

SDNN was shift work (Beta:  $-16,68$ ; 95% CI:  $-30,69$  to  $-2,67$ ).

**Discussion** Although Mexican healthcare professionals frequently suffer from precarious employment conditions, shift work was the main predictor for lower HRV in our study population.

### 1528 WORKER'S SUPPORT PROGRAM FOR URBAN VIOLENCE IN A BRAZILIAN LOGISTICS COMPANY

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**Introduction** Violence in a developing country can be very common and particularly increases in an economic downturn. In a logistics company employing hundreds of drivers who sometimes face urban violence, this problem can be a great challenge for the occupational health as well as the security teams.

**Methods** A program to assist workers in dealing with violent incidents they encounter while working was developed in 2008. This program was developed to address legal, security, psychological, and occupational health requirements of these workers. The psychological support aspects of the program are accomplished by phone within 24 to 48 hours after the incident, with follow-ups after 15 and 30 day period.

**Results** Workers involved in violent incidents are provided with a company attorney when reporting the incident to the police. They also receive a phone call from a psychologist. The psychologist provides support, listening to the workers description of the incident, administering a psychological assessment, and then referring the worker for further therapy or to a psychiatrist when appropriate. Commonly, such incidents do not have physical ramifications for the worker but instead often have psychological consequences that are more difficult to measure. The same worker can experience several such assaults. Psychological issues can manifest with just one event, but there are some workers who have been involved in dozens of these events.

**Discussion** This support program for workers is important and necessary to help them to cope with violent incidents even when considering the ideal solution of preventing such incidents from occurring in the first place. The challenge for occupational health professionals is how to mitigate the consequences for the involved workers who are otherwise subject to potentially severe psychological and physical injuries. This program helps by opening a new communications channel and support avenue to assist the company in addressing such complex and delicate situations.

### 1533 LONGITUDINAL PSYCHOLOGICAL SUPPORT AFTER OCCUPATIONAL VIOLENCE IN A BRAZILIAN LOGISTICS COMPANY

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**Introduction** Violence at work is a psychosocial risk that safety and health occupational teams have to deal with nowadays. A

program to assist workers in dealing with violent incidents was developed in 2008 in a national logistics company to address legal, security, psychological, and occupational health requirements for workers. The psychological support aspects of the program are accomplished by phone within 24 to 48 hours after the incident, with follow-ups after 15 and 30 day periods. The objective of this study was to gather data relating to psychological support requirements of workers who had been victims of violent episodes in the course of their work, typically during the theft of their cargo.

**Methods** A longitudinal study carried out in a logistics company located in São Paulo, Brazil, during 2014–2016. Data was gathered from company notifications of violent incidents relating to theft of cargo in 5 regions of the country.

**Results** The average number of violent events during the three years of the study did not vary significantly from year to year and averaged 1833 events per year. The greatest frequency of events occurred during the second half of the year (53.9% average). The regions of the country with the highest percentage of events were the southeast (68.3% average) and the least was the north (2.3% average). Requests for psychological support rose by an average of 69.0% during the study period. About 16.0% of events resulted in support requests in 2013, while 43.6% of cases generated support requests in 2016. The region generating the most psychological support requests was the southeast (33.0% average) and the least was the northeast (22.7% average).

**Discussion** The data demonstrated that while the overall number of incidents remained consistent, the number of support requests from workers rose significantly during the study period. We infer from this data that the support program is viewed by the workers as being an effective tool to deal with violent incidents. It is necessary to discuss regional strategies to help increase worker use of the program. It is also recommended to analyse the impacts of violent episodes on workers and whether the psychological follow up reduces the damage to their mental and physical health.

### 1298 ERGONOMIC ANALYSIS OF ELECTRONIC SPORTS PLAYERS – UNRAVELLING RISKS – POST-GRADUATION IN ERGONOMICS

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**Introduction** Performed Ergonomic Analysis of Work (AET) with professional players of Electronic Sports (mode: League of Legends). It is known through social networks, interactive newspapers and television broadcasters that the modality is on the rise and that it also brings some evidence and difficulties related to pain in the wrists of athletes.

The pains in the fist are in the area of Physical Ergonomics, but can not be considered the origin of the cause. We also know that the work tool of the players is the computer, so the second point to be studied is in the field of Cognitive Ergonomics, where we approach topics related to decision making, memory, reasoning, perception, human-machine interaction, reflexes. Ergonomics has its three established pillars: Physical, Organisational and Cognitive

Ergonomics, and we have done the work focused on this perception of the existing risks.

**Objective** It is understood ergonomics as adaptation of work to man, application of scientific knowledge necessary to design tools, machines and devices that can be used with maximum comfort, safety and effectiveness (FALZON, 2007). The purpose of the work is not different from those principles that the author puts forward.

The proposal, in addition to providing a work environment that minimises problems related to wrist pain, understands the cognitive processes present in the athletes' daily lives.

**Analysis methodology** For methodology we will use the points predicted in the AET: demand, analysis of the task, analysis of the activity, diagnosis, proposals and implementations. Methods by observing and elaborating questions pertinent to what you are encountering. Application of ergonomic tools and installation of Mouse Metre software, measuring the intensity of clicks per second on the mouse (direct button and left button), mouse movement on the desktop, clicks on the keyboard. A questionnaire with 6 players was carried out. 3 perform gym and 1 practice race.

**Conclusion** The study aims to contribute to the community of electronic sports and ergonomics, because it is a relatively new area for the field of work, it is interesting that there is knowledge about the aspects related to the ergonomics involved in the activity of the athletes. The analysis is based on ergonomics as a whole (cognitive, organisational and physical) – and it was evidenced that for many hours sitting, in front of computer with inadequate posture (even by the body's need to modify positions for its comfort), keyboard use Intensely, and stare at the screen to perform the avatar commands correctly, with reflexes and at the right time.

It is noticed that almost 60% of the day of them they spend playing (they are seated during 13 hours of the day),

They perform wrist movements and very intense hands (both by typing and by clicking) and identify pains in the shoulders, forearms, wrists and cervical, most common on the side that use the mouse for the most part (dominant member). Players with their own chair feel less discomfort in the body, players with more complaints of pain are those who do not have support in the arm chair.

The cognitive part they discuss game strategy, in-game communication, decision-making to achieve in-game goals are in direct interactivity with the game interface (map, skills, goal time, gold conquered); Players may know part of the abilities of the 137 players available in the game – where each champion/player has an average of 5 skills – in a total of 500 skills, but there are no reports of player complaints about this seemingly idiosyncratic use of cognitive skills.

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#### THE DEVELOPMENT OF SLEEP AND SAFETY DECISION MAKING AMONG LESS EXPERIENCED/'YOUNG' TRUCK DRIVERS: A QUALITATIVE DESCRIPTIVE STUDY

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American truck drivers are at risk for sleep deprivation and subsequent increased risk for sleep – related motor vehicle crash. In spite of their significant risks, little is known about how truck drivers make sleep and safety decisions. The

purpose of this study was to describe influences on sleep and safety-related decision-making among a group of long-haul truck drivers.

The qualitative descriptive study focused on a purposive sample (n=10) recruited from truckstops, by word of mouth, and flyers posted at locations commonly visited by truck drivers. Semi-structured interviews were conducted with participants. All interviews were audio-recorded and transcribed verbatim prior to analysis. A cyclic approach to coding was used to develop and revise the code book. The process was repeated until themes were generated. Trustworthiness and credibility were enhanced by using reflexivity, an audit trail, and interpretive convergence.

Four general themes emerged from driver descriptions of influences of health-related decision making:

- individual driver characteristics
- key events,
- relationships with others, and
- company-level factors.

From analysis of the interviews, it was clear that individual driver characteristics, key events, personal and professional relationships, and company-level factors all influenced health and safety decision-making of this sample of long-haul truck drivers. An important finding was that drivers new to the profession ('young drivers') evolved over time as they gained experience to self-advocate for their sleep and safety – related health needs; and thus, made different sleep decisions.

Factors influencing health and safety decision-making must be considered when providing care and teaching to truck drivers. Involving family members and important others to assist in motivating truck drivers may be an effective strategy to positively influence health and safety decision-making. It will be especially important to target interventions to the less experienced ('younger') drivers. Findings from this study may be used to inform the development of educational materials and other interventions to positively influence truck driver health and safety decision-making, which could lead to a healthier transportation workforce and safer highways for the public.

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#### SELF-CERTIFIED SICKNESS ABSENCE AMONG YOUNG MUNICIPAL EMPLOYEES – CHANGES FROM 2002 TO 2016 AND OCCUPATIONAL CLASS DIFFERENCES

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**Introduction** Young employees have self-certified 1–3 day sickness absence (SA) more often than their older counterparts, but the burden of self-certified SA and its occupational class differences have only little previous evidence. We examined the changes in self-certified SA among young employees from 2002 to 2016 and the magnitude of occupational class differences during that period.

**Methods** All 18–34 year-old employees of the City of Helsinki, Finland were included (2002–2016, n=~11 725 per year). Employer's personnel and SA registers were used. Occupational class was categorised to four groups: managers and professional, semi-professionals, routine non-manuals and manual workers. Changes in the self-certified SA spells and days