

ABSTRACT

Title: The relationship between mental workload and mental fatigue in service sector in Malaysia

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Abstract:

Service sector in Malaysia is a job considered exposed to high mental demand. Among activities of the service expected to give high mental workload are such as control room operator, telemarketer, and those who is in the transportation sector which can cause mental fatigue and consequently increasing accident risk. However, to what degree is the relationship between mental workload and mental fatigue is still unknown. To investigate on the matter, a survey has been carried out to 392 participants of selected service sector. Participants were categorized into 7 categories that is control room operator, telemarketer, office workers, front desk workers, academician, nurses and others. The survey results indicated that mental workload for all categories of work under investigated is above average (more than 60% of mean score). The results highlighted that high-performance demand is the highest score compared to other elements being investigated. Second highest score is high temporal demand followed by mental demand. The results also highlighted that nurses shows high performance demand (91.2%) followed by control room operators (84.6%) compared to other categories. In addition, academician shows high temporal demand (65.2%) and high cognitive demand (71.7%) compared to other categories. In addition, the results indicated that mental workload has strong correlation with higher performance demand, cognitive demands and temporal demands. The three dimensions related closely to task demand. The correlation model shows that there was significant correlation between overall mental workload and mental fatigue. To conclude, the above results highlighted that most participants under all categories are above average (more than 60%) for mental workload and mostly on average for mental fatigue results. Thus, the findings highlighted that the task demand of service sectors workers could be design using overall mental workload and mental fatigue regression model as to improve the design of the job.

Keywords: Mental workload, mental fatigue, performance demand, cognitive demand