

Introduction: Three selected major scales of the Job content questionnaire namely decision latitude, psychological job demands and social support at work have shown to be a valid and reliable tool to assess job stress in many occupational settings.

Objective: To assess the reliability and validity of the Sinhalese version of the selected three major scales of the JCQ among banking employees in Sri-Lanka.

Methodology: A nominal group procedure was followed to translate the original English version of the decision latitude, psychological job demands and social support at work, major scales of the Job content questionnaire into Sinhalese language. A Delphi process with experts from medical, occupational and psychology reached a consensus on face and content validity of the three selected major scales. A random sample of 225 middle level managers and operational staff employees in domestic commercial banks in Gampaha district was given the 22 item survey questionnaire to assess construct validity by exploratory factor analysis with Varimax rotation. Reliability was assessed by using Cronbach's alpha for internal consistency.

Results: Cronbach's alpha coefficients for decision latitude (0.71), social support at work (0.8) and psychological job demands (0.61) were within the accepted limits. Exploratory factor analysis showed six meaningful factors that could explain the three theoretical dimensions of Karask's demand-control-support model.

Conclusion: Sinhalese version of the three selected major scales of the JCQ are reliable and valid for assessing occupational stress in banking employees in Sri-Lanka.

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Solid Waste Segregation Promotion Program in Srirakul Vittaya School, Thailand

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Objective: To implement solid waste segregation promotion program (WSPP) in Srirakul Vittaya School, Thailand and to study the difference of sample group's knowledge, attitude and practice (KAP) towards solid waste segregation before and after WSPP.

Methods: The samples were 192 students in Srirakoolvittaya school. The KAP questionnaire was used as an instrument in this study. The difference of sample group's KAP towards solid waste segregation before and after WSPP was analyzed by statistically with paired t-test.

Results: The average quantity of solid waste in each day was 48.43 kilograms which classified into 4 types as general waste, vanished waste, paper, and plastic which was 22.66%, 35.92%, 15.76%, and 25.66%, respectively. After WSPP, the average quantity of solid waste in each day was 47.64 kilograms. The solid waste was classified to 4 types as general waste, vanished, plastic, and paper which were 43.67%, 29.75%, 17.42%, and

9.17%, respectively. Segregated plastic and paper were sold to junk shop which created outcome about 1,184 Bath/ month. Furthermore, the amount of solid waste which must be final disposed was decrease to 47.59%. The sample group's KAP towards solid waste segregation before and after WSPP had different with statistical significant at the level of 95%.

Conclusion: Solid waste segregation promotion program in school can reduce solid waste quantity to final dispose and created outcome to school. It is the alternative way for solid waste management in school.

FP-139

Identifying Determine Factors Related to Unsafe Act/Substandard Practices at Rig Process, in X Company, Pekanbaru, Riau, Indonesia, 2009

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In rig process, there are 7 type of hazards; chemical, biological, physical, ergonomic, psycho-social, kinetic, and mechanic. Still, with the high potential of risk and accident, it was found that many of the workers acting (behave) unsafely while doing their job. Such as; using improper equipment, not using personal protective equipment, horseplay. Related to Heinrich Theory (1931), 88 % of accident is caused by unsafe act and 10 % unsafe condition. DuPont (1988-1998), said that 96 % of accident is caused by unsafe act. Based on the fact that was found in workplace, the objective of this research is to identify what is the determining factors, related to unsafe act/substandard practices at rig process, in X company. This research concerns about related factors to unsafe act/substandard practices at rig process, in X company. It focus on personal and job factor (basic causes) Still, based on Domino theory, the first domino, which is lack of control (management system), is the main cause of the sequence of unsafe act/substandard practices. This is a qualitative research, using primary data (observation, interview based on International Safety Rating System and International Environmental Rating System), and secondary data (documents treasure, such as Standard Operating Procedure (SOP), Job Safety Analysis (JSA)) at rig process, in X Company. As the results, there are 5 main factors that related to unsafe act/substandard practices at rig process; social economy factor, knowledge factor (related to training quality), equipment/property factor, supervision factor, and management factor.

FP-140

Analysis of Dyslipidemia as Risk Factor of Hearing Loss in Mining Employees at District of Nuha, Luwu Timur Regency, South Sulawesi, Indonesia

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Objective: The purpose of this research is to determine whether the high lipid profile could cause hearing loss, without exposure to any source of noise. This research involved 124 male respondents, where 62 of them were classified as control group with normal hearing. Other 62 male were as case group with decrease hearing function without exposed by source of noise for four years.

The research method was observational with case control approach by carrying out the measurement of lipid profile and audiometric examination. Data was analyzed by SPSS software with Odds ratio Statistic test of 95% confidence limit.

The result of the research showed that there were a significant relationship lipid profile level towards hearing loss. Cholesterol total was a risk factor with Odds ratio 5.42, Triglyceride with odds ratio 11.18, High density lipid cholesterol has Odds ratio 1.583, Low density lipid with Odds ratio 15.5.

As conclusion this research confirm that dislipidemia alone may cause decrease of hearing level if lipid profile kept at high level for a long time. Low density lipid showed highest significant relationship with coefficient regression 11.254

FP-141

Treating Wastewater Containing Formaldehyde with Activated Sludge System

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Large variety usage of formaldehyde results in frequent contamination in wastewater causing environmental pollution. This study reports results on the biological treatment of formaldehyde using co-substrate mechanism, which required the additional biodegradable carbon source for bacterial respiration. In this study, sucrose was used as a supplemental carbon source. Three ratios of formaldehyde to sucrose, 1:1, 1:2 and 1:3, were investigated in comparison with a control set (without sucrose addition). An activated sludge system in the configuration of 5-litre sequencing batch reactor (SBR) was employed and operated with HRT of 24 hrs and SRT of 20 days, except in the control set. No sludge was wasted (SRT was uncontrolled) in the control set in order to maintain sufficient biomass concentration. The formaldehyde concentrations in the feed varied from 180 to 446 mg/l while those in the effluents were around 1 mg/l or lower. High efficiency of formaldehyde removal, even in the control set, should be possibly caused by both air stripping and biological degradation. The efficiencies of total COD removal were mostly higher than 90%, especially higher than 95% in those experimental sets with sucrose addition. Although there was no sludge wastage in the control, biomass concentration was almost constant throughout the experimental period, indicating of little biomass synthesis when formaldehyde was the only carbon source. The formaldehyde to sucrose ratio of 1:1 was recommended.

FP-142

House Condition and Bronchitis Asthma Severity in the Working Area of Health Centre of Marisa Pohuwato District

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Background: Health Office of Pohuwato 2006 report showed that amount of asthma bronchitis sufferer who visited Health Centre of Marisa in year of 2006 were 61 and it was the most among eight of health centres in Pohuwato District. House condition is one of some factors may influence asthma bronchitis severity. The aim of this study was to analyze relationship between house condition, include in house ventilation, sun lighting, room temperature, humidity, house density, and asthma bronchial severity.

Method: This study was observational by means of cross sectional study. The population were houses in working area of Health Centre of Marisa Pohuwato District, Gorontalo Province. Sampling was using purposive sampling with criteria of housing of asthma bronchitis sufferer which live in working area of Health Centre of Marisa Pohuwato District. There were 51 samples. **Result:** This study showed that there was relationship between ventilation, natural lighting, room temperature, room humidity, house density with asthma bronchitis severity ($p = 0.00$). **Conclusion:** It was conclude that there was relationship between house condition with asthma bronchitis. It was recommended to the society to improve house sanitation and to the government to give assistant of adequate house program to poor society.

FP-143

Neurobehavioural Effects of Inorganic Lead Exposure in Battery Workers in Selangor

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Introduction: Lead is predominantly used in the lead-acid batteries with estimated 76% of annual primary and secondary lead usage. Almost 95% of all adult lead intoxication is of occupational in origin. Early effects of lead on the central nervous system can be subclinical and test of neurobehavioural is one method to detect these effects.

Objective: To assess the neurobehavioural performances of battery manufacturing plant workers.

Methodology: This is a cross sectional study comparing the neurobehavioural effects of lead among 44 exposed and 33 non-exposed. Exposure was assessed through personal monitoring of exposure to lead; blood lead level was checked as a biomarker and symptoms and neurobehavioral outcome was assessed using standard