

Inter and intra-rater reliability of a new assessment tool for Health, Safety, and Environment (HSE) in urban districts: A case study in Tehran city

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Abstract

Introduction: In recent years, a growing attention has been paid to assess the physical characteristics of rich and poor urban districts to understand social health differences. Urban districts environment play a major role in health of the residents. Previous few studies have considered some aspects of limited neighborhood environment. The current study was designed to investigate the reliability of the Neighborhood Health, Safety and Environment (NHSE) tool in one of Tehran city neighborhoods.

Material and Method: Dimensions and related items of the NHSE were extracted based on the previous studies and interviews with city experts. Five observers completed the NHSE in a selected neighborhood in order to test inter and intra-rater reliability of the tool. Data analysis was done using the Cronbach's alpha, Interclass Correlation Coefficient (ICC) and kappa coefficient.

Result: The ICC and Cronbach's alpha were estimated 0.86 for all dimensions of the NHSE. The calculated kappa values were in the range of 57%-66% for inter-rater reliability and 0.47-0.62 for intra-rater reliability.

Conclusion: The NHSE tool was shown to have a desirable inter and intra-rater reliability and a good level of internal consistency for assessing the health, safety, and environment (HSE) of the neighborhoods.

Keywords: *Health, Safety and Environment (HSE), Neighborhood, Observational Assessment, Reliability, Tehran*

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