

The main violence occurrence place against infant was home. Home and public residential institution were the main VAC occurrence places for 1-4 years old children, and school was the main place of violence against the children over 5 years old.

Conclusions The declining death rate of VAC may be related to the social benign development. The related child protection laws and regulations should be implemented further and the prevention programs targeting the domestic violence and the school violence should be prioritised.

470 ADVERSE CHILDHOOD EXPERIENCES STUDY AMONG UNIVERSITY STUDENTS IN TURKEY

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Background There is a salient relationship between exposure to childhood traumatic events and negative health behaviours, and health status. The aim of this study was to identify the prevalence of adverse childhood experiences (ACEs) in a group of university students in Turkey and to evaluate the association of ACEs, with some health consequences including health risk behaviours.

Methods This is a descriptive cross-sectional study. 2257 students of 5 universities in Turkey were enrolled into the study between the years 2012–2013. A questionnaire modified from the ACE Questionnaire developed by CDC and Kaiser Permanente was used in the study. The questionnaire includes 53 questions on sociodemographic characteristics, household dysfunction, childhood maltreatment, health risk behaviours, somatic complaints and health status.

Results 47.9% of the 2257 respondents were male and 52.1% were female. The mean age of respondents was 20.1 years. The overall prevalence of childhood physical abuse, sexual abuse, emotional abuse, emotional neglect and physical neglect was 21.1%, 7.9%, 9.8%, 8.8% and 5.7% respectively. 5.2% of respondents had divorced or separated parents. The overall prevalence of depression or suicide attempt, problem alcohol use, history of street drug use and involvement in crime or imprisonment in household members was 9.3%, 6.4%, 3.4% and 10.3% respectively. The ACE scores indicate that half of all respondents had a history of at least one ACE. ACE score was positively associated with health risk behaviours. The risk of smoking, harmful alcohol using and drug using increases dependently on the ACE score. Some health problems particularly emotional problems were associated with ACE score of the participants.

Conclusions This study suggests that ACE prevalence, health risk behaviours and certain health problems are high in a group of young adults in Turkey. The data from this study does not only provide information about the magnitude of the problem but also evidence that underlines the need to prioritise child maltreatment besides.

471 THE FAMILY HEALTH, FUNCTIONING AND CHILD MALTREATMENT RISK OF FAMILIES EXPECTING A BABY

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Background The purpose of this study is to describe the family health, functioning, social support and the child maltreatment risk and associations between them in families expecting a baby. It is crucial for welfare of children, to find families needing special support before the pattern of maltreatment has been developed within the family.

Methods The child maltreatment risk in families was measured using the Child Abuse Potential Scale (CAP). Health, functioning and social support were measured using the Family Health, Functioning and Social Support Scale (FAFHES). Data were collected from mothers and spouses at 30 weeks of pregnancy. Data were analysed by multivariate logistic modelling for explaining the child maltreatment risk level of families and for examining the associations between health, functioning, social support and the risk level.

Results Data included 380 families, 136 of them were expecting their first baby and 78 families had an increased risk for child maltreatment. Heightened risk was associated with the age of the spouse, the mother's education, the mental health problems of the spouse's father, the mother's concern about her spouse's drinking, and the mother's difficulties in talking about the family's problems. Child maltreatment risk was associated with family functioning and health. Families with risk received a little less support from maternity clinics.

Conclusions Families with child maltreatment risk and related factors were found. This knowledge can be applied for supporting families both during pregnancy and after the baby is born. The research continues as a part of Family Violence Research Project, by assessing the possible changes in family situation, while the baby is about 12 months of age.

472 EFFECT OF SIBLINGS IN A BELGIAN SURVEILLANCE SYSTEM OF CHILD MALTREATMENT: COMPARISONS OF SEVERAL STATISTICAL METHODS

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Background Over time, the circumstances encountered in case of child maltreatment, can be quite complex and then, can lead to methodological questions for the analysis of the data. Based on data coming from 395 children hospitalised, alone (66.1%) or in siblings (33.9%), in a paediatric ward between 2007 and 2012 for mistreatment or because of a severe risk of mistreatment, the aims of this study were to quantify the degree of similarity between sibling members, to study the differences between children hospitalised alone or with siblings and to compare four statistical methods for the analyses of the associated factors of mistreatment.

Methods To quantify the degree of similarity between sibship members, the Snijders and Bosker intracluster correlation coefficient was calculated and the statistical methods used were the logistic regression and GEE, both without and with robust standard error.

Results Almost all intracluster correlation coefficients were large, meaning that the sibling's members have a higher degree of similarity between them. The odds ratios were not exactly the same between the two models and the robust standard errors were almost always higher than the model-based standard errors in both logistic and GEE models leading to wider confidence intervals.

Conclusions Because many of the intra-siblings correlations observed were relatively strong, the failure to take this cluster dependency into account had a substantial effect on the statistical analyses. Methods taking into account the cluster dependency are widely available in statistical software and strongly recommended.

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473 IRANIAN ROAD TRAFFIC INJURY PROJECT: ASSESSMENT OF ROAD TRAFFIC INJURIES IN IRAN IN 2012

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Background Road traffic injuries (RTIs) are the second leading cause of mortality and the first cause of disability adjusted life years (DALYs) in Iran. This study investigated the status of RTIs in Iran.

Methods All traffic accident data for the one-year period from March 2011 to March 2012 recorded in the national traffic accident database was investigated. The information included demographic data specific to road traffic accidents (RTAs) and injuries. The data was summarised and presented using the distributions of all components.

Results There were a total of 452192 RTAs with 252246 victims in the one-year period. The highest percentage (47%) of these was in the 15–30 year age group. Men constituted 78.4% of those involved in RTAs. Most RTAs (73.2%) took place between 6 am and 6 pm. The province of Semnan had the highest annual incidence rate of RTIs and Alborz had the lowest. The majority of RTAs (66.7%) occurred within the city roads. Although the levels of non-fatal injury were similar within the city roads and outer them, mortality was 3.1 times higher outer the city roads.

Conclusions This study confirms that the number of RTIs places a heavy burden on the Iranian population, especially on young men. Comprehensive strategies and policies must be implemented for effective prevention of road accidents in Iran.

474 ROAD TRAFFIC INJURIES AND DEATHS AND THEIR RISK FACTORS IN MONGOLIA

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Background Worldwide, the number of people killed in road traffic accidents (RTA) each year is estimated at over 1.2 million, while the number of injuries reaches as high as 50 million. Low- and middle-income countries account for 91 percent of the total RTA fatalities. In Mongolia the number of road accidents, crimes and road safety violations is on the increase and it is forecasted that this trend will continue in the future.

Methods To identify the risk factors of road accidents and the characteristics of victims involved in road traffic accident and crimes (RTA&Cs), 25 percent (4000) of the investigation forms collected by the Police Department on RTA&C were randomly

selected and analysed using descriptive and advanced statistics methods.

Results The victims classified as passengers were more likely to be in urban areas and the rate of road crashes caused by alcohol is significantly different in rural and urban areas. In rural accidents, drunk driving was twice as common and seat belts were 50 percent less likely to be worn. Over 50 percent of deaths and injuries from accidents are among young adults in the age range of 19–39 years. The gender ratio of victims is 6:4, with males in higher numbers. Males in rural areas have higher percentages of moderate and serious injuries occurring than in urban.

The logistic regression analysis showed that the statistically significant risk factors of injuries were alcohol consumption and failure to stop the vehicle. The main causes of death were alcohol consumption, excess speed, vehicle defects, driver's negligence, failure to keep distance and excess loading.

Conclusions The age, sex, drunk driving, seatbelt use and type of participation in traffic were significantly different among victims by location. The statistically significant risk factors of injuries in RTA&Cs were; the fault of pedestrians, alcohol consumption and failure to stop the vehicle and risk factors associated with death were; alcohol consumption, excess speed, vehicle defects, driver's negligence, failure to keep distance and excess loading.

475 FATAL OCCUPATIONAL INJURIES IN NORWAY: SURVEILLANCE DATA ARE BIASED AND UNDERESTIMATED RISK

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Background The Norwegian Labour Inspection Authority (NLIA) compiles and publishes statistics on fatal occupational injuries. Other institutions also register such information on a national level: Statistics Norway (SN) (from Cause of Death Registry (CDR), recently transferred to the Norwegian Institute of Public Health), the National Insurance Administration (NIA) and Finance Norway (FN) (from private insurance companies). The aim of this study was to examine completeness and quality of NLIA statistics, and see if use of additional sources could improve surveillance of risk.

Methods Residents in Norway have a unique personal identification numbers. This was used to compare cases of death from occupational injuries 2000–2003 registered in NLIA, NIA and FN – with information in CDR.

Results NLIA had registered 171 deaths from occupational injuries 2000–2003. 75 more deaths were identified from the three other sources. Of all the 246 deaths, NLIA had information on 171 (70%), NIA 158 (64%), SN 141 (57%) and FN 50 (20%). NLIA was most complete, but completeness varied between industries, from 24% for Public administration and defence, compulsory social security to 81% for Construction (Standard Industrial Classification (SIC2002)). Completeness also varied according to external cause of death, and was particularly low (32%) for transport accidents with car (ICD-10 V4). All 246 deaths were found in CDR, but due to incomplete information in death certificates, only 57% were identified as occupational injuries.

Conclusions The NLIA registry was most complete, but biased, and grossly underestimated risk in some subgroups.