Fact sheet: Improving lighting to prevent non-domestic assault

What does this strategy involve?

Improving lighting to prevent non-domestic assault involves the installation and/or upgrade of lighting in streets in central business districts, commercial areas and residential areas with high-density housing that have been identified as experiencing high rates of assault offences occurring during night-time hours. This may include:

- increasing the number of lights along pedestrian routes;
- relocating or redirecting lights to minimise dark spots;
- installing brighter or more appropriate lights; or
- improved maintenance and regular repairs to existing lighting systems.

How does the strategy work?

The precise mechanisms that underpin lighting as a crime prevention measure are unclear, especially in terms of having an impact on non-domestic assault offences. There are several possible explanations. First, lighting helps to improve visibility, which makes it easier for people in and around problem areas to detect suspicious or criminal behaviour and to identify perpetrators.

Second, areas that are in darkness or dimly lit may serve to create a feeling of personal insecurity, even if the likelihood of being victimised is actually quite low. Lighting upgrades improve the general amenity of an area, promotes feelings of safety among users (or potential users) and encourages pedestrian movement through an area that may have previously been avoided. Increased pedestrian movement improves natural surveillance, which also assists in the detection of suspicious behaviour and well-populated areas may be less likely to be targeted by offenders.

Finally, lighting improvements can also signal community investment and guardianship in an area. This may contribute to an increase in community pride and ownership of public spaces, encouraging resident engagement in crime prevention activity and informal social control. Notably, while increasing visibility may only have an impact on night-time crime, promoting community ownership of public spaces and engagement in crime prevention may also result in a reduction in crimes committed during the day.

What does the evidence say?

A number of studies have demonstrated that the installation and/or improvement of lighting can contribute to a reduction in non-domestic assaults. Four studies that examined the impact of lighting schemes delivered in isolation found that the introduction of improved lighting led to a reduction in non-domestic assault. These strategies were targeted at streets in residential areas with high density housing, commercial areas and central business districts that were experiencing high rates of assault occurring during night-time hours. A further three strategies that also involved lighting improvements being delivered in isolation did not have any measurable impact on non-domestic assault rates.
Most of the reviewed strategies were not the subject of long-term evaluation. The average post-intervention period was 12 months. However, one study that was implemented in a mixed residential and commercial district in New Orleans was evaluated over a 29-month period. The results of the evaluation indicated that despite an initial increase in night-time assaults, the strategy did not have any impact on non-domestic assault over the 29-month period.

Where will the strategy work best?

Effective strategies targeted streets in central business districts, commercial areas and residential areas with high-density housing that had been identified as having a high rate of non-domestic assault offences. A number of the locations that received lighting upgrades had recently experienced a sharp increase in offending rates. This was determined on the basis of local crime statistics and/or on the basis of concerns raised by the community, local residents and business owners.

Generally speaking, lighting improvements are most effective when they are implemented in areas where the previous lighting conditions were poor and the resulting improvement in visibility is substantial. Given the focus is on improving visibility at night, this particular strategy needs to be targeted at areas with a high rate of offending during night-time hours.

What will you need to implement this strategy?

The accompanying handbook provides more detailed information on how to implement this strategy, but briefly:

A good understanding of your local problem

The studies reviewed for this project showed that effective strategies were targeted at streets in commercial areas, central business districts and residential areas with high-density housing that were experiencing high rates of recorded offences at night. Effectively targeting problematic areas requires access to information to identify non-domestic assault hot spots, as well as information about the characteristics of these offences (including whether they are happening after dark, whether they occur in areas with poor lighting, whether the absence of natural surveillance is a contributing factor and whether alcohol is typically involved). This information can be obtained from recorded crime data, but may also involve information from other sources, including local business owners, residents and the wider community.

Stakeholder involvement

Establish appropriate consultation mechanisms at the commencement of the project to seek input from local residents and business owners or operators who live and work in the area being targeted. Proactive and engaged residents and business operators are important as they will often be responsible for the maintenance of the strategy in the long term and may be able to provide increased surveillance of the area.

Availability of appropriate lighting equipment and qualified personnel

It is important that lighting improvements are designed and implemented by professionals who have an understanding of lighting design and technology, are aware of issues that may reduce the effectiveness of an intervention and will ensure that lighting equipment is hardwearing, vandalism-proof or resistant and (where necessary) maintained over time.
CASE STUDY 2: Bellgrove and High Blantyre

This strategy was implemented in Bellgrove and High Blantyre (Scotland). These sites were chosen because:

- residents were separated from necessary services by a geographical barrier (e.g. a train line);
- residents could not access necessary services unless they used a funnel route; and
- the funnel route was straight and (more importantly) poorly lit.

As part of a general residential relighting project, lighting engineers installed street lights along the two site’s funnel routes.

In order to determine whether the lighting improvements had an impact on assault rates, the evaluation involved interviews with a large sample of residents prior to and after the strategy was implemented. The evaluators also used observational fieldwork to determine whether pedestrian use of the funnel routes increased. The evaluation found that self-reported non-sexual and threatened assaults fell significantly during the post-intervention period. However, this decrease was not reflected in local police statistics, which suggested that rates of non-sexual assault and petty assault remained steady. The observations did show that after the lighting improvements were introduced, more pedestrians (especially women) were using the funnel routes.

CASE STUDY 1: Stoke-on-Trent

This strategy was implemented in a former council estate located in Stoke-on-Trent (United Kingdom) that was experiencing high rates of non-domestic assault, particularly at night. Over a two month period, 110 tungsten streets lamps were replaced with brighter, high-pressure sodium street lights along one kilometre of roadway. New street lights were also installed along a series of detached footpaths that were previously unlit. To determine whether the lighting improvements had any impact on assault rates, a crime victimisation survey was distributed to residents in the weeks leading up to, and a year after, the implementation of the strategy. The evaluators also conducted a series of face-to-face interviews with a sample of residents.

The evaluation found that self-reported night-time assaults decreased by 68 per cent in the intervention site. The number of people who self-reported feeling unsafe when walking around the estate at night also decreased. Further, residential community pride in the area appeared to increase, with the number of residents who described the estate as friendly and ‘well-kept’ increasing significantly. Notably, the incidence of self-reported day-time assaults also decreased during the post-intervention period. The evaluators explain this finding by suggesting that it was the increase in residential community pride in the area that lead to the decrease in self-reported victimisation, rather than increased visibility.

CASE STUDY 3: Kansas City

Lighting was improved in Kansas City (United States) to address increasing rates of non-domestic assaults occurring at night. The strategy involved the replacement of 1,800 incandescent lamps with mercury and sodium street lights in approximately 500 blocks of the downtown business district and a mixed residential/commercial neighbourhood. Prior to the implementation of the strategy, local police crime statistics were analysed to gain a better understanding of the crime problem in Kansas. This process helped the lighting engineers to locate crime hot spots and to determine the most appropriate type of lighting to use in the target locations.

An evaluation found that night-time assaults decreased by 48 per cent during the 12-month post-intervention period. However, there was some evidence of a minor displacement of crime effect as surrounding areas that did not receive the lighting improvements experienced a slight increase in night-time assaults. However, the rate of non-domestic assault had also increased across the city as a whole.

Endnotes


Further reading

For further reading in this area, refer to the accompanying handbook and literature review.

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