Ergonomics study of stretcher for rescuer to lift drown body

ABSTRACT

Drowning is one of 10 leading causes of death in every region of the world especially in the picnic and recreation. Statistics from Fire and Rescue Department showed an average of 700 people drown each year in this country. There were also cases where casualty to rescuers during the Save and Rescue Operation (SAR). As the incidents increased, the task of rescuers and equipment used should be reviewed. Issue How to ease rescuer task and safely lift underwater drown body. Problem Statement Difficulties arise during lifting drown body from underwater to the surface due to certain circumstances. This involved safety to rescuers, process of rescuing and time consuming of the operation. Objective The objective of this study is to determine the efficient ways of lifting drown body based on rescuers preferences. From the results, new stretcher design parameters will be established. Method Thirty rescuers from two Water Rescue Teams namely PPDA Putrajaya and PPDA Shah Alam Branches participated in this study. They are 24 male and 6 female aged between 23 to 51 years with mean of age at 29.5 year and experienced in SAR. Instrument Questionnaires were used to identify factors contributed to success or failure of any SAR operation. Likert scale questions were used to measure their preferences. Data then processed using statistical software (SPSS). Results Findings shows that all respondents agreed that lifting method is the most significant factor affecting their task performance, safety and time consumes. Meanwhile 83.3% of them strongly agreed and 16.7% agreed the usage of proposed floatable stretcher to lift drown body in their future SAR Operations.

Keyword: Rescuer; Stretcher; Drown body; Task performance; Safety; Time consume