Strategies to Promote Safety and Reduce the Vulnerability of Urban Wornout Textures to the Potential Risk of Earthquake

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Abstract: Earthquake is known as one of the deadliest natural disasters, with a high potential for damage to life and property. Some of Iran's cities were completely destroyed after major earthquakes, and the people of the region suffered a lot of mental, financial and psychological damage. Tehran is one of the cities located on the fault line. According to experts, the only city that could be severely damaged by a moderate earthquake in Earthquake Engineering Intensity Scale (EEIS) (70% destruction) is Tehran because Tehran is built precisely on the fault. Seismic risk assessment (SRA) of cities in the scale of urban areas and neighborhoods is the first phase of the earthquake crisis management process, which can provide the information required to make optimal use of available resources and facilities in order to reduce the destructive effects and consequences of an earthquake. This study has investigated strategies to promote safety and reduce the vulnerability of worn-out urban textures in the District 12 of Tehran to the potential risk of earthquake aimed at prioritizing the factors affecting the vulnerability of wornout urban textures to earthquake crises and how to reduce them, using the analytical-exploratory method, analytical hierarchy process (AHP), Expert choice and SWOT technique. The results of SWAT and AHP analysis of the vulnerability of the worn-out textures of District 12 to internal threats (1.70) and external threats (2.40) indicate weak safety of the textures of District 12 regarding internal and external factors and a high possibility of damage.

Keywords : risk management, vulnerability, worn-out textures, earthquake

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