

**Conclusions** Repeated practice in a simulated pedestrian environment helps children learn aspects of safe and efficient pedestrian behaviour. Six twice-weekly training sessions of 45 crossings each were insufficient for children to fully reach adult pedestrian functioning, however, suggesting longer or more intense training may be needed. Future research should continue to study the trajectory and quantity of training needed for children to become competent pedestrians.

## Parallel Sessions Monday 19.9.2016 14:30–16:00

### Preparedness and Resilience

#### Parallel Mon 2.1

#### 123 PREPAREDNESS AND REGIONAL DIFFERENCES IN FINLAND

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**Background** Finland is sparsely populated country where infrastructure varies between urban and rural regions. Safety and security services are part of the local infrastructure and provided by the state and local municipalities. Hypothesis is that regional differences, for example lack of rescue and security services in rural regions, has affected preparedness culture and injury prevention among population. Research is needed to define the essence of local resilience.

**Methods** The research examines regional differences by using data from two separated surveys (1. N = 3000 and 2. N = 1000). The data have been collected on 2015. Analysing data by using statistical methods it's possible to reveal differences, based on regions, among population.

**Results** There are a significant differences between rural and urban population. Compared to cities most of the Finns rates countryside more safe and secure place to live. Especially those who live in rural area considers countryside safer place to live. In rural areas population also strongly believes, compared to urban population that neighbours are providing assistance in case of emergency. In rural areas population is more prepared to manage in emergency conditions. In rural areas rescue and security services are less provided in urban environments. However results reveal that services are seen as important as in urban areas even supply of services is weaker.

**Conclusions** These results reveal that population in the rural areas have higher level of self-preparedness than population have in urban areas. Lack of rescue and security services may be one of the key factors to enhance self-preparedness.

#### 124 DISASTER PREPAREDNESS OF PRIVATE SOCIAL SERVICES CALLS FOR COOPERATION WITH THE PUBLIC SECTOR

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**Background** Global warming increases the amount of disasters. The impacts of the phenomenon on social, economic and

ecological environment are, thus, greater than before. Finland is not situated in a very disaster prone area, however, hazardous storms are not unknown to the country. Consequences of disasters are worst for people who are also in normal life more vulnerable, thus, we need knowledge how these population groups have been protected in case of disasters. Disaster preparedness is obligatory for municipal social work and services. The legal obligation does not, though, apply to the private sector. In Finland one third of the social services are produced by private organisations and their responsibility of preparedness planning should be agreed on while purchasing the services.

**Methods** In our study we explored private social service organisations' adoption of mitigation activities after heavy storms in 2013 and the preparedness measures taken. We sent a questionnaire to all private social service organisations producing residential care in Finland. SPSS descriptive statistics were used to analyse the data. Majority of the clients in these services were the elderly, but included also disabled, clients with mental health and substance abuse disorders, and children taken into care.

**Results** Our findings showed that the storms had had impacts on the daily activities of nearly one fourth of the service producers. The major impacts had been to energy supply. Various measures were taken to mitigate the effects, though minority had to evacuate their clients. Only 10 per cent of the respondents reported that preparedness planning was a requirement agreed on with the service purchaser.

**Conclusions** The most vulnerable to disasters are people dependent on others, which most often include those in residential services. Consequently we recommend the service purchases to include private social work and services in their disaster preparedness activities.

#### 125 IMPROVING CRITICAL INFRASTRUCTURE RESILIENCE BY IDENTIFYING VULNERABLE INTERCONNECTIONS

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**Background** Critical infrastructure (CI) covers the structures and functions that modern societies require to operate continuously. Failures in these infrastructures may cause substantial undesired consequences in other services due to the high degree of interconnectivity of services. Therefore the continuous operation of these services is essential even during a severe failure situations. This study proposes an approach for identifying the vulnerable interdependencies between critical infrastructure (CI) networks so that the resilience of the CI can be improved. The study focuses on the electricity distribution, telecommunications and IT infrastructures.

**Methods** The study was conducted during the years of 2014 and 2015 for National Emergency Supply Agency in Finland. The study included six workshops where the material was collected based on threat scenario and verified by the participating CI companies that constitute the regional preparedness committees.

**Results** In order to find the potential vulnerable interconnections the following approach was introduced: a) collect and structure expert knowledge related to essential activities and failure types, b) analyse the data and create causalities, c) model the relevant influence chains and d) identify the local preparedness requirements. The approach assist also in identifying and creating decision support analysis such as geographical vulnerability analysis.