

may explain the inconsistent with previous studies, and further exploration for other reasons was warranted.

**Conclusions** The health impact of occupational upper limb injury are multiple aspects, including psychological, return to work, and quality of life. Further studies with longitudinal follow-up are needed to further elucidate their associated risk factors in different stages post-injury, which could be useful for prevention of workers' long-term disability.

### P.3.10 CAUSES AND CONSEQUENCES OF WORK ACCIDENTS IN ESTONIAN AGRICULTURE

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**Introduction** Work accidents (WA) in agriculture are a problem all over the world. There are over 1,3 billion agricultural workers, that counts more than 50% of all the worlds' workforce. Even if the most of work tasks become more automated, farmers, family members and farm workers are facing risks at work that are higher than in most other occupations. Many accidents involve the handling of machinery or animals. The costs of WAs are increasing, exhausting national economy as a whole. The aim of this study is to analyse the main causes and consequences of WAs in Estonian agriculture.

**Method** The database of accidents in agriculture (2008–2017) has obtained from the Estonian Labour Inspectorate. WAs statistics is based on official reports of employers. Causes and consequences including injury severity, type and body region are described in the present study.

**Results** The main cause of WAs in agriculture is disregarding of safety requirements (28,9%), whereas more than half of cases remain unclear. Loss of control over animals or machinery (33,4%), falling and slipping (21,5%) and an attack or an assault by cattle (15,8%) are the main activity-based reasons of WAs. During the last decade the most were minor injuries (72,8%). By the type of injury most often wounds and superficial injuries (40,4%), bone fractures (25,6%) and concussion or internal injuries (16,2%) have been registered. Upper and lower limbs (35,7% and 33,6%) were the most often injured body regions.

**Conclusions** Agriculture is a sector with high accident risks, where injury rate shows steady tendency to increase. It is important to pay more attention on improvement of safety culture and prevention of work accidents in agriculture.

### P.3.11 IMPLEMENTATION OF COMMUNITY-BASED OCCUPATIONAL HEALTH PROGRAMS FOR INFORMAL WORKERS IN INDONESIA

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Informal workers account for 60% of workforce in Indonesia. Most do not have access to occupational health and safety (OHS) services. The study aims to explore the implementation of community-based OHS program consisting of OHS post and cadres (referred to as UKK program) among informal workers in rural areas in Indonesia. This study was an implementation research using focus group discussion (FGDs) and key informant interviews (KIIs) to workers, primary health care (PHC) staff, and provincial and district program managers. Thematic analysis was used to identify barriers and enablers of UKK implementation at intrapersonal, interpersonal, community, organizational and policy level.

A total of 10 FGDs with informal workers from different areas of occupation, two FGDs with PHC staff and 6 KIIs with program managers were conducted. Informal workers faced various occupational risks yet personal protective equipment were rarely available or used. OHS was perceived as important, however, participation in UKK was low because of lack of time and information. There was lack of workers empowerment, resulting in top-down planning of activities by PHC. Informal workers expected PHC health workers to provide OHS services rather than UKK cadres. Not all PHCs have implemented UKK. Few programmers were trained on OHS. The program was assigned low priority and resource allocation by PHC and District Health Office. The absence of OHS regulation for informal workers offered little incentive for government departments to implement OHS programs and services for informal workers.

Informal workers had unmet needs of OHS. Substantial efforts are needed to implement UKK, especially investment in financial and human resources. UKK establishment should be focused at workplace with the highest occupational risks. Technical capacity of programmers responsible for health promotion and OHS should be improved. Local policy on social protection and OHS services for informal workers should be developed.

### P.3.14 OCCUPATIONAL HAZARDS AMONG MIGRANT WORKERS: IMPACT ON THEIR FERTILITY AND MENTAL HEALTH

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**Background** More than 1,750 Nepalis leave the country daily for foreign employment. A total of 6 39 167 aspirant migrant workers left for various countries in last fiscal year 2016/17, up from 418,713 in previous FY 2015/16. Most the migrant worker destination is hot humid climate countries for occupational work especially chemical, biological hazards.

**Methods** It is the retrospective study among return migrant male 100 case reports with non-migrant control reports in (2016 Jan–2018 Nov.) years. Data of Semen analysis reports (questionnaire for duration of infertility, sperm count, percentage of normal sperm morphology, percentages of sperm), BMI, mini mental health examination and family details data was collected. Descriptive statistics, analysis of variance, and correlations were conducted using SPSS 21.0 and Epi info