ASSESSMENT OF KEY COMPETENCIES FOR WORKPLACE HEALTH, SAFETY CONCERNS AND MINOR INJURY ACCIDENTS FOR BUILDING CONSTRUCTION SITES IN SRI LANKA

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IN

CONSTRUCTION PROJECT MANAGEMENT

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"This report was submitted to the Department of Civil Engineering of the University of Moratuwa in partial fulfillment of the requirements for the Master of Science in Construction Project Management"

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March 2023

DECLARATION

I certify that this report does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other university or institute of higher learning and to the best of my knowledge and believe it does not contain any material previously published, written, or orally communicated by another person or myself except where due reference is made in the text.

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Signature of Supervisor Date

Prof. Asoka Perera

DEDICATION

This report is dedicated to my all Teachers, loving Parents, Wife and my three daughters.

ACKNOWLEDGEMENT

I would like to offer my heartfelt appreciation to Prof Asoka Perera, a senior professor in the Department of Civil Engineering at the University of Moratuwa, and now in Transport and Logistic Department for his advice and assistance during my research study. His knowledge and experience were the driving forces behind the creation of this paper. This research would not have been possible or successful without his unwavering support.

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I liked to remember the commander of the Navy, director naval and civil engineering staff for extended support given on me. Also, I would like to thank my wife and family for the inspiration all the time. I'd also like to express my gratitude to my family for allowing me to be preoccupied with the numerous tasks required to perform this research.

I hope the conclusions of this article will be useful for the construction project management discipline and will provide insight into further research on the subject.

ABSTRACT

Sri Lankan construction industry is experiencing a boom. The lack of skilled labor in the construction sector causes numerous problems for projects. Many medium-sized construction projects heavily rely on skilled labor to be effective. In Sri Lanka's construction industry, Health, Safety and Minor injuries or accidents are not reported or kept track of. Health concerns like ergonomics and other issues relating to unsafe acts and labor exposure to the outer limits of human capabilities are frequently ignored. Therefore, establishing a safe workplace is essential to make effective use of the skilled labor that is available.

This study will shed light on important variables influencing Health, Safety and Minor illnesses and injuries to skilled laborers on medium-scale Sri Lankan Navy construction sites. In the data collection, both quantitative and qualitative approaches were taken into account. Thus, a study was conducted to identify the underlying causes of health, Safety problems and minor injuries that skilled laborers do not count. A questionnaire survey for professionals working on medium-sized construction sites was conducted from SL Navy building construction sites' Management and skilled staff were participated in the initiation interviews and questioner survey.

Back pain was found to be the health issue most significantly impacted by the study. Workers' lower back pain was a major contributing factor. With regard to the entire survey, 30% of attempts were near misses. For skilled workers, lacks of knowledge of important manual handling techniques and pushing human limits have led to numerous health problems. It was discovered that 4% of workers experienced more than four near misses while at work. Five why (5-Why) analysis and accident investigation techniques were successful in identifying the roof causes of minor injury accidents involving skilled laborers at medium-scale construction sites in Sri Lanka.

Poor safety practices on construction sites have been linked primarily to two factors: a lack of knowledge about site safety and a dislike of wearing personal protective equipment (PPE). Enhancing professionals' interests in active safety management and the implementation of awareness programs, which must be developed and implemented among construction workers, is one of the industry's most pressing needs. Site safety will be improved by workers and contractors being aware of potential risk factors and knowing how to reduce those risk factors.

The study that ranked behavioral competency as the top important competency in health, safety, and minor accident prevention took the top spot. Technical competency came in second and core competency in third. According to the study's relationship between competencies for Health, Safety, and Minor Accident, Technical versus Core high, Technical versus Behavioral, and Behavioral versus Core moderate

Finally, the study demonstrates that it is crucial to establish new guidelines and frameworks for using modern technologies in Sri Lanka.

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