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Cases of CPTED Application in KOREA & Expected Effect

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Abstract

CPTED(Crime Prevention through Environmental Design) theory was first introduced in Korea in late 1980s, and research began in full scale from late 1990s. Moreover, academic circles have vigorously pressed ahead with research into the preconditions for CPTED application, supportive organization activities, physical environment design factors, analysis of citizens' awareness based on pilot projects, etc. While various researches have been conducted in Korea, ranging from consideration of traditional theories to actual applications, criticisms have been raised about passive implementation of projects focusing on conceptual elements of CPTED.

This study was intended to introduce the cases of CPTED applications in Korea and to examine the anticipated effects of crime prevention based on results of such CPTED applications. Additionally, the results would provide theoretical basic data for constructive alternative for CPTED application projects, along with discussion on future direction of CPTED application projects. Additionally, the results would provide theoretical basic data for constructive alternative for CPTED application projects, along with discussion on future direction of CPTED application projects.

In practical application of CPTED strategy, surveillance network should be put into place which serves as invisible psychological barrier blocking criminals, as well as physical environment creation such as natural surveillance, access control, and boundary reinforcement. Collaborative network with security organizations can be built, buttressed by the attention and support of residents. Constant efforts to create bright image of streets bustling with residents and maintain a pleasant environment will eventually lead to crime reduction. Active participation and attention of local residents is of utmost importance for placing a lot of pressure on criminals conscious of around-the-clock surveillance on them by local residents and reinforcing the boundaries unnatural and difficult to access for criminals.

The image of safe village, which is embedded in the minds of the public, has been benchmarked as a best practice in the neighboring area. CPTED is highlighted in the process of improving the quality of life. Thus, future CPTED application projects should serve as pivot for vitalization of local community and induce active participation of local residents. For the purpose, a process should be established to heed the opinions of residents from the stage of project planning and allow residents to take initiatives spontaneously.

[Keywords] CPTED, Situational Crime Prevention Theory, Citizen Participation, Urban Environment Improvement, Crime Monitoring

1. Introduction

CPTED(Crime Prevention through Environmental Design) theory was first introduced in Korea in late 1980s, and research began in full scale from late 1990s.

Specifically, CPTED has been applied to new city development, apartment building design, and old-age city housing refurbishment project, etc., and has been actively pushed forward by local governments since

the CPTED action plan was implemented first by the National Police Agency in 2005[1].

Moreover, academic circles have vigorously pressed ahead with research into the preconditions for CPTED application, supportive organization activities, physical environment design factors, analysis of citizens' awareness based on pilot projects, etc.

While various researches have been conducted in Korea, ranging from consideration of traditional theories to actual applications, criticisms have been raised about passive implementation of projects focusing on conceptual elements of CPTED.

This study was intended to introduce the cases of CPTED applications in Korea and to examine the anticipated effects of crime prevention based on results of such CPTED applications.

Additionally, the results would provide theoretical basic data for constructive alternative for CPTED application projects, along with discussion on future direction of CPTED application projects.

2. Theoretical Consideration of CPTED

2.1. Concept of CPTED

CPTED refers to crime prevention strategies structured artificially to minimize the chance of success in crime for potential criminals so as to ensure that good citizens can feel secure in their environment[2].

In particular, access control and rigorous monitoring are the main principles of CPTED, creating an environment that doubles the effort required for crime, which is consistent with the situational crime prevention theory that emphasizes crime prevention through reduction of crime opportunities.

CPTED reduces the chance of crime through defensive design in architectural designing and urban planning, etc., thus creating an urban environment which allows urbanites to feel less fear of crime and maintain their sense of security, which will eventually help improve the quality of life[3].

2.2. Strategies & application of CPTED

The main principles behind CPTED are monitoring, access control, and community reinforcement. Based on this principle, CPTED consists of five components such as natural surveillance, natural access control, territoriality reinforcement, activity reinforcement, maintenance and management. Each element has, in principle, overlapping and inter-complementary relationship, rather than being independently planned or utilized[4].

CPTED focuses on spatial arrangement that maximize visibility to ensure natural surveillance and difficulty with access to facilities, natural access control that increases the risk of exposure for potential criminal behaviors, and physical environment design that reinforces boundaries through specific demarcation. By increasing the activities of local resident and improving the image through maintenance of facilities, CPTED maximizes the sense of security for the public and creates an environment unnatural to criminals.

Simply improving the physical aspects of cities cannot make the society safer. The CPTED strategy can be maximized by strengthening social cohesion through voluntary community problem-solving activities of local residents and by creating community culture that promotes cultural activities of local residents[5].

For instance, Seoul Metropolitan Government designated and operated the daily sharing projects, such as volunteer camp construction, joint day care center, apartment resident school, and shared laundrette, etc., through projects involving participation of local residents from 2011 to 2013[6].

3. Cases of CPTED Application in Korea

3.1. CPTED project of Seoul metropolitan government

'Salt Road' in Yeomri-dong, Mapo-gu is the most typical of the 'Crime Prevention Design Project' led by Seoul Metropolitan

Government. Yeomri-dong, Mapo-gu was designated by the Police Agency as Citizen Protection Police Reinforcement Zone to cope with accelerated pace of slumming and increased risk of crimes which resulted from suspension of residential environment improvement project in this area. As a result, this 'Salt Road' was selected for Crime Prevention Design Project of Seoul Metropolitan Government in 2012 and pushed forward until 2013[7].

The main purpose of this project are improvement of nighttime lighting in alleyways, prevention of illegal dumping of garbage to create a pleasant environment, operation of safety guard houses and emergency bell management in cooperation with local residents, diurnal and nocturnal opening of residents' rest area that villagers can share.

A village brand called 'Salt Road' stretching about 1.7km was established which can stimulate the space by allowing the residents to exercise and take a walk around the space where residents feel anxious.

In addition, there were various exercise facilities and exercise guide signs, guidance signs installed along with CCTV, 69 safety streetlamps with LED number indicators for safety guidance and crime prevention, security guard houses (safe houses) for emergency call, and painting of the walls with residents[8].

Particularly, yellow cord with high visibility was assigned to various spaces and facilities that need emphasis through differentiation from other facilities, and designs adopting the motives of the 'Salt Road' were developed and applied.

In addition, spare space was used to allow residents to exercise and take a rest along the 'Salt Road' in order to facilitate the natural surveillance by residents.

'Salt Naru', formed at the entrance to the 'Salt Road', was being used as a local community space, serving as the center of residents' community, so that residents can maintain and improve their own environment on their own.

Salt Naru, featuring the book cafes, courier parcel storage, makeshift rest area, autonomous anti-crime checkpoint, etc., is being used as a space for opening and friendship, conducive to promoting the exchange among residents[9].

3.2. CPTED projects led by Busan metropolitan government

In Busan, Busan Metropolitan Government, Busan District Prosecutors' Office, and Busan Regional Police Agency have proceeded with "prevention safe village project", "CPTED project", and "CPTED happy village project", respectively, since 2013.

Among the sites targeted for the projects, the Himangdidimdol(Hope Stepping Stone) village in Deokpo-dong is the area where the kidnapping, sexual assault, and murder of female middle school students occurred in 2010 and is dotted with detached houses of low-income families and deserted houses in the vicinity of an industrial complex. At that time, this dark-lit village with many meandering alleyways was prone to violent crimes.

Crime prevention education and 'law and order' campaigns were planned but not implemented while only physical environment improvement strategies were carried out such as improvement of natural surveillance through installation of streetlights, security light with CCTVs, emergency bell, deserted house signage and shutdown, access control with special anti-crime police checkpoints, wall paintings, guide signs, reinforcement of boundaries through pavement of roads and stairs, etc[10].

The CPTED application project led by Busan Metropolitan Government was centered around natural surveillance and access control, which could affect the satisfaction of the residents. However, local community space conducive to voluntary participation of residents has not been secured sufficiently and interactive cultural events that aim to create resident community culture have remained insufficient.

3.3. Expected effects & improvement plan

According to the press release (April 2014) published by Seoul Metropolitan Government, the survey of awareness of residents, which was conducted after completion of pilot projects, showed that residents' fear of crime decreased by 9.1% and their attachment to the neighborhood increased by 13.8%.

In particular, the extent of awareness towards the crime prevention effect of 'Salt Road' reached 78.6% while the extent of satisfaction was as high as 83.3%[11].

According to the study by Lee Kwang-Guk (2016) who conducted a survey on the satisfaction of residents in the site for "Safe Busan Village" pilot project, Decrepit detached house complexes would require active projects, such as installation of CCTVs, streetlights, community rest area, window boundary devices, wall structures for crime prevention, reflectors, etc., which corresponded to surveillance and access control in connection with the principles of CPTED configuration, rather than passive projects such as guide signage installed within the scope of budget, painting-centric environment improvement like stair cleanup, etc[12].

Future CPTED projects tailored to physical, psychological, and environmental characteristics of the community should be developed and applied and should be carried out with constant attention and support from public and private-sectors to ensure spontaneous participation of residents.

4. Discussion & Conclusion

The image of safe village, which is embedded in the minds of the public, has been benchmarked as a best practice in the neighboring area. CPTED is highlighted in the process of improving the quality of life.

In practical application of CPTED strategy, surveillance network should be put into place which serves as invisible psychological barrier blocking criminals, as well as physical environment creation such as natural surveillance, access control, and boundary rein-

forcement. Collaborative network with security organizations can be built, buttressed by the attention and support of residents.

Constant efforts to create bright image of streets bustling with residents and maintain a pleasant environment will eventually lead to crime reduction. Active participation and attention of local residents is of utmost importance for placing a lot of pressure on criminals conscious of around-the-clock surveillance on them by local residents and reinforcing the boundaries unnatural and difficult to access for criminals.

Thus, future CPTED application projects should serve as pivot for vitalization of local community and induce active participation of local residents.

For the purpose, a process should be established to heed the opinions of residents from the stage of project planning and allow residents to take initiatives spontaneously.

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