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UNINTENTIONAL CHILDHOOD INJURIES IN KENYA: EPIDEMIOLOGICAL PATTERNS BASED ON HOSPITAL TRAUMA REGISTRY DATA

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Background Unintentional injuries are the leading cause of death for children under age 18 years globally. Our study aims to describe the epidemiological patterns of unintentional injuries and assess the adoption of safety measures and pre-hospital care among paediatric injury patients to inform future interventions in Kenya.

Methods The Trauma Registry System collected data of injury patients from four major hospitals in Kenya between January 2014 and July 2015. Out of the 4257 paediatric patients, 4005 (94.1%) with unintentional injuries were included in analysis.

Results We found that boys were more likely to suffer from unintentional injuries than girls at all ages, accounting for 60.4% of those under 5 years ($n = 1359$), 68.0% of those aged 5–9 years ($n = 1130$), and 73.0% of those aged 10–17 years ($n = 1516$). Majority of the injuries happened at home (79.9%) or on the road (14.5%) for those under age 5; while more injuries occurred at school for those aged 5–9 (15.0%) and aged 10–17 (31.3%). The top three injuries were fall (46.5%), burn (29.1%), and road traffic injuries (14.2%) for children under age 5 years, and fall (64.8%), traffic injuries (19.1%), and struck or hit by a person or object (7.3%) for children aged 5–17 years. Death rate was higher for the under age 5 group (4.9%) than that for the age 5–17 group (1.3%). Burns and traffic injuries had higher death rates (6.6%, 5.6%) and severity scores compared to the other injuries. The adoption rates for helmets and seatbelts were about 10% in at risk patients. Only 18.4% children received pre-hospital care, which was mostly provided by relatives and friends and associated with lower odds of death ($p < 0.05$).

Conclusions Our preliminary findings show that the epidemiological patterns of injuries differ by child age, which implicates that interventions should be tailored for specific age phases. This study pinpoints the needs to prioritise promoting pro-safety behaviours to alleviate the consequences of injuries in Kenya.

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DEVELOPMENT AND VALIDATION OF A SURVEY ON FATHERS' ATTITUDES TOWARDS CHILD INJURY PREVENTION

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Background The purpose of this study was to develop and validate a survey instrument to measure fathers' attitudes regarding injury prevention for their children. Parents play an important role in reducing child injury risk; however, our understanding of the unique role that fathers play in keeping children safe is limited. Our previous research indicated that fathers believed risk played an important role in their children's development and that they aimed to balance these risks with protecting children from injury.

Methods We developed a survey to measure two main dimensions of fathers' parenting attitudes: child protection from injury

(16 items) and child risk engagement (24 items). The survey content was created using a 4-step process utilising expert feedback, cognitive interviews with fathers and pilot-testing. The survey was administered to fathers of children ages 6–12 years visiting the Emergency Department of a children's hospital in British Columbia, Canada. We used confirmatory factor analysis to validate the factor structure of the questionnaire.

Results There were 302 fathers who completed the questionnaire, with 45% children attending hospital for an injury and 55% for another medical concern. Following analysis, the child protection from injury factor was found to consist of eight items (Cronbach's alpha of 0.75) and the child risk engagement factor consisted of six items (Cronbach's alpha of 0.77). Correlation between the factors was low suggesting the dimensions are independent.

Conclusions These survey data provide support for the idea that for fathers, child protection from injury and child risk engagement reflect distinct attitudinal dimensions. These results add to our understanding of fathers' conceptions related to child safety and offer direction for development of injury prevention messages and interventions that are tailored to fathers' perspectives and experiences.

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MULTI-PROFESSIONAL COLLABORATION IN THE SERVICE OF CHILDREN AND YOUNG PEOPLE

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Background Families' various problems are reflected in the everyday life of children and young people. In order to help them, low-threshold services based on multi-professional collaboration between the various authorities are required. Within the framework of the 'Code of caring' project (www.valittämisenkoodi.fi), a new operational model and communications system will be developed, providing responses to children's and young people's challenging life situations, preventive marginalisation and violence and promoting the safety of children and young people.

Methods The impact of the new operational model on aid provision to children and young people aged 12–17 will be studied with the help of a three-phase research process. The first phase (2014) will comprise the gathering of national data on the marginalisation of children and young people. The second phase (2014–2015) will study the current situation as assessed by the various authorities themselves and as experienced both by the children and young people. The third phase (2014–2015) will describe the views and experiences expressed by the various authorities and children and young people of working under the new model. The experiences of children and young people will be studied with the help of thematic interviews as well as queries sent to the actors involved. The data thus gathered will be analysed using both qualitative and quantitative methods.

Results The results obtained from the first survey indicate that the representatives of the authorities were almost unanimous in believing that common conversations aid in understanding the overall process aimed at helping children and young people. Themes represented in development suggestions included the need for common training, in order to better understand the roles of the different helpers and the goals set for their work.

The challenges of multi-professional work most emphasised were lack of time, personnel turnover and communication issues. Research findings on the views of the various actors were supported by the interviews with the children and young people. These interviews were taken into consideration in the development of the model. Research finding obtained from the third research phase will be presented at the Safety 2016 World Conference.

Conclusions When attending to the concerns of children and young people, account must be taken of the views expressed by those who need help as well as by those parties that are engaged in collaboration.

930 RISK FACTORS OF TRAUMATIC BRAIN INJURIES BETWEEN THE YOUNGSTERS

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Background The elevated occurrence of traumatic brain injuries (TBI) between the youngsters has brought much spotlight to this area in current years. Sports harms have been recognised as a major instrument. Even though vigour drinks, counting those mixed with alcohol, are frequently used by juvenile athletes and other youngsters they have not been observed in relation to TBI. We examined the occurrence of youngsters' TBI and its alliances with vigour drinks, alcohol and energy drink assorted in with alcohol use.

Methods Data were obtained from the Institute of Public Health in Albania. This cross-sectional school study comprised 7430 students from high school (aged 14–20) who fulfilled self-administered questionnaires in classrooms.

Results Between the participants, 25.6% (95% CI: 21.3, 23.8) expressed a record of TBI. Sports harms remain the major instrument of a current TBI (44.8%, 95% CI: 40.6, 49.4). Logistic regression demonstrated that compared with youngsters who never maintained a TBI, the odds of supporting a current TBI were bigger than those using alcohol, vigour drinks, and energy drinks assorted in with alcohol than abstainers. In relation to current TBI thanks to other reasons of harm, youngsters who carried on a current TBI whereas playing sports had bigger odds of current energy drinks use than abstainers.

Conclusions TBI continues to be a immobilising and ordinary circumstance abetween the youngsters and the use of alcohol, vigour drinks, and alcohol assorted with vigour drinks promote the enhancement of the odds of TBI between the youngsters. These alliances necessitate additional research.

931 IMPLEMENTING SAFETY CULTURE IN TEACHER EDUCATION

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Background During the past few years the incidents of extreme violence and the increase of unintentional injuries and accidents have created situations where new safety procedures are needed. Safe learning environment should be a safe working environment for teachers. According to the target programs and visions, safety and wellbeing can be seen as basic values of the society.

Objective The New National core Curriculum contains broad-based competence issues such as “Looking after oneself, managing daily activities and safety”. The renewed curricula also includes practical safety issues such as knowing the basic safety signs and symbols, conducting appropriate behaviour in traffic and avoiding dangerous situations. The renewed curriculum sets new challenges also for teacher education. There is a need for new teacher's safety competence with knowledge and attitude but also the practical skills.

Results The curricula for the University of Turku, teacher education in Rauma unit were renewed. The new teacher education curricula include safety and security issues such as safety competence and school subject didactical safety as well as safety in practical training. As a part of their studies the prospective teachers participate to educational lessons or debates, safety walks, fire-drills and monitoring of unintentional injuries. This is preparing the teachers to act safely when working at the school.

In addition The Developing Network of Safety in Schools (OPTUKE) has been established. The aim was to advance a wide, systematic and open safety culture in schools as well as to support the process of making safety culture more visible with the help of a pedagogic point of view on safety.

Conclusions These measures strengthen prospective teachers' safety competence, resilience and ability to respond in the emergency situations

932 PREVENTING SOCIAL EXCLUSION WITH VOLUNTARY FIRE DEPARTMENT TRAINING ACTIVITIES

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Preventing social exclusion with voluntary fire department training activities

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Background Social exclusion among youth is one of the major social problems in Finland. Therefore it is seen as the biggest threat to internal security. A low level of education, a lack of hobbies and a lack of sufficient skills increase the risk of becoming excluded from the labour market and from society. Moreover, inherited problems, such as transgenerational social exclusion, are seen as relatively new and worrying phenomena in Finland.

Objectives The Yli Hyvä Juttu –program is an early intervention, where at-risk children and young people are directed to participate in interesting free-time activities at a local voluntary fire department. This is done in collaboration with the local authorities, such as social, youth and educational services. The target groups are children and young people between the ages of 7 and 17, especially those who have been antisocial, lonely or in need of boundaries. A study of the possibilities of the program was carried out among the youth trainers and social workers. The presentation will show the forms of activities as well as the results of the latest outcome study of the possibilities of Yli Hyvä Juttu working model.

Results Through the voluntary fire department's training activities, children and young people learn firefighter skills and other safety activities. Youth trainers in fire brigades are educated to meet the possible special needs of young persons. Also group dynamics such as team control and team spirit are taught to the trainers.