

Crime Prevention Through Environmental Design (CPTED) includes strategies implemented to directly modify the environment to take advantage of pre-existing environmental assets or change the design features and condition of particular targets (e.g., store fronts, parking garages, or abandoned buildings) or areas in an effort to reduce crime. In some instances, CPTED strategies are implemented during the beginning phases of a project (e.g., during planning of a new housing development). But, in many instances, the strategies are applied when the need for intervention occurs (e.g., adding security cameras to a store after a robbery). CPTED strategies are often linked with other community-based crime prevention strategies, such as problem-oriented policing, which emphasizes tailoring crime prevention strategies to solve specific problems. As with other types of community-based crime prevention programs, CPTED is made up of multiple elements or approaches and can be used by various stakeholders within and outside of the criminal justice system. CPTED strategies address quality of life issues by attempting to deter criminal activity, increase overall safety for citizens, and reduce citizen fear of crime. CPTED strategies are thus evaluated to determine not only whether crime was reduced but also whether citizen perceptions of crime were affected by implementation of the strategy. Several key components of CPTED are often manipulated to impact crime and positively affect public perceptions of safety including:

■ **Territoriality**

Territoriality is a primary concept upon which many CPTED strategies are based. It is directed toward making changes to design features of buildings and locations to instill a sense of ownership or pride for a particular area so that criminals are discouraged from offending. Improving the landscaping of a particular area, removing graffiti, and making clear demarcations between public and private spaces are examples of territoriality. Studies examining whether implementation of features designed to clearly define public and private spaces can reduce crime have shown that implementing territoriality strategies can reduce fear of crime. Implementation of these strategies has also been shown to be related to reduced levels of recorded crime.

■ **Access control**

Access control seeks to direct the movement of potential offenders to reduce opportunities for offending. Although there is little research examining natural access control methods, a few studies have found that implementing measures such as bullet proof barriers at banks reduces robberies. Installing street barriers on streets with high levels of drug trafficking and homicides has been shown to decrease homicides. However, when compared with neighboring jurisdictions, at least one study showed that street closures did not reduce robberies and assaults to a significant degree.

■ **Surveillance**

Most surveillance studies have focused on CCTV. Surveillance involves the implementation of various types of strategies that make it more likely that an offender will be noticed when committing a crime therefore surveillance is intended to deter individuals from offending. One surveillance strategy known as Closed Circuit Television (CCTV) has been studied most extensively in the United Kingdom. CCTV has been shown to reduce recorded vehicle crime and robbery in some studies while other studies of CCTV have shown it to be ineffective. A systematic review of CCTV showed the strategy to be effective in decreasing vehicle crime, but not effective in reducing violent crime. Some studies have also shown CCTV to significantly reduce levels of fear of crime in

a community. Security guards have been shown to affect the likelihood that a bank robbery will occur and to reduce auto thefts. Note that there is some concern that CCTV may have unintended negative consequences such as displacing crime from one area to another.

■ **Activity Support**

Activity support includes elements of territoriality, access control, and surveillance. It involves the placement or planning of activities in locations that are more vulnerable to crime so that natural surveillance can be utilized to reduce crimes. Examples include placing street vendors or outdoor eating areas near strategic locations to encourage more desirable activity. Evaluations of this strategy provide preliminary evidence that opportunity for committing crime is reduced when desirable activities increase.

■ **Maintenance**

Maintenance involves routine maintenance of surrounding areas and buildings to foster a positive image that helps to discourage crime and reduce the fear of crime. Research indicates that the routine maintenance of the urban environment does reduce crime. For example, clean-up programs have been shown to reduce graffiti. Repairing vandalized train equipment has been shown to not only increase train availability but decrease reported crimes against persons.

■ **Target Hardening**

Target hardening involves implementing features (e.g., home security measures, peepholes, street lighting, or reinforced front and rear doors) that will make it more difficult to commit a crime. This method has a long history as a crime prevention measure. Early studies of improved street lighting using quasi-experimental designs (e.g., before/after comparisons with no control area) produced inconclusive results concerning its ability to reduce fear of crime. However, studies that were more rigorously designed (e.g., used experimental and control areas) showed a decrease in crime. A systematic review of street lighting measures showed that across the studies examined in the review, crime was reduced by 20%. Research suggests that target hardening methods help to reduce burglary.

What Have We Learned From Evaluations of Crime Prevention Through Environmental Design Strategies?

A range of strategies and programs have been evaluated to determine the effectiveness of CPTED. Although some studies have attempted to use true experimental designs when studying CPTED, a majority of the strategies have been studied using quasi-experimental designs. In addition, there are few process evaluations of CPTED, which limits what is known about how these strategies are implemented, whether they are implemented properly and potential reasons for program failure. Few studies have examined long-term goals or been designed to provide unequivocal evidence indicating whether the CPTED strategy or other factors (e.g., seasonal variations or overall reduction in crime rates) were responsible for observed outcomes. However, systematic reviews of CPTED evaluation studies as well as results from individual studies provide preliminary evidence that implementing CPTED strategies does impact crime. Research also suggests the importance of taking the local contexts of a neighborhood into account when implementing CPTED strategies. Overall, the evidence currently available on the effectiveness of CPTED indicates that these strategies are promising although more rigorous evaluations are needed to show more clearly how and why these strategies work.

Sakip, S. R. M., N. Johari, et al. (2012). "The Relationship between Crime Prevention through Environmental Design and Fear of Crime." *Procedia-Social and Behavioral Sciences* 68: 628-636

- The built environment especially in terms of the residential design is believed to be one of the factors influencing crime and the level of fear of crime (FOC).
- People's perception of FOC varies considerably depending on their attitude and practices towards environmental conditions.
- CPTED is one of the most effective mechanisms to reduce FOC.
- Therefore, this paper investigates the relationship between practices and attitudes of CPTED and FOC in gated and non-gated residential areas.
- This study found that CPTED perception has a positive relationship with FOC while CPTED practices have a negative relationship with FOC.

Casteel, C. and C. Peek-Asa (2000). "Effectiveness of crime prevention through environmental design (CPTED) in reducing robberies." *American Journal of Preventive Medicine* 18(4): 99-115

- The objective of this study was to determine the effectiveness of the Crime Prevention Through Environmental Design (CPTED) approach in reducing robberies.
- CPTED evaluations were obtained through a comprehensive search mechanism. Two sets of inclusion criteria were used: 16 primary studies evaluated a CPTED program with a comparison period; 12 secondary studies presented some evidence of CPTED effects but were not required to have the same level of scientific rigor. The percentage change in pre- and post-intervention events was the outcome examined. Studies were stratified by programs implementing multiple components, a single component, and through ordinances.
- Main Results: All primary multiple-component CPTED programs experienced a percentage change in robberies ranging from -84% to -30%.
- Single-component program effects ranged from -83% to +91%, and ordinances ranged from -65% to +130%.
- Secondary studies reported robbery changes ranging between -92% and +7.6%. Robbery reductions were larger for interventions comprising basic store design, cash control, and training components compared to those including equipment systems.
- No associations were found between robbery decreases and either the follow-up period or the number of program components.
- Studies examining nonfatal injuries found a median pre-post change of -61%; those examining homicides found changes ranging from 0% to +11%.