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범죄예방 환경조성을 위한 범죄위험평가 도입 방안 연구

Crime Risk Assessment for CPTED: Tools and Policy Applications

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CPTED(Crime Prevention Through Environmental Design), which aims to create a safe environment based on environmental criminology, has been actively introduced in Korea through the revision and enactment of related laws since the Ministry of Land, Infrastructure and Transport provided the secure design guideline in 1992.

It is important to conduct crime risk assessment in terms of crime inducing factors and crime hotspots, as CPTED strategies are to minimize potential crime risk factors in certain area. Even though a considerable numbers of CPTED systems provided by central and local governments have promoted crime risk assessment, there is a lack of consideration in different characteristic of regions, projects and stakeholder's condition.

The purpose of this research is to classify measurement tool through analysis of case studies and standardize crime risk assessment tools for increasing the effectiveness of CPTED-related projects. Also, this research suggests a crime risk assessment model easily applied in the practices and improvement of CPTED system for the central and local governments.

There are several crime risk assessment methodologies at home and abroad, developed by Korean Institute of Criminology, Seoul new town, Korean National Police Agency, Greater Manchester UK, New South Wales Australia, CAP Index Inc and European committee for standardization.

This research suggested six standardized measurement tools to apply crime risk assessment based on the classification of the seven existing crime risk assessment models as follow: demographic analysis, crime data analysis, space analysis, Field investigation, survey and interview.

1. Demographic analysis tool was consist of ten factors: population size, population density, population mobility rate, public assistance recipient households rate, low income single parent households rate, property tax per person, foreign resident rate, divorce rate, adolescent population rate and elderly population rate;
2. Crime data analysis tool proposed to utilize basic analysis and density analysis, based on overall crime statistics and crime location data respectively;
3. Space analysis tool suggested to implement crime risk assessment, applying WLVAE, VGA and ERAM space analysis model;
4. Field investigation tool was completed by three different checklists depending on building, street and block;
5. Survey tool was designed, considering the fear of crimes, the experience of victims of crimes, crime prevention activities and socio-demographic characteristics;
6. Interview tool was developed for local residents, local officers and polices who have the perception of area and crime-related information.

This research conducted crime risk assessment using these six assessment tools to verify the effectiveness of crime risk assessment tool in real projects. There are the results as follows:

- Demographic characteristic analysis was appropriate for the establishment of a crime prevention mater plan at the local level and a long-term strategic direction;
- Crime data analysis was one of the objective and scientific method to analysis location and type of crime in area, however, there was a difficulty in obtaining crime data in Korea;

- Space analysis could predict the potential location of crimes through analysis visibility and accessibility of area as an alternative method instead of crime analysis;
- Field investigation was a significant part of crime risk assessment, since it provided general site information, including physical environment for the establishment of project plans;
- Interview could be a practical tool to understand detailed site environment conditions from residents' comments. Nevertheless, interviews needed to be conducted with surveys obtained the statistics of residents' perception, due to a lack of objectivity in it;
- Six measurement tools draw two potential crime risk factors: the causes of crimes and the locations of crimes. The causes of crimes were inferred by survey tool, crime data analysis tool and demographic characteristic analysis tool. The location of crime occurrence as the other factor was identified by interview tool, crime density analysis tool and space analysis tool. Field investigation tool was useful for both factors.

In conclusion, three crime risk assessment models, proposed by this research, could be applied in practice, depending on the various conditions and the environment of applied area. Apart from these models, this research also suggested to adopt the application of crime risk assessment models by flexibly combining different measurement tools. In order to implement CPTED more effectively for crime prevention, professionals from the fields of Architecture and Urban Design should take account into the causes and the location of crimes before project planning. Furthermore, this research proposed the improvement of related systems to enhance the practicality of crime risk assessment.

Keywords : CPTED, Crime risk assessment, Crime risk assessment tools, Crime risk assessment methodology