

# SUMMARY

English summary of Brå report No 2008:16

## Fear of Crime and Segregation

The importance of residential areas in relation to the general public's feelings of insecurity and concern about crime

**brå**

brottsförebyggande rådet

# Fear of Crime and Segregation

The importance of residential areas in relation to the general public's feelings of insecurity and concern about crime

**A summary of the report 2008:16**

**The Swedish National Council for Crime Prevention (Brottsförebyggande rådet, Brå)  
– centre for knowledge about crime and crime prevention measures.**

The Swedish National Council for Crime Prevention works to reduce crime and improve levels of safety in society by producing data and disseminating knowledge on crime and crime prevention work.

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## Introduction

This report deals with and unites two current areas of policy: fear of crime and segregation. The main question is whether housing segregation in Swedish towns and cities affects people's feelings of insecurity. One of the most important goals within criminal policy is "to make all of Sweden a secure country to live in". Surveys have shown that a majority of Sweden's inhabitants feel secure. But one problem is that the fear of crime is unequally distributed. Some groups of resource-poor and vulnerable individuals feel more insecure and worry about becoming victims of crime more than others.

Housing segregation means that different groups of people live in separate areas. One effect of segregation that is often emphasised in political debate is increased crime and fear of crime. An underlying theory about negative neighbourhood effects in poorly resourced areas can be seen in many public documents. This posits that the surroundings are expected to influence the circumstances of the individual's life, irrespective of the individual's own resources. But it is important to differentiate between composition effects and area/neighbourhood effects. A composition effect only reflects a concentration of a certain population group in a certain area.

For instance, earlier research has found that resource-poor and vulnerable groups become victims of crime more often, and worry about crime more than others. As these groups are often concentrated in certain residential areas, it is also a reasonable expectation that the *proportion* of insecure people is higher in these areas. But the idea of neighbourhood effects is based on a concept of dissemination effects between groups of individuals, in other words, that a concentration of poorly resourced individuals gives rise to something more than a composition effect. A neighbourhood effect means that the surroundings have an independent effect on the individual. For instance, if both resource-poor and resource-rich individuals living in poor areas are more insecure than their equivalents living in more resource-rich areas, this may be an effect of housing segregation.

A problem with many studies of neighbourhood effects is that they use aggregated data, or data at the area level, in order to make statements about outcomes at an individual level. But, in order to answer the question of how an individual is affected by his or her environment, it is necessary to combine both individual and area data. The opportunity to study the combined data is now possible by using the Swedish Crime Survey (SCS). This is a victim survey conducted annually by the Swedish National Council for Crime Prevention (Brå).

### **Objectives of the report**

The report has three objectives. The first is to *contribute a knowledge review* describing some of the explanations for fear of and worry about crime that can be found in research literature, focusing on the importance of the neighbourhood. This first section is not reproduced in this English summary. The second aim is to use the SCS to *describe and explain individuals' perceived insecurity and worry about becoming victims of crime*. First, a description is provided of how fear and worry vary in different population groups, and, thereafter, how they vary between *groups* living in different types of residential areas. Finally, any segregation effects on *individuals'* feelings of insecurity are analysed using multilevel analysis. The third objective of the report is to lay the foundation for a *time series* that makes it possible to track trends in fear of crime in exposed areas.

The report deals with the following issues:

- What factors, at an individual and area level, does previous research identify as being of importance for people's fear of crime?
- How do population groups differ in terms of their experiences of fear of crime?
- Are there any differences between different types of residential area in terms of the fear of crime, and, if so, what are they?
- Do people who live in resource-poor areas feel more insecure than others?

Insecurity, here, means the degree of insecurity felt by the interviewees when outside in the evening within their own residential area. The wording of the question (relating insecurity to the residential area) makes it highly relevant for the report's main question about segregation effects.

### **Theoretical points of departure**

Figure 1 illustrates the theoretical model used as the point of departure for the report. The first component in the model covers individual characteristics, such as gender and age, but also characteristics linked to lifestyle. The second component covers area characteristics, where people live, or how the neighbourhood is laid out and which groups live there. If people's feelings of insecurity are affected by segregation, this means that individuals perceive their vulnerability differently depending on where they live, and who the people around them are. The knowledge review discusses a number of factors, such as social control, social networks, social disorganisation and so on. But how do these relate to each other, and how do they relate to the composition of the area's population?

Concentrated poverty and high population turnover are factors that have been shown to vary with people's fear of crime. Urbanisation gives rise to a certain population structure in towns and cities, and this is followed by social polarisation and increased population turnover, which weakens the social integration in the residential areas of the towns and cities. This, in turn, makes it more difficult to agree on common norms, and has a negative effect on the conditions for exercising informal social control. Failing or non-functional social control is assumed to express itself in problems maintaining order, which finally manifests itself as increased perceived insecurity. In other words, neighbourhood poverty is assumed to influence the conditions for informal social control in the residential area, and, thus, also has a negative effect on people's feelings of security. With the data at hand, it is not possible to test all the explanatory factors discussed in the literature review. Instead, two variables are used which capture the population composition: median income, as a measure of financial resources (neighbourhood poverty), and electoral participation, as an indicator of the area's social capital.

The third component is victimisation: the direct and indirect experiences of crime that may influence an individual's perception of security. Previous exposure to crime may also be a result of who you are and where you live, and is, in this way, an intermediate variable. However, these relationships will not be tested in the report; instead, it is the direct relationship with insecurity and fear of crime that is of interest here.

The theoretical line of thought could be made yet more complicated and take account of additional factors. However, for the purposes of this report, the simplified model in Figure 1 is used. In order to measure these components, a number of variables, and individual and area level, are used (see appendices to the main report).

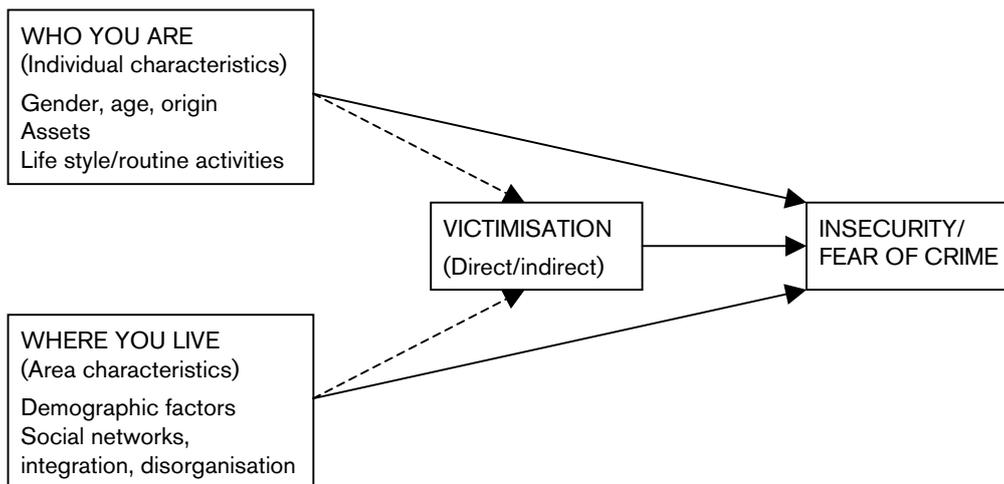


Figure 1. Theoretical model for the report

## Methods and procedures

### Swedish Crime Survey

The data used in the analyses comes from the 2006 and 2007 waves of the SCS. The two surveys have been amalgamated into a single data file containing responses from a total of 22,632 individuals. The SCS is based on a stratified, independent and random sample of people aged between 16 and 79. The response frequency was 76.9 and 74.7 percent respectively, which is high for this type of survey.

### Delimitation of residential areas

In order to analyse the effects of housing segregation, a geographic delimitation of residential areas had to be carried out. The larger the area selected, the more heterogeneous the population composition becomes. A division method often used in Swedish research is Small Area Market Statistics (SAMS areas). Sweden is divided up into around 9,200 non-overlapping SAMS areas. In the division, the following has been taken into account: the date the property was built, form of ownership (rented or owned), borders in the building patterns in the form of roads etc, and natural borders in the topography. The SCS includes SAMS codes for each respondent, which means that that each individual can be linked to a specific area. The 22,632 respondents are distributed over a total of 6,352 areas.

Housing segregation is primarily an urban phenomenon. For this reason, respondents living in the three metropolitan regions and those living in larger towns were selected to be part of the analysis. After selection, 12,006 individuals remain, distributed across 2,935 SAMS areas in a total of 77 municipalities.

At the SAMS area level, two explanatory variables are used: median income and participation in elections. Both indicate the socio-economic population composition of the residential area. On the basis of median income in the SAMS area, all areas have been classified into four groups. Low-income areas represent the quarter of all areas with the lowest median incomes. High-income areas represent the quarter with the highest incomes, and middle-income areas the areas with incomes in-between. The fourth category, “disadvantaged area”, consists of residential areas that have been identified as areas with more widespread social and financial problems within the framework for Swedish

metropolitan policy. Electoral participation measures the proportion of those entitled to vote, per SAMS area, who voted in the municipal elections in 2006. Apart from being a measure of resources, electoral participation is also regarded as an indicator of the area's social capital. In the section where areas are classified as having low and high electoral participation, the limit has been set at the national average (79 percent). Below the national average (0–78 percent) is regarded as low, and above the national average (79–100 percent) is regarded as high.

## Fear of crime within different groups

In order to gain a perspective on the importance of the neighbourhood for people's feelings of insecurity, an in-depth knowledge is needed of which groups of individuals feel more or less insecure is needed. The response patterns that emerge from SCS are mainly those that are well known from research into fear and worry about crime:

- *Women feel more insecure than men.* 8 percent of men and 33 percent of women state that they feel insecure when outside in the evening in their own residential area. The youngest and oldest women are the most insecure groups, while young and middle-aged men feel the least insecure.
- *Those born abroad feel more insecure when outside in the evening.* Around one third of those born abroad feel insecure when outside in the evening in their own residential area, compared with a quarter of those of foreign extraction and a fifth of those of Swedish origin.
- *Resource-poor individuals feel more insecure.* The proportion of people who feel insecure or worry about being mugged is highest among low-income earners. However, for property against crime, the differences are not as distinct.
- *How you live and whether you live with someone matters.* The proportion of those who feel insecure in their own residential areas is higher among those living in rented flats. However, worry about break-ins is highest among those who live in owner-occupied houses. No clear link between family circumstances and worry about becoming a victim of crime emerges from the material.
- *Crime victims feel more insecure than others.* Of those who have been the victims of crime during the past year, around 15 percent said that they worry about muggings or assaults. Among those who have been victims of property crime, the figure is 24 percent, and among those who have been victims of crimes against the person, the figure is even higher, 36 percent. The groups who have been witnesses to violent crime and/or have a close relative who has been the victim of crime also feel more insecure when they are outside in the evening and are more worried about crime than other groups.

## Fear of crime in different residential areas

Figure 2 shows the proportion of people who feel insecure when outside in the evening in their own residential areas categorised by type of area. The differences between inhabitants of the different types of area are large and significant. The proportion of insecure people is highest in the particularly disadvantaged areas. In these areas – which are characterised by high unemployment in combination

with a low rate of employment, low level of education, low-income level, a high proportion of inhabitants with foreign background, and, usually, a high proportion of children, making the population young – 37 percent feel insecure in the evening in their own residential areas. The corresponding level is 26 percent of the respondents in low-income areas. The lowest proportion of people feeling insecure is found in high-income areas.

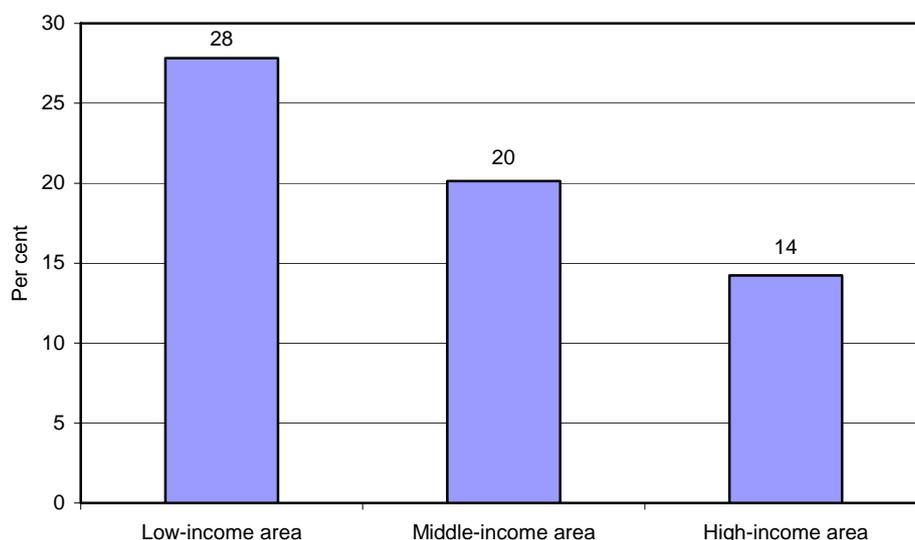


Figure 2. Insecurity when outside in the evening in their own residential area. Proportion who feel very or fairly insecure or who do not go out due to insecurity (in percent). Separate reporting according to type of area: particularly disadvantaged areas, low-, medium- and high-income areas (n = 542–4618).

### Areas with high electoral participation present less insecurity

Electoral participation can be regarded as an indicator of social capital, as people who feel they are participating in society are more inclined to vote. In order to capture a complementary dimension to financial resources, the SAMS areas have been classified into six types: low-, medium- and high-income areas with a low and high participation in elections. Figure 3 shows the proportion of people within each type of area who state that they feel insecure when outside in the evening in their own residential area. The columns to the left in the diagram correspond to the area types with a low electoral participation and the columns to the right to those with a high electoral participation. Irrespective of income level, the proportion of people feeling insecure is higher in the types of area where electoral participation is low. In other words, at the area level, there appears to be a link between electoral participation and insecurity, even when compared with the general level of income.

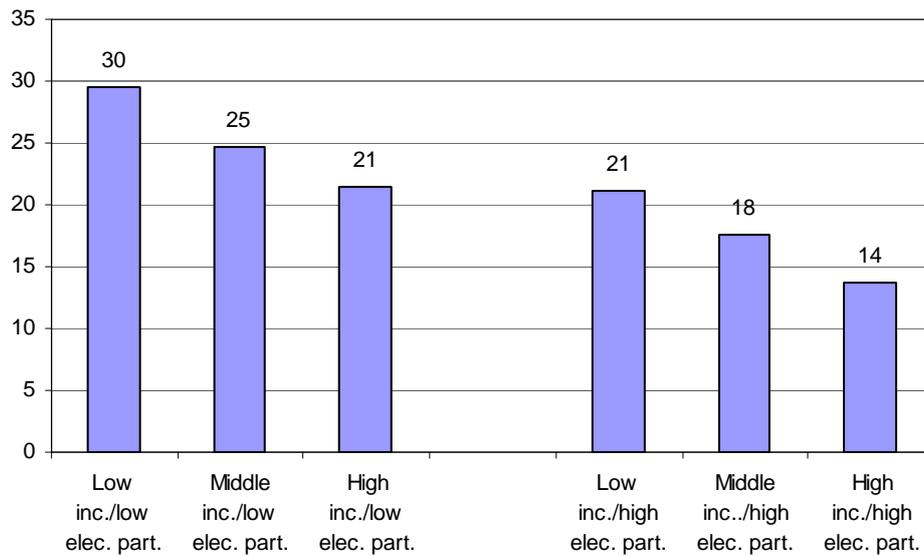


Figure 3. Insecurity when outside in the evening in their own residential area. Proportion who feel very or fairly insecure or who do not go out due to insecurity (in percent). Separate reporting according to median income and participation in elections at SAMS level.

## The importance of the residential area for the public's fear of crime

The report has described how fear of crime and feelings of insecurity vary between different population groups and between different types of residential areas. In order to say anything about how people's fear of crime is affected by neighbourhood factors, a multilevel analysis must be conducted which includes controls for characteristics at both the individual and neighbourhood levels. This provides an answer to the initial question of whether people's fear of crime is affected by segregation, or whether the differences that have been described so far only reflect the population composition in the residential area. Are there any differences in fear of crime between individuals who live in different residential areas also when controlling for individual characteristics? Table 1 presents the results from the multilevel analyses of the SCS material.

Table 1. Multilevel analysis of insecurity when outside in late evening in their own residential area. Random Intercept models at two levels: individual and SAMS area level. Odds ratios (RIGLS estimates, 2<sup>nd</sup> order PQL), ( $n_i = 11,206$  and  $n_j = 2,890$ ).

	Zero model	Model A	Model B	Model B1	Model C	Model D	Model E
<b>Fixed effects</b>							
Constant	0.25	0.05	0.04	0.06	0.03	0.06	0.06
<b>Gender</b>							
man (ref.)							
woman		5.74 ***	5.93 ***	5.90 ***	6.03 ***	5.91 ***	6.11 ***
<b>Age</b>							
16–24		1.08	1.11	0.94	1.02	0.95	1.03
25–44 (ref.)							
45–64		1.19	1.17 **	1.05	1.12	1.05	1.11
65–79		1.52 ***	1.52 ***	1.34 ***	1.44 ***	1.37 ***	1.47 ***
<b>Origin</b>							
Born in Sweden (ref.)							
Born abroad		1.56 ***	1.56 ***	1.73 ***	1.57 ***	1.64 ***	1.37 ***
<b>Marital status</b>							
Partner with children (ref.)							
Partner without children		0.95	1.03	1.21 **	1.12	1.21 ***	1.15 *
Single with children		0.84 **	0.93	1.22	1.05	1.20 **	1.09
Single without children		0.80 *	0.79 *	1.05	0.96	1.06	0.93
<b>Income</b>							
Low		1.19 ***	1.18 ***	1.23 ***	1.16 **	1.21 ***	1.17 **
Medium (ref.)							
High		0.99	1.03	0.91	0.99	0.91	1.01
<b>Education</b>							
Basic (ref.)							
Higher		0.73 ***	0.77 ***	0.76 ***	0.74 ***	0.77 ***	0.83 ***
<b>Housing type</b>							
Owner-occupied house (ref.)							
Flat, owned		1.75 ***	1.78 ***				
Flat, rented		2.41 ***	2.41 ***				
<b>Active socially</b>							
Never (ref.)							
Rarely			0.65 ***	0.70 ***	0.68 ***	0.70 ***	0.70 ***
Often			0.61 ***	0.65 ***	0.64 ***	0.66 ***	0.67 ***
<b>Crime against person</b>							
No (ref.)							
Yes			1.72 ***	1.79 ***	1.78 ***	1.78 ***	1.77 ***
<b>Crime against property</b>							
No (ref.)							
Yes			1.20 ***	1.20 ***	1.19 ***	1.20 ***	1.19 ***
<b>Witness to violence</b>							
No (ref.)							
Yes			1.34 ***	1.43 ***	1.38 ***	1.41 ***	1.36 ***
<b>Relative victim of crime</b>							
No (ref.)							
Yes			1.29 ***	1.27 ***	1.28 ***	1.27 ***	1.27 ***
<b>SAMS variables</b>							
Proportion of low-income households					1.03 ***		
Particularly exposed area						2.24 ***	
Participation in elections							0.95 ***
<b>Random effects</b>							
Variance at an individual level	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Variance at SAMS level	0.214 ***	0.117 ***	0.110 ***	0.192 ***	0.164 ***	0.161 ***	0.102 ***
ICC individual level (percent)	93.9	96.6	96.8	94.5	95.3	95.3	97.0
ICC SAMS level (percent)	6.1	3.4	3.2	5.5	4.7	4.7	3.0
Model fit	2,857.24	2,907.66	2,944.83	2,835.69	2,879.44	2,881.37	2,965.86

\*\*\* significant at 99 percent level, \*\* significant at 95 percent level, \* significant at 90 percent level

By testing a multilevel model that does not include any explanatory variables, either at the individual or area level (zero model), a measure is gained of how large a part of the variation in fear of crime is dependent on individual and area

conditions respectively. The zero model in Table 1 shows that the greater part of the variation (93.9 percent) is between individuals. The remaining part, 6.1 percent, is due to differences between residential areas, which is in-line with expectations based on earlier studies. For instance, in one study of the insecurity of citizens in Malmö, the authors found that the area variation amounted to 7.2 percent (Lindström, Merlo and Östergren 2003).

Model A includes the variables: gender, age, origin, family circumstances, income, education and housing, which leads to the area variation being almost halved, from 6.1 percent to 3.4 percent, but it is still significant. Model B also includes the variables concerning the respondents' direct and indirect experiences of crime and their lifestyle, in the form of participation in social life. The area variation is slightly reduced in Model B, from 3.4 percent to 3.2 percent, but it is still significant.

Some of the differences in fear of crime that exist between areas in the zero model are caused by concentration effects, and disappear when individual characteristics are controlled for in Model A and when controls are included for experiences of victimisation and lifestyle in Model B. However, even when controlling for these factors, a significant variation in fear of crime remains, which is dependent on circumstances at the area level. This means that the variation in fear of crime between people living in different residential areas is more than merely a reflection of the population composition since this has been controlled for. Irrespective of who the individuals are, and whether they have direct or indirect experience of crime, the residential area has an independent effect on the individuals' fear of crime.

But what causes these differences between individuals living in different areas? Can housing segregation explain them? In order to answer these questions, a number of models are tested which include explanatory variables at the area level.

However, before these are presented, the housing variable deserves a comment. In Table 1, Model B shows that people living in multi-family dwellings run a higher risk of feeling insecure than people living in owner-occupied houses (Table 1). The odds are almost 2.5 times greater for people in rented flats compared with people in owner-occupied houses. The type of housing also explains a considerable part of the area differences in feelings of insecurity. Model B1 in Table 1 contains the same set of variables as Model B, with the exception of this one variable. When it is excluded from the analyses, the area variation rises from 3.2 percent of the total variation in Model B to 5.5 percent in Model B1. Housing type constitutes a measure of resources at the individual level. But it also provides information about area-level conditions, since more poorly resourced areas are dominated by rented accommodation in the form of multi-family blocks of flats, while resource-rich areas are characterised by owner-occupied houses. As the variable captures both individual and area circumstances, we risk underestimating the effect of the area variables on the individuals' fear of crime in the models that are tested below. The variable is therefore excluded from the following presentation.

### **Segregation effects?**

Model C, in Table 1, includes the first area variable: the proportion of families in the area with a low disposable income. The odds ratio for the factor in question is 1.03. This means that the odds for fear of crime increase by 3 percent when the proportion of poor families in the area increases by one percentage point. In other words, there is an extra risk of fear of crime in areas where a large proportion of families have low incomes, in all population groups and irrespective of experiences of victimisation.

Model D tests the effect of living in one of the areas identified as being particularly disadvantaged in the local development agreements. The odds ratio is 2.24, meaning that the odds for experiencing fear of crime are 124 percent higher for a person living in a particularly disadvantaged area compared with a person living in another type of neighbourhood.

Model E in Table 1 tests the model using electoral participation as an indicator of the amount of social capital in the residential area. The odds ratio is 0.95 percent, meaning that the odds for feelings of insecurity fall by 5 percent when the proportion of people voting in the residential area rises by one percentage point. In other words, having a high proportion of inhabitants in the residential area participating in social life appears to have a favourable effect on the residents' experiences of fear of crime.

Area poverty has a negative effect on people's fear of crime, while participation has a positive effect, even when controls are included for number of important factors at the individual level: gender, age, family circumstances, socio-economic position, previous exposure to crime and participation in social life. The increased risk of experiencing fear of crime associated with living in a poor area, and the reduced risk associated with living in a neighbourhood where many participate in social life thus also apply when controlling for these factors. The area differences are, therefore, not caused by concentration effects, for instance the fact that more women than men live in poor areas, or that people in some areas are more exposed to crime and violence.

How does the variation in fear of crime change between residential areas when the area variables are included in Models C–E? Do these variables explain the differences between individuals living in different neighbourhoods? In Models C and D, 4.7 percent of the variation in individuals' experiences of fear of crime can be ascribed to area factors, and in Model E, 3.0 percent. As shown, all three factors: the proportion of poor families, whether the residential area is particularly disadvantaged and the proportion of voters, have a significant effect on fear of crime. They also reduce the area differences compared with Model B1 (which only includes variables at the individual level). But it is only Model E that reduces the variance more than Model B (which includes housing type). As previously mentioned, the type of housing is a measure of both individual and neighbourhood conditions, and, as such, is also a better explanatory variable than the two variables that measure area poverty in Models C and D respectively.

Model E, which controls for electoral participation in the residential area, is the model that best explains the differences in experiences of fear of crime between people living in different area. But, despite this, a significant variance still remains between areas, which cannot be explained by the variables analysed here. If housing form is also included in Model E, the area variance is reduced to 2.3 percent of the total variation in fear of crime, but it is still significant. In other words, there are other factors at the neighbourhood level that explain people's experiences of fear of crime. However, the question of what these factors are is left open for future research.

The results show that there is a link between housing segregation and individuals' fear of crime. The variation does not just reflect the population composition within the residential area, but also has an independent effect on individuals. A concentration of vulnerable people appears to create grounds for fear of crime, however, higher levels of fear of crime in some areas are not caused by the inhabitants being more exposed to crime. The question of exactly what mechanisms transform housing segregation into negative neighbourhood effects cannot be answered by this report, but social disorganisation and failing social control are some examples emphasised in the literature review.

## Concluding discussion

Three empirical questions were posed in the introduction to this summary, and these have guided the presentation:

- How do different population groups vary in terms of their experiences of fear of crime?
- Are there any differences between different types of residential areas in terms of fear of crime, and, if so, what are they?
- Do people who live in resource-poor areas feel more insecure than others?

### **Women and vulnerable groups feel more insecure**

As discussed in the literature review, previous research has found a strong link between vulnerability and feelings of insecurity. Groups that are physically, financially and socially vulnerable also feel more insecure than others. The results from this report confirm this picture. Gender is the variable that has the greatest effect on fear of crime. Irrespective of whether we control for a number of other factors, such as age, social and economic resources, whether people have been exposed to crime or witnessed violence, and so on, women feel more insecure than men when they are outside in the evenings in their residential areas. One possible interpretation is that women's feelings of insecurity are based on a fear of sexual violence. Although the risk of becoming a victim of an assault and rape are very small, the consequences could be fatal. Another possible interpretation, is that women and men are socialised into different roles, and that women "learn" that it is natural to feel insecure in the situation in question.

The analysis of the SCS material also shows that older people feel more insecure than younger people. Individuals with low incomes and low levels of education feel more insecure than those who have greater financial resources. The odds for feelings of insecurity are higher among those born abroad than those born in Sweden. This can also be interpreted in terms of vulnerability associated with belonging to a minority group, and not having access to the social networks that may work as a protection against crime.

Another very important factor that has emerged in the analyses is the type of housing tenure. Those who live in rented flats feel a higher degree of insecurity than others. This can be interpreted in terms of vulnerability, since those living in rented accommodation generally have less financial resources than those who live in owner-occupied houses. But the form of housing tenure can also be an indicator of the area's physical layout. It is a reasonable assumption that rented flats, to a large extent, can be found in multi-storey residential areas, which are felt to be more insecure places. This illustrates that both the physical layout and the use of land may be central factors for people's feelings of insecurity.

### **Those who spend a lot of time outside feel less insecure**

Analyses show that those who regularly participate in social life feel less insecure than those who never participate, although the former are more exposed to risk simply by actively participating in social life. The relationship also holds when controlling for a number of other factors, such as gender and age, which means that it is not because the people who stay at home are older. These individuals visit the cinema, clubs or restaurants, spend time regularly outside in the evenings in their own residential areas, and on their way to or from home, however, this does not make them feel insecure, but the opposite – more secure. This might perhaps be because this type of feeling of insecurity (outside in the

evening) is equivalent to a fear of the unknown. Those who often move about their residential area after dark probably view it as familiar territory, and, therefore, less frightening.

Fear of crime or insecurity is a complex feeling, which cannot simply be explained on the basis of the objective risks of being subjected to crime, and the link between victimisation and insecurity is not always simple and linear. Having been the victim of crime gives rise to a number of feelings, such as insecurity, anger, frustration and fear. However, even when controls are included for a number of other factors, such as gender and age, the analyses in the report show that those who have been subjected to some type of crime feel more insecure than others, and crime aimed against an individual has a stronger effect on the outcome variable than crime against property. The odds for feeling insecure are just over 70 percent higher among those subjected to crimes against the person, and around 20 percent higher for those who have experienced property crimes. In the same way, those who have witnessed violence or who have a relative who has been exposed to crime feel more insecure than others.

### **Segregation affects everybody's feelings of insecurity**

The answer to the question of whether the character of the residential area affects an individual's feelings of insecurity is: yes. The links that emerged from the descriptive parts of the report were confirmed by the multilevel analyses. Even when controlling for important factors such as gender, age, social and economic resources, previous victimisation, and whether people have witnessed violence or have a relative who have been subjected to crime, a significant variation remains, which is dependent on area conditions. Can these differences be explained by segregation effects? In order to find an answer to this question, the proportion of families with a low disposable income was used as an indicator of area poverty. The results of the analyses show that area poverty has a significant effect on the odds for fear of crime. The odds for fear of crime increase in line with the rise in the proportion of poor households. However, the area variable in question did not reduce the area variance to any significant extent, which means that it is debatable whether the general level of income is a good measure of poverty. For this reason, we also tested the effect of living in one of the areas identified as being particularly disadvantaged in the local development agreements. It then emerged that people who live in this type of neighbourhood run a greater risk of experiencing fear of crime. The odds for fear of crime are almost 2.5 times greater for those who live in disadvantaged areas compared with those who live in another type of area.

The fact that fear of crime has a skewed distribution across different population groups is known from previous research. The results from this study also confirm the view that fear of crime has a skewed geographical distribution. The results show that the higher levels of fear of crime found in poorly resourced residential areas do not simply reflect the concentration of vulnerable groups. Housing segregation also has an independent effect on those who live there, which might be expressed as those living in these areas running a greater risk of experiencing fear of crime in the evening in their own residential areas.

### **More social capital: less fear of crime**

An interesting result emerging from the report is the importance of social capital for people's feelings of security. The descriptive sections showed that feelings of insecurity are greater in residential areas with a low level of electoral participation, irrespective of the general income level in the area. This indicates that not just financial, but also social resources are important dimensions for understanding why people feel insecure. The multivariate multilevel analysis

confirmed that the odds for fear of crime fall the higher the proportion of voters among the inhabitants of the residential area. In areas where the inhabitants participate in society, fear of crime is also lower. Participating in elections turned out to be a better explanatory factor than the general income level in the residential area, since electoral participation reduced a substantial part of the variation in the fear of crime associated with differences between areas.

Previous studies have found a positive correlation between the existence of strong social capital and the prevention of crime. Its effect on the perception of security would then be indirect. But perhaps the reverse is also true: a high level of crime has a negative effect on social capital (Lindström, Merlo and Östergren 2003).

### **How to reduce the unequal feeling of insecurity?**

It is clear that perceived fear and insecurity are partly linked to exposure to crime, and, to the extent that this is the case, a policy to reduce crime will also have the potential of increasing the feeling of security. In this study however, results indicate that the work to counteract feelings of insecurity also has to deal with conditions that affect people's perceived and actual vulnerability. Here, various situational measures, in the form of lighting of footpaths, improvements to public spaces and CCTV monitoring of parking areas, for instance, may be a way of reducing perceived vulnerability and increasing feelings of security. These types of measures should be aimed at residential areas and locations where the perception of vulnerability is at its greatest.

Another important result for a policy striving towards improved security throughout Sweden is the importance of various forms of participation in society, which improve the perceived level of security. Individuals who often participate in social life probably have a greater risk of being subjected to violence in public places, but, despite this, they claim a greater feeling of security. One interpretation that could be made, in relation to the knowledge review, is that participation itself creates a feeling of being in control of the situation. In relation to this, the study shows that feelings of security are greater in those residential areas where more people participate in municipal elections, and that this effect applies irrespective of who the individual is. This is also in line with an explanation based on a feeling of security being created when individuals feel that they are participating in society. Measures that increase the levels of participation in society (particularly vulnerable people) will have positive effects on the feeling of security.

An important question raised by the existing differences in people's concerns about crime is how the feeling of insecurity in particularly disadvantaged areas will develop in the future. In Sweden, we have, as yet, not seen the type of hyper-segregation found in American cities, for instance. Despite this, there are, today, clear differences in feelings of security between different residential areas in Sweden. The question is: what will happen if the trend towards increased residential segregation continues? In the international literature, there are discussions about threshold effects, meaning that that the effects of residential segregation emerge even more strongly when the residential area reaches a critical poverty limit. Once this limit has been passed, it may be very difficult to turn the trend around.

Against this background, it is very important to follow the development of residential segregation over time and to study the extent to which unequal feelings of insecurity increase or decrease. This type of study should therefore be repeated regularly. In this way, it can also be clarified whether the measures used by society to reduce people's concerns about crime and to increase their feelings of security have had the desired effect.