

**THE INFLUENCE OF INCOMPETENT PEOPLE TO  
STRUCTURAL DESIGNS OF HOUSES, ITS IMPACT  
ON STRUCTURAL FAILURES AND WAYS TO  
OVERCOME IN THE CONTEXT OF HOUSE  
CONSTRUCTION INDUSTRY**

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4<sup>th</sup> March 2020

## DECLARATION

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The above candidate has carried out research for the Masters dissertation under my supervision.

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## ABSTRACT

Sri Lankan Construction industry has been concentrating its capacity for large scale development project while incompetent persons have been dominating the small-scale housing construction in the contemporary context. It has been a huge threat to the construction industry and for its goodwill where these incompetent people will represent the same industry and showcase bad impression to society due to lack of capabilities in the structural designs of buildings. Traditional house construction was based on those traditional construction practitioners and the labors that were exposed to structural building construction during their carrier. The clients also have the mentality of awarding the construction project to the labors that they have more control and more laymen level communication. They don't feel the communication gap and the interaction level difference with their personal interaction.

The lack of structural concerns for the construction of house have been lead to more structural failures in the present context due to the vast variation in the site conditions and loading pattern due to modern conditions in the country such as unavailability of lands with good soil conditions, use of new technical equipment in houses, modern use patterns of space in houses etc. Experts have been identified that these will lead to structural failure with high impact than earlier. The main four factors have been suggested by the researcher for the structural failure of the houses. They are Clients lack of knowledge and misunderstandings, Labors lack knowledge and manipulations seeking advantages, Engineers lack knowledge and experience, Engineers lack of confidence and communication skills. Research has been identified that Labors lack of knowledge and manipulations seeking advantages was the main factor that has a strong relationship with the structural failure as per the regression analysis was done using the survey data. Client's lack of knowledge and misunderstanding and Engineers lack of knowledge and experience have been considered as the next priority cause for the same. But Engineers lack of confidence and communication skills was not being able to prove as a factor for effecting structural failures of houses. It was recommended that clients should be more careful when constructing a house about structural practices. The engineers and the labors should have cohesiveness in working together to achieve the common goal of quality product at the end of the construction. Awareness about the

structural practices, in general, can mitigate many misunderstandings and future failures of houses in term of structure.

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