The Influence of Sleep Quality, Safety Culture and Cabin Ergonomics on Work-Related Stress and Burnout of Bus Drivers in Lahore

Background

Health and working environment of a professional bus driver is comprised in low income countries such as Pakistan which leads to work-related stress and burnout along with excessive involvement in Road Traffic Crashes. Urban bus drivers in Lahore, the second most populated city of Pakistan, are continuously struggling to safely meet travel needs of its ever growing population and are often regarded as stressed and aggressive. Thus, this study investigates factors affecting their safe operations from health and work environment perspectives (e.g. sleep quality, safety culture) and measures their associated stress and BO level.

Methods

Sample of four forty nine public and transit bus drivers of the city are interviewed. The questionnaire contained three sections and used different subjective rating different based upon their past reliability. Stress is measured using Siegrist's Effort/Reward imbalance model and Burnout is measured using Copenhagen Burnout Inventory. For predictors, Pittsburg Sleep Quality Index is used for sleep quality while Global Aviation Network scale is used for safety culture assessment. Ergonomic design of the driver's workstation is evaluated using five self-constructed questions. Information related to socio-demographic and health factors (i.e. BMI) is also collected. Descriptive and regression analyses (both simple linear and logistics regression) are performed for determination of significant determinants and their associations.

Results

Results show the traces of stress in both groups (i.e. public and transit) which is emerged as physical and psychological health damaging factor. As drastic increment in stress is boosting burnout syndrome which is suspected more in public bus drivers as compared to transit drivers. Poor sleep quality (i.e. PSQI >5) along with overweight problem (i.e. BMI>25) is also found in both groups. Regression analyses further confirms their joint effect in instigating stress and burnout. However, safety culture and bus ergonomics are found to moderately effecting both cases. Among socio-demographic factors, low income level is found to be a dominant factor causing stress and burnout.

Conclusions

This research concludes that less recognition and focus on health factors and safety culture at organization level are significantly contributing to increased stress and burnout levels of drivers. Specifically, factors such as fear of pay deduction in case of not meeting timelines, prolong sitting on overused buses with lot of vibrations, temperature rise due to engine heat and to drive in a dense noisy traffic during hot summer days are badly affecting health and driving performances of drivers in the city.