

ISSOP 2018

Early Childhood Intervention: Science, Systems and Policies Promoting Healthy Development of Vulnerable Children

Poster presentations

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Relationship between nutritional status and development in Down Syndrome children

Background:

Down syndrome (DS) is a type of chromosomal abnormality that causes a range of physical, intellectual and clinical symptoms. Developmental delay is frequently found and this condition are worsened by nutritional status disorder associated with DS. This study aimed to investigate the correlation between nutritional status and developmental age scale of DS children.

Method:

Thirty children (19 boys and 11 girls) participated in this cross sectional study during Januari to April, 2018. The anthropometric scale and nutritional status of these children were measured. The developmental age scale was taken based on Thomas L. Layton Developmental Scale for Children with Down Syndrome (DS-CDS). The results were subjected to statistical analysis using Mann-Whitney and Spearman correlation scale.

Results:

All children with DS follow the same sequence of motor, cognitive, linguistic, and personal-social skills delay according to their chronical age. There was a statistical significant difference of developmental scale between typical developing children age scale and DS-CDS (Mann-Whitney test; $p < 0.05$)

Discussion:

Our results showed all children with DS had global developmental delay to their chronical age. The DS children have an average $10 + 6.2$ months delay behind their typical developing children age scale. There was no significant correlation of nutritional status and developmental scale achievement of children with DS because 60% of children have well nourished status, only 0.6% got obesity.

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Early intervention – interdisciplinary approach (pediatricians' and other relevant experts' perspectives)

Background:

According to the Croatian Law on Social Welfare, early intervention (EI) was introduced in 2011. Services for all the children with disabilities (newborns up to three or seven years of life) are guaranteed.

The purpose of the study was to show the challenges of EI in regards to the collaboration of pediatricians and other relevant experts who are involved in EI.

Methods:

The research method used was qualitative research. Opinion of pediatricians and other experts working with disabled children, were collected using semi-structured interview methods and analyzed.

The experts participated voluntarily. Confidentiality and anonymity were guaranteed.

Results:

The results showed long waiting lists for EI inclusion, insufficient network communication, especially between health services and social care services.

The experts complained about poor governmental financial support, and expressed the need for more expert teams in providing care and rehabilitation for these children well as more education. In addition the experts noted the lack of adequate information for parents from the moment of noticing certain symptoms, through recognition of the condition and getting the diagnosis to the inclusion in early intervention services.

There is also the drum gap between big cities and other regions.

Discussion:

To accomplish the EI for every disable child, there a lot of work has to be done: open more EI centers, all over the state, employment of new experts, continuous education, adequate and timely information for parents through all relevant services and sufficient financial support.

Early Intervention is the right of every child with a disability.

With early and adequate intervention and available services improvements in participation can be made and potential future spending prevented.

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Staff and family attitudes towards opportunistic vaccination of paediatric inpatients

Background:

The WHO has a target of 95% coverage of vaccination to prevent serious disease in children. Inpatient services could potentially improve local vaccination rates by offering opportunistic vaccination of inpatients requiring further immunisation. We aimed to assess attitudes of parents and staff towards the idea of implementing an opportunistic inpatient vaccination service.

Method:

Two questionnaires were developed, one for parents/guardians of paediatric inpatients aged five and under, and one for frontline paediatric staff (including doctors, nurses, students and allied health professionals). Local vaccination rates were determined through discussion with parents and cross-checked using the personal child health record. Acceptability of opportunistic inpatient vaccination was asked through 'yes', 'no' or 'not sure' questions.

Results:

100 families and 76 staff members (30 nursing, 26 doctors, 14 students, 6 allied health professionals) participated. 85/100 families reported that the child's vaccines were up to date, significantly below the WHO target ($p=0.011$). 89/100 (89.0%) families and 66/76 (86.8%) of staff considered inpatient catch-up vaccination acceptable, and 59/76 (81.9%) of surveyed staff were willing to act as vaccinators if properly trained. The three most commonly identified barriers to opportunistic inpatient vaccination reported by staff were the child being unwell (37/76, 48.7%), parental resistance (35/76, 46.1%) and time (34/76, 44.7%).

Discussion:

We identified that our local vaccination adherence rates are significantly below the WHO target. Therefore, children in our area could benefit from opportunistic inpatient vaccination. This strategy is acceptable both to parents and to staff.

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Impact of Parental Education on Behavioral Insomnia of Childhood

Background:

Behavioral Insomnia of Childhood (BIC) is a common condition.

The most widely applied treatment strategies for BIC comprise behavioral procedures, in which formula fed baby, rather than breastfeeding, is considered as the biological norm. In the current study, we addressed the effect of parental cued care sleep education on infant's BIC, and further evaluated its effect on breastfeeding.

Method:

In all, 183 infants aged 6 to 12 months from the well-child outpatient clinic were randomly assigned to parental education (based on POSSUM) (n=92), or usual care group (n=91). Sleep problems (according to the Brief Infant Sleep Questionnaire [BISQ] as well as mothers' report), breastfeeding practices, and Beck Depression Inventory (BDI) scores were assessed at baseline and after 3 months.

Results:

Out of 157 mother-infant dyads completing the study, BIC was found among 50 infants (31.8%) according to BISQ, and 56 (35.7%) based on the mothers' report. In the intervention group, the proportion of infants with BIC decreased from 37.4% to 17.6% at follow-up based on BISQ ($p<0.001$), and from 42.9% to 33.0% based on mothers' report ($p=0.022$). Corresponding values in the usual care group were 24.2% vs 12.1% (BISQ; $p=0.057$), and 25.8% vs 27.3% (mothers' report; n.s), respectively. The proportion of mothers maintaining breastfeeding was higher at follow-up in the intervention group (78.9% vs 67.7%; $p=0.002$). Moreover, BIC was predicted by mothers' BDI scores adjusted for infant's age, gender, maternal age and education ($p<0.001$).

Discussion:

Our results suggest that parental education may improve BIC with sustained breastfeeding.

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Efficacy of an oral and dental health educational intervention on prevention of early childhood dental caries

Background:

Dental caries is one of the most common chronic diseases among children. Early childhood caries (ECC) is frequently associated with poor quality of life, decreased school performance, and reduced growth. Pediatricians and pedodontists should work together to overcome this preventable but irreversible public health problem.

This study aims to assess the effect of an oral health education provided during well child visits using motivational interviewing method.

Method:

Parents of 241 infants aged between 6 to 12 months old were randomly allocated to intervention and control groups. Questionnaires about oral health and feeding practices were applied to the mothers. Oral health education by using motivational interviewing was provided to the intervention group. One reminder follow up call was provided by phone during the 12 months follow up period. Dental examinations were performed on 171 children and decayed missing filled teeth (dmft) scores were calculated by a pediatric dentist.

Results:

The overall incidence of dental caries in primary teeth was 21.2%. Caries incidence and mean dmft scores were low in the intervention group (42.2% versus 16% and 0.89 versus 0.49 in the intervention and control groups respectively). Daily brushing habits were higher in the intervention group (5.6% versus 51.2% in the intervention and control groups respectively).

Discussion:

Pediatric well child visits provide an excellent opportunity for counselling families concerning strategies regarding ECC which would help them to develop lifelong skills to improve oral health.

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A Lemonade Test – Empathy In Preschool Children Attending Montessori Kindergarten

Background:

Empathy is the experience of understanding another person's thoughts, feelings, and condition from their point of view, rather than from your own. It facilitates prosocial behaviours and encourages compassion, counteracting the modern individualistic and self-centred society.

Empathy is a skill which can be learnt. It can be observed right after the birth when new-borns share their distress crying. Later on, it can be nourished through handling, gentle care, and showing toddlers how to behave. Verbalization essentially gives children the words of emotional descriptions; reading stories enables them to »put someone else's shoes on«, caring and nourishing them with empathy enables them to learn how to care for the others. Research shows that children who are empathic tend to do better in school, in social situations, and in their adult careers. Hence teaching empathy is an important skill which should be adopted by those who work with children.

Method:

In our Montessori kindergarten we conducted a short research on empathy in our 3-6 years-old children. We used a lemonade test, where children were offered a salty lemonade resembling oral rehydration fluid for children. They were grouped into four groups, each consisting of 3 boys and 3 girls; total number of children was 12. They described, whether they liked the lemonade. We filmed them and qualitatively analysed their behaviour.

Results:

The children showed an age-appropriate behaviour with developed theory of mind. They were very polite and despite showing on their face discontent, they tried to please their headmaster who offered them lemonade. Boys and girls in our groups did not differ in expressing their opinion. However, when asked, whether they want more lemonade, they denied it; some told the headmaster that their mother makes a better lemonade; some children used distraction: commenting on some other issues but lemonade in order not to supposedly "insult" the headmaster. It was interesting to see, that when they were told, some other adult did not like lemonade, they quickly agreed.

Discussion:

Our study showed that our children display an age appropriate empathy. They showed a very polite and empathetic behaviour when compared to the UK children. We think that this is connected to the way we teach our children in Montessori program. In order to confirm our hypothesis, further studies are needed. We used this study to remind the parents as well as ourselves of importance of empathy; we found some children's behaviour we all can be proud of; we offered a short seminar on empathy for parents and hopefully promoted empathy and prosocial work in our small community.

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PART-CHILD: Evaluation of an ICF-CY-based complex intervention to improve shared decision-making in social pediatric care and participation in children with chronic health conditions - study design of a stepped-wedge cluster-randomized trial

Background:

Chronic health conditions and disabilities are major health concerns in children and adolescents. A consistent implementation of the International Classification of Functioning, Disability and Health for Children and Youth (ICF-CY) has the potential to improve the quality of social pediatric care by increasing shared decision-making (SDM) and social participation in this patient group. PART-CHILD assesses the effectiveness of an ICF-CY-based complex intervention comprising (1) a staff training program on the ICF-CY and participation-oriented communication, (2) an electronic support tool (ICF-Add-In) simplifying the use of the ICF-CY in daily practice and (3) a 6-month program facilitating the transfer of training contents into routine care.

Method:

The intervention will be rolled out in 15 German outpatient clinics for children with chronic health conditions between November 2018 and July 2020. The intervention effectiveness will be assessed with a stepped-wedge cluster-randomized trial and approximately 3,000 patients > 7 years of age and 12,000 parents. Primary endpoint is a parental SDM measure. Secondary endpoints are measures of SDM and social participation of patients. Intervention effects will be analysed using mixed models. A process evaluation will integrate qualitative and quantitative data in a mixed-methods framework.

Results:

Details on (1) the ICF-CY-based intervention, (2) its logic model and (3) the evaluation design will be presented.

Discussion:

PART-CHILD is one of the first projects implementing the ICF-CY in a consistent way in pediatric care. The intervention has the potential to improve SDM and to enable social participation as an ultimate goal of care in social pediatrics.

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Knowledge, Attitude and Behavior of Medical Residents and Interns Regarding Children's Rights

Background:

This study was aimed to evaluate the knowledge, attitude and behavior of medical residents (MRs) and interns regarding children's rights at Pamukkale University in Turkey.

Method:

The scope of this study was 323 persons, including 207 MRs and 116 interns. A questionnaire was used to collect the data. The Attitudes towards Children's Rights Scale was a part of the questionnaire. Higher scores indicated more negative attitudes towards children's rights. Eleven questions were asked to determine the behavior of participants on child rights at the time of health care delivery. The behavior score was calculated. Higher scores indicated more positive behaviors. $p < 0.05$ was considered statistically significant.

Results:

The sample consisted of 223 respondents. The mean age (SD) was 26.7 (3.0) years and 52.7% of respondents were male. 45% of the participants were not aware of The Convention on the Rights of the Child (CRC). Only 25% of the MRs and 43.4% of the interns previously had some training in children's rights. The mean (SD) of the attitude score was 29,82 (7,81). The mean (SD) of the behavior score was 46,29 (4,52). Being an MR and having no knowledge about CRC were independent risk factors for both negative attitudes and behaviors towards children's rights.

Discussion:

Medical doctors in training have, to a moderate degree, shown positive attitudes and behaviors towards children's rights. In addition, MRs were less educated on the subject and had more negative attitudes and behaviors than intern doctors. The awareness of the CRC is low and needs to be raised.

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Content Analysis of Food Advertisements on TV Channels in Turkey

Background:

Childhood obesity is an increasingly important public health problem. The spread of unhealthy food advertisements (ads) in media may contribute to obesity. The aim of this study is to perform a content analysis of food ads on TV channels in Turkey.

Method:

This cross-sectional study included 6 TV channels with the highest ratings according to the TIAK (Television Monitoring Surveys Joint Stock Company) 2016 data. Prime time (PT, 20:00-23:00) and off prime time (OPT, 17:00-19:59) time slots were taken into consideration for data collection. The data was collected between October 13-19, 2017. For standardization, food groupings were based on previously published literature and the Turkey Specific Food and Nutrition Guide. Frequencies and percentages are given for descriptive statistics and the Chi-square test was used to compare categorical variables.

Results:

A total of 2740 food ads were evaluated. 1732 (63.2%) of them were found to be unhealthy, only 124 (4.5%) were healthy and 884 (32.3%) did not fit into either category (other). There were more unhealthy food ads in the OPT time period (65.5%) than the PT time period (60.2%) ($p = 0.005$). The most commonly advertised unhealthy food ads showed cakes, cookies and biscuits. Unhealthy drink ads were about coke, carbonated beverages and aroma sodas.

Discussion:

Two of three food ads at Turkish TVs are about unhealthy foods. Any child will be exposed to an average of 96 unhealthy food ads per week in case of only two hours of TV viewing per day.

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Rotavirus vaccine; parental attitudes changing from 2010 to 2016

Background:

Success of any vaccination program and uptake of children's vaccines largely depends upon parents' perceptions and attitudes. To explore what factors influence parents' decision whether to have their children rotavirus vaccine (RV) immunised or not and compare them with other internationally published studies and to spread vaccination with RV.

Method:

This study was carried out in two parts. Firstly, the data were gathered in a semi-private paediatrics policlinic from January 2009 through March 2010 in Kocaeli, Turkey via a survey. Secondly, data from 302 parents were gathered via a survey completed by the parents during their paediatrics policlinic visit between August 2015 and May 2016 in Kocaeli, Turkey.

Two questionnaires were designed to explore the RV status of children, socio-demographic and reasons for excluding RV. . Parents indicated their level of agreement with each statement using a 5-point Likert scale, with possible responses ranging from "strongly agree" to "strongly disagree." It was also questioned about the level of knowledge about RV and where it was obtained in two parts of study.

Results:

Only 3.8% from 262 children were immunized for rotavirus in 2009-2010. However 53.4% accepted rotavirus vaccine in 2015-2016. Two parts of study were compared and there was no strong opinion for the rotavirus vaccine, as parents neither agreed nor disagreed to its seriousness. Another important factor that influenced parents' decision to vaccinate their children for RV not covered by the nationally funded program was advice from the paediatrician, lack of information and the cost. Parents' perceptions were increased dramatically from 2010 to 2016 by being well informed.

Discussion:

The acceptance of RV depends on a complex interaction of factors but parents' perceptions may change dramatically by being well informed as well as having financial support from the government.

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Smoking and drinking behaviour of Bissau-Guinean adolescents aged 15-16 compared to European peers

Background:

In sub-Saharan Africa adolescents comprise 23% of the population compared to 12% in high-income countries. With the Sustainable Development Goals 2016-2030 increased attention is given to adolescents' health and well-being. Compared to the situation in Europe, relatively few studies focus on protective factors for the health and well-being of adolescents in sub-Saharan Africa compared to the attention paid to their risk to acquire specific diseases. Here we describe and analyse the prevalence of smoking and use of alcohol by Bissau-Guinean adolescents aged 15-16 and compare to peers in eight European cities.

Method:

Survey with the locally adapted and pilot tested Youth in Europe questionnaire that was conducted in randomly selected classes of adolescents aged 15-16 in secondary schools in the capital Bissau in June 2017 with comparable data from eight European cities in 2015-2016.

Results:

In Bissau, 871 (42%) adolescents aged 15-16 participated (52% girls and 46% boys) compared to 6,534 peers in eight European cities (49% girls and 51% boys). In total, 2.2% of the Bissau-Guineans reported daily smoking (B=3.9%; G=0.7%) compared to 11.3% of the European peers (B=13.2%; G=9.4%). About 1/3 of the Bissau Guineans had life-time experience of drinking alcohol compared to about 2/3 of the European ones, with no difference among boys and girls; 10,6% of Bissau-Guineans reported having been drunk during the last 30 days compared to 14% of the Europeans, the prevalence being slightly higher among boys compared to girls.

Discussion:

Bissau-Guinean adolescents aged 15-16 report less smoking and drinking than European peers. It is urgent to initiate health promotional activities in secondary schools in Bissau to inform and educate adolescents on the detrimental effect of such behaviours on their long-term health and wellbeing.

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**Prevention of child abuse by early intervention during pregnancy.
The working method of the 'Team for High Risk Pregnancies Maastricht'.**

Background:

Every year in the Netherlands, at least 107,000 children are victims of child abuse. Although not explicitly mentioned in the definition of child maltreatment, maltreatment or neglect may also affect the unborn child.

Risk factors and risk behaviors during pregnancy, lead to child abuse of the unborn and newborn child, but figures on the unborn child are not known.

Method:

The Maastricht University Medical Center (MUMC+) established a special Multidisciplinary Consultation Team for High Risk Pregnancies to discuss the situation of pregnant women where threats to the well-being of the unborn child are identified, to prevent (intra-uterine) child maltreatment. Within this team, several representatives from different organizations, which provide care for pregnant women and newborns, come together to discuss the at risk-cases on a monthly basis. The team includes professionals from various medical departments. The paramount goal is to realize a safe and secure environment for the child and its mother, during and after pregnancy. Each year the cases of about 50 women are discussed within the consultation team.

Results:

During a 2 year study period the cases of the women were discussed

Discussion:

Follow-up showed that a special multidisciplinary consultation team leads to earlier intervention and to a safer and secure environment for the child and its mother, during and after pregnancy.

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Effects of baby massage stimulation on level of IGF-1 and cortisol

Background:

Infant massage is a multi-modal stimulation such as visual, auditory, tactile, and kinesthetic stimuli as a manifestation of parental love for the baby. Stimulation of massage has an influence on the nervous system and hormonal system. IGF-1 is one of several indicators of infant growth and development. Increased cortisol as a cause of stress in infants and will affect the function of the baby's immune system.

Method:

Randomized controlled trials, the study was conducted at Dr Kariadi Semarang General Hospital in Central Java Indonesia. The aterm infant subjects consisted of two groups, the massaged group (20 subjects) and the control group (20 subjects), performed with a baby massage stimulation module from the Indonesian Pediatric Society. Blood samples were assessed for IGF-1 levels and cortisol, collected before the first massage and after two weeks of massage using the ELISA method

Results:

Levels of IGF-1 in massage group increased 52.87 ± 26.04 ng / ml higher than in control group (20.90 ± 8.25 ng / ml). There are significant differences in the levels of IGF-1 in both groups before and after the study ($p < 0.0001$). There are significant differences in increment of the levels of IGF-1 between the group after two weeks ($p < 0.0001$) cut off point levels of IGF-1 on 75.61ng/ml. Decreased level of cortisol in the control group was -57.58 ± 124.924 . There was a greater decrease in cortisol level in the massage group with an average value of -120.47 ± 126.242 ($p < 0,016$).

The results of the correlation test between IGF-1 and cortisol showed an increase in IGF-1 inversely with cortisol decrease.

Discussion:

Healthy newborns have elevated levels of IGF-1 to 10% daily. This studied show that Levels of IGF-1 in the massage group was higher than the control group at two weeks after massage intervention. This result is consistent with previous research studies of massage stimulation in aterm infants who concluded the levels of cortisol decreased significantly although the studies used saliva samples to measure cortisol levels.

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Being Healthy and moving is FUN, even when you are on overweight !

A 10 year report of the „MultiSPORT“ program destined to young adolescents with overweight in public primary schools of Freiburg / Switzerland.

Background:

Overweight and obesity has become a growing health problem in the beginning 21st century, with nowadays 20 % for children and adolescents in Switzerland affected. In Freiburg, a middle-town, the school medical service is responsible for health screening in children between the age of 5 years to 14 years admitted to a public school. Systematic weight controls are integrated in health education. We try to point out by regular medical visits the overweighted children and we offer them to join the MultiSPORT-programm. The screening concerns weight and height, the BMI is then calculated (percentiles by age), based on PRADER cross-curves, and in case of overweight (> 90 percentiles) or obesity (>>97percentiles) we send an invitation for the multisport-programm to the parents. There are no extra costs for the family, the programme is financed by the public school department. Aim: using this kind of approach is to enhance overweighted children, between 9 and 12 years, to take more care about their food and habits, stabilize their weight (or reduce it) and to have fun at sport-activities. They are being personally coached by a health care giver of the school medicine sector. Taking their families in active collaboration is as important as working interdisciplinary.

Method:

The program MultiSPORT includes adapted sports and activities, a nutritional assessment and follow-up, individual visits with the health care giver (nurse) and a medical screening for comorbidities and concerns at the beginning (with the GP). If needed, close collaboration with a psychologist or a social worker are organized. MultiSPORT is multifocal, besides activities in groups there are personal consultations with the participants, a family assessment and, at the end of the 1-year-programm, a kids summercamp.

Results:

The experience of our 10-year program shows that every 4th child concerned for overweight or obesity joined the Multisport-program. One third stabilized, one third lost weight, and only one third gained weight and raised up their BMI. The acceptance and pleasure for the participants to be integrated in a group of peers suffering the same problems, seems to have another positive effect as well as the summercamp at the end.

Discussion:

Interdisciplinary working between health and educational services (nutritionists, psychologists, sport teachers, school medical service) as well as integration of the families encourage these overweighted children to succeed and enhance their self-confidence, the pleasure to move and to take care of their own alimentation- all factors contributing to a child's well-being. In future, we hope to enlarge the offer of a Multisport-program as an encouraging primary prevention of childhood obesity also to younger children: since it is known that access to overweighted children is the more and more important when started already in early stages of childhood, going directly to kindergarden or primary school is the best way to reach them.

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The Club MultiActivities : a possible response to join for overweight adolescents ?

Background :

The Club MULTIACTIVITIES (MA) was initially created and stimulated by the national framework for early detection of health issues in school children. The public in the Club MA are young adolescent, concerned by overweight problems and open for changing usual thinking about their health status, being together with peers in a confidential setting. Therefore, moments of slow motion activities such as group discussions about life style and motivation are alternated with physical activities. There is neither competition nor performance between the adolescents. This approach was supported financially by the community of Freiburg town and joined by the school health unit.

Method:

After screening for overweight /obesity using PRAADER growth curves (BMI > 90th overweight, >> 97th obesity) the adolescent can join the group ; information for parents is joined to the letter of invitation. After a year evaluation sheets are filled in by both groups.

Results:

Taking part in such a group is difficult for an adolescent, barriers of stigmatisation may interfere. Only 10-20% finally joins the Club MA. Little modifications in the general behaviour are observed, eating habits may be adapted as well as more awareness of physical activity may be fostered. The « eating in-between meals » still remains a main problem even when most adolescents are conscious about their habits.

Conclusions:

The Club MA as it is offered in secondary public schools in Freiburg in collaboration with the school nurse and school medicine unit needs more impact to reach the vulnerable population of adolescents. Overweight and obesity is a main concern ; we need to accentuate and promote the pleasure to move, helping the adolescents cope with their body to support him/ her to get self-confidence for changing habits and find new strategies to balance their weight. Networking, interdisciplinary and regular contact to the families of the adolescent need to be strengthened as well as to get more acceptances to join such approaches when « you feel a bit different from your peer”.

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Child Maltreatment epidemiology in Sardjito General Hospital, Yogyakarta, Indonesia

Background:

Child maltreatment is still an iceberg phenomenon and has a negative impact on child growth and development. Impact of maltreatment in childhood can lead to social and mental adverse effects in adulthood. In low to middle income countries including Indonesia, incidence and characteristics data about child maltreatment are very limited. This study aimed to describe the characteristics of child maltreatment in Indonesia

Method:

An observational study using medical records was conducted in Sardjito General Hospital, Yogyakarta, Indonesia, which has the *Sekar Arum* Center for women and children maltreatment. All patients diagnosed as maltreated children in 2015-2017 were included in this study. Descriptive statistical analyses were used to evaluate demographic characteristics, type of maltreatment, and abuse perpetrators.

Results:

Twenty-five children were ascertained in this study. Types of maltreated children were: sexual abuse (17), physical abuse (7), neglect (1), and no emotional abuse was reported. Maltreatment was more prevalent in females (16) than males (6) with mean age of 9.92 years. Sexual abuse was more common in adolescents (10-18 years old) than younger children with mean age of 11.35. Most perpetrators in physical abuse were parents and perpetrators in sexual abuse were other people such as boyfriends and unknown people.

Discussion:

Females experienced maltreatment more than males and adolescents more often experienced sexual abuse. Sexual abuse was the most common reason for people seeking medical examination. Further community-based studies are needed to more completely describe the epidemiology of child maltreatment in Indonesia.

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Do functional carbon ankle foot orthoses improve drop foot pattern in children with unilateral spastic cerebral palsy?

Nikolai H. Jung

Background: The drop foot pattern in children with unilateral spastic cerebral palsy (UCP) is characterized by excessive plantarflexion during swing phase of gait. This pattern can result in tripping or falling and may influence activity and participation. Functional carbon- component ankle foot orthoses (c-AFO) are used in clinical practice to improve an increased plantarflexion during swing, therefore normalizing the secondary affected first ankle rocker and to support the push-off mechanics. However, the detailed mechanisms of their contribution to normalize gait pattern and their effectiveness in UCP remain unclear.

Aim: We aimed to evaluate the effectiveness of c-AFOs on gait parameters in children with UCP exhibiting a drop foot pattern in comparison to barefoot and shoe walking.

Methods: Sixteen ambulatory children with UCP and a drop foot pattern were included (mean age: 9 years (SD: 3.3); gross motor function classification system: I = 14, II = 2) and three-dimensional gait analysis was applied under randomly assigned conditions (barefoot; shoe; c-AFO). Kinematics, kinetics, time-distance parameters and gait indices were investigated.

Results: Shoes already increased the maximum ankle dorsiflexion in swing ($p = 0.004$) and initiated more knee flexion during single support ($p \leq 0.013$). Compared to shoe walking, the c-AFO led to additional benefits regarding further ankle dorsiflexion during swing ($p < 0.001$) and initial contact ($p < 0.001$), ankle movement during loading response ($p = 0.002$), improved the sole angle during initial contact ($p < 0.001$) and during mid stance ($p = 0.015$). Plantarflexion and ankle power generation during push-off decreased when wearing the c- AFO ($p \leq 0.008$).

Conclusion: C-AFOs demonstrated to improve drop foot patterns in children with UCP. Wearing shoes only already led to significant effects at the ankle and knee in swing and stance phase. This could be considered in clinical decision processes. In comparison to shoe walking, c-AFO additionally improved foot clearance and normalized initial heel contact. Since kinematics improved with the orthoses, c-AFOs might reduce tripping and falling caused by a drop foot during long distance walking in patients with UCP.

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The Influence of Baby Walker Use on the Language-Cognitive, Motor and Mental Development of Babies

Background:

Baby walkers have been used since the early 1660s to mobilize babies before the independent gait has been gained. According to the studies the age of baby walker usage ranged from 2.5 to 17 months. The aim of this semi-prospective clinical study was to examine the effects of baby walker use on the language-cognitive, motor and psychological development of infants aged 18-30 months.

Method:

Between July 2015 and December 2015, 200 of the 477 children, who met the inclusion criteria participated to the study. A survey was conducted to parents who were admitted to İstanbul Medical Faculty, Well Child Outpatient Clinic of Social Pediatrics Department. Baby walker group (n=100) was constituted from children who use baby walker for at least 30 minutes a day, and at least one month. Children who do not use baby walker were assessed as control group (n=100). The Ankara Developmental Screening Inventory (AGTE) was applied to the children by the investigator. The Social Communication Area Screening Test (SIATT) results of the children were examined from their files retrospectively.

Results:

The incidence of gait disturbance, toe walking were significantly higher in the study group than control group. There was a statistically positive correlation between the time to start the baby walker use and walking without support. Twenty-four percent of children experienced baby walker-related accidents. And 91.7% of these accidents were in the form of falling down from baby-walker.

Discussion:

Our findings showed that family counselling should be given during the follow-up about baby walkers usage.

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Pre-school vaccination status of children in İstanbul

Background:

In recent years, mismatches and discords with vaccination schedules, especially in kindergarten children, has begun to manifest itself as epidemics in society. The study originated from a need to complete missing vaccinations and to contribute to public health by sharing up-to-date information about mandatory and complementary vaccines and diseases that can be protected by vaccination with families of children in preschool period.

Method:

Fifty kindergartens from 34 different districts of İstanbul, was carried out by an experienced pediatrician and her assistant team between April 2014 and January 2017. A 27-question survey on pre-school immunization was administered to the parents at the kindergarten visits. Posters, brochures and coloring books were distributed to kindergarten students and their families. Interactive seminars were held and the questions of the parents were answered. The children with the vaccination card were checked for missing vaccines. After the seminars, a second questionnaire was applied to determine if there were any changes in the families. The third questionnaire was conducted after 12.4 + -3.3 months of the visit and it was checked how many of the missing vaccines were completed.

Results:

Three thousand and twenty two family participated in seminars face to face and filled the surveys. Also surveys were sent to 729 parents by postal. The first survey 3751 times, the second survey 2921 times and the 3rd survey 1854 times have been completed. 24.3% of children were missing at least one vaccine. %11.4 fourth dose of DaBT-İPA-Hib 34.5% varicella vaccine, 73.5% second dose varicella vaccine, 23.6% first dose hepatitis a vaccine, 34.3% second dose hepatitis a, 27.6% second dose MMR vaccine, 35.4% 4-6 years dose vaccine was missing. 43.7% of children with influenza vaccination, and 23.7% with meningococcal vaccination were protected. Third survey results showed that %98,8 family completed missing dose of DaBT-İPA-Hib and %67.8 family had influenza and varicella vaccination. % 97.7 families told the most important factor to decide for meningococcal vaccine is the physician's advise. Statistically significant $p = 0.03$ was obtained.

Discussion:

Inadequacy in practice in both the national programs vaccines and the other vaccines has been identified. The fact that vaccinations are not suggested enough by physicians and the vaccine credibility is the main reason underlying this situation. Society, families and health workers need to be informed more.

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Vaccination status of the children with neurological disorders and associated factors

Background:

It was aimed to evaluate vaccination status of the children with neurological disorders.

Method:

The patients who have been followed at Erciyes University Pediatric Neurology department were included during the January 2013-January 2015. A questionnaire form consisting of sociodemographic characteristics, reasons of missing vaccination, history of administering to emergency department because of adverse events following immunization (AEFI) and history of vaccination with seasonal influenza vaccine were administered.

Results:

321 patients whose mean age is $3,5\pm 4$ years were included. Eighty percent of the patients had been diagnosed with epilepsy. It was determined that 17% of the patients had been missing immunized due to neurological disorders and 11% of them have been still missing immunized. Median age and diagnosis age, mean mother's age of the missing immunized patients with neurological disorders were smaller than the full-immunized ($p=0,02$; $p=0,02$; $p=0,003$ respectively). Application rate to the emergency department due to AEFI was higher in the missing immunized patients than the full-vaccinated ($p<0,001$). The most common reason for the missing vaccination was frequent or long-lasting hospitalization (55%). It was determined that 12% of the patients have been immunized with influenza vaccine.

Discussion:

It is important to evaluate the vaccination status and the missing opportunities of the patients, prevent unreal contraindications and inform the parents in every visit in both first step and treatment centers. It is especially important to follow the patients who were frequent or long-lasting hospitalized, small aged, and who experienced AEFI. However, using of the influenza vaccine should be generalized for the pediatric neurology patients.

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Case management for children and adolescents from vulnerable families with Asthma bronchial

Background:

Current healthcare developments show a trend towards a more integral healthcare coverage strengthening cooperation between healthcare and socio-educational approaches. Asthma is the most frequent chronic disease among German children and shows a social gradient in terms of severity of the disease and the distribution of risk factors like tobacco exposition, low quality housing (presence of dust mites or mould) and obesity, disproportionately affecting asthma patients coming from a low socioeconomic background. We investigated how asthma care could be improved by focusing on diminishing the adverse effects of relevant risk factors and through better interdisciplinary collaboration.

Method:

We chose an explorative-qualitative approach. This involved interviewing 28 German experts in paediatric asthma care, paediatric health or general social care using a semi-structured interview-guide. The interviews were subsequently analysed by a qualitative content analysis.

Results:

The majority of experts recommended better nursing care for indigent families in order to improve disease management and therapy adherence, especially if difficult-to-treat-asthma is present. This care should be carried out by trained paediatric nurses or medical assistants. Concerning the issue of improving interdisciplinary cooperation, case management should be applied.

Discussion:

This study provides further data and insights into an integrated healthcare service for children and adolescents in Germany suffering from. Thus tailored care could be offered for the most vulnerable and affected patients including case management and comprehensive nursing care at home. The statutory health insurance (GKV) or the German pension fund (DRV) could serve as possible sponsors of such service, facilitating better and more personalized care at reduced costs.

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HPV vaccination and respect for children's developing autonomy: Results from an EU wide study

Background:

There is no consensus in Europe regarding the ideal model for the child healthcare provision. Similarly, children's rights to autonomy of choice may also be differently and unequally expressed throughout the European Union (EU). Herewith, we explore differences regarding expressions of respect for children's developing autonomy throughout the EU, using the procedure of HPV vaccination offer in Europe, as indicator for autonomy.

Method:

We used a mixed methods approach, utilising an expert survey within the frame of the "Models of Child Health Appraised" (MOCHA), among all thirty EU and European Economic Area states. A questionnaire was designed using questions and vignettes regarding the provision of the HPV vaccine. The data collection and validation took place from June 2017 to April 2018.

Results:

We identified and studied the following themes:

- i. provision of informed consent to receive or refuse the vaccine
- ii. parental and medical paternalism
- iii. relevance of the child's chronological age or maturity
- iv. vaccination programs targeting boys.

These are being handled differently across the region.

Discussion:

The HPV vaccination is an interesting indicator for studying child's developing autonomy, the paradigm change towards libertarian paternalism, issues of gender equity and solidarity. Identifying and transferring the most suitable ethical approaches is crucial and should be strengthened. Educating children and parents in the existence and issues surrounding autonomy, and implementing written consent approaches that respect children's autonomy should become common practice. This would also facilitate the evolution of the paediatrician's role into an advocate for the child and a negotiator in cases of disagreement.

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Funded by the European Commission, Horizon 2020 Framework, grant agreement number: 634201.

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Difficulties during physical examination of children with special needs at an outpatient clinic

Background:

Most of paediatricians experience difficulties on physical examination of applied to the hospital for acute illness children with special needs. The aim of this study is review to experiencing difficulties during physical examination of these children.

Method:

Between March 01 -May 12 2018, We enrolled seven children (6 boys, 1 girl) with special needs acute illness at Ankara Koru Hospital ambulatory pediatric clinic.

Results:

Applied children with special needs were between 2-7 years old. One patient had applied with abdominal pain, six patient had applied with upper respiratory tract infection symptoms to the hospital. Patients have diagnosed as cerebral palsy (3), attention deficiency hyperactivity disorder (1), atypic autism (3). Four children were done examination well, they are compatible with doctor but three others were have problematic behaviours such as excessive crying, excessive fear, uncontrolled movements. They did not calm whatever done. One patient feel fear of white gown. All of the children have speech problem. All children have been taking special education on speech (7), physical rehabilitation (3), game therapy (3), social communication (3). Only one patient was obese, one patient was undernutrition, others were have normal weight and length.

Discussion:

It is important to know how children with special needs have behaviour characteristics and what they are afraid of during examination in term of management of their acute illness. Throughout the examination, patience and gentleness help greatly to insure a reliable diagnosis. Paediatricians should periodically evaluate to these children's growth status

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What do parents know about safe sleep environment?

Background:

Sleep-related infant death (SRID) is an important issue. As a result of current studies to reduce SRID, recommendations have been developed like back to sleep position, using a firm sleep surface, breastfeeding, room sharing, keeping soft objects out of the sleeping environment. In this study, we wanted to evaluate the safe sleeping habits of the children, knowledge level of parents, and related risk factors.

Method:

Our study took place in Istanbul University Istanbul Medical Faculty Hospital, Well Child and General Pediatric Clinic, The population of the study were the children who applied to the Pediatric Clinic for the regular visit and nonspecific complaints. Mothers of children aged between 6-59 months were asked to join a survey about sleeping habit of their children and about their knowledge in risk of death and suffocation during the sleeping period

Results:

236 questionnaires were included in our study. The ratio of exclusive breastfeeding in the first 6 months was 67,8%, sleeping in the same room was %89,2, back to sleep position was 28,4% and choosing 'the babies feet at the bottom of the cot' position was 18,3%. Among the risk factors; the ratio of sedative use in parents was 4,4%, pillow use while sleeping was 54,9%, using soft objects in bed was 11,2% and smoking mother ratio was 17,6%. Cosleeping ratio was 8,4% among smoking parents, 10,8% among obese parents.

Discusion:

In our study, it was understood that the knowledge of safe sleeping environment was not enough, even among the mothers who could easily access the health service. For early intervention of SRID, it is necessary to give detailed information about safe sleeping habits while breastfeeding counseling is given after birth.

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A case of a preventable positional torticollis and plagiocephaly

Background;

Torticollis refers to the postural positioning that occurs when the head is twisted and turned to one side. Positional plagiocephaly is defined as unilateral occipital flattening and bulging of the ipsilateral forehead. Positional plagiocephaly and torticollis is a common occurrence with the “back to sleep” campaign and with the increase in the frequency of premature births. Our case is a premature baby with a positional torticollis and plagiocephaly which could have been prevented with correct positioning during the NICU stay.

Method:

Case report

Results:

A 2-month-old girl infant who was applied for well-child examination to our hospital was born at 34 weeks gestational age. There was a total of 32 days history in the NICU in another hospital. In physical examination she had preferential head positioning with head rotational asymmetry and asymmetrical occipital flattening at her left side. In the history, we learned that during the majority of visits of the parents to NICU, she was always lying on her left side. We think of a positional torticollis and plagiocephaly in our patient. The neck ultrasound test was compatible with torticollis. We made the repositioning suggestions and in cooperation with physical therapy and rehabilitation unit, the baby started the physical therapy. After 4 months of physical therapy, her torticollis was regressed and plagiocephaly was partially improved.

Discussion:

Positional plagiocephaly and torticollis are preventable conditions with early education and suggestions. In our case, positional plagiocephaly and torticollis were developed because of the absence of these practices, during the NICU stay. If an infant has a strong positional preference or skull flattening, early intervention will help to prevent or minimize the severity of positional plagiocephaly.

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A proposal for early intervention

Background:

12-15% of the general population of children at some point present problems at developmental milestones. The earlier the problems are found and documented, the better results we can have after a specialized rehabilitation.

Method:

"Early childhood development programs" and "early intervention programs" are important for achieving these objectives.

Results :

We suggest examining infants of nursery schools, aged 1-5, so that early detection of the children likely to have problems and further assessment for rehabilitation can be identified.

Discussion:

The level of intervention concerns: the child, the family or care provider, the social contexts of the children, the community (including health-peadiatric-private and public services) and the broader community and the state. Finally, creating the right conditions for early childhood development is effective and clearly less costly than tackling the problems caused by its lack.

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Evaluation of psychological symptoms in adolescent period using SCL-90-R-preliminary data

Background:

Various psychological problems are common during the adolescence period. The Symptom Checklist-90-Revised (SCL-90-R) is a 90-item self-report symptom inventory measuring psychological symptoms and psychological distress. The aim of this study was to determine the frequency and severity of psychological symptoms during the adolescence period using SCL-90-R, as well as to determine the sociodemographic factors affecting these symptoms.

Method:

This study was conducted in the Ankara Education and Research Hospital's pediatric outpatient clinic. SCL-90-R and a sociodemographic questionnaire form were administered to adolescents aged 14-18 years. In this report, the preliminary data of the study were presented.

Results:

120 adolescents were evaluated. The mean age was 15.8 ± 1.1 years and 60.8% of the participants were female. Somatization, anxiety, obsessive-compulsive symptoms, depression, sensitivity in interpersonal relations, phobic anxiety and anger were found in 34.2%, 27.5%, 40%, 31.7%, 32.5%, 18.3% and 46.7% of adolescents, respectively. Furthermore, 26.7% had a higher overall symptom index. The mean subgroup index of girls were higher than that of the males, and statistically significant differences were determined in somatization, anxiety and depression ($p < 0.05$). In those adolescents, who answered 'I do not know' in terms of having any psychiatric illness, various symptoms including anxiety, interpersonal sensitivity, psychotic symptoms and anger were found significantly higher ($p < 0.05$ in all symptoms). In adolescents from higher socioeconomic status, the paranoid ideas index was significantly higher than those from lower socioeconomic levels ($p = 0.042$).

Discussion:

This report presents preliminary data of an intervention study which is ongoing. Psychological problems are common during adolescence. The SCL-90-R questionnaire can be routinely used in children's follow-up clinics for an early diagnosis of psychological problems.

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Maternal personality traits and the expression of umbilical artery circulating eHsc70 and eHsp70 in preterm-born neonates

Background:

Associating maternal personality and cellular parameters of the neonates has gained only little attention in research so far. Recent studies revealed that mechanisms of preterm parturition may involve extracellular chaperones, heat shock protein 70kD family (constitutive eHsc70 and inducible eHsp70), that may have specific role in newborn neonates brain development. The aim of this study was to evaluate the correlation between maternal personality and the expression of circulating eHsc70 and eHsp70 in preterm-born neonates

Method:

A cohort retrospective study was done for the total of 21 eligible preterm-born neonates. The expression of circulating eHsc70 and eHsp70 was determined on the basis of blood samples taken from umbilical artery at birth. The maternal personality traits measures are based on the big-five model of personality which is consist of five different traits: Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism. Statistical analysis using Pearson's correlation test, with $P < 0.05$ being considered significant

Results:

The expression of constitutive eHsc70 in neonates was not correlates with all traits of maternal personality as well as for the correlation between the expression of inducible eHsp70 and maternal personality traits of Extraversion, Agreeableness and Neuroticism ($P > 0.05$). However, there was significantly moderate negative correlation between inducible eHsp70 and traits of Openness ($r = -0.543$, $P = 0.011$) and Conscientiousness ($r = -0.526$, $P = 0.014$)

Discussion:

Mother with personality trait of Conscientiousness or Openness would be vulnerable for having a neonate with low level of circulating inducible eHsp70. Possibly these results may use in the theoretical framework of the association between maternal personality and preterm-born neonates brain integrity

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**The Influence of Family Income on Anthropometry and Quality of Life
of Preschool-Aged Children in Kupang City, East Nusa Tenggara, Indonesia**

Background:

Studies revealed that the quality of life (QoL) of children can be affected by poverty. Family economic conditions greatly affect the availability of nutrition and education of their children, which can impact on long-term quality of life. This study assessed the effect of family income on anthropometry and quality of life of preschool-aged children in Kupang City of Nusa Tenggara Timur, which is one of the cities in Indonesia with low per capita income

Method:

A cross-sectional study was held in preschool-aged children. The family income was grouped into: below average, average, and above average according to households income per month. The Anthropometry of children was measured as weight, height, body mass index (BMI) and head circumference. The health-related quality of life (HrQoL) of children was obtained from parents proxy-report using Pediatric Quality of Life Inventory (PedsQL) for ages 2–18 years. Statistical analysis using Manova test, with $p < 0.05$ being considered significant

Results:

A total of 59 children were included with median of age was 65 (39-76) months. They divided into three different family income groups: Below average 20 (33.9%), Average 23 (39.0%), and Above average 16 (27.1%) children. The family income significantly affect on body weight ($P=0.040$) and BMI ($P=0.014$), and also on Social functioning of QoL ($P=0.045$), which give a greatly impact on overall scores of PedsQL ($P=0.026$)

Discussion:

Efforts to increase family income is one of the effective entrances in order to improve child weight and quality of life of preschool-aged children especially in social functioning.

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A serious game using virtual reality and mindfulness-based techniques to reduce stress

Background:

Mindfulness mitigates the psychological, behavioral and physiological changes associated with toxic stress. Mindfulness- and breathing-based eHealth interventions might be a useful addition for children that experience early life adversity. In the present study we test if mindfulness breathing techniques can be taught to children using virtual reality (VR).

Method:

Kids in Control (KiC) is an interactive VR game using a head-mounted display. The VR experience is controlled by the breathing pattern of the player and calm breathing will correspond with positive changes in the virtual environment. In this pilot-study the concept was tested in healthy adults, using a cold pressor test (CPT) both in a VR-condition and a no-distraction condition. Breathing pattern and heart rate are measured by a wearable vest (Hexoskin) and participants fill in a visual analogue pain severity scale (VAPSS) and the Igroup Presence Questionnaire (IPQ) to measure the sense of presence experienced in the virtual environment.

Results:

Preliminary result show that when the breathing pattern slows down heart rate goes down. The heart rate trend correlates with subjective pain experience. Most participants have a higher pain tolerance and threshold during the VR-condition. More participants are still being tested.

Discussion:

Active distraction by virtual reality is used to manage and attenuate anxiety and pain by using immersion and involving multiple senses. VR combined with biofeedback helps children mastering the practice of mindful breathing so they can use the technique in stressful situations. This study proved that KiC can initiate stress relieve during stressful events. In the long term, this can help children using mindfulness exercises as a step in healing the stress response in early life adversity.

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Obesity among school children: From 6 to 11 years of age

Background:

Obesity is an important public health problem. The aim of this study is to investigate the changes in body mass index (BMI) of children in two different age groups (6 and 11 years), and the influence of socioeconomic level, eating habits, physical activity on BMI.

Method:

Our study is a cross-sectional epidemiological study. A private school, and a state school were selected. Anthropometric measurements of all children were taken, and a questionnaire was applied to collect data on factors (socioeconomic level, eating habits, physical activity, screen time) influencing obesity

Results:

Of 495 children participated in the study, 270 were 6 years old and 225 were 11 years old. According to BMI classification 21.2% of participants were overweight and 14.5% of them were obese. The BMI averages of 11-year old children were higher than those of 6 year-old children. Screen time of 11 year-old children was higher than those of 6 year-old children. Screen exposure time was found to be the most important factor influencing obesity.

Discussion:

The prevalence of obesity is increasing in Turkey among children. Our findings showed that obesity was increasing from 6 to 11 years of age. Necessary interventions should be planned for the prevention of obesity in school age children.

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