



Well-Being index of super tall residential buildings in Korea[☆]

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ABSTRACT

Super tall residential buildings (STRBs) are regarded as good quality housing in Korea because of their high economic value as well as convenient facilities. However, the buildings still have many issues in terms of residents' health and well-being because many people are worried that high-rise living may cause harmful effects on the residents. This study aims to establish a well-being index model that can be applied to the evaluation of STRB. This study has three stages. First, previous studies on the well-being of STRB residents have been thoroughly reviewed. Second, well-being indices have been derived from the expert surveys and factor analysis. Third, an Analytic Hierarchy Process (AHP) survey has been conducted to systemize all of the well-being indices. The purpose of the findings of the study is to systemize the residential quality factors of STRB into a well-being index: health, ecological environment, safety and security, and function and management. The well-being indices, which have been driven from an AHP weighting process, of STRB residents indicate that health is the most important index, followed by safety and security, ecological environment, and function and management in that order.

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1. Introduction

Intensive land use and advanced construction technology have resulted in widespread construction of super tall residential buildings (STRBs) in urban areas. In the Seoul metropolitan area, numerous 30-story and higher STRBs have been constructed, and building 40-story and higher STRBs is becoming increasingly common (Table 4). Korea's housing policy of massive unit supply within urban areas has resulted in an increase in the popularity of high-rise and high-density dwelling types, and residents in such housing have become increasingly aware of the value of well-being and are demanding better residential environments. Unlike the earlier high-rise apartments, STRBs are characterized by a 30-story or more height, very high-density, massive size and mixed land use, and creating new architectural characteristics. Thus, there is a strong need to shed light on these residential and environmental issues of high-rise living.

In recent years, the term 'well-being' has become a matter of social and cultural concern. Mass media has extensively featured

well-being from different perspectives, and product advertisements have increasingly used the term 'well-being'. Housing market personnel have become more aware of well-being, and major newspapers run articles with such titles as "Housing markets see the blow of well-being-oriented apartments."¹ Various media have likewise significantly discussed the impact of residential environment on health, leading to the emergence of healthy housing as a social issue, thus boosting and widening the people's interest in "well-being" apartments. The sick house syndrome further enhances the people's concern about health, and a lifestyle geared towards "eating well and living well" is a key factor behind the emergence of well-being apartments.

Since the 1970s, Korea has been supplied with massive housing units to cope with the housing shortage problem, and the number of house units over households' ratio has surpassed 109.9% in 2008². This policy has been successful in terms of supply, but there has been a housing supply surplus particularly in provincial areas since the mid-1990s. Within the housing supply market, attempts have been made to enhance housing quality by building high-rise residences to satisfy consumers; thereby competitions for providing high-rise units have become popular among housing suppliers [1]. Housing

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¹ Features story; 'Housing markets see the blow of well-being-oriented apartments.'; The Hankyoreh, Feb. 15th 2004.

² Statistics Korea, Housing penetration ratio in 2008(www.nso.go.kr).