with the risks of MSDs of different bodily sites in general employees of Taiwan.

Methods Participants were representative employees aged 25–65 years from a nationwide survey of 2016. Self-administered questionnaires were used to obtain information concerning work-related ergonomic and psychosocial factors, employment conditions, and MSDs of different bodily sites over the past 12 months.

Results A total of 5242 male and 4164 female employees was included. Workers who were older, with lower education levels, being manual skilled or low skilled workers, worked in the construction industry, and being employed in small-sized enterprises had higher risks for MSDs, and the most common bodily site were the neck/shoulders, low back, and wrists/hands. Psychological demands, workplace justice and ergonomic factors were significantly associated with MSDs. Furthermore, results of separate regression models performed for MSDs of different bodily sites showed that higher psychological demands and lower workplace justice were associated with MSDs of the neck/shoulders to a greater extent than other work-related factors, while whole-body-related ergonomic factors and hand-related ergonomic factors were more greatly associated with MSDs of lower back and wrists/hands, respectively.

Conclusions MSDs were more prevalent in workers with lower socioeconomic positions. Differential contribution of specific types of work-related ergonomic and psychosocial factors to the risks of specific types of MSDs should be taken into consideration in the management of MSDs in the workplace.

P.3.18 ASSOCIATION BETWEEN NIGHTSHIFT SCHEDULE AND MENTAL HEALTH SYMPTOMS AMONG FACTORY WORKERS: A CROSS-SECTIONAL STUDY

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Introduction Nightshift is one of the major issues in work-time schedule. The association between working at night and the occurrence of mental health symptoms has been a subject of considerable debate. This study aimed to look at the association between working at night and mental health symptoms, and mediating factors to this association.

Methods This study looked at a database of 500 factory workers that originally investigated hazard exposures and occupational health of workers in export processing zones in the Philippines. Associations between shift schedule and probable confounders with frequency of occurrence of mental health symptoms were studied using chi-square test of association. Multiple logistic regression was used to analyze the overall association.

Results The study showed that work schedule, work load and occurrence of mental health symptoms are associated with night schedule. The crude odds ratio for the association between shift schedule and frequency of occurrence of mental health symptoms is 2.13 (0.77–5.81). This means that without adjusting for confounders, those who work in the evening are 2.13 times more likely to have frequent occurrence of mental health symptoms as compared to those who work in the morning. Specifically, among females, those who work at night are 2.97 times more likely to have frequent occurrences of mental health symptoms compared to those who work in the morning.

Controlling for age, sex, educational attainment, tenure, work load, and exposure to occupational hazards, those who are working at night are 2.13 (0.79–5.71) times more likely to have frequent episodes of mental health symptoms compared to those who work in the morning. Those who are frequently exposed to occupational hazards are 5.78 (1.17–28.71) times more likely to have frequent mental health symptoms.

Conclusion The study has shown that among Filipino factory workers, nightshift work is associated with mental health symptoms.

P.3.19 EFFECT OF OCCUPATIONAL WORK AND SAFETY ISSUES ON ROAD CRASH INJURIES IN THE PHILIPPINES

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Background This study looked at occupational road crashes and work schedule among truck and bus drivers in comparison to other drivers and motorists on the road of Metro Manila which is one of the cities globally with a high traffic density. One of the most precarious work occupations is driving especially buses used for public transportation, and trucks for commercial activities. This is most astute in the metropolis.

Methods The study used meta-analysis of previous studies conducted, grey literature, government statistics, and validation through key database research in concerned national government agencies involved in road traffic from 2010–2015.

Results The study found that the in terms of the number of public utility vehicles registered in Metro Manila (2015), 51.27% were buses and 20.21% were trucks. Majority of the drivers worked more than 12 hours a day. In terms of time and peak of accidents, it is alarming to note that about 35% of the road crashes occurred from 22–23 gmt (2010–2015), and 30% from 23–24 (2010–2015) gmt. Human error accounted for the overwhelming cause of road crashes such as drunk driving, beating the red light, sleepiness, accounting for 99.52% in 2012, 99.47% in 2013, 95.33% in 2014, and 97.19% in 2015. Majority of the drivers worked over prolonged hours on the road that may cause fatigue and sleepiness which are the highest risk factor to road accident based on the study.

Conclusion The study has shown how risky driving is as an occupation especially due to the work schedule and work issues. The study suggests developing better information, education and communication campaign as well as policies particularly on work conditions favorable to bus and truck drivers, and likewise, considering work schedule in road safety among drivers which composes one of the risky occupations.

P.3.20 HOSPITALIZATION OUTCOMES OF ROAD TRAFFIC INJURY PATIENTS IN THE LARGEST HOSPITAL IN THE PHILIPPINES

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Background Road traffic injuries claim are among the leading causes of preventable death, claiming around 7000 lives every year. Accordingly, injuries to the head and neck are the main causes of death and disability.

Objective This aimed to identify the determinants of prolonged length of stay in the hospital among victims of road traffic injury.

Methods A retrospective cohort study was conducted. Socio-demographics, accident details (e.g. time of injury, type of victim, other party to the accident, time to admission, intoxication, and helmet use), the Glasgow Coma Score upon admission, head injuries, torso injuries, injuries to the limbs, and length of stay) were abstracted from the patient charts and cleaned accordingly. The predictor model for the determinants of prolonged length of stay in the hospital was built.

Results There were 427 road traffic injury victims that were admitted during the time period considered. The distribution of the time to admission differed between those who have a short length of stay and long stay differed significantly ($p < 0.01$). Glasgow coma score, type of victim, mortality, age, and sex were found to be important determinants of prolonged hospital stay. Those who have a low Glasgow Coma Score (i.e. more severe cases) were found to be 2.77 (95% CI: 1.13–6.91) times more likely to stay longer in the hospital as compared to those who have high Score. There is strong evidence for this association. Passengers are 78% (95% CI: 0.06–0.84) less likely to stay longer in the Hospital as compared to drivers. There is also strong evidence for this association.

Conclusion Based on the predictive model from 427 traffic injury patients, determinants of prolonged hospital stay were identified. Consequent policies and programs should address this.

P.3.21 PREDICTORS OF HEALTH PERCEPTION AMONG WASTE PICKERS IN LANDFILL SITES IN JOHANNESBURG MUNICIPALITY, SOUTH AFRICA

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Background In South Africa, waste is disposed in landfill sites where waste pickers collect recyclable waste. These informal workers are exposed to various health hazards. However, seeking health care is often determined by the individual's perception of the status of their health. The objective of this study was to find predictors of health perceptions among waste pickers in Johannesburg Municipality, South Africa.

Methods A cross sectional study was conducted among waste pickers aged 18 years or older, working in major landfill sites in Johannesburg. Information on possible risk factors for health perception were collected. Health perception was defined as very good, good, fair, and poor. Ordinal logistic regression model with landfill sites taken as a cluster variable was done to find factors associated with health perception.

Results A total of 361 participants were included in this study. More than 70% of them were males. Their median

age was 31 years (interquartile range (IQR): 27–39). Ever smoked (OR: 1.72; 95% CI: 1.112–2.665), mental ill health risk (OR: 1.87; 95% CI: 2.849), chronic diseases (OR: 2.34; 95% CI: 1.479–3.689), and history of infectious diseases (OR: 2.07; 95% CI: 1.779–3.635) were all statistically significantly associated with increased odds of reporting poor health. Participants who reported an injury were less likely to report poor health (OR: 0.53; 95% CI: 0.307–0.911).

Conclusions Predictors for reporting poor health among waste pickers were smoking, chronic and infectious diseases, and mental health risk. However, injuries from cuts showed a decreased odd of reporting poor health. Mitigating these risk factors including health promotion as well as improving primary health care may improve perceptions of good health among waste pickers in SA.

P.3.23 INCIDENCE RATE AND RELATED FACTORS OF OCCUPATIONAL INJURIES AMONG VETERINARIANS

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This cross-sectional descriptive study was conducted to determine the incidence rate and patterns of occupational injuries and to determine the factors which related to occupational injuries among veterinarians in veterinary clinics in Bangkok. The self-administered questionnaires were distributed to 395 veterinarians who had more than one-year experience in each veterinary clinic. Data were analyzed using Chi-square test, Fisher's Exact test and Independent t-test.

The results found that Incidence rate of occupational injuries among these veterinarians were 280 events per million man-hours and 56.22 times per 100 full-time veterinarians. The most site of injury was hand. Abrasion and laceration were the most common injuries. Dogs and cats bite were the most causes of injuries. Diagnostic process was the major activity associated with injury. Sixty-nine percent of this sample required physician treatment and fifty-six percent needed work restriction. Thus, the mean of work days lost was 3.45 days. Factors related with occupational injuries were age (p -value <0.001), year of graduation (p -value=0.003), BMI (p -value <0.001), allergic problem (p -value=0.001), sleep less than 7 hours (p -value=0.022), drowsy pills (p -value=0.003), exercise (p -value=0.024), type of practice (p -value <0.001), year in practice (p -value <0.001), working time more than 40 hours per week (p -value=0.035), safety training required (p -value=0.038), careful animal restraint (p -value=0.036), always using safety bin (p -value=0.01), adequate assistants (p -value=0.01), adequate animal restrained equipment (p -value <0.001), and adequate ambient light (p -value=0.018). According to the results from this research, the incidence rate of occupational injury among veterinarians could be reduced by appropriated adjustment of working and resting period, increasing awareness and knowledge transfer experience. Moreover, working area should be properly prepared.