

according to priority). Child-friendly tools included discussions, postcards, toy money and board games.

Results DR and SBR were completed by all participants using the DR rankings as a baseline then separating equal ranked items to generate SBR rankings. Older children preferred BP as it allowed them to make choices according to need for improvement and therefore requirement for funds, rather than simply importance, but was only used successfully by those aged 8+.

BP can also demonstrate weighting. Managing Acute Attacks was prioritised 1st with all methods but only BP demonstrated strength of opinion: Managing Acute Attacks received £1430 in total, whilst the 2nd place issue received just £610.

Conclusions Young children can and should be involved with health services research. More effort needs to be dedicated to developing methods that enable Childrens involvement.

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1698 KARATE INFLUENCES ON ASTHMA MANAGEMENT IN PRESCHOOL CHILDREN

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Background Examples of semi-contact sports include karate and its benefite influence on asthma in childhood. Specific treatment for asthma will be determined by pediatrician based on children age, overall health, medical history, extent of the disease, tolerance for specific medications, procedures, or therapies and expectations for the course of the disease.

Aims A target of this article is showing benefit of karate training in preschool ages on asthma management and course of disease.

Methods To verify the efficacy of karate on asthma, a complex psychomotor activity that enhances pulmonary capacity and lungs volume, and breathing regulations, as an intervention for asthma curing, ten children with asthma, ranging in age from five to seven years, and meeting diagnostic criteria for children asthma disorder were studied during two years period 2010–2011.

Results A higher prevalence of asthma has been reported in athletes specially in karate clubs for younger children but with better control of asthma. Risk of asthma decreased with number of years of training (odds ratio 2.02; 95% confidence interval 1.60–3.03; $p < 0.0001$), number of hours per week (odds ratio 1.74; CI 1.11–2.21; $p = 0.015$) and rank, specifically brown green belt versus lower belts (odds ratio 3.53; CI 2.82–6.28; $p = 0.007$).

Conclusions Karate is a relatively safe sport for preschool children and younger schoolers when properly taught and optimize for asthma management. These training principles are perhaps most useful early in a children patient's course when the setting of appropriate expectations is important in minimizing restrictions from treatment and karate activity.

1699 DISTRIBUTION OF CONGENITAL MALFORMATION IN A NEONATAL INTENSIVE CARE UNIT IN TURKEY

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Background and Aim Congenital malformations are one of the important reasons of mortality and morbidity in newborns. The aim of this study is to give the frequency and distribution of the congenital malformation in a neonatal intensive care unit from Turkey.

Method A retrospective analysis of congenital abnormalities in singleton births was performed to identify frequency, types, combined congenital abnormalities and distribution of malformation in newborns over a 7 year period. Congenital malformations were classified according to involved organ systems and also classed as single and multiple malformations.

Result 1024 newborns with congenital malformations (13.7%) were identified among the 7450 hospitalized newborns in neonatal intensive care unit (NICU). Mean birth weight was 2988±648gr, mean gestational age was 37.9±2.5 weeks. Consanguinity rate was 22.3%. Prenatal diagnosis rate was 11%. The most affected system was the cardiovascular system (68.8%). Most of the malformations (69.6%) were single malformations while 20.4% of the newborns had multiple major and 8.4% of the newborns had multiple minor malformations. On the other hand, 1.4%, 0.1% and 1.6% of the newborns had deformation, disruption and displasia, respectively. Chromosomal analysis was only performed 24.8% and 65.3% of them were in normal limits. The most frequently detected chromosomal abnormality was Trisomy 21. Overall mortality rate was 15.5% among the newborns with congenital malformations.

Conclusion The most common congenital malformation was cardio-vascular malformations in our hospital. Preventing and prenatal diagnosis of congenital malformations may help to reduce perinatal mortality and morbidity. Therefore, each country should establish its own national database for prevention and management of congenital malformations.

1700 EXPRESSION OF THE NUCLEAR FACTOR OF ACTIVATED T CELLS MRNA IN HUMAN FETAL LUNG

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Background and Aims The nuclear factor of activated T cells (NFAT) is a family of four transcription factors (c1, c2, c3 and c4) involved in vascular smooth muscle differentiation, contractility and hypertrophy. NFATc3 is required for hypoxia-induced pulmonary hypertension and for murine vascular patterning. High pulmonary vascular tone is necessary in the fetus and vasoconstrictors, such as endothelin-1 (ET-1), are required. ET-1 is a potent activator of NFAT but the role of NFAT in human lung vascular development is not known. We aim to study NFAT expression during mid-gestation in the human fetal lung.

Methods Human fetal lung tissue from 10 to 24 weeks of gestation was collected following elective termination (N:40). Gene expression of the NFAT isoforms c1, c2, c3 and c4 was measured in fetal lung tissue with qRT-PCR, normalized to GAPDH. Statistical analysis was performed using Spearman non-parametric correlation coefficient.

Results In the human fetal lung, NFATc1 expression increased with increasing gestational age ($R^2 = 0.2708$). NFATc2 expression remained stable ($R^2 = 0.0117$). NFATc3 expression increased ($R^2 = 0.1802$). Conversely, NFATc4 expression decreased with advancing gestational age ($R^2 = 0.3774$).

Conclusion The NFAT isoforms are expressed during mid-gestation in the human fetal lung showing different patterns of expression. NFATc1 and NFATc3 expression increased suggesting a possible role