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Inadequate holistic training of tower crane operators significantly impacts health and safety in Gauteng, South African construction projects.

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ABSTRACT

The research investigated the current inadequate holistic training practices given to tower crane operators which significantly impact health and safety in Gauteng, South African construction projects. The primary motivation for conducting the research was due to tower crane related accidents, fatalities and related project delays which have become endemic in the construction industry. These occurrences have not been researched from the perspective of the basic training given to tower crane operators in the SA construction industry.

The study sought to examine the current structure and characteristics of the training programmes used in developing the skills of tower crane operators. This included exploring the current barriers and the effectiveness experienced in the training programmes given to tower crane operators. The study also sought to find the major improvements or restructuring that is still needed in skills development and training of tower crane operators from the perspective of tower crane operators.

It consisted of a sample of 25 tower crane operators trained in various skills development programmes used in the South African construction industry. The research also included interviews from 9 site foremen and managers who manage the operations of tower cranes during construction project delivery, who also provided key data in relation to the training practices of tower crane operators from the manner in which their contractors conduct them.

The study found several major factors contributing to inadequate holistic training of tower crane operators related to the following: the manner in which the current training programmes were structured in terms of theoretical and practical training; lack of effectiveness of the training programmes in terms of safety, communication, rigging and hoisting and the important knowledge of tower crane operations; inefficiency of tower cranes in terms of the technological aspects that relate to giving a clearer site view of the environment in which lifting and unloading of construction materials was conducted; inadequately trained banksman or signalers and lack of training in general personalities needed in operating tower cranes as the main contributing factors. These major factors that the study found to contribute to tower crane related accidents need to be addressed if the continuing accidents and fatalities are to be significantly reduced in Gauteng, South African construction projects during project delivery and execution.