

# SEISMIC STRUCTURAL DESIGN CODES EVOLUTION IN PAKISTAN AND CRITICAL INVESTIGATION OF MASONRY STRUCTURES FOR SEISMIC DESIGN RECOMMENDATIONS

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## ABSTRACT

The paper presents the historical background on the evolution of seismic design codes for structures in Pakistan. The current seismic design code do not provide information and detailing on the design and assessment of ordinary masonry structures in low to moderate seismicity regions, which is found the most in the country. This paper thus presents the investigation on ordinary masonry structures, yet respecting the minimum requirements to ensure significant good performance, representing current field practice through nonlinear time history analysis. The study aim to develop simplified tools and guidelines for the design of masonry structures in low to moderate seismicity regions using static procedures and hand calculations. Also, significant modifications required in the current seismic design code of Pakistan is highlighted for future development. The findings herein can also provide an opportunity to other researchers for investigation of masonry structures in the other parts of the world.

**Key words:** building codes of Pakistan; masonry structure design; response modification factor; R factor; seismic design.