert opinion as a data collection tool, a sociodemographic questionnaire and another questionnaire was used to find out information, attitudes and practices related to complementary feeding of the mothers. The present study was designed as a descriptive and cross-sectional study and was performed in Manisa Celal Bayar University Hafsa Sultan Hospital. 200 mothers who had 0-24 months child were selected.

*Results:* It was found that the participant mothers' mean age was 29.4(±5.73) years. 47% of the babies were female, 53% were male and the babies were 13.18 (±6.46) months on average. 92.7% of the mothers suckled their babies for a while and 74% had started to breastfeed in the first half hour after birth. 73.5% of the mothers have received information on complementary feeding. 14.4% of the mothers have started complementary feeding when baby is sixth month and the mean time of initiation of complementary feeding for babies is 2.87(±2.0) months. 44.8% of the mothers' milk is not enough, 33.9% of mothers started complementary foods as they presumed it was the correct time to use them. 42% of the mothers gave pacifiers to their children and 69.5% used bottles. 27.1% of mothers gave cows' milk before the twelfth month. Using a bottle and recommending complementary food variables were found as the most effective variables on introducing early complementary feeding.

*Conclusion:* It has been found that the mothers had deficient information about complementary nutrition. During well-baby follow-ups it is required that healthcare professionals should give continuous, effective health education to mothers about complementary feeding to encourage correct behaviours among mothers to initiate complementary feeding at the correct time.

**PP20**

## **Practices of mothers' with infants with colic**

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Esra Ardahan Akgül, Zehra Doğan, Hatice Yıldırım Sarı,  
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*Background:* Infantile colic adversely affects the comfort of mothers and babies especially in the first months of life. Mothers use many different methods to cope with this situation.

*Aims:* To determine the practices of mothers with 0-6-month-old babies with infantile colic.

*Methods:* This cross-sectional study's data were collected from mothers with 0-6-month-old babies with infantile colic between November 2017 and January 2018 in Izmir, Turkey. The Mother-Infant Information Form was used.

*Results:* The mean age of babies was 3.26(±2.19) months and 52.9% of them were male. 64.3% of babies were born with caesarean delivery and 60.6% of them were currently exclusively breastfeeding. Mothers who use medication most frequently used (35.3%) Simethicon, and those who use non-pharmacological methods were the most frequently (37.7%) used massage method. 68.6% of the mothers who used medication stated that the drug was an effective method for the treatment of infantile colic. 85.9% of the mothers using non-pharmacological therapies stated that these methods are beneficial. 27.3% of the mothers said they were drinking fennel tea as an infantile colic treatment, and 71.6% did not consume some food while breastfeeding because they thought it could cause infantile colic. It was determined that the most shunned food (32.7%) was dry legumes.

*Conclusion:* The majority of the mothers used medical and complementary therapies in infantile colic treatment together and the rate of the mothers who benefited from the complementary therapies was higher than the medical therapy.

**PP21**

## **Determinants of breastfeeding interruption at six months of the baby's life**

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*Background:* Although breastmilk is uniformly accepted as the most complete and effective

nourishment to ensure the baby's health and it has clear benefits for the mother the breastfeeding rate is still far lower than intended.

*Objectives:* To identify evidence in the scientific literature about what determines breastfeeding interruption up to six months of the baby's life.

*Methods:* A systematic review was carried out searching in PubMed, The Cochrane Library, Scielo database and Google Academic, looking at studies published between January 2010 and October 2015, based on previously defined inclusion criteria. Selected studies were subsequently evaluated. Two reviewers assessed the quality of the studies to be included, using the grid for critical evaluation. After quality evaluation, four articles were included in the study corpus that were between 87.5% and 95.0% quality levels.

*Results:* With meta-synthesis and analysis of the articles, it was identified that the factors that lead to the interruption of breastfeeding at six months of the baby's life are: concerns about lactation, baby weight loss, mother's disease or her need for taking medication, blocked ducts, problems related to psychosocial management, lifestyle conflicts, inadequate positioning to latching on, poor or weak milk complaint, breastfeeding pain, nipple cracks, breast engorgement, maternal anxiety and crying.

*Conclusions:* Given the scientific evidence, the causes of breastfeeding interruption are multifactorial and are associated with mother's, baby's and health problems. The promotion of breastfeeding requires evidence-based education programmes, to improve breastfeeding prevalence rates up at least in the first six months of the baby's life.

**PP22**

## **Development of an evidence-based paediatric fall prevention programme – the Humpty Dumpty Falls Prevention Program™ – in Children's Hospital in Croatia**

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Preventing falls in hospitalised children is a key factor in patient safety. Although there are numerous studies and studies on the decline of adult patients, only a few are devoted to the falls of hospitalised children. One of the most important research on paediatric falls carried out in 1989 by S. Levene and G. Bonfield in the UK involved 780 patients in eight children's hospitals [1]. There are interesting results in the research:

- Most falls occur in children aged 3-5 years
- Drops are more frequent in boys
- Most falls happening during the day
- 27% of the falls occurred in the crib
- 13% falls involve playing with toys
- 41% of children's falls occurred in the presence of parents
- 3% of the falls had very serious consequences.

Another important nursing research was conducted by I. Razmus, D. Wilson, R. Smith, E. Newman and presented in 2006 in Paediatric Nursing. The study included risk factors for falls in hospital environments, whether Morse scale can predict and prevent falls of paediatric

patients and whether Morse's scale is even more predictable for falls adult patients.

The results showed that the Morse scale for the assessment falls in adults not fully defined for falls in children. The descriptive statistics from the conducted research shows that there are some key differences. The Humpty Dumpty falls scale differentiates the paediatric hospital population into categories of either low or high-risk for falls based on specific factors. The risk factors are the patient's age, gender, diagnosis, cognitive impairments, environmental factors (history of falls, bed placement – age appropriate or not age appropriate, equipment/furniture, and use of assistive devices), response to surgeries/sedation/anesthesia, and medication usage. The article will show the results of the pilot project on implementation of Humpty Dumpty Falls Prevention Program™ at the Srebrnjak Children's Hospital.

**PP23**

## Psychosocial effects of immigration on children

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*Aims:* To provide information about the psychosocial problems experienced by refugee children and adolescents.

Immigration is defined as a phenomenon and a place where individuals or groups move from one place to another to settle in there to live because of social, economic, cultural and political reasons. Especially in recent years, hundreds of thousands of people have immigrated from the Middle East to Europe to escape from war and torture, resulting in a serious population movement.

It is the children who pay the biggest price during the war and immigration. Immigration causes an irregular environment therefore, children are not able to benefit from education, health, social services, and they face more violations of rights. Refugee children are vulnerable to a number of risks, including social exclusion, discrimination, exposure to racism, economic and sexual exploitation, marriages and adolescent pregnancies, as well as psychological trauma they experience during immigration. In refugee children, psychological and behavioural problems such as suicide and violence tendency, growth deficiency, sleeping, eating and tic disorders, nail biting, stuttering, day wetting, anxiety and depression are common.

Many refugee families need their children to work as they struggle against poverty because of poor socio-economic conditions. Children, especially during adolescence, are not able to continue going to school since they need to work. Refugee children, deprived of their right to education are exposed to more abuse, showing more signs of post-traumatic stress disorder and fail to complete their physical and psychological development. Refugee children also struggle with language problems and peer victimisation in schools. It is important to develop mental health programmes and social support systems so that immigrant children can maintain their psychosocial development in a healthy way.

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PP25

## Effects of fathers and grandmothers on exclusive breastfeeding

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*Introduction:* The aim of this poster evaluated effects of fathers and grandmothers on exclusive breastfeeding. The World Health Organization (WHO) recommends exclusive breastfeeding as an important strategy for reducing child deaths, particularly in developing countries. Exclusive breastfeeding rate is reported as 37% all over the world. Because of this inefficiency, WHO notes that one of the 2025 Global nutrition goals is to increase the breastfeeding rate by at least 50% for the first six months.

Mothers also suffered from barriers related to insufficient breast milk production and difficulties with breast milk production (blockage, cracks, etc). One small qualitative study with five women looked at barriers to exclusive breastfeeding in a peri-urban area near Yangon. The main barriers to exclusive breastfeeding included a lack of knowledge of proper infant feeding practices and lack of a supportive environment. In Mahoney and James's study, it was found that encouragement of breastfeeding by the baby's father or grandmother was weak. A Chinese study however found that highly educated grandmothers were associated with decreased exclusive breastfeeding.

*Conclusion:* Husbands, grandmothers, health workers and other people and family members in their community provided support and information to mothers for breastfeeding.

PP26

## Postoperative nursing management of neonates with transposition of the great arteries

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*Introduction:* Transposition of the great arteries (TGA) is a severe form of congenital heart disease. Nowadays, arterial switch operation remains the procedure of choice with the occurrence of life-threatening complications stand as an integral part of postoperative intensive care.

*Purpose:* To describe the nursing clinical judgment as a basis for nursing diagnosis and basis for development of a personalised postoperative nursing intensive care plan for a child after cardiac surgery for complex CHD.

*Methods:* Mixed method of case study presentation and critical literature review of published articles in PubMed, published during last decade. Nursing diagnoses from NANDA-I and the NIC interventions are presented as proposed by two nurses with at least five years of

experience in PICU on a realistic area of a neonate in a severe clinical condition. Data was retrospectively collected from the medical and nursing records of the neonate.

*Results:* Postoperative care of children with TGA is very demanding and requires a thorough understanding of the underlying anatomic defect, the cardiopulmonary bypass, and the details of operative procedures. Postoperative nursing care plan focuses on anticipating potentially deleterious events and instituting a proactive approach in managing patients. Intervention strategies are directed at preventing low cardiac output and avoiding adverse sequelae in major organ systems. Invasive haemodynamic monitoring, laboratory analysis, and clinical examination provide essential assessment information for effective management of the postoperative paediatric patient. During treatment several nursing diagnoses were identified, towards which several interventions were directed. Every nursing diagnosis was supported by diagnostic and clinical indicators and was evidence based. Priority nursing diagnosis for this case study were consensually identified based on documented information available in the child record. The consensual proposal of interventions to respond to the priority human responses of the child in this case study was optimised by the use of standard terminologies.

*Conclusion:* High-quality nursing care for children in cardiac intensive care units (ICUs) demands professional nursing knowledge and practical skills, due to its specificity and complexity.

**PP27**

## **Epidemiological study of children admitted in a major Greek children's hospital following a court order due to abuse and/or neglect**

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*Introduction:* Childhood abuse and neglect decisively affects normal development as well as health status. In Greece, children who are removed from a harmful family environment due to abuse and/or neglect are admitted in paediatric hospitals for evaluation, following a court order.

*Methods:* Retrospective study of children admitted to Aghia Sophia Children's Hospital due to abuse and/or neglect in 2013.

*Results:* The study included a total of 183 children aged 6.8(±4.3) years (20% aged <3 years). 51.5% were immigrants, 33% children of Greek origin and 15.5% belonged to a Roma community. Children lived in families of low socio-economic status with many children (62%), apparent family problems (75%) and in certain cases with parents with a history of psychiatric illness and/or substance abuse (22%). Referral included neglect and poor living

conditions (67%), emotional and physical abuse (33.5%), confinement of parents in prison or substance abuse (22%). We recorded 15 cases of abandonment, 34 cases of children forced to beg and 7 children investigated for possible sexual abuse. Clinical evaluation and laboratory tests confirmed the conditions of neglect and/or abuse. Psychiatric assessment revealed insufficient parental role, absence of a stable and structured educational framework and frequent occurrence of anxiety and depression as well as lack of overall adjustment. Children remained in the hospital relatively long (54±47 days) pending admission in a suitable host institution. The main problems observed during their hospital stay related to the special needs of infants, toddlers and adolescents, adverse events (infections, accidents, and behavioural problems) and 'illegal' exit, even in case of children who had been exploited and abused.

*Conclusion:* Data indicate the need for elevated social awareness and the urgent necessity for the development of a more suitable and efficient mechanism to help children living in a harmful environment of abuse and neglect

## COMPLEX HEALTHCARE AND CHRONIC DISEASE MANAGEMENT

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PP28

### Childcentric approach in complex care

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*Introduction:* The study is a part of the Horizon 2020 Models of Child Health Appraised (MOCHA) project which aims to assess the varied patterns of children's primary care in Europe. It includes the analysis of the childcentric health policy determinants which was preceded by an analysis of the historical changes in the perception of the child.

*Methods:* The main objective of the study was to explore the contextual shifts over time, which ultimately led to the development of the transformative childcentric paradigm in healthcare. The research had an explorative character and a narrative literature review was conducted.

*Results:* The development of the childcentric paradigm is followed by the healthcare paradigm shifts from mechanistic via holistic towards the (bio)ecological approach. The mechanistic approach is characterised by patient objectification and passivity, whereas in the holistic perspective health and disease are considered as the consequences of not only biological construction but also cultural, social and psychological conditions. In the (bio)ecological view, the child remains under the influence of the micro-, the meso-, the exo- and the macro-system. This entails the need for a complex view in childcentric healthcare, as the origin of complex needs might be embedded within the wider context.

*Conclusion:* The childcentric approach is proposed as the way to deal with the complex patients' needs, and it necessitates that the child is a value and thus his or her rights, needs and culture have to be respected. The child is also a central actor in the process of child

health policy and care, and thus must be listened to carefully, and be facilitated as an active and aware partner in the process of care.

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**PP29**

## **Factors that influence the guardians to choose or not choose palliative care for oncologic paediatric patients**

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*Introduction:* Although, in the past few years there are many medical developments and discoveries of new medicines, the incidence of childhood cancer has been rising. In addition, although childhood cancer has high rates of survival in the last decades many children who are diagnosed with cancer and survive, have a risk of complications for the rest of their lives. Paediatric palliative care (PPC) is an important specialty, which can help the guardians and the paediatric patients. The benefits that PPC gives to families and the patients are essential. However, this specialty is not as widely used as it should be and many guardians are unaware of it.

*Aim:* The aims of this article were to raise awareness regarding the value and importance of PPC and to identify the factors that influence the selection of paediatric palliative care by the guardians.

*Methods:* A systematic review of the literature was performed in databases of Medline, PubMed, Ascopubs and webpages of international palliative care and cancer associations. All the articles that were used for the review are from 2006 to 2017 in English language with key words 'paediatric palliative care', 'childhood cancer', 'parents and paediatric palliative care', 'factors influence parents about their children's treatment'.

*Results:* The majority of the articles and the studies show us that the knowledge of guardians about PPC is inadequate. The factors that can influence the guardians take up palliative care are stress factors about being a good parent, insufficient information, others' opinions, patient's preferences, need of continuing cancer treatment, quality of children's life, educational status of parents and relationship of the parents and the medical team.

*Conclusion:* As can be seen, there is an increasing need for the paediatric palliative caregiver specialists to familiarise the guardians of the oncologic paediatric patients with the advantages of PPC and the positive outcomes it will have for their children.

PP31

## Paediatric asthma and electronically measured adherence to inhaled therapy: a systematic review

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*Introduction:* Adherence to inhaled medication in children with asthma, is of critical importance in determining the success of eliminating daily symptoms and controlling the disease. Objective electronic monitoring can provide an accurate indication of the extent of non-adherence in children with asthma.

*Aims:* To assess adherence to inhaled therapy measured electronically and its determinants.

*Methods:* A systematic literature search was performed in PubMed, Cochrane and Science Direct databases from 2012 to 2017. Studies published in English were included if data on the association between medication adherence and electronic monitoring were presented.

*Results:* A total of 12 studies involving 1448 children, 1-16 years, were included. Mean adherence ranged from 28% to 92%. Well controlled asthma was significantly related with higher adherence rates, while uncontrolled asthma maintained low adherence rates. Ethnic minority, inner-city residence, illness perceptions and medication beliefs constituted negative determinants. Parents' overestimated adherence related with the electronic devices measurements. Adherence was positively related to self-management education, parents and youths addressing conflicts, use of electronic devices' reminder dosing and parental perceptions about medication need.

*Conclusions:* Adherence to prescribed asthma medication is extremely variable in children. Assessing adherence is a complicated process due to many determinants that affect it. The recognition and management of these determinants may improve adherence and increase asthma control.

PP32

## Comparison of quality of life self-assessment by children with coeliac disease and their healthy peers in Serbia

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*Introduction:* Coeliac disease is a specific disease for which the beneficial treatment is a strict and life-long gluten-free diet. It can create problems for children in acceptance from peers. A limited choice of food can lead to social restrictions and can affect the quality of life.

*Methods:* This prospective study included 116 respondents aged 5-18 years with a diagnosis of coeliac disease and 116 healthy children who met the basic criteria of 'matching' the examined group by age and gender. The selection of the control group was carried out by random sampling. As an instrument for measuring the quality of life in children, the Paediatric Quality of Life Questionnaire (PedsQL) – Serbian version was used. Descriptive data were calculated for all results, while a T-test was used to compare them.

*Results:* The mean value of the total score on the PedsQL test was lower in the group of children with coeliac disease ( $75.89 \pm 20.35$ ) than in the control group ( $86.35 \pm 11.13$ ). Yet there was no statistically significant difference in the physical health domain ( $P > 0.05$ ).

*Conclusion:* Health-related quality of life of the children with coeliac disease was significantly lower compared to healthy peers.

#### PP34

## Corticophobia, a timeless problem

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*Introduction:* Although corticosteroids are widely used, phobia of their use continues to exist. According to the results of many studies, fear of their side effects can prevent both medical staff and pharmacists as well as parents of children with health problems from using them, even though they are aware that their non-use may endanger the health of children.

*Purpose:* The purpose of the study was to evaluate the degree of phobia of the medical staff and parents towards corticosteroids, and whether this fear could be an inhibiting factor in their use.

*Methods:* PubMed was used as a database to review the literature. The inclusion criteria were articles on the use of corticosteroids in humans. The articles were published from 2008 to 2017 and the language of the articles was English. The key words used were corticophobia, corticosteroids, nurses, doctors, pharmacists, parents and children. Initially, 193 articles were found but following the implementation of inclusion criteria and reading titles and abstracts, 12 articles remained.

*Results:* According to the results of the bibliographic review, the side-effects of corticosteroids are an important inhibitor for their use. This fear occurs in nursing staff, pharmacists and parents of children with atopic dermatitis and asthma. Corticosteroids continue to be a class of drugs with several side-effects, so medical staff and parents of children with chronic illnesses are frightened to use them.

## The impact of nutritional status on health-related quality of life of children with cancer at diagnosis. A preliminary report

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*Introduction:* The quality of life of a child suffering from cancer is highly affected by poor nutrition. Malnutrition is common among children with cancer. With improvements in treatment, the survival rates of patients have been improved over the past few decades. Nutritional care as a component of supportive care is very important and contributes to fewer complications during and after treatment.

*Aims:* To evaluate the impact of nutritional status on health-related quality of life (HRQOL) of children with cancer during the first year of treatment.

*Methods:* A prospective six-month cohort study is being conducted on 13 newly diagnosed cancer patients with haematological, solid and brain malignancies. Anthropometric data, body fat (%) based on Dual-energy X-ray absorptiometry (DXA), nutrition status, dietary habits based on a Mediterranean Diet Quality Index tool (KIDMED) and HRQOL based on a PedsQL Cancer Module 3.0 are assessed at diagnosis.

*Results:* Seven boys and six girls with median age 12.2 years have been admitted in our department, 8 of whom have been diagnosed with haematological malignancy, four with solid tumour and one with a brain tumour. All of them have been treated by chemotherapy, while one was also treated by radiotherapy. Among them, the KIDMED index classification was good in 61.5% of the population, average in 30.8% and poor in 7.7%. Moreover, 53.5% are normal, 38.5% overweight and 7.7% obese based on BMI on diagnosis. Also the median of body fat (%) is 36.5 % (24.87%-45.85%). Finally, the median score of QoL is 66.67 (56.01-74.58).

*Conclusion:* It seems that there is a negative correlation between total scores of quality of life and fat for children with a cancer diagnosis. Nevertheless, due to the small size of the sample, such results should be considered with caution.

## Skin care in atopic dermatitis

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*Introduction:* Atopic dermatitis is a chronic eczematous disorder that affects 20% of children, while 50% of them will have symptoms since their first year of life. The heteropathogenesis of atopic Dermatitis is caused by genetic, immunological and environmental factors.

*Aim:* Research and evaluation of effectiveness of the existing methods of skin care.

*Method:* A review of the literature was conducted using electronic databases (PubMed, the Cochrane Library and Google Scholar), related to the subject from 2013 to January 2018. The key words used were atopic dermatitis and skin care. Age limits were imposed and the research was restricted to babies and children up to 18 years old.

*Results:* From the research there were 801 articles, 39 of which responded to the clinical question. Upon evaluation of the data selected, it resulted that daily skin care involving bathing and use of moisturising cream is crucial for atopic dermatitis treatment, and the use of local corticosteroids can be handled without any concerns from the parents, since the results from their use are very satisfying. Furthermore, the use of 'bleach baths' during the colonisation of skin from *Staphylococcus aureus*, seems to improve the symptoms of atopic dermatitis to a moderate and even a serious level.

*Conclusion:* There are many research studies regarding skin care for atopic dermatitis. One should choose methods which have been proved through randomised studies that help the atopic skin.

## The role of maternal perinatal viremia in the vertical transmission of hepatitis B virus

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*Introduction:* The levels of maternal viraemia (HBV-DNA) during the third trimester of pregnancy are the most important risk factors for perinatal transmission of hepatitis B virus (HBV) infection and for failure of the immunoprophylaxis applied. High levels of viraemia are mainly observed in women with HBeAg(+) chronic HBV infection. However, high-level viraemia also occurs in a small percentage of women with HBeAg (-) chronic HBV infection.

*Objective:* To evaluate the perinatal viremia of HBeAg (+) and HBeAg(-) pregnant women and its contribution to the vertical transmission of the infection to their infants that have undergone complete immunoprophylaxis.

*Methods:* The investigation of perinatal viraemia's role in the vertical transmission of the hepatitis B virus was performed on a population of 52 [HBsAg (+) / HBeAg(+) and HBsAg(+)/ HBeAg(-)] pregnant women with HBV infection, as well as on their children respectively after approximately a year of monitoring. In this sample, five women were found positive for the presence of e antigen (HBeAg), while the remaining 47 were HBsAg(+)/ HBeAg(-). Their infants were given an appropriate immunoprophylaxis scheme immediately after birth. Compliance to their subsequent vaccination coverage was also monitored.

*Results:* 92.3% (48/52) of our final sample showed detectable HBV-DNA titles in the third trimester of pregnancy. 25% (13/52) of these women had HBV-DNA presence above 10,000 IU/mL. Immunoprophylaxis failure was observed in 5.8% (3/52). The children that were found positive were born to mothers with high viremia (HBV - DNA > 10000 IU/ML) and had HBeAg (+) presence during the perinatal period. The percentage of vertical transmission in women, who had HBsAg(+)/ HBeAg(+) serological profile was 60% (3/5), whereas in those with HBsAg(+)/HBeAg (-) profile, it was 0% (0/47).

*Conclusion:* Mothers who showed high viraemia (HBV-DNA >10,000 IU/mL) and had HBeAg (+) during the perinatal period, contributed to the vertical transmission of the virus to their children.

## An 'electric heart' Jarvik 2000 bridge to transplantation or destination therapy

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*Introduction:* Among most goals in medicine and in the nursing profession, there is the belief that the achievement of a goal might improve the quality of life, ours and/or those around us. Each of our long-term or short-term goals is often associated with many choices and decisions, including what is worth trying. We describe our experience of using the Jarvik 2000 system, used as a transplant bridge or as a destination therapy (definitive therapy alternative to cardiac transplantation). The system consists of a device implanted when the ventricle is no longer able to autonomously fulfil its function. Jarvik 2000 is an L-VAD (left ventricular assistance device) and consists of a continuous flow coaxial pump (titanium turbine), inserted in the left ventricle which draws blood from it and then injects it into the ascending aorta by tube graft, thus implementing the cardiac output. The system is regulated by a battery-powered controller (lithium and lead), connected by a pedestal that protrudes from the retro-auricular mastoid cavity.

The targets of the innovative system are patients with heart failure that are refractory to medical therapy, so that cardiac transplantation (BT) is necessary, or those patients with Duchenne syndrome with cardiac impairment who can't undergo cardiac transplantation (DT).

*Methods/results:* In the total of the 14 plus 1 infant Jarvik cases treated at the OPBG, our analysis focuses on the assistance to 8 patients admitted to the cardiology and arrhythmology ward. A path has emerged, that we can define common, in which the nursing activity has been developed into different phases where the teamwork turned out to be the winning card for the acceptance, care, education of the patient and therefore reintegration into daily life. Not least, the reception from the national territory/environment/, 112 (emergency number), to the approach in case of emergency/urgency with this type of patients.

*Conclusions:* LVADs are a valid therapeutic option in patients who have heart failure refractory to medical therapy, allowing them a better quality of life and on the other hand they increase the life expectancy in patients with dystrophinopathies. Our commitment is aimed at developing a path that can assist patients throughout the complex journey they have undertaken, as well as at the continuous improvement of the healthcare/welfare standards associated with the device implantation.

## The coordination of care for adolescents with traumatic brain injury (TBI) across the EU/EEA: a MOCHA study

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*Introduction:* The medical management of children and adolescents with complex health conditions requires input from a variety of health and allied professionals. Effective care coordination is, therefore, pertinent for the delivery of optimal care for these children.

*Aims:* Conducted as part of a Horizon 2020 funded study, Model of Child Health Appraised (MOCHA), this study explored the structures/processes relating to care coordination for adolescents with traumatic brain injury across the EU/EEA.

*Methods:* Thirty EU/EEA countries were surveyed using local country representatives. The survey consisted of a clinical vignette and open/closed questions adapted from US Standards [1] and the Eurobarometer survey [2]. Categorical data were analysed using descriptive statistics.

*Results:* Twenty three countries (76.6%) returned surveys. Six countries (26.1%) have policies and/or procedures, which support the coordination of care for adolescents with TBI. Fifteen countries (65.2%) have discharge planning coordinators in acute hospitals responsible for managing the transfer of adolescents with TBI to a community-based setting. Parents/guardians and healthcare team members are involved in the development of personalised care plans for adolescents with TBI in 12 countries (52.2%). Furthermore, adolescents with TBI, where cognition allows, are involved in the development of their personalised care plans in 11 countries (47.8%).

*Conclusions:* The results suggest that the mechanisms in place to support coordinated care for adolescents with TBI vary considerably across Europe and are sub-optimal in many countries. Further research is required to explore ways in which care coordination can be universally improved.

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PP40

## Practices of mothers with children with infantile colic

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*Aims:* To compare the quality of life and burden of care of parents with children who were 2-4 years old with liver transplantation.

*Methods:* The study was carried out as a descriptive cross-sectional study of 43 children from 1 June to 31 December 2017 who came Inonu University Liver Transplant Institute outpatient clinics. Data were collected using the Child Information Form, Parent Information Form, Quality of Life Scale for Children, Quality of Life Scale and Care Load Scale.

*Results:* The average age of the children participating in the research was 3.48 ( $\pm 1.62$ ), while the average age of the parents was found as 34.14 ( $\pm 7.59$ ). It was found that 59.6% of the children with transplantation were male, 38.3% had their organ donation from their mother, and 95.7% of the children had post-transplant complications. The average quality of life scores of the children participating in the study were 27.83 ( $\pm 20.15$ ), while the parents' average of life quality score was 28.78 ( $\pm 16.73$ ) and the parental care load was 67.25 ( $\pm 15.59$ ). There is a medium positive correlation between the quality of life of the parents and the quality of life and sub-dimensions of the children. There was a medium negative correlation between parental quality of life and caregivers burden in the negative direction. There is a strong positive correlation between childhood quality of life and physical and psychosocial health areas. There is a strong positive correlation between the physical and psychosocial health domains of the quality of life sub-dimensions for children.

*Conclusion:* It has been found that the quality of life of children with transplantation and parents is low and that the quality of life of children is impaired and the care load of parents is increased.

PP42

## Parental views on paediatric weight management attrition

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*Introduction:* One of the challenges that paediatric weight management clinics often encounter is non-compliance with the long-term follow-up programme, with studies reporting rates higher than 50%.

*Methods:* Structured interviews with patients' parents, as part of a telephone survey, with a parallel use of information from the medical records, were performed. Eighty five parents of overweight and obese children and adolescents who followed up clinic visits at a public paediatric hospital and were withdrawn prematurely served as the sample pool.

*Results:* The main reasons leading to attrition from paediatric weight management programmes were the childrens' refusal to follow the treatment plan (32.9%) and the difficulty in coordinating the monitoring and counselling meetings with the daily activities of the family (29.4%). Treatment discontinuation rates due to scheduling issues were significantly higher in boys ( $P=0.004$ ) and in the cases that transport costs were high ( $P=0.003$ ). When parents were asked what would help their family to better handle their child's weight, they stated changes in appointment schedules, group sessions depending on the age of the child, and rewards according to the outcome of the treatment.

*Conclusions:* This study provides information on the potentially modifiable aspects of treatment dropout and the parameters that can promote continuity of care. Furthermore, it can help with the design of programmes and interventions for obese children and adolescents to assure maximisation of compliance in the treatment programme while minimising the burden of the family.

**PP43**

## Quality of life in mothers of children with cerebral palsy

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*Introduction:* Cerebral palsy (CP) describes a group of permanent disorders of the development of movement and posture, causing activity limitation, that are attributed to non-progressive disturbances that occurred in the developing fetal or infant brain. The motor disorders of cerebral palsy are often accompanied by disturbances of sensation, perception, cognition, communication and behaviour, epilepsy and secondary musculoskeletal problems (1). CP has been reported at an incidence of 1.2-2.5 in each 1,000 live births among school age children in developed countries and it has been reported as 4.4 in 1,000 live births among 2-16 year-old-children in Turkey (2).

*Aims:* To evaluate life quality of the mothers who had a child with cerebral palsy.

*Methods:* Literature was reviewed to examine life quality of mothers of children with cerebral palsy and this review study was carried out.

*Results:* CP appears as a complex clinical condition with its high incidence level and its complications often requiring careful care (3). While providing care for the child having CP, mothers generally appear as the primary caregivers within the families that meet many difficulties. During this period, mothers may need to struggle with psychological problems besides socioeconomic challenges; and they may experience psychological problems such as anxiety, shock, denial, sadness, anger, avoidance for facing the attitudes of outer world, self-confidence and decrease in respect (3). In case of intense stress, anxiety and concerns experienced this process may cause a decrease in their life quality as in chronic diseases (4). As a result of the impairment of their quality of life, life quality and rehabilitation process of the child having CP may be affected negatively (3,4,5). In the study by Ones et al,

anxiety, depression and life quality of 46 mothers of children having CP and 46 mothers who had a healthy child and similar demographic characteristics were compared. As a result, depression scores were found significantly higher among the mothers of children having CP; but no significant difference was found in terms of anxiety (6).

In the study by Ahmedizadeh et al that was carried out with mothers of 60 children having CP and 60 healthy children, life quality of the mothers of children having CP was found to be lower compared with the mothers of healthy children (7).

*Conclusion:* As a result, impairment in life quality and a tendency for depression may be seen among the mothers of children having CP compared with the mothers of healthy children. Detailed recognition of social and psychological problems of the family members of the child having CP and trial for finding solution offers are highly important in terms of promoting their quality of life.

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#### PP44

## Nursing care practice in the management of familial Mediterranean fever

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Familial Mediterranean fever (FMF) is an autosomal recessive disorder due to a genetically determined inflammatory unbalance (Çobankara ve Balkanlı 2011). Traditionally, it is common among populations living around Southern and Eastern coasts of Mediterranean Sea: Armenians, Turks, Middle-Eastern Moslems, non-Ashkenazi Jews, but, because of migrations during centuries, FMF is no longer a rare disease in European countries like Italy, France and Greece (Padeh 2005; Kasapçöpür ve Arisoy 2006). The disease onset is before 20 years of age in 80-90% of the patients. Typical attacks last 12-72 hours. Fever, peritonitis, pleuritis, arthritis, and erysipelas-like erythema are common features in

decreasing frequency. Amyloidosis is the major complication of FMF. White blood cell count, erythrocyte sedimentation rate, CRP and serum amyloid-A levels are increased during attacks ( Erdogan ve Öner 2002).

More than 50 disease-associated mutations have been identified in MEFV gene, the gene of FMF. The diagnosis is based on clinical criteria; Tel-Hashomer Criteria and Sheba Medical Center Criteria are helpful. MEFV mutation analysis and response to colchicine treatment are valuable tools for the diagnosis of uncertain cases. Causes of recurrent fever, abdominal pain, chest pain, arthralgia, scrotal pain, hereditary recurrent fevers (hyper-immunoglobulin D syndrome, TNF receptor associated periodic syndrome, NOMID/CINCA, Muckle-Wells syndrome, familial cold auto-inflammatory syndrome) and PFAPA syndrome should be considered in the differential diagnosis of FMF (Manna et al 2003).

FMF is a benign disease when treated by colchicine. A long-life colchicine therapy can determine a reduction of number of FMF attacks, of their severity, preventing amyloidosis; in this way a real improvement of the quality of life of the patients can be achieved (Cerquaglia 2005).

Care of children with familial Mediterranean fever differs according to the child, his/her family, type of disease, social environment and medical care while it facilitates or complicates child's adaptation to the disease. For solutions of compliance problems, nurse develops child's self-care agency by using nursing care and educational approaches. Nurses can achieve opportunities to evaluate health status of people, to organise and analyse the data and to explain the information by using theories (Özkan et al 2014).

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#### PP45

## Psychosocial consequences of food allergy in children and their families

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*Background:* Food allergy in children is a growing problem. Clinical expression varies from mild urticaria or atopic dermatitis to severe anaphylaxis. Serious life-threatening manifestations and dietary restrictions seem to cause a variety of consequences.

*Aims:* To examine the psychosocial consequences that special restrictions of allergy-causing foods may produce.

*Methods:* The material studied consisted of 93 mothers of allergic children attending outpatient paediatric allergy clinic as well as children older than eight years old up to 17 years of life as long as they wanted to participate. Two different standardised questionnaires were administered to mothers and children after personal communication.

*Results:* Out of 93 children studied, 24 (25.8%) had developed tolerance. A statistically significant association was detected between tree-nuts sensitisation ( $P<0.001$ ) and anaphylaxis ( $P=0.021$ ). Parents of children with cow's milk or egg allergy, that insists after the age of two years of age had significantly more often difficulty in getting food from the market (OR=1.91, C.I.:1.11-2.68,  $P=0.001$ , and OR=1.72, C.I.:1.15-2.88,  $P=0.002$ , respectively).

Adrenaline usage was reported more often among children with tree-nut allergy (OR=2.9, C.I.:2.01-3.78,  $P<0.001$ ). Children who stated that 'worry for any serious reaction' had significantly more often history of anaphylaxis (OR=1.5, C.I.:1.09-2.08,  $P=0.003$ ) and late onset on their allergy presented symptoms (OR=1.8, C.I.:1.12-3.45,  $P=0.012$ ).

*Conclusion:* The most frequent food allergens in infancy and pre-school ages are egg and cow's milk, whereas for school-age children and adolescents tree-nuts are more common. Psychosocial consequences of food allergy in children are severe, especially for those who have a history of anaphylactic reaction. The main psychosocial reactions are insecurity and the fear for the imminent threat. More organised programmes for patients and family education on the proper treatment and adrenaline usage are needed.

**PP47**

## **Monitoring home medication errors in children with chronic conditions through an app for smartphone: preliminary results**

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*Introduction:* Children with chronic conditions follow treatment regimens of high complexity at home and it could be particularly dangerous for parents making errors with medications. Telemedicine is spreading quickly in the outpatient setting and could be useful in monitoring

medication errors at home in paediatrics.

*Aims:* To monitor the use of a smartphone app that monitors medication errors made by parents during the management of drugs at home in children with chronic conditions, describing their characteristics and incidence.

*Methods:* After Ethics Committee approval, a prospective observational study was conducted from September 2016 to January 2017. Parents of children cared in the units of pneumology, rheumatology and cystic fibrosis, and cardiology of Bambino Gesù Children's Hospital in Rome were enrolled. Parents were asked to use an App to report medication errors and to answer a questionnaire measuring their level of satisfaction with this App on a Likert scale from 1 to 5.

*Results:* Overall, 77 parents of children with a mean age of 8.5 years (SD=5.5) downloaded the App and reported eight medication errors. All errors occurred during the administration phase of enteral drugs, which were antihypertensive in half of the cases. The incidence of medication error corresponded to about three errors per patient/year ( $8/857=0.009 \times 365=3.4$ ). Parents ( $n=18$ ; 23%) expressed a mean level of satisfaction with the App of 4.17 (SD=0.53).

*Conclusion:* Data about medication errors at home in paediatrics are quite recent and there are no specific studies aimed to evaluate the incidence of these errors or the use of telemedicine. It is not possible to make comparisons. This pilot study showed how an App can be a useful tool for remote monitoring of errors during management of drugs in paediatrics and can be highly appreciated by users.

*Source of funding:* Centre of Excellence for Nursing Scholarship of IPASVI in Rome

## CROSS-CULTURAL NURSING AND MULTIDISCIPLINARY TEAM WORKING

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PP48

### Family management of life with Down syndrome: a cross-cultural exploration

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*Introduction:* The purpose of this study was to examine the reliability of the Family Management Measure (FaMM) for families of children with Down syndrome (DS) from multiple countries. The FaMM is a 53-item self-report measure developed by Knafl and colleagues to assess how families manage caring for a child with a chronic condition/illness and the extent to which families incorporate condition management into everyday family life. Initially the FaMM was used only with families of children with chronic physical conditions. More recently, it was found to be applicable for families in which a child has an intellectual disability such as DS.

*Method:* 2,740 parents (2,387 mothers, 353 fathers) of children with DS from more than 50 countries have completed all or part of an online survey that included the FaMM as part of a cross-cultural study concerning adaptation and resilience in families of children with DS. The survey is currently available in nine languages (Dutch, English, Italian, Hebrew, Japanese, Korean, Portuguese, Spanish and Thai).

*Results:* There is evidence of overall strong internal consistency reliability (ICR) for the entire sample. ICR exceeds 0.70 for four of the FaMM scales (Condition Management Ability, Child Daily Life, Family Life Difficulty, and Parental Mutuality and ranges between 0.61-0.68 for the remaining two scales (View of Condition Impact and Condition Management Effort). Two of the scales, Family Life Difficulty and Parental Mutuality have excellent internal consistency across countries. On the other hand, the View of Condition Impact scale has ICR scores above or close to 0.70 for only three of the languages (Dutch, English and Korean).

*Conclusion:* Results support the reliability and cross-cultural applicability of the English language FaMM scales and suggests that with suitable adjustment this should also hold for the FaMM scales available in other languages.

## EFFECTIVE COMMUNICATION AND PARTICIPATION OF CHILDREN, YOUNG PEOPLE AND THEIR FAMILIES

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PP49

### Content validation of the Family Empowerment Scale for parents of children with a chronic condition

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*Introduction:* Insight into parental empowerment is important to understand the impact of healthcare policy to support and strengthen parents in the care for their child. The Family Empowerment Scale (FES) is a valid instrument measuring parental empowerment and was originally developed for parents of children with emotional disabilities. It has been translated from English into Dutch. Before using the translated FES in another context, the aim of this study was to assess the content validity of the Dutch FES in the context of children with a chronic condition in a children's hospital, according to parents and nurses.

*Method:* This content validity study has a convergent, mixed methods design. The content validity index was used to examine the relevance according to 22 parents and 12 nurses quantitatively, on scale and item level. An item-content validity index  $\geq 0.78$  is considered as relevant, 0.80 is a sufficient score for scale-content validity index. The qualitative part assessed the comprehensiveness and comprehension of the FES through cognitive interviewing with eight parents and four nurses. Results of both analyses were converged to determine content validity.

*Results:* The scale-content validity index was 0.88, three items scored on item level <0.78. For 10 (of 24) items, issues were noticed about tone and clarity of wording. Participants considered the FES not only as a measurement instrument in research, but also as an instrument that could be used to give insight in the personal degree of parental empowerment.

*Conclusion:* The content validity of the Dutch FES for parents of children with a chronic condition can be considered sufficient. Resolving some minor translation issues in some items is advised. The FES can be used in further research to examine the value of the FES in healthcare services, aiming to support the needs of parents, and to increase their empowerment.

**PP50**

## **Parental stress and deprivation of sleep in Icelandic parents – a search for directions for prevention and clinical approaches**

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Nurses have an important role in monitoring patients' sleep and reacting to negative sleeping patterns. It is important to know how much sleep can be expected from various groups within the population. Not much is known about sleeping habits of parents or how long different groups of parents sleep during the night. This despite piling evidence that sleep interacts with important outcomes of health and human performance such as parenting.

*Aims:* To review findings of four Icelandic studies of stress and sleep in Icelandic parents of healthy and sick children to identify factors that may lead to clinical solutions to preventive practices in the healthcare of families with children.

*Methods:* Findings from a random populations study of a sample of 1,599 Icelanders with a subsample of 591 parents as well as three clinical samples of parents of acutely ill infants and children in NICU and PICU and parents of severely disabled parents, were used to synthesise results to identify the varieties of sleep length and parental stress among parents by parameters of their children's health conditions and the demographics and health of parents.

*Results:* Parents with children under five years old slept on average six hours and 54 minutes, but duration of sleep increased as the child got older. There was a significant difference between the sleep of parents and childless adults. Parents who got the shorter sleep than others were fathers, those who worked more than 50 hours per week, those who worked on shifts, had secondary school education and those who had two children or more at home. Parents who had a preferable length of sleep were more often those who did not do shift work and did not have disability. Parents of sick and disabled children have disruption in their sleep significantly related to the level of parental stress they experience. The methods of assessing parental stress are important in the detection of problems in relation to sleep in parents.

*Conclusion:* The results give us an image of what can be expected regarding the sleep of different groups of parents. Further research on this subject is needed to specify the needs of subsamples of parents in terms of addressing their parental stress and sleep deprivation.

The information is crucial so that nurses and other professionals can advise parents on adequate regular sleep, focus on certain groups of parents and offer evidence-based nursing therapy to minimise prevalence and prevent sleep deprivation or sleep problems during stressful times as well as during child rearing.

## PP51

### Sisom

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*Introduction:* Sisom is an alternative means of evaluating symptoms for children older than six years old with cancer. It is a virtual game which gives the opportunity to patients to participate in their child's treatment.

*Methods:* A pilot survey of using Sisom is carried out on young patients of the Oncological Hospital Panagioti nd Aglaias Kyriakou. The survey will promote the children experimental description of everyday feelings. Via Sisom the child takes the role of a traveller with different island destinations. Each one of them marks different situations which connect directly, or not, with the malady of cancer. The child is called to evaluate these situations using a scale of feelings. By the side of the child, besides the real nurse, stands a virtual one who offers vocal instruction. In the end, the actual nurse can print the data and register them in the file of each patient separately. The study period will last nine months. Each new patient diagnosed with cancer and fulfils inclusion criteria will take part in the study after informed consent is obtained.

*Results:* Until now, we have gathered 10 different cases (five boys and five girls) aged 8-17 years old. Their reports prove common persistent tiredness, keen desire to return home, accumulation of anger but no fear of death because of the disease. In general, the boys' data is assembled more positive and stable, giving answers like 'no, it is not a problem'. Instead, girls' answers varied constantly and most of the theme marked with face 'a little problem'.

*Conclusion:* As expected, Sisom proved a friendly and pleasant tool. It can detect feelings that can't be traced by parents or nurses. It offers an advanced approach of child treatment adapted to contemporary paediatric needs.

## PP52

### Determination of the factors affecting psychological situations of parents with autism spectrum disorder

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*Introduction:* This study was conducted to determine the factors affecting the psychological state of parents with autism.

*Methods:* The research was carried out as descriptive in rehabilitation centres affiliated to the

Ministry of National Education in a district centre. The study's universe consisted of autistic children's parents in the 3-18 age group enrolled in the rehabilitation centers on the dates of the study. It was conducted with the parents of 62 autistic children who accepted the search without going to the sample selection method at the stage. The data were collected with the Personal Information Form prepared by the researcher and the Brief Symptom Inventory. Percentage distribution, mean, Kruskal Wallis test was used in the evaluation of the data.

*Results:* It was determined that 48.4% of the parents who participated in the survey were in the age range of 30-39 years, 46.8% of them were primary school graduates and 51.6% of them had two children. The mean short symptom inventory total psychological symptom score was 45.32 ( $\pm 27.68$ ). It was determined that the income status of the parents and the degree of the child's autism affected the parents' psychological state, while the parents' age, education status, number of children, presence of supportive status in the child's care, and parents' ability to allocate adequate time to the child did not affect the psychological status of the parents.

*Conclusion:* The findings of the study showed that the parents' psychological status of children with autism was slightly affected. In this direction, it is suggested that the psychological status of the parents should be determined and the professional support including the counselling services should be arranged for parents.

**PP54**

## Safe schools

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*Introduction:* The nursing team at BAT, in compliance with the ethical and deontological principles of the nurse, has offered 'SCUOLE SICURE', a training path for lay people#nursing4children.

*Aim:* To inform, train and educate teachers in nursery schools about the correct interventional procedure of airway disruption and management of the emergency due to foreign body ingestion in pharynx/larynx/trachea. The training path has been provided in some of the BAT Province Institutes in the metropolis of Barletta, Bisceglie, Andria and Trani. The airway obstruction in the infant/child represents 50% of the causes of death in the age between 0 and 5 years (source IRC-Italian Resuscitation Council).

*Methods:* Lectures (90-minute theoretical exposition) with slide presentation in powerpoint format according to the ERC international guidelines; preparation of work islands for the practical topic and 50X70 delivery with images of rescue and unstructured maneuvers. 18 meetings were held in 18 different schools, forming 1,250 people. At the end of the event, a Likert-scale questionnaire was administered (with the use of emoticon symbols and alphanumeric description) and an affirmative/negative scale. The coding of the variables was done on word and graph sheets with Microsoft Excel.

*Results:* The participants declared that:

- 100% witnessed spontaneously resolved airway obstruction of the airways;
- 50% have witnessed or experienced an airway obstruction of food;
- 40% assisted or tried an airway obstruction from seawater;

- 4% witnessed mild airway obstruction in the paediatric age
- in one case the use of medical care.
- 100% the course will have considerable feedback in the private sphere.

*Conclusions:* The high perceptive impact detected thanks to the satisfaction questionnaires and the numerous requests for repetition of the training editions motivated the training staff to extend the educational offer for 2018, engaging in maintaining the quality standards of teaching characterised by excellence, deontology and professionalism

**PP55**

## Submissive behaviours and violent tendency in nursing students: The case of Turkey

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*Aims:* The study was conducted to identify the tendency to violence and level of submissive behaviors of nursing students, to demonstrate the association between them, and evaluate the factors affecting these variables.

*Methods:* The study was conducted in a nursing faculty of a public university in Istanbul. The study sample consisted of 159 fourth-year nursing students. A descriptive information form, the scale of tendency to violence, and scale of submissive behaviors were used in the study. Institutional permission from the faculty, ethics board approval from the university and written consent of the students who volunteered to participate in the study were obtained. One-way ANOVA test, Tukey HSD post hoc test, and Pearson's correlation analysis were used in addition to descriptive statistics.

*Results:* The mean age was 22.18 ( $\pm 0.87$ ) years, and 74.8% (n=119) of participants were female. The mean score of submissive behaviour was 36.12 ( $\pm 8.96$ ), and the mean score of tendency to violence was 37.82 ( $\pm 10.20$ ). A positive 34.3% rate of statistically significant association was detected between the scores of the scale of submissive behaviour and scale of tendency to violence ( $r=0.343$ ,  $P=0.001$ ). The mean score of tendency to violence of men was found statistically significantly higher than the women ( $P=0.001$ ).

*Conclusion:* There was found to be an association between the tendency to violence and submissive behaviours in nursing students. Discussion of the topic in the curriculum of undergraduate education of nursing students may contribute to training nurses, and have higher self-confidence, self-esteem, and enjoy their profession, and thus increase the quality of care.

## New methods to assess parents' satisfaction with family-centered care in neonatology: A multi-center study, preliminary results

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*Introduction:* Family-centred care (FCC) is one of the goals of health quality improvement and it could be evaluated by the assessment of parents' satisfaction with care. In Neonatal Intensive Care Units (NICU), it is assessed through the EMPATHIC-N, a Dutch questionnaire with 57 items exploring the five domains of FCC. An Italian version of the questionnaire was developed for NICUs and it was reduced to 30 items: the EMPATHIC-N30. It was realised in paper-and-pencil and online format.

*Aims:* To verify if the online method is reliable as the paper one in collecting data.

*Method:* Ethical approval was obtained. This is an observational, transversal and multicentre study. It includes 13 Italian NICUs, with an expected final sample of 300 newborns. Parents are recruited with a cluster sampling and they have to fill the EMPATHIC-N30 paper and pencil or online based on the order of discharge.

*Results:* The EMPATHIC-N30 was reduced from 57 to 30 items. Items were grouped in five areas: Information (item 1-6), Care and Treatment (item 7-15), Parental Participation (item 16-19), Organisation (item 20-23), Professional Attitude (item 24-30). An interim evaluation suggests that there is a higher frequency of responders using the paper method. At the beginning, for the online method, the parents' e-mail was used, but later it was considered not user-friendly, so they were provided with a SMS including the link to the EMPATHIC-N30. High level of satisfaction with care was reported.

*Conclusion:* People may not like the online system, but, at the same time, it is crucial to assess if it is as reliable as the paper one. Assessing satisfaction with care in NICU is fundamental to improve FCC, so to enhance quality of care. No statistical difference is expected in the level of satisfaction by the use of the two methods.

*Source of funding:* Centre of Excellence for Nursing Scholarship of the IPASVI Nursing College of -Rome Participants at the multicentre study with affiliations:

[https://it.surveymonkey.com/r/FCC\\_Italian\\_NICUs\\_study\\_group](https://it.surveymonkey.com/r/FCC_Italian_NICUs_study_group)

PP58

### Current trends and approaches concerning Paediatric Mass Disaster Preparedness

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*Introduction:* A mass disaster is always considered an event which stresses any healthcare system. When such an event involves children and families the challenges for efficient response and preparedness are greater. Moreover, children exhibit significantly higher mortality rates in disasters when compared with the adults.

*Aims:* To present the international trends, challenges and opportunities in relevance to paediatric mass disaster preparedness.

*Methods:* Research articles and systematic reviews, published during last decade, along with national and international guidelines were critically reviewed and underwent a thorough content analysis.

*Results:* Mass casualty events involving children challenge the available resources of any health system. Therefore, it is strongly recommended that paediatric and nonpaediatric hospitals should establish protocols for paediatric victims. The all-hazards approach is the core proposed strategy for the most effective preparedness of a healthcare system for a paediatric mass disaster, especially in our era that economic crisis has limited the available resources. Children have unique vulnerabilities and characteristics that place them at increased risk during a disaster. In the frames of a holistic and family-centred approach, mass event preparedness should include the prevention of injury during the post-event period and the reunification with family. The support of families should be considered and incorporated as much as possible and their needs should be evaluated systematically. Moreover, since children spend most of their time in schools, the disaster preparedness plans should include school settings. We highly recommend individualised school response protocols based on their unique characteristics. Close collaboration among health professionals, state, communities and individuals is essential to assure preparedness for children in each step of the planning process.

*Conclusion:* Despite the lack of resources, there are systematic approaches available to improve the disaster preparedness in different healthcare systems and settings. The use of empirical data and paediatric disaster expertise along with the implementation of protocols that reflect paediatric needs and post-event safety.

PP59

### Effect of an educational intervention programme in children's postoperative pain management

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*Introduction:* Effective pain management contributes to high-quality postoperative care. Nevertheless, accurate assessment of pain and its management remains a challenging aspect of paediatric care.

*Aims:* To estimate the intensity of postoperative pain scores in children after an educational intervention as well as factors affecting them.

*Methods:* 800 children aged 0-16 years old undergoing surgery were recruited from December 2012 to February 2016. Surgical ward nurses delivered an educational programme including theoretical orientation and clinical practice recorded children's postoperative pain scores every three hours for the first and second postoperative day. Pain scales FLACC, FACES and NRS were applied according to the child's age.

*Results:* Gender, route of administering painkillers and use of non-pharmacological interventions made a statistically significant difference to the pain score during the first 24 post-operative hours ( $z=-4.069$ ,  $P=0.000$ ;  $\chi^2=34.957$ ,  $P=0.000$ ;  $z=-7.259$ ,  $P=0.000$  respectively). For the second postoperative day, severity of the operation, use of antiemetic drugs, route for painkiller administration and use of non-pharmacological interventions were found to be statistical significant factors regarding the pain scores ( $\chi^2=30.825$ ,  $P=0.000$ ;  $z=-3.822$ ,  $P=0.000$ ;  $\chi^2=22.072$ ,  $P=0.001$ ;  $z=-5.418$ ,  $P=0.000$  respectively). There was also a statistically significant correlation between gender and severity of surgery ( $\chi^2=6.229$ ,  $P=0.047$ ), as well as between severity of surgery and use of antiemetic drugs ( $\chi^2=54.344$ ,  $P=0.000$ ) and severity of surgery and use of non-pharmacological interventions ( $\chi^2=18.247$ ,  $P=0.000$ ). With the exception of duration of surgery for the second postoperative day (Spearman's  $\rho=0.187$ ,  $P=0.000$ ), no other factor was statistically correlated with pain scores for both first and second postoperative day.

*Conclusion:* Educational programmes contribute to effective postoperative pain management. Painkiller administration route, use of non-pharmacological interventions, severity and duration of the operation and use of antiemetic drugs seem to affect pain intensity scores.

## Pain assessment in children with severe cognitive impairment in a home care setting with the revised-FLACC: feasibility study

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*Introduction:* Children with severe cognitive impairment experience pain more often than their healthy contemporaries. The WHO gold standard uses subjective tools to assess pain. We implemented the Revised-FLACC, in Home Care Practice (HCP), with the aim of improving pain assessment in children (0-18 years) with severe cognitive impairment. We aimed to determine the feasibility and clinical utility of the Revised-FLACC in HCP.

*Methods:* An observational descriptive design was used. The participants were healthcare professionals and caregivers involved in the implementation phase of the R-FLACC in HCP. Preliminarily, the participants attended a course aimed at training them at using the tool. We used the R-FLACC Evaluation Form (an eight-item questionnaire) to survey feasibility and clinical utility. Hard copies of the survey were given to caregivers, while healthcare professionals filled out a web-based version of the survey. The study was approved by the Ethics Committee of Istituto Tumori in Milan. Written informed consent was obtained from each participant.

Cohen's kappa was used to measure inter-rater agreement between raters in three measurements predetermined time points.

*Results:* Forty healthcare professionals and 28 caregivers answered the questionnaire. Twenty (50%) health professionals and 28 (100%) caregivers returned the R-FLACC Evaluation Form. The overall prevalence of positive answers was 88%, 86% for the feasibility and 90% for the clinical utility. Cohen's kappa measures showed a moderate inter-rater agreement (T1: K= 0.615; T2: K= 0.613; T3: K= 0.604). All measurements were considered statistically significant with *P* value < 0.05. The inter-rater reliability, measured by Cronbach's Alpha, was higher than the 0.75 cut-off in all measurements (T1:=0.951; T2:=0.981; T3:=0.945).

*Conclusion:* This is the first study designed to examine healthcare professionals and caregiver perceptions of the feasibility and clinical utility of the R-Flacc in HCP. The results suggest that the R-FLACC may be a feasible and clinically helpful tool for this population in HCP.

## Non-pharmacological pain management in children. What do the studies show in Turkey? A systematic review

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*Introduction:* Infants and children often experience pain due to various medical processes. In reducing such pain, it is important that non-pharmacological methods are applied either because pharmacological methods are often not used or to support the effect of pharmacological methods. Thus, the formation of a negative memory of pain in children can be prevented. There are a wide variety of non-pharmacological approaches to pain, and knowing their effectiveness helps in determining which to choose.

*Aims:* To review studies carried out in Turkey between 2000 and 2017 about non-pharmacological pain management applications and effectiveness of them for newborns and children and systematically analysing data obtained from the studies.

*Methods:* A total of 138 international articles and 26 national theses were reached through the search engines of ScienceDirect, EBSCOHOST, SCOPUS, Web of Science and ULAKBIM, using the key words pain, child/newborn/infant/premature, non-pharmacological, and Turkey. In accordance with the inclusion criteria (being experimental or randomised controlled, with access to full text, with a relevant method etc.) eight articles and 16 national theses were included in the study.

*Results:* In children, the following methods were found to be applied to relieve pain during IV or IM injections: ice application on Buzzy<sup>®</sup>, watching cartoons, playing digital games, inflating balloons, having children cough, distraction cards, kaleidoscope, and informing and dramatising with toys. All these were found to be effective in reducing pain. 30 seconds of ice application was found to be ineffective. Informing and dramatising with toys was determined to be ineffective in post-operative pain, while having children listen to music was effective for pain in the first six hours.

In term and preterm infants, the following methods were found to be applied when drawing blood through the heel or administering vaccinations: putting in fetal position, swaddling, leg massaging, giving reflexology and massage, breastfeeding, giving amniotic fluid, giving sucrose, giving a pacifier, using white noise, lavender scent and musical mobile. All these methods were found to be effective. It was determined that having an infant listen to the mother's heart beating was effective for aspiration pain, but there was no difference between open or closed aspiration.

*Conclusion:* Non-pharmacological approaches (compared to control groups) are effective at varying degrees in acute pain in the medical process of children and newborns.

PP62

## Paediatric burns: non-pharmacological interventions for pain management

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*Introduction:* Burns during childhood are one of the most serious health problems worldwide. Pain is a common symptom not only due to their injuries, but also due to surgical procedures, wound care and mobilisation.

*Aim:* This review substantiates the beneficial effect of non-pharmacological pain management in children with burns.

*Methods:* A critical review was performed after content analysis of articles published after 2000 in PubMed. Adequate key words were used for the literature search.

*Results:* Many studies support the effectiveness of non-pharmacological interventions as an alternative or in combination with pharmacological pain treatment, in children with burns. However, there is a growing debate among healthcare professionals in concern to their implementation in everyday practice. We critically present our findings in three categories. The first category includes psychological techniques for pain management, which include distraction, fantastic images, music therapy, therapy games and laughter. A second category includes physiotherapy treatment techniques such as cryotherapy, acupuncture and immobilisation. The ancillary role of parental presence is discussed separately, since it stands as an important and integral part of any pain management approach.

*Conclusion:* There is a growing evidence that supports the beneficial effect of non-pharmacological treatments on child's burn pain relief. Recommendations for further implementation in clinical practice are presented.

PP63

## Methods that have positive effect to the development of premature infants

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*Background:* The ectopic environment in which premature infants are required to adapt and remain for a long time is often quite 'inhospitable' and harmful. In this paper we try to explain the necessity of the development of newborns in a friendly and safe environment.

*Methods:* The experience gained from our educational visit to Sao Jose Hospital in Porto, Portugal, has been the reason for this systematic review. The bibliography includes articles published from January 2010 until June 2017 in the English language from PubMed, Cinahl and Cochrane databases with the following key words: parents, pain, pain management, participation, infant, neonatal intensive care unit, kangaroo care, Nidcap.

*Results:* Early infants are particularly sensitive to external stimuli and have greater difficulty

in keeping vigilance as well as having more help in gaining stability. Aggravating factors include illumination, noise, painful procedures, excessive handling. Such factors that lead to persistent hypersensitivity appear to have detrimental effects on the immature brain and their subsequent development.

*Conclusions:* Staff on neonatal intensive care units in collaboration with parents must act to support the needs of the newborns in the ectopic environment. Minimal handling, staff collaboration to coordinate activities, recognition of their levels of tolerance to noise and illumination, parental touch, especially the kangaroo method and parental voice is recommended as a method of relief from painful procedures.

**PP64**

## **Assessment of neonatal pain–assessment tools: a systematic review**

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*Introduction:* Assessment and measurement are a cornerstone for pain management. The tools used for neonatal pain are an important factor in the direction of pain management in practice.

*Aims:* Review of knowledge about the assessment of neonatal pain and assessment tools.

*Methods:* Systematic review of studies published over the past five years in the databases PubMed, Cochrane, Scopus and Cinahl in the English language, using the key words: assessment, neonatal pain, pain scales and pain in NICU.

*Results:* Of the total 253 articles, only 19 were included in the systematic review. From the articles that were studied, 15 pain scales were used during the period of the last five years. Four of these were unidimensional and the others are multidimensional. The scales evaluated acute pain, two of them in postoperative and also two in prolonged pain both of preterm and full-term neonates.

*Conclusion:* In the international literature there are valid and reliable tools for assessing neonatal pain.

PP65

## Assessing the quality of life of adolescents with idiopathic scoliosis

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*Introduction:* Idiopathic scoliosis is a chronic condition, which evolves and intensifies during adolescence. The effects are mainly psychological and rarely organic, and relate to the clinical picture exhibited in the adolescent because of spinal deformity.

*Aims:* The purpose of the study was to assess the quality of life of adolescents with idiopathic scoliosis and to investigate the factors that influence it.

*Methods:* The study was based on a review of articles from the PubMed database. The selected articles covered the period from 2000 to 2015. Keywords used were scoliosis, body image, quality of life, effects, parents.

*Results:* The research findings revealed that the clinical picture of idiopathic scoliosis affects the adolescent's personality, social behaviour and performance in school. Moreover, children with scoliosis have an undermined perception of their own body with boys exhibiting better body image than girls.

*Conclusion:* The treatment of idiopathic scoliosis requires time and patience. If the effects of the condition are not addressed in time, they may leave scars on the child's psychosocial behaviour. At a difficult age, these children are called upon to cope with a long and painful treatment and need all the support they can get. The provision of structured information and the ongoing communication between the child and his or her family and the team of health professionals are crucial for the progress of the child's treatment and his or her psychosocial stability.

## MEETING THE RIGHTS OF THE CHILD

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PP66

## Sick children's rights: a systematic review

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*Aims:* This study was planned to systematically investigate studies evaluating sick child rights.

*Methods:* Studies and systematic compilations were searched with the key words 'patient rights' published in the Turkish and English databases (Medline/PubMed, Google Academic, Turkish Citation Index) between July 2008 and January 2018. A total of seven

national and international publications in line with the inclusion criteria were included in the study and evaluated.

*Results:* In this systematic review, a total of seven studies were used, two of which were compilation articles and five were research articles. When studies were examined, it is generally the level of knowledge of health professionals on the subject of sick children's rights, parents were studying the level of knowledge about the rights of the child receiving treatment in the hospital and evaluating the affirmation of the children before the medical interventions. Within the scope of sick child rights in studies, the importance of the right to education, the right to play games and the right to receive informed consent from parents and children are emphasised. In five research papers, in particular, health professionals assessing the level of knowledge about child patient rights, there are differences in the scope of applying children's rights among countries and among paediatric units of different hospitals. It has been determined that health professionals receive approval from their parents only under informed consent.

*Conclusion:* It is required that health professionals adopt rights for sick children and ensure that health services are equally accessible and sustainable for all children.

## NURSING EDUCATION, MANAGEMENT AND LEADERSHIP

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PP67

### A European perspective on nursing preparation to care for children with complex health care needs

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*Aim:* To analyse nurses' preparedness for the care of children with complex care needs (CCN) and their families in 30 European countries.

*Introduction:* Advances in the field of medicine have increased the number of children living with complex conditions, and with that the need for high-quality healthcare. Nurses play a key role in the care of children. The knowledge and training acquired by the nurses working with children and families has to be targeted in order to deliver high-level care. This study is part of the EU funded project: Models of Child Health Appraised (MOCHA).

*Methods:* A questionnaire, for distribution by country agents in 30 European countries, was developed to explore the qualifications required when nursing children with CCN in the community. The questionnaire also included a request for nursing curriculum documents. Responses were received from 23 countries (79%). Descriptive statistics were used to analyse the results on nursing qualifications. A summative inductive content analysis of each curriculum was carried out to understand the written content related to the child.

*Results:* No specialised training is required to deliver community nursing care to children with CCN in 73.9% ( $n=17$ ) of the countries. For these countries, a general nursing qualification was the only requirement. Almost three-quarters of the general nursing curricula analysed (70.6%,  $n=12$ ) offered one or more compulsory core modules on the care of the child. Most countries had child care mentioned within the context of other compulsory modules. The inductive content analysis conducted in the curricula, detected three main categories focused on the child: Nursing Care of Children, Paediatrics and Psychosocial Aspects. The category that focused on the psychosocial aspects had the least number of key words.

*Conclusions:* Results showed the need to promote specialist children's nurse education to enhance the skills and competence of nurses who deliver care to children living with CCN. Creating a European competency framework for regulating the nursing care of children within general nursing programmes can be an important step in reaching this goal.

**PP68**

## **Importance of nursing students' education in the correct diagnostic assessment and their participation in a diagnostic multidisciplinary team approach**

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*Introduction:* The Division of Paediatric Cardiology is responsible for the diagnosis of congenital heart defects, performing diagnostic procedures and for the ongoing management of the sequelae of heart disease in infants, children and adolescents.

*Methods:* A prospective field study of one-year duration was carried out. It began in June 2016 with a six-month training of two nursing students at the Paediatric Cardiology Clinic, in theoretical knowledge and clinical skills, followed by a paediatric cardiologist examination and certification. After the training, children of three elementary schools were invited to participate in the study. The sample consisted of 32 children aged 8.9 ( $\pm 0.3$ ) (8.4-10.1) years. Diagnostic examinations included somatometric measurements, vital signs, cardiac hearing, digital stethoscope evaluation and recording, electrocardiogram recording and paediatric medical history. All diagnostics examinations were carried out by the two nursing students and then by a paediatrician and a paediatric cardiologist.

*Results:* There were more boys in the sample than girls (65.6%). Overall, 87.5% were term-born children, 62.5% were overweight and the mean blood pressure was 105.6/59mmHg. Diagnostic examinations revealed nine children with a heart murmur while the average examination time was 11 minutes per child. After auscultation the nursing students referred 22% of the total, the paediatrician 9% and the paediatric cardiologist 17% ( $P=0.007$ ) for further cardiac examinations. Comparison of functional heart murmur by the total number of children, nursing students were diagnosed 28%, the paediatrician 31% and the paediatric cardiologist 37% ( $P=0.022$ ). Moreover, the nursing students recorded 12% of children with pathologic heart murmurs, the paediatrician 3% and the paediatric cardiologist 7%. Finally, the students identified three types of sounds, the paediatrician two and the paediatric

cardiologist four types.

*Conclusions:* The expansion of nursing knowledge and skills leads to the upgrading of nursing science and enables equal participation in an interdisciplinary team.

**PP69**

## Professional self perception of nurses working in paediatric units

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*Introduction:* Professional self is the perception of oneself as a member of a profession. Sociotropy leads a person to attend to and depend on others for personal satisfaction. Autonomy leads people to focus on their own uniqueness, physical functioning and control over their environment. These concepts mutually reinforce each other. Nurses having a strong sense of professional self, sociotropy and autonomy trait can provide high-quality nursing care

*Aims:* A descriptive study to determine the professional self concepts and sociotropy-autonomy personality traits of paediatric nurses.

*Method:* The sample was composed of 625 nurses working in paediatric units. Data were collected with a Description Form, the Professional Self-Concept Scale in Nurses (NPSCS), the Sociotropy-Autonomy Scale. Higher scores on the scales indicate greater levels of Professional Self-Concept and Sociotropy-Autonomy traits. Data were analysed using the t test, one-way ANOVA, and Turkey HSD.

*Results:* The nurses' NPSCS mean score was 113,85 (min:36, max:144), their mean score on the sociotropy subscale was 64.20, (min:0, max:120) and their mean score on the autonomy subscale was 76.39 (min:0, max:120). There was a positive relationship between the NPSCS total score and the total score of the sociotropy and autonomy subscales. The study also found that those nurses who had a professional experience of more than five years, who used care plan system or care standards who frequently attended congresses/symposiums, received higher scores on the NPSCS.

*Conclusion:* According to results, it could be said that the nurses had moderate levels of professional self-concept and sociotropy-autonomy personality traits. Paediatric nurses who have these traits at an advanced level are expected to communicate effectively, solve problems and provide quality care. Therefore, it would be useful to promote paediatric nurses' professional self-concept and sociotropy-autonomy traits.

## Looking over motherhood in refugee women: experiences of a portuguese nursing student in a refugee camp in Lesbos, Greece

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*Introduction:* The motherhood experience can be particularly arduous for refugee families, since they are highly exposed to extreme conditions. Although the topic is on the socio-political agenda, research is still scarce and nurses' interventions with refugee populations are under-explored.

*Aims:* To describe the experience of a nursing student in an international-volunteer program in Lesbos, Greece, in August 2017.

*Methods:* A collective case-study methodology was conducted. Data from ten woman who gave birth during the immigration phase were collected. Participants were consecutively recruited during one week, in a refugee camp of Lesbos-Greece. Women were informed about study purposes and confidentiality was assured. Interviews were performed in a private setting, during a single moment, after nursing consultation. For ethical reasons, the conversations were not recorded, but written notes were registered with the participant's permission. A translator was present during conversations.

*Results:* The women's mean age was 33.8 years (SD: 1.9 years; 24-41 years). Participants identified themselves as being from Syria ( $n=4$ ), Afghanistan ( $n=3$ ), Kurdistan-Iraq ( $n=2$ ), and Republic of Congo ( $n=1$ ). Most looked for asylum in Germany ( $n=8$ ) or Sweden/France( $n=2$ ) and were in Lesbos about 5.1 months (sd: 1.4 months). The number of children raised was between two and eight. Six women lost their children during childbirth/immediate postpartum. Most childbirths occurred in Turkey: four in the hospital and three in the refugee camp (among these, two were assisted by their family/friends and the newborn did not survive). Thus, two women lost one of their children while crossing the Aegean Sea. Nursing interventions focused on the children's vaccination, in accordance with the country's vaccination plan and the children's age.

*Conclusion:* Data highlight deficient assistance to both newborns and refugee women who give birth, particularly during the postpartum phase when the main risks are higher. The nursing assistance, more than transcultural, should preserve the focus on life/transitions processes.

PP71

## The effect of high and low fidelity simulations in learning heart and lung sounds of nursing students

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*Aims:* The study was conducted as pretest and posttest experimental design to determine the effect of high and low fidelity simulators used in research on learning heart and lung sounds of nursing students.

*Methods:* The sample of the study consisted of third and fourth-grade students (High Sensitive Simulator Group: 36, Low Sensitivity Simulator Group: 35) who attended a nursing faculty in Istanbul in April-June. The data were collected by using the Information Form, Knowledge Level Form, Nasco Smartscope Simulator.

Four heart and lung sounds were listened to from the Nasco Smartscope Simulator by the students in the laboratory group and from the computer in the theory group and in both groups knowledge levels of heart and lung sounds were measured. After the measurement, the researchers trained both groups about heart and lung sounds and both groups listened to heart and lung sounds again. After 21 days from training, heart and lung sounds were listened to by both groups, their knowledge levels were measured and compared.

*Results:* It was found that the information point averages of heart and lung sounds significantly higher after training of the students in the laboratory group (heart sounds:  $56.25 \pm 36.04$ ; lung sounds:  $67.36 \pm 33.71$ ) than before training heart sound:  $38.89 (\pm 26.35)$ , respiratory sound:  $45.83 (\pm 38.03)$ . There was no significant difference in the information point averages of heart and lung sounds of the students in the theory group between pre-training and post-training ( $P > 0.05$ ).

*Conclusion:* The use of high fidelity simulators is more effective in the development of vocational knowledge of students than in low-fidelity simulators.

PP72

## Hand hygiene knowledge, attitudes, beliefs and practices of Greek nursing students

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*Introduction:* In contemporary days, nosocomial infections are a significant risk factor for the patients. Nursing students should be aware of the importance of hand hygiene in the reduction of nosocomial infections.

*Methods:* This is a survey which is in progress this year and it is expected to be completed until May. In the survey, until this time, 111 fourth year nursing students of National and

Kapodistrian University of Athens and 70 fourth year Nursing students of Technological Educational Institute of Athens (TEI of Athens) participated and filled in a questionnaire. In the subjects, fourth year nursing students of the University of Peloponnese will be included. For the transaction of the survey we used a translated version of the HH Questionnaire, which elicits information on demographics (five questions), HH teaching and assessment and HH knowledge (13 questions based on the Centers for Disease Control and Prevention [CDC] HH guidelines). The questionnaire also measured HH beliefs (24 questions), practices (14 items) and perceptions of the importance of HH in the curriculum (three items) on five-point Likert scales.

*Results:* 181 nursing students with median age 21.0 years (21.0-22.0) and median clinical practice 10.0 months (9.0-10.0) took part in the survey. The portion of wrong answers in regards to hand hygiene and use of disinfection solutions was 1.1-96.7%. No statistically significant differences were found between nursing students of different educational levels in regards to hand hygiene and use of solutions for hand disinfection, except of the time required for hand disinfection when an alcohol-based hand rub was used ( $\chi^2=5.17$ ,  $P=0.03$ ). There were statistically significant differences among nursing students of different level of education in relation to the course or practice included hand hygiene: written exams ( $\chi^2=9.96$ ,  $P=0.04$ ), oral exams ( $\chi^2=48.95$ ,  $P=0.000$ ), hospital simulator ( $\chi^2=23.23$ ,  $P=0.000$ ), hospital ( $\chi^2=12.29$ ,  $P=0.013$ ). Percentage of compliance with hand hygiene was found to be affected significantly by students' educational level ( $z=-4.52$ ,  $P=0.000$ ), although there was no statistical significance in the evaluation of the importance of hand hygiene according to students' opinion ( $z=-1.89$ ,  $P=0.057$ ).

*Conclusion:* Nursing students understand the importance of hand hygiene for the prevention of nosocomial infections and can use their clinical skills to achieve that goal. Nursing education should enforce clinical practice and training focused on hand hygiene increasing nursing students' knowledge and skills.

### PP73

## Education of nursing students in clinical paediatric setting

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*Introduction:* The experiences of nursing students in the paediatric setting can lead to anxiety and affect the learning outcomes due to specialised care.

*Aims:* The purpose of this review is to present the emotions of students during clinical paediatric education, as well as to identify the factors of the clinical environment that inhibit and facilitate learning.

*Methods:* A bibliographical search was carried out using electronic databases PubMed, Google Scholar and keywords: nursing students, clinical practice, clinical education, paediatric nursing, experiences and emotions. After evaluating the articles, the most related to the subject were chosen.

*Results:* Results from the published material showed that the most stressful factors in the clinical practice of students were administration of drugs to children, mistakes combined

with lack of clinical knowledge, inadequate information about care of children and family, as well as the interaction with instructors. Emotions such as fear and disappointment have been associated with high levels of anxiety, which has been shown that significantly reduce the interest in clinical activities and the self-confidence of students during the practice. Other studies revealed that the morale of nursing students in their clinical practice included positive aspects and negative aspects, too. The factors that affect the morale of nursing students include the clinical environment, their relationships with staff and patients and the high degree of role strain they may experience, because of the gap between their expectations and the reality. Significant was also the effect of a clinical exercise simulator on the quality of clinical nursing practice. (1-5)

*Conclusion:* The emotions of students before and after paediatric clinical practice may vary a lot. The clinical environment, individual perceptions, abilities and conflicts between the expected and ideal roles have been found to cause moral dilemmas and stress on students.

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#### PP74

## Paediatric nurses' perceptions of job satisfaction in a modern private paediatric clinic of Athens

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*Introduction:* The Faculty of Nursing of the National and Kapodistrian University of Athens surveyed a sample of 44 paediatric nurses of a modern and leading paediatric clinic of Athens to determine their perceptions of certification on job satisfaction and other factors. There is a substantial body of literature that demonstrates job satisfaction among nurses positively increases retention and reduces absenteeism and burnout. Paediatric nurses seek certification for a personal sense of achievement, professional recognition, and validation of clinical competency.

*Methods:* This study used a cross-sectional survey design in which nurses from six units in a 85-bed private paediatric clinic in Athens completed questionnaires on one occasion. The following factors were measured using self-report questionnaires: nurse perception of job stress, work satisfaction, education and training opportunities, group cohesion, and anticipated turnover.

*Results:* The survey respondents had self-reported low levels of job satisfaction and indicated that relationships with colleagues and a supportive work environment are very

important to increase levels of job satisfaction. Unfortunately, most respondents stated lack of personal qualitative time, inability to combine well their personal and professional life-due to burdened working schedule- and stressful working conditions. Nurses, also declared that they are given modest education and job opportunities. A significant proportion (40%) of them indicated that they have experienced depression recently, due to their job dissatisfaction.

*Conclusions:* The results of this study highlight important factors to consider for hospitals and clinics that influence nurse turnover as they plan strategies and cost-effective ways to positively affect patient care and retain qualified paediatric nurses at the bedside.

## PROFESSIONAL ISSUES IN NURSING INCLUDING ACCOUNTABILITY, NEW ROLES AND NEW WAYS OF WORKING

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PP75

### Towards coupled care: developing patient-safe family nursing practices

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*Introduction:* Current research indicates that the best environment for the newborn is with his/her own parents. We have started to develop and standardise the practice of family-centred care by increasing the cooperation among the care providers working with newborns at the NICU and maternity ward towards a new hospital (2020). By clarifying the practice and principles of family-centred care it is possible to produce quality care and promote patient safety. The aim of this study was to develop patient-safe family nursing care among preterm and newborn infants at the NICU and maternity ward together with their mothers to improve the practice towards coupled care.

*Methods:* Three refresher courses for midwives and nurses were arranged using the learning café method. The themes discussed were how to create practices to support parenthood, how to increase the co-operation between different wards and how to improve patient safety on the way to a new family ward. The results of these theme discussions were reported to all midwives and nurses in the wards via e-mail. The possibility for a personal conversation with the developers was given.

*Results:* In the refresher courses for midwives and nurses ( $n=28$ ) the following new ways of working were created: mothers are allowed to eat at the NICU, midwives come to the NICU to give the mothers their antibiotics, more skin-to-skin contact after birth between mother and a child is promoted, fathers' commitment to the care of their babies is supported more. The visiting hours were also changed to be free.

*Conclusion:* New family nursing practices were created through cooperation, and the staff was familiarised with the new ways of working. In the near future, information about the feasibility of new ways of working will be collected.

PP76

## Paediatric oncology nurses: ways of working with less stress

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*Introduction:* Being a nurse may be extremely stressful. For nurses working in paediatric oncology departments, factors that exacerbate anxiety and fatigue are much more. Nurses with compassion fatigue tend to be cynical, emotionally exhausted, caring less for patients and when eventually reach burnout they see no other alternative than leaving their job.

*Method:* A literature search was made for research articles in the databases PubMed and Scopus for the years 2014 to 2018 using keywords: nurses; stress; burnout; nurse's grief; therapy; prevention; oncology. This search came up with 59 full-text articles, of which 48 were fully related to the topic.

*Results:* This literature search aimed to locate the factors causing stress, feelings of inability and even burnout for paediatric oncology nurses and to find ways to prevent and deal with it when it happens.

*Conclusion:* Nurses working in oncology units for children have an important, multiple role to cope with and since they are very specialised they are valuable for the good operation of these units. Many factors related to the nature of their work and their special connection with the patients and their families may cause serious stress and even burnout. There are certain interventions that can reduce stress and compassion fatigue in paediatric oncology nurses so that they may continue caring for their patients and be emotionally healthy and satisfied with their work.

PP77

## The relationship between liking of children and compassion fatigue levels of paediatric nurses

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The purpose of this study is to determine the relationship between liking of children and compassion fatigue levels of paediatric nurses. The type of study is a descriptive, cross-sectional and correlational. Research was conducted between April-September 2017 in the west of Turkey in four cities in six hospital's paediatric units. In this study, the target population was 682 paediatric nurses from four different hospitals. No sampling Method: was used because it was aimed to reach the whole population. A total of 536 nurses were reached and included in the study. Data were collected by the socio-demographic data form, Barnett Liking of Children Scale and the Professional Quality of Life Scale. Mann-Whitney U, Kruskal Wallis H and Spearman correlation test were performed for data

analysis. The mean age of the sample was 32 ( $\pm 7.40$ ). The median values of the liking of children scale, the professional quality of life scale, the compassion satisfaction subscale, the burnout subscale and compassion fatigue were 86.51 (min-max=74-94), 85 (min-max=80-91), 39 (min-max=32-41), 24 (min-max=21-29) and 24 (min-max=21-28) respectively. There was a positive moderate correlation between total score liking of children scale and score of compassion satisfaction ( $r = 0.516$ ;  $P < 0.001$ ), a negative moderate correlation between total score liking of children scale and the score of the burnout ( $r = -0.398$ ;  $P < 0.001$ ) and a negative weak correlation between total score liking of children scale and score of the compassion fatigue ( $r = -0.177$ ;  $P < 0.001$ ). In conclusion, it was found that as score of liking of children scale increased, the compassion satisfaction was increased, burnout and compassion fatigue were decreased.

**PP78**

## **Nurses' opinions about family-centred care model in neonatal care units**

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*Background:* Family-centred care is a new approach in nursing care based on the mutual and good collaboration between medical-nursing staff and families of ill children.

*Aims:* To investigate nurses' opinions and beliefs concerning the model of family-centred care in neonatal units and the factors that influence them.

*Methods:* This was a structured questionnaire-based study of nurses who are working in units of increased nursing care and in neonatal intensive care units of four large public hospitals in Greece. Family Centred Care Questionnaire-R was used after obtaining permission by its creator. First, nursing staff were informed about the conduction of this study and then questionnaires were administered to them. Each item of the tool asked subjects about their perceptions regarding family-centred care in the daily practice and if it was necessary topic for adopting it.

*Results:* Cronbach's alpha was found to be 0.95 for the daily practice and 0.91 for what it was necessary. A statistically significant difference was found for each subscale and for the total scale as well, when daily practice was compared to what it was necessary ( $t = 11.09$  (62),  $P = 0.000$ ). Nursing department and working in a paediatric hospital were found to be statistically significant factors for the total score of the daily practice ( $t = -2.10$  (49.58)  $P < 0.05$  and  $t = 5.18$  (27.99),  $P = 0.000$ ). There was also a statistically significant difference detected for what it was necessary, when nurses were working in a paediatric hospital ( $t = -2.19$ , (61),  $P = 0.032$ ).

*Conclusion:* Nurses found family-centred care significant and they tried to adopt it in their daily practice.

PP79

## Perspectives in paediatric oncology nursing in Greece

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*Introduction:* The paediatric oncology nurse is a special subdivision of nursing that is occupied with paediatric patients that have been diagnosed with various types of cancer. Oncology nurses provide specialised care to paediatric patients from the first diagnosis of the disease, throughout the induction therapy, during remission, and the follow-up visits of the survivor patients monitoring possible side-effects.

*Method:* This is a literature review of numerous articles on paediatric oncology in Europe, Canada and United States of America.

*Results:* The oncology nurses are one of the most vital parts of the multidisciplinary therapeutic approach. They have distinct responsibilities, roles and specialisation, aiming to provide the highest quality of nursing support. They are facing challenges, because oncology covers every type of cancer and every cancer has its own protocol and treatment, thus it is necessary to be trained and be proficient to administer different chemotherapy protocols and other kinds of therapy like immunotherapy. They are trying to maintain the balance among preserving their professionalism and being able to interact with their patients and their families and communicate with empathy. At the same time, they have to focus on the cooperation with the rest of the therapeutic team and on several occasions, being able to perform on crisis intervention.

*Conclusion:* Oncology nursing in Greece is a completely different specialism with distinct roles and responsibilities, challenges, requiring the ability to cope with young patients and their families throughout their journey in an oncology haematology clinic.

PP80

## The paediatric nurse with the family paediatrician to care for children and their families in the community: a survey with family paediatricians about the perceived utility of nursing activities

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*Introduction:* To ensure children's continuity of care, the Italian health system is organised with family paediatricians in the community. Paediatric nurses might work with family paediatricians in the same office. In a previous pilot study conducted in Italy, we found that family paediatricians ( $n=178$ ) considered very useful the presence of a paediatric nurse in their office, especially for conducting activities of health education. However, the questionnaire used was too long to conduct a large study (71 items).

*Aims:* To reduce and revise the questionnaire to describe the extent to which family paediatricians consider useful the activities that a paediatric nurse could perform in their office and develop an online survey.

*Methods:* Ethical approval was obtained. Statistical approaches were used to reduce the number of the items. Moreover, several items were merged together when correlations were high ( $r > 0.80$ ). The content validity index was calculated by asking 14 experts (five nurses, five paediatricians, four parents of children with chronic diseases) to evaluate the relevance of each item.

*Results:* The questionnaire was reduced from 71 to 40 items. Items were grouped in four areas: care of healthy, sick or disabled children (item 1-13), health education (item 14-25), prevention of diseases (item 26-32), coordination and organisation activities (item 33-40). Participants are asked to rate the usefulness of each activity using a scale ranging from 1 (not useful at all) to 6 (very useful).

*Conclusion:* The presence of a paediatric nurse in the family paediatrician's office could be important to collaborate in ensuring clinical, educational, prevention and organisational activities. It is necessary to use a valid and reliable instrument to support the development of this new nursing role. The questionnaire was revised to conduct an online survey directed to all family paediatricians in Italy and preliminary results will be showed.

**PP81**

## Occupational hazards in paediatric nurses and midwives

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*Introduction:* Paediatric nurses and midwives theoretically are exposed to practically all the hazards existing in the healthcare setting. However, it is differentiated due to the different level of exposure and differences in the way everyday care is provided.

*Aims:* To outline the occupational hazards that paediatric nurses and midwives are exposed to and to propose a framework for a safer working environment during the provision of neonatal and paediatric care.

*Methods:* A critical review of literature with specific key words (occupational hazard, illness, injury, midwives, neonatal and paediatric nurses) in psychological, nursing and medical databases was performed in January 2018 for studies published since 2000.

*Results:* Nowadays, occupational health and safety stands as an important issue because of high rates of associated morbidity and mortality. We categorised the findings according to the type of hazard (physical, chemical, biological, ergonomic, psychosocial and organisational). Needle-stick injuries are commonly reported by paediatric nurses but their knowledge about prevention strategies is rated as suboptimal. Paediatric nurses may suffer from stresses and burnout caused by shift work, night work, and by other psychological and organisational factors, among which neonatal and paediatric death stands up as a severe predatory factor. Therefore, secondary traumatic stress is an occupational hazard for midwives and paediatric nurses who may develop symptoms of post-traumatic stress disorder from exposure to their patients who underwent a traumatic birth or has an incurable or chronic disease, respectively. Prevalence of musculoskeletal symptoms is increased among midwives and less prevalent in paediatric nurses, attributed to individual characteristics and workplace exposures. Key elements for a safe workplace is policy development, consultation and engagement, health professionals' education and training in safety, risk management and improvement.

*Conclusion:* The level of occupational hazards' exposure in neonatal and paediatric care depends on personal behaviour, individual beliefs about occupational safety, the pragmatic safety of the working environment and the legislative framework. Every healthcare setting that provides paediatric care should address occupational exposure and set work safety as a priority.

## SERVICE DEVELOPMENT AND QUALITY IMPROVEMENT

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PP83

### Roving the healthcare workers' knowledge and skills and parents' caring skills for the newborn

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Counselling and teaching methodology of caring for the newborn varies at care organisations (Tartu University Hospital Foundation) and at colleges where nurses are educated (Tartu Health Care College). Therefore, this training is intended to harmonise the principles of care, teaching and counselling. It is crucial that the formal education complies with real-life needs and the real-life activities would be evidence-based and up to date.

Information materials for parents, and teaching care for the newborn, are many. Both the information content and format are inconsistent. Therefore, we intend to review the existing available materials, link them all together and fill in the gaps with new evidence-based materials. All (video, written, web-based etc.) materials will be made available from a single website. The new materials will be composed by THCC staff and healthcare professionals from the hospital, in cooperation, based on best research practices. All materials will be complemented by videos and illustrations.

Current health information systems applied at the hospital do not include counselling and training guidelines to healthcare professionals, as well as control measures for the training

of the newborn's parents. Therefore, a patient training programme will be developed for the parents of the newborns. The training programme is complemented by a hospital discharge control procedure for quality control. Following the programme, the nurse can follow the training process of the parents: if and to which extent they need teaching by the nurse, which parts (e.g. bathing, umbilical cord care, etc.) they can implement on their own. The training programme is in line with the discharge control card to provide that the parents of the discharged newborn will be able to take care of the newborn, on their own. The described system will provide controlled training and counselling to the parents, which is required to provide high-quality nursing care.

**PP84**

## **Neonatal ambulant nursing team (NAST)**

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*Introduction:* To reach our goal to become a family-friendly neonatal care unit, we created NAST, a service powered by five paediatric nurses. NAST is a voluntary care package offered to babies and their families over the GA 34 weeks. The babies must be medically stable and in a breast/bottle training phase, but will still require nasogastric tube. The parents/caregivers will receive training and must be confident with nasogastric feeds to their children.

*Methods:* A member of the NAST team (a paediatric nurse) visits the family at home three times a week. Monday, Wednesday and Friday are the visiting days. During each visit the baby's weight is measured and general guidance is given. The baby and family are discharged from NAST when the baby is fully breastfeeding/bottle feeding without requiring supplements from nasogastric tube. After the discharge, the municipal healthcare system will conduct regular follow-up visits to the baby.

*Results:* The entire family will experience far less stress when they are the caregivers in their own home, with follow up care from the NAST team. Breastfeeding is likely to be more successful, with less stress. Parental competence is strengthened. Siblings can have their family at home. Earlier bonding for each family member is strengthened and will be more positive. Families will be empowered to have control over their everyday lives. We are doing a survey on stress and breastfeeding, with significant results, to date.

*Conclusion:* Families who have agreed to work with NAST have all, to date, expressed their satisfaction at having used this care package. We hope to increase the number of families who will receive this care in the future as we view this as a very successful and positive way of empowering these families.

## The FINE methods adaptation at B' NICU, Papageorgiou General Hospital, Thessaloniki: requirements and challenges

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*Introduction:* The objectives of world neonatal community have mutated through premature newborns' survival to the provision of high-quality healthcare services; the minimization of prematurity's consequences in early and later childhood and the transition from patient-centred to family-centred organisational culture in neonatal units. The main purpose of this report is to present the efforts of a Greek NICU's healthcare professionals to adopt the Family and Infant Neurodevelopmental Education (FINE) mode as an innovative working system.

*Methods:* The recent worldwide literature review on the requirements must be fulfilled during the FINE adaptation processes; focusing on the major topic of change management; and on the other hand, the blueprinting of the healthcare providers' corresponding efforts at B' NICU, Papageorgiou General Hospital, Thessaloniki.

*Results:* B' NICU's case study identified top management commitment; effective and inspirational medical/nursing leadership and guidance to the project's success as the key performance indicators.

*Conclusions:* The FINE adaptation project is part of a larger strategic operational plan intended to promote the change of organisational culture and the implementation of some of the key components of the High-Performance Working Systems. The necessity to invest in continuous education, teamwork, effective communication between the multidisciplinary healthcare team members in order to cope with underfunding and understaffing which are inherent problems of the Greek National Healthcare System become a top priority issue for Greek Healthcare Organisations' Management.

## Newborn umbilical cord care: comparison between hospital and the outpatient care

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*Introduction:* The goal of nursing care of the umbilical cord (UC) is the physiological course of healing and optimal healing. The purpose of the study was to gain insight into the practice

of UC nursing care in the Slovenia area.

*Methods:* A descriptive survey was conducted using a questionnaire. The questions covered the UC nursing care from birth to complete healing of umbilical wound. We researched Slovenian primary, secondary and tertiary level paediatric centres. Medical nurses were involved in outpatient and inpatient UC care.

*Results:* Data show that all nurses are washing or just disinfecting their hands before UC nursing care and they gave same advice to the parents. Disinfection of the hands is more often recommended by hospital nurses ( $P=0.026$ ), which also use antiseptic agents more ( $P=0.045$ ) often than outpatient nurses to cleanse the healthy UC. In the outpatient setting, nurses primarily use a physiological solution. In the case of a sick and risky UC, nurses use an antiseptic solution and adjusts the frequency of nursing care to a critical assessment of the condition of the UC.

*Conclusion:* The nursing care of newborn UC in the hospital and outpatient care is adapted by the nurse to the clinical condition of the newborn UC. It can be argued that the practice of nursing care of newborn UC in Slovenia follows international recommendations. Based on this survey and literature review, we formulated recommendations and prepare national protocol for UC care.

## SPECIALIST CHILDREN'S MEDICAL AND SURGICAL NURSING

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PP89

### Investigation of the effect of nurses' preoperation preparation on anxiety and worry level of children in 9–12 age group

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*Introduction:* The preoperational period is a stressful time both for the child and their family. The nurse is the person who is primary in the preoperational preparation of the child and the parents. The nurse is responsible for understanding the anxiety and fear of the child and the family and planning and applying the approaches to eliminate them. The nurse plans and applies the preoperational preparation programme in accordance with the personal characteristics of the parents and the child.

*Aims:* To investigate the effect of nurses' preoperation preparation on anxiety and worry level of children in 9-12 age group.

*Methods:* The semi-experimental study was conducted, in the paediatric surgery clinic of an Educational Research Hospital located in Izmir between August 2014 and January 2015, with 100 children aged 9-12 years who were admitted to surgery and who agreed to participate in the study. The children were selected according to their protocol numbers into study and control groups. If the last digit of the protocol number was an odd number it was taken for the study group ( $n=50$ ) and even number for the control group ( $n=50$ ).

In the study, the whole of the universe was reached without going to the selection of the sample. The children received in the Study Group were informed before the surgery by the investigator about whether he/she would be awake during the operation, how long the operation will last, when he/she will be mobilised, how he/she will appear after the operation with the illustrated templates prepared by the researcher. In the control group, no information was given by the researcher before the operation, and routine clinical procedures were performed. The data were collected with Information Form, Social Anxiety Scale for Children-Revised and State Anxiety Scale for Children. In the analysis of the data; descriptive statistics, Student-t and Variance analysis tests were used.

*Results:* The children included in the study were 54% boys, 57% older than 10 years, 86% had no previous surgery and did not receive preoperative information and 50% are living in the city. In the analysis, it was determined that there was a significant difference between the scale scores of the children of the study group ( $X=64.84\pm 17.74$ ) and the children of the control group ( $X=100.78\pm 35.60$ ) who were given preoperative preparation training by the nurses in terms of anxiety and worry scores ( $t=-6,388$ ,  $P<0,001$ ).

*Conclusion:* Preoperative preparation and education provided by nurses were effective in reducing anxiety and worry levels among children aged 9-12 years.

**PP90**

## **Risk stratification in paediatric congenital heart surgery**

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*Introduction:* Risk stratification is a process to evaluate the complexity of care in paediatric cardiac surgery and method of estimating the risk of adverse outcomes. The challenge is to deal with the great number and varying complexity of congenital heart procedures.

*Aims:* Critical evaluation of literature concerning the clinical use of risk stratification scoring systems in paediatric congenital heart surgery.

*Methods:* Systematic review of 22 articles published after 2000 in PubMed, Scopus and Cinahl.

*Results:* Risk prediction scoring systems are valid clinical research tools that allow meaningful comparison of outcome of therapy for children undergoing surgery for congenital heart diseases. Risk adjustment is necessary because there are marked differences in the malformation complexity among the paediatric cardiac surgery populations from different hospitals or hospital groups. Without stratification of complexity, the analysis of outcomes would not be at least fair. In literature there are references of empirically-based tools, tools based on subjective probability, tools based on observed data and evidence-based tools. A limited number of their systems have been widely used and have performed a satisfactory correlation with outcome. However, the increase of empirical and evidence-based data in CHD care, seems to enforce the development of the next generation of these systems.

*Conclusion:* Further research is needed to optimise scoring systems in relevance to congenital heart disease to achieve better prognostic results concerning mortality, morbidity, complexity and outcomes.

## Parental level of knowledge concerning burns prevention and first aid

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*Introduction:* According to WHO, the parental education in paediatric burns prevention and first aid treatment should be a topic for discussion and implementation. The incidences of burns in children remain high internationally.

*Aims:* To assess the baseline level of knowledge regarding first aid and scald prevention in parents of hospitalised children.

*Methods:* We present the preliminary results from a convenience sample of 123 parents of children aged 0-14 years old, who have been hospitalised in surgery units and emergency departments in four paediatric hospitals in Greece during a three-month period. Data collected with a questionnaire that was constructed by the authors.

*Results:* In total, 27 fathers and 91 mothers participated the study, with a mean age of 37.5 years and the majority of them living in Attica. 29.3% ( $n=36$ ) of the parents stated history of at least one incidence of burn in their child, mainly at home (83.3%). The mean age of a child with history of burn was 4.6 years, mainly with second degree burn injuries (65.7%). 86,1% of the parents provided first aid at the place of the accident even though the 29.9% of them stated no or poor knowledge of the adequate care. In 20.7% of the children with burns, their care was complicated. Interest in further education was reported by 90.2% ( $n=111$ ) of participants. Parental sex and age was not statistically correlated with their knowledge concerning burn injury care. However, higher education was correlated with better knowledge and statement for further education ( $P<0.001$ ).

*Conclusions:* Parental knowledge in relevance to burns prevention and first aid treatment varies depending to a variety of determinants. The implementation of parental educational programmes for the paediatric burn injury prevention and first aid provision are highly recommended.

## Factors that determine the surgical age for correction of cryptorchidism in Greece

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*Introduction:* Cryptorchidism is the most common congenital abnormality of the urogenital system and is corrected by the method of orchiopexy, in the first year of life. However, the recommended age for surgical repair is not consistently achieved internationally. To our knowledge the rate of adherence to these guidelines in recent years in Greece is unknown.

*Aims:* To investigate the trend of surgical timing and explore the factors that affect the surgical age for correction of cryptorchidism in Greece.

*Methods:* We enrolled all the children who had undergone surgical correction of cryptorchidism in any of the three public paediatric hospitals in Athens, from 1 July 2017 to 31 December 2017. A questionnaire completed by parents, including socio-demographic data (age, race, marital status, educational level, etc.), as well as data on possible reasons for delaying surgery and intraoperative data was used. Informed consent and ethical approval was obtained accordingly. All tests of statistical significance were two-tailed and *P*-values <0.05 were considered statistically significant.

*Results:* In total, 88 children that underwent surgical correction of cryptorchidism and fulfilled the study criteria were enrolled. The mean age of the children who underwent orchiopexy was 2.49 ( $\pm$ 1.31) years. The interval from diagnosis to surgical correction of cryptorchidism was 17.1 ( $\pm$ 29.8) months. The majority of parents that completed the questionnaire were women ( $n=62$ , 70.5%), with higher education ( $n=49$ , 55.7%), with a monthly family income less than 1500 Euros ( $n=67$ , 76.1%), living in Athens ( $n=50$ , 56.8%). Only 23.9% ( $n=21$ ) of study participants stated that the surgery was performed in the first year of life, although the majority of the parents ( $n=57$ , 64.8%) reported that they were aware of the possible complications from delayed surgery and they were also informed by a physician ( $n=60$ , 68.2%). A multivariate analysis was performed and several sociodemographic factors were significantly associated with time to surgery. There was a clear trend for early surgical intervention and the majority of children had the operation before the age of 24 months ( $n=55$ , 62.5%).

*Conclusion:* Our findings indicate that parents are not adequately informed and several sociodemographic characteristics influence their decision. Public education is recommended to encourage treatment of cryptorchidism on optimal time.

## Technology-based interventions for reduction of preoperative anxiety in children

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*Introduction:* New innovating technology-based distraction interventions suitable for the perioperative setting are increasingly implemented. However, there is limited evidence concerning their effectiveness in comparison to traditional distraction techniques or to pharmaceutical interventions in managing anxiety.

*Aim:* To critically evaluate the effectiveness of technology-based interventions implementation for the management of preoperative anxiety in children.

*Methods:* Critical review of published articles in PubMed, Web of Science, Cinahl and Scopus, after 2000 using the appropriate keywords. After content analysis, 32 articles satisfied inclusion criteria and were included in the review.

*Results:* The use of audiovisual interventions (video, electronic games, electronic devices) is an effective technique for reducing preoperative anxiety compared with classical approaches such as information (spoken or written), parental presence and the use of anxiolytics. Moreover, there are findings that audiovisual interventions are more effective in comparison with other technological techniques such as music therapy and web-based programmes. Distraction techniques with use of electronic interactive toys, which are multi-sensory with visual, kinesthetic and haptic stimuli, activate the cognitive, kinetic and visual skills of the user. A prerequisite for the efficient use of electronic games is increased focus and detachment from the environment and mainly for this reason, electronic games are considered as an active technique of distraction, with a dynamic involvement of multiple sensations that lead to a reduction in pain and anxiety. In this context of multisensory approach, new technologies such as 3D imaging and robotics have been introduced.

*Conclusions:* There is a clear need for larger clinical trials to provide sufficient evidence of the efficacy of each method to properly guide clinical practice. Moreover, our findings mainly concern small and school-aged children and fewer teenagers where more research is recommended.

PP94

## Childhood obesity and cardiovascular disease

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*Introduction:* Childhood obesity is a major public health problem with potentially destructive consequences. Many of these children are at increased risk for developing later disease, including cardiovascular disease (CVD). Although the relationship between adult obesity and cardiovascular disease (CVD) has been proven in clinical practice, the relationship with childhood obesity is still unclear.

*Purpose:* The purpose of this study is to review the current literature about the effect of childhood obesity on the cardiovascular body system to enhance the knowledge about its consequences in cardiac health.

*Methods:* An extensive review of the relevant literature was performed via electronic databases (Medline, PubMed, CINAHL and Google scholar) and Greek and international journals using appropriate key words: childhood obesity, cardiac risk, cardiovascular disease.

*Results:* Obesity in childhood is related to various risk factors for developing cardiovascular disease. It causes hypertension, hyperinsulinaemia, hyperlipidaemia, chronic inflammation, increased blood clotting tendency, endothelial dysfunction, type 2 diabetes mellitus and an increased risk of coronary atherosclerosis. The above-mentioned risk factors are included in what it is known as the 'insulin resistance syndrome'.

*Conclusion:* Due to the potential consequences associated with obesity, healthcare professionals must be able to identify children at risk of obesity and provide appropriate help and provide optimal cardiovascular health.

PP95

## Parents who have children with type 1 diabetes and their satisfaction from the education provided by nurses

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*Introduction:* Diabetes mellitus is one of the most frequent chronic diseases of childhood in Western countries, there is a constant increase in the number of children and adolescents with diabetes type 1 diabetes. Type 1 diabetes (T1DM) is a complicated and demanding disease which significantly affects the everyday life of the patients, since it requires a multiple measurement and monitoring of blood glucose levels, a special diet, the dispensing of insulin doses and regular exercise. The dispense of insulin and the monitoring of blood glucose levels, like all the other necessary actions, have been comprehended by the children and adolescents with diabetes even from their parents, since it is not always possible for a specialist nurse to be present to cover the children's needs. Generally, parents require the nurse's support and professional assistance, from the moment of first diagnosis.

*Aim:* The main object of this review is to study parents' satisfaction with the provided nursing education.

*Methodology:* To accomplish the main object of this review, a thorough investigation of relevant papers was performed in the databases Pubmed and Google Scholar. The key words used in this paper are the following: 'parents', 'type 1 diabetes', 'nurses', 'education', 'training', 'children', 'healthcare personnel', and 'satisfaction'.

*Results:* The education is an irreplaceable part of the complete and effective management of T1DM. This education addresses not only the children but also to their parents, who are responsible for the management of diabetes and for the psychological support of the patient. This kind of education programme is usually performed by nurses.

According to literature, the main objectives of the parents' education by nurses are, training about the insulin dispense, measurement of blood glucose, basic steps towards an emergency, such as a hypoglycemic episode, appropriate diet, and psychological support of the children. Another important element of parents' education is the gradual and effective transition of diabetes management to their children. Thus, every nurse should provide parents with knowledge and skills adjusted to the needs of their children. Parents' and patients' satisfaction of the healthcare personnel, such as nurses, is important for the children's regimen adherence. Higher cooperative skills, the presence of respect towards the patient, advance knowledge and well organised educational scheme are some of the main characteristics of nurses that are associated with higher level of parents' satisfaction from the education provided by nurses. Furthermore, the nurses' higher educational level the better skills, which enhance the care provided, the knowledge and advice offered to parents who have children with diabetes. Finally, it is noted that although there are many instruments for measuring the patients' satisfaction with nursing care, there aren't any tools for the measurement of the parents' satisfaction from the provided nursing education for diabetes.

*Conclusions:* The provision of education from nurses towards the parents who have children with T1DM is a crucial step for the improvement of managing diabetes and the patients' psychological support. Thus, this education provided should be appropriate to the children's needs in order to increase their parents' satisfaction.

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