

CHAPTER 3

METHODOLOGY

Geographical analysis must go beyond purely descriptive ecological studies and formulate some theoretical constructs which may lead to explanations of the criminal spatial structure.

- Rengert (1980:47)

3.1 INTRODUCTION

The rationale behind Chapter 3 is to describe the methodology that was used to conduct the research. The range of methods and approaches that were applied, fall primarily within the paradigm of qualitative research. The case study approach served as methodological anchor, and was adjusted to suit the specific needs of the study.

Within the framework of the realist philosophy of 'what we can know' and 'how we can come to know about it' (see par. 1.8), the challenge was to develop an appropriate methodology, a set of rules and procedures, that prescribed how the research would be conducted. It was also stated in the objectives of the study (see par. 1.6.3) that an appropriate methodology would be developed that would guide and direct the research process, and that would answer to the requirements formulated in the conceptual framework (see par. 2.6) and the research expectations (see par. 2.7).

3.2 RESEARCH STRATEGY

To obtain a clear understanding of the complex processes and interactions involved in the burglary process, it was decided to focus the study on the realist domain of the actual event and how it took place (see par. 1.8). Less emphasis was placed on the underlying structures that cause criminal behaviour. In order to undertake a qualitative study of the burglary process, it was necessary to adopt a research strategy that would ensure an in-depth understanding of the many situational and environmental factors that could influence the course of the burglary process and to be able to construct an integrated and holistic picture of what happened before, during and after the burglary event.

The research strategy adopted and adjusted for this study is based on the case study approach, as conceptualised by social theorists such as Robson (1993:146-166), Miles and Huberman, (1994:18-37), Stake (1994:236-247), Yin (1994) and Neuman (1997:29-30).

3.2.1 The case study approach

3.2.1.1 Rationale

Case studies were previously, prior to the 1990s, closely associated with data collection, as a specific phase in the research process. More recently, the case study approach is advocated as a complete methodology, one that has great flexibility in its application, whether applied to people, communities, institutions or events. According to Robson (1993:146) the case study method can be regarded as “a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence”. Residential burglary can be regarded as such a ‘contemporary phenomenon’, which needs to be studied in ‘its real life context’. As indicated in Chapter 1 (par. 1.9), the designing of a case study implies the following elements: building a conceptual framework, formulating research questions, bounding the case territory, bounding the collection of data and instruments or methods for data collection and analysis (Miles & Huberman, 1994:18-37).

Robson (1993:149) also pointed out the danger of using a detailed conceptual framework, which could blind the researcher to important features of a case, or may cause the researcher to misinterpret the evidence. For this reason the initial framework should not be regarded as definitive, and the researcher should remain open to alternative formulations, or possible relationships not captured in the initial framework.

On the grounds of the following considerations, the decision was taken to use the case study approach in the research:

- The case study approach provides an alternative to the “scientific method” of quantitative research most often used in geographical studies. Through the case study design and methodology, the researcher can use a relatively small sample of cases to qualitatively investigate a specific phenomenon.
- The case study approach is especially convenient to study burglary events at a micro-level and to answer the questions “why” and “how” a particular burglary event took place, at a specific location, at a specific time (Yin, 1994:6).
- The emphasis is on a ‘contemporary phenomenon’ (burglary event) within some ‘real-life context’, and to examine how the different parts of the case are configured, and not to display a quantified explanation of the phenomenon based on, for example, survey methodology (Robson, 1993:146).

- Through the case study approach events at the micro-level can be linked to patterns at the meso- and macro-level. The logic of the case study is to demonstrate a causal argument about how general social forces shape and produce results in particular settings (Neuman, 1997:30), although the findings cannot be generalised.
- The case study is primarily a qualitative research approach that can be applied to gain in-depth knowledge and understanding of a particular event, and to create the opportunity for personal involvement and observation. Neuman (1997:29) is of the opinion that the case study method provides the logic of analytic instead of enumerative induction. Through multiple-case studies, however, a degree of quantification is possible in the determination of burglary patterns and trends.
- By using a case study approach it is possible to describe and explain the burglary process in order to advance an understanding of the phenomenon, residential burglary, and to build on existing theory so that it becomes more complete (Stake, 1994:237).

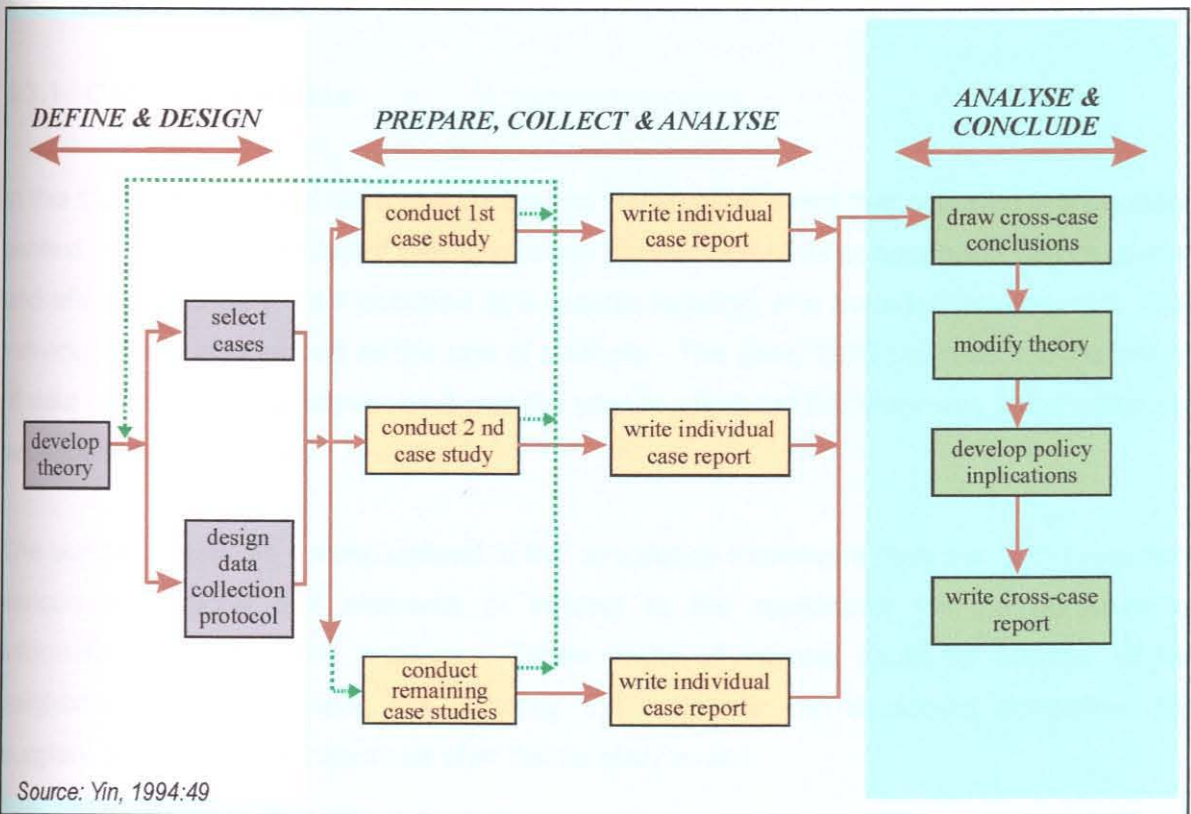
3.2.1.2 Multiple-case design

A multiple-case design was used in this study because of the abundance of available cases of residential burglary. The multiple-case study should not be considered to be similar to the respondents in a survey study. Instead of a 'sampling' logic in a survey study, the multiple-case study follows a 'replication' logic, that is to determine the degree of 'replication' of results between the different cases (Yin, 1994:47). A 'sampling' logic to the contrary, will be more appropriate when the researcher is interested in determining the prevalence or frequency of a particular phenomenon, in which case the sample represents a larger pool of respondents.

Figure 3.1 provides an illustration of how multiple-case studies can be used as a research design and a method to modify existing theory. The case study method as explained by Yin (1994:49) advocates that the initial step in designing the study must consist of theory development, followed by case selection and the design of data collection process. Each individual case represents a complete study, which culminates in cross-case conclusions, theory modification, policy implications, and the final report.

Stake (1994:237) also distinguishes between "intrinsic" and "instrumental" case studies. The former is undertaken not to represent other cases or because it illustrates a particular trait or problem, but because the case itself is of interest. The purpose is thus not to build theory.

FIGURE 3.1: THE MULTIPLE-CASE DESIGN



On the other hand, the instrumental case study, provides insight into a particular issue or event, or helps to refine a particular theory. When a number of cases are needed in order to inquire into the phenomenon, Stake (1994:237), calls it a “collective” case study. Cases, in a collective case study, are chosen because they will enhance understanding, and perhaps lead to better theorising of a still larger collection of cases.

3.2.2 Phases in the research process

Within the realm of the case study approach, the following phases, also reflecting on the methods, techniques, and procedures, could be identified in the research process:

- bounding of case study territory;
- identification of sources of information;
- method of enquiry;
- compilation of interview guides;
- pilot study;
- selection of interview cases;
- conducting of interviews;
- processing of information;
- analysis of information; and
- criteria for trustworthiness.

3.3 BOUNDING OF CASE STUDY TERRITORY

3.3.1 Defining the case

In this study an individual case was defined as the burglary event that occurred in a bounded context. The context included the time-space dimensions of what happened before, during and after the burglary, as it occurred at a specific location, in a bounded environment. The individual case also served as the unit of analysis. The year, 1998, represented the period of data collection and analysis, as it was the year in which the fieldwork was undertaken and secondary data collected.

The burglary event as conceptualised in the conceptual framework (see par. 2.6) comprises various dimensions and elements of interest to the researcher for the purposes of information gathering and analysis. These areas of interest could be defined as the neighbourhood environment; the burglars; the residents; the situational conditions; the burglary event; and the responses after the burglary event.

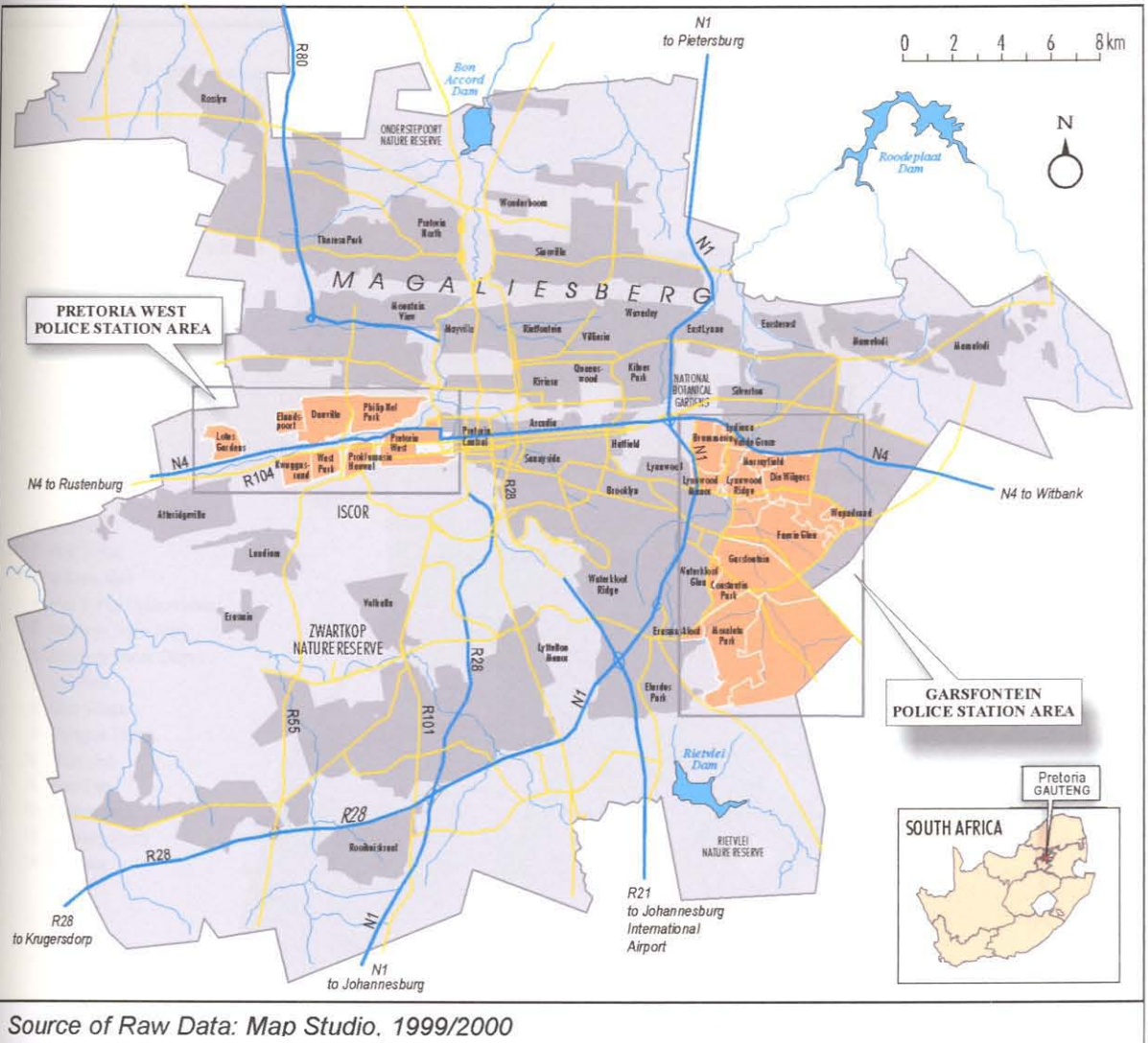
3.3.2 Demarcation of the case study areas

In Chapter 1 (par.1.7) mention was made of the two police station areas of Pretoria West and Garsfontein that were selected for the purpose of the case study fieldwork, and that the selection was done on the grounds of an affluent residential area versus a less-affluent one. The following criteria were used to differentiate between these two areas: The neighbourhoods in the Garsfontein police station area appear on "face value", or in terms of general public knowledge, to be more affluent than the Pretoria West area. These impressions were confirmed by two other indicators, namely the average size and value of residential sites, which were significantly larger in the Garsfontein area than the Pretoria West area. This conclusion is based on the assumption that larger residential sites and higher site values are associated with neighbourhoods that experience higher levels of affluence. Figure 3.2 provides an orientation map of the two case study areas.

The physical demarcation of the case study areas corresponds with the residential neighbourhoods in the Pretoria West and Pretoria East police station areas, as illustrated in Figures 3.3 and 3.4.

The Pretoria West police station area includes the following residential neighbourhoods: Pretoria West, Proklamasie Heuwel, West Park, Danville, Kwaggasrand, Elandspoort, Lotus Gardens and Philip Nel Park (see Fig. 3.3). It should be noted that the Pretoria West police

FIGURE 3.2: ORIENTATION MAP OF THE TWO CASE STUDY AREAS



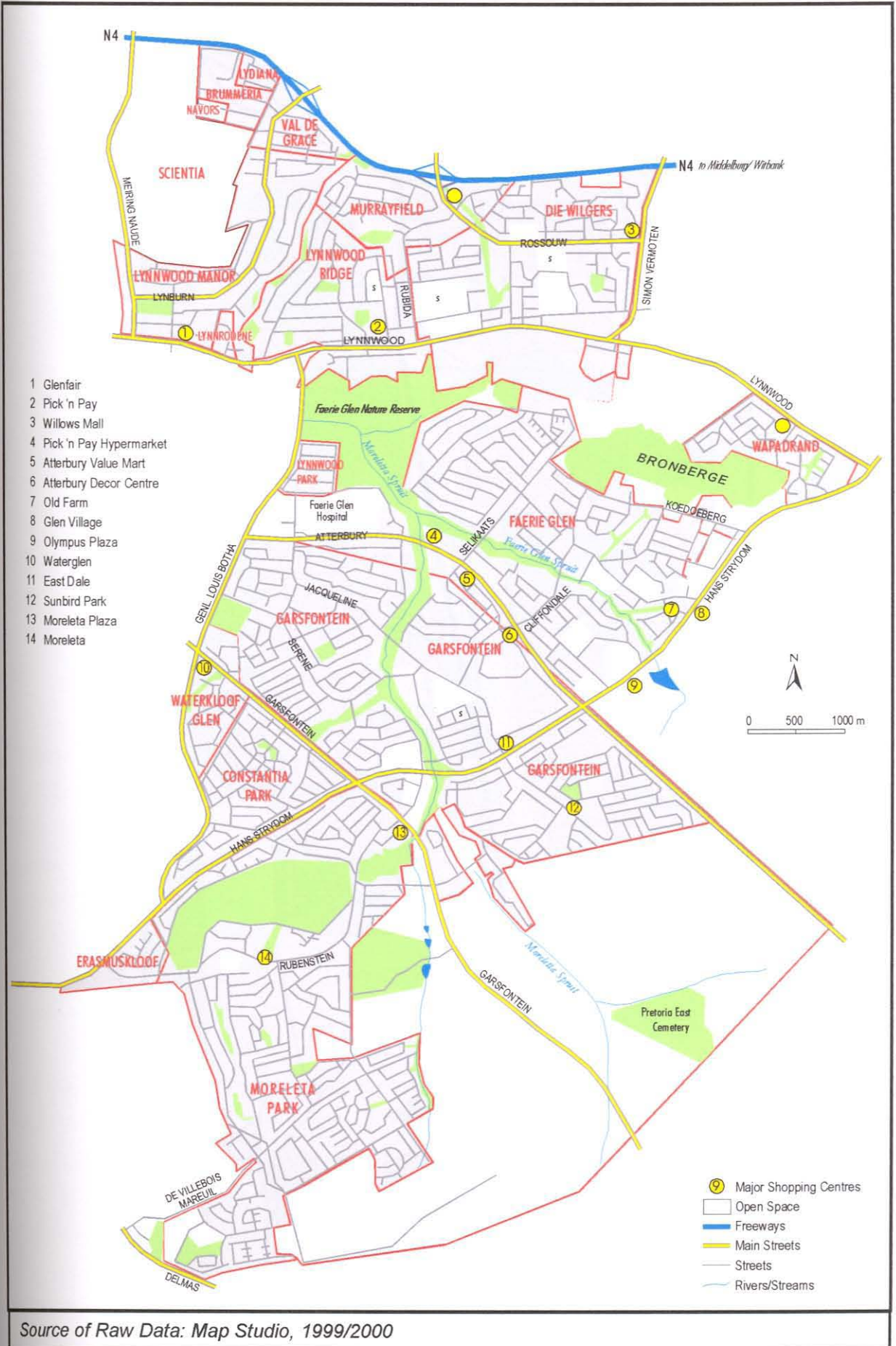
Source of Raw Data: Map Studio, 1999/2000

station area also encompasses rural plots (small holdings) and industrial areas that were not included in the study.

The Garsfontein police station area includes the following residential neighbourhoods: Lynnwood Manor, Lynnwood Ridge, Lynnwood Park, Murrayfield (partly), Die Wilgers, Wapadrand, Faerie Glen, Garsfontein, Constantiapark, Pretoriuspark and Moreletapark (see Fig. 3.4).

Comparative features of the two case study areas are provided in Table 3.1. Further detailed information on the case study areas are provided in Chapter 4 (see par. 4.5).

FIGURE 3.3: GARSFONTEIN POLICE STATION AREA



Source of Raw Data: Map Studio, 1999/2000

FIGURE 3.4: PRETORIA WEST POLICE STATION AREA



Source of Raw Data: Map Studio, 1999/2000

TABLE 3.1: FEATURES OF CASE STUDY AREAS

FEATURES	PRETORIA WEST SAPS AREA	GARSFONTEIN SAPS AREA
1. Population*	65 000	80 000
2. Average size of residential sites in square metres**	815	1 357
3. Average residential site value in Rand**	R26 000	R65 000
4. Residential burglaries per 100 000 of the population in 1998***	519	2 195

Source:

* Population statistics provided by the office of the Pretoria Area Commissioner of the SAPS, 2000

** Information provided by the Property Valuation Directorate of the City Council of Pretoria, 2000.

*** Crime statistics provided by the office of the Pretoria Area Commissioner of the SAPS, 2000.

The information in Table 3.1, is a confirmation of the decision to select neighbourhoods in the Garsfontein police station area as the more affluent area versus the Pretoria West police station area as the less affluent area.

3.4 SOURCES OF INFORMATION

Through the formulation of research questions, the conceptual framework and research expectations, the researcher developed a clear understanding of the information needed for the research. The conceptual framework provides a theoretical explanation of the burglary process in the micro-environment, but also in context of the broader meso- and macro-environment. A distinction could therefore be made between primary data sources, focussing on the micro-environment, and secondary data sources, focussing on the meso- and macro-environment. Table 3.2 provides a summary of the sources of data and methods of data collection that were used in the study.

The rationale behind the use of various sources of information (interviews, observations and documentation) was to create a basis for comparison, agreement and disagreement of data, that would strengthen the validity and credibility of the findings and conclusions. According to Yin (1994:10) case studies provide little basis for scientific generalisation, however, case studies are generalisable to theoretical propositions or a conceptual framework.

In addition to the collected research data, the literature study on residential burglary also provided the researcher with numerous sources of information on research findings of

TABLE 3.2: SOURCES OF DATA AND METHODS OF DATA COLLECTION

SOURCES OF DATA AND METHODS OF COLLECTION	
A. Primary information sources:	
1.	Semi-structured interviews with three groups of people: <ul style="list-style-type: none"> 1.2 Burglary victims in the two case study areas. 1.3 Convicted burglars (prisoners at the Atteridgeville prison). 1.4 People with expert knowledge on certain aspects of residential burglary, including the SAPS, Security Companies, Insurance Companies, and Community Policing Forums.
2.	Personal observations of the urban environments in the two case study areas, as well as the micro-environments in which the burglary events (the selected case studies) took place.
B. Secondary information sources:	
3.	Documentation of existing data, including: <ul style="list-style-type: none"> 3.1 SAPS statistics and records, provided by the SAPS Monthly Bulletin on Reported Crime in South Africa, and the office of the Pretoria Area Commissioner. 3.2 Publications on crime studies in South Africa, including: <ul style="list-style-type: none"> • a victim survey done by the ISS in 1998 of the Greater Pretoria Area, • a survey study on crime patterns in the Greater Pretoria Metropolitan Area, conducted in 1998 by the Community Safety Unit of the Institute for Democracy in South Africa (IDASA), and • a victims of crime survey conducted in 1998 by Statistics South Africa. 3.3 Maps and residential site values as determined by the Property Valuation Directorate of the City Council of Pretoria.

studies undertaken in the UK and the USA. Of specific significance were the research publications of Reppetto (1974), Clarke and Mayhew (1980), Poyner (1983), Bennett and Wright (1984), Brantingham and Brantingham (1984), and Heal and Laycock (1986). These sources provided valuable information for purposes of comparisons and cross-references in terms of agreement or disagreement with research findings in this study.

Paragraphs 3.5 to 3.11.1 of this chapter will primarily focus on the methodology used in the collection, processing, and analysis of primary data sources, whereas Paragraph 3.11.2 will explain the use of secondary data analysis in the study.

3.5 METHOD OF ENQUIRY

The semi-structured interview technique was used as the method of acquiring information from the people selected for interviewing. The semi-structured interview can be regarded as a middle route between the self-completion of questionnaires in a survey study, and the unstructured, "free-range" interview, with no clear beginning or end. In this regard the researcher supports the view of Robson (1993:227), namely, that the interviewer should have clear defined purposes with the interview, but seeks to achieve them through some

flexibility in wording, greater freedom in the sequencing of questions and in the amount of time and attention given to different topics.

According to Robson (1993:238), the interview schedule for the semi-structured interview can be simpler than the one for the structured interview. The semi-structured interview schedule usually includes the following elements (Robson, 1993:238):

- introductory comments (probably a verbatim script);
- list of topic headings and possibly key questions to ask under these headings;
- set of associated prompts; and
- closing comments.

From the research literature of Neuman (1997:371), the following guiding principles regarding field research interviews were identified that assisted the researcher in the compilation of the interview schedules, and also the conducting of the pilot study, as well as the case study interviews:

- The interview should be conducted like a friendly conversation, but with more interviewer questions.
- The questions and the order in which they are asked are tailored to specific people and situations.
- The interviewer shows interest in responses and encourages elaboration.
- Open-ended questions are common, and probes are frequent.
- The social context of the interview is noted and seen as important for interpreting the meaning of responses.
- The interviewer adjusts to the interviewee's norms and language usage.

According to Robson (1993:229), the use of semi-structured interviews has certain advantages and disadvantages. Advantages are *inter alia* the opportunity to observe the respondent's behaviour and the environmental setting in which the event took place, the possibility to follow up important responses and to investigate underlying motives or feelings. However, semi-structured interviews can also be time-consuming, people may be unwilling to participate, while others may be overeager for conversation that can easily divert the interview to unrelated issues. There is also the question of standardisation and possible biases from the interviewer's side, which require considerable skill, experience and professionalism in conducting of semi-structured interviews.

3.6 COMPILATION OF INTERVIEW SCHEDULES

According to Bailey (1987:191), the interviewer has to study the event or phenomenon in advance before drawing up an interview guide or schedule. Robson (1993:241) also argued that the first task in preparing for an interview, is to carry out a situational analysis, by means of observation, or documentary analysis (in this study the conceptual framework). Generally this will include important aspects of the situation, the meaning thereof, and the effects they have on those involved.

The contents of the interview schedules compiled for this study were based on the requirements as stipulated in the research questions (see par. 1.4.1), the conceptual framework (see par. 2.6), and the research expectations (see par. 2.7). In a broad sense, the interview schedules were aimed at answering the research questions of “why”, “how” and with “what” effect a burglary event took place. The research expectations were also formulated in such a way that it covered all the elements in the conceptual framework, and for that reason also served as a guide in the formulation of questions for inclusion in the interview schedules.

Three sets of interview schedules were developed, aimed at three different target groups, namely: burglary victims in the two case study areas; convicted burglars; and people with expert knowledge on residential burglary. Each of the interview schedules consists of a pool of questions that can broadly be divided into three sections, namely: Section 1, containing general questions of a personal nature and descriptions of the situational conditions existing in the micro-environment prior to the burglary; Section 2, containing questions on the actual commission of the burglary event; and Section 3, containing questions on the feelings and responses of the interviewees after the occurrence of the burglary. The three interview schedules (without the spaces for notes) are attached as:

- Appendix 1: Interview schedule for burglary victims;
- Appendix 2: Interview schedule for convicted burglars; and
- Appendix 3: Interview schedule for people with expert knowledge on burglary.

Most of the questions were of a descriptive nature and designed to obtain factual answers from the respondents, although in Section 3 of the interview schedules a few questions on personal feelings and beliefs were included. An example is (Q 3.2 in Appendix 1): *Has your fear of victimisation changed since the burglary?* The reason for the mainly factual nature of the questions was to ensure that the central focus remained on the actual event and how the respondents experienced the phenomenon of residential burglary.

In order to allow the respondents to express themselves freely and to answer in detail or to qualify their responses, open-ended questions were formulated. Other advantages of open-ended questions are that they allow the interviewer to use probes for further explanations, to clear misinterpretations, and to encourage cooperation and rapport between the interviewer and the interviewee (Robson, 1993:233). There can also be disadvantages to open-ended questions, as stipulated by Neuman (1997:241), which *inter alia* include: different respondents give different degrees of detail in answers; comparisons and statistical analysis become more difficult; coding responses is difficult; responses may be irrelevant and time-consuming; and the interviewer may find it difficult to take down verbatim responses.

As a result of the qualitative nature of the study, the use of open-ended questions, the relative small interviewing samples involved, and the fact that no sophisticated statistical methods were planned to be used in the analysis of the data, it was decided in advance not to make use of codified interview schedules.

3.7 PILOT STUDY

The pilot study was undertaken prior to the data collection phase in order to refine the contents of the interview schedules and to determine the best practices and procedures to be followed during interviewing sessions (Yin, 1994:74). The pilot study was also useful to evaluate the appropriateness of the research-design and to examine different approaches on a trial basis. According to Robson (1993:164) a pilot study helps to assess the feasibility of what is proposed in terms of time, effort and resources to ensure the best possible results.

3.7.1 Selection and conducting of the pilot study

Although three target groups were identified for interviewing, namely the burglary victims, the convicted burglars, and people with knowledge of burglary (the expertise group), the pilot study only involved the burglary victims in the two case study areas of the Pretoria West and Garsfontein police stations. This decision was taken after considering the following:

- the case study investigations constituted the central focus of the study and the other interviews were conducted to complement the case study findings;
- the interviewing of the convicted burglars could only be arranged over two consecutive days, which made their inclusion in the pilot study difficult; and
- the target group of expertise consisted of people with diverse interests and specialised knowledge in certain aspects of the burglary process and could therefore not be regarded as a distinct grouping.

The researcher was also of the opinion that the lessons learned through the pilot study could be applied to the other target groups, seeing that many of the questions and the design thereof were similar for the three sets of interview schedules.

For the purpose of selecting the pilot cases, the first four interviews (two in each of the case study areas) that were conducted with the burglary victims, were used in the pilot study. The four pilot cases were included in the total number of cases selected for the study as explained in Paragraph 3.8. Members of the Pretoria West and Garsfontein police stations were requested to assist the researcher in the selection of four pilot cases, and to confirm with the residents whether they were prepared to participate in the project.

The four pilot interviews were conducted during March and April 1999. The purpose was specifically to evaluate the interview schedule (with reference to Interview Schedule 1) in terms of:

- whether it covered the full spectrum of the burglary process;
- whether the questions were sufficient and properly formulated, and to make the necessary adjustments;
- what sequence of questioning worked best;
- how to establish good rapport and confidentiality between the interviewer and the interviewee;
- the best way of taking down notes; and
- the time-frame to complete the interview.

3.7.2 Results of the pilot study

It was obvious to the researcher that the respondents in the pilot study did not feel threatened by the interview or the questions posed to them, to the contrary, they easily identified with the objectives of the study as well as that of the interview. The fact that most of the questions were not of a personal nature, but directed at the respondent's experiences of the burglary event and the factors surrounding the event, could be contributory to the creation of an atmosphere of co-operation and openness. Residential burglary was also perceived as an external problem and not a household problem. The researcher realised through these factors how important the introduction was to explain the purpose of the interview, and to establish confidentiality and rapport.

The main section of questions involved the three time slots in the burglary process, namely: the situational conditions prior to the burglary event; the commission of the burglary; and the responses of the residents after the burglary event. The sequence of questioning that

seemed to suit the respondents best, was to begin with the questions on the burglary event of which they have a clear conception, and then to advance to the questions on the situational conditions in the micro-environment that persisted prior to the burglary event, and lastly, to focus on the respondents' feelings and responses after the burglary event.

Because of the semi-structured nature of the interviews and the fact that most questions were open-ended, provided a flexibility in the conducting of the interviews. However, the researcher acknowledged the need for standardisation and therefore realised that the same questions should be posed to all the respondents, although the order of questioning could vary. In this regard the value of probes for further enquiring or to correct misunderstandings were of crucial importance. An example is Question 1.8 (in Appendix 1), where the respondent was asked to describe the accessibility of his/her residence in terms of access roads. Depending on the answer, the interviewer would further probe for clarification on the closeness of busy streets or main roads.

During the pilot study it was found that the respondents had difficulty in answering some of the questions, and because the same information could be gathered through other sources of information, for example, the site values could be obtained at the City Council of Pretoria, it was decided not to include the following questions:

- *What would you say is the current market value of your property/residence?*
- *What is the site value of your property according to the account you receive from the City Council of Pretoria?*
- *What is the improvement value of your property according to the account you receive from the City Council of Pretoria?*
- *Can you give me an indication of your monthly income?*
- *Do you have any idea of what tools were used to gain entrance to the building?*

It was decided to pose the last question to the convicted burglars who were in a better position to provide a more reliable answer to the question and it did not feature in the pilot study.

During the course of the pilot study, the researcher decided to change the following three questions by providing prompts to the interviewees, reading out a list of possibilities on which they could comment. The reason was to make sure that all the items, the researcher regarded as important, were covered in the interview, and to improve standardisation in the sequence of responses. These questions were:

Question 1.13: The original question read: *Were other people (workers) present on the*

premise, prior and during the period of the burglary?

Question 1.13 was then extended to include the following prompt: *Were other people (workers) present on the premise, prior and during the period of the burglary? If any, can you give me further particulars about the person(s), whether they were lodging or commuting, and which days they were present?*

Person	Yes or No	Lodging or commuting	Days of the week present
Domestic worker			
Gardener			
Tenant			
Other: Name:			

Question 1.20: The original question read: *Can you tell me what security measures were in place before the burglary?*

Question 1.20 was then changed to include the following prompt: *Which of the following security measures were in place before the burglary?* (Followed by a list of 18 possibilities, read out to the interviewee)

Question 2.20: The original question read: *Can you tell me what items were stolen during the burglary?*

Question 2.20 was then changed to include the following prompt: *Which of the following items were stolen during the burglary?* (Followed by a list of 16 possibilities, read out to the interviewee) (see Appendix 1).

Except for minor editorial changes, the rest of the questions did not provide interpretation problems and were regarded as sufficient to cover the full spectrum of the burglary process. The duration of the interviews varied between one hour and one and a half hour, which is generally regarded as within the expected duration scheduled for the interviews. Robson (1993:229) also suggests interviews of approximately one hour duration, because too lengthy interviews may make unreasonable demands on busy schedules of interviewees, and could reduce the interviewees' willingness to co-operate.

The recording of the interviews was done through the taking of notes, for which provision

was made on the interview schedules. The researcher also realised that for the purposes of standardisation and subsequent analysis of the interview data, the taking of notes should be done in an accurate and consistent way. According to Robson (1993:163), the case study investigator should have an open mind (be a good listener) and a good memory, taking in a lot of new information without bias; noting the exact words said; capturing the mood and affective components; and appreciating the context.

The researcher was of the opinion that taking notes was sufficient to capture the essence of the interviews and that the use of a tape-recorder was not necessary.

As a result of the minor changes to the four pilot cases, the decision was taken to include them into the sample of research cases that were analysed and interpreted.

3.7.3 Application of lessons learned on the other schedules

The lessons learned through the pilot study on the burglary victims were also applied to the interview schedules for the convicted burglars (see Appendix 2) and the group with expert knowledge on burglary (see Appendix 3). Questions 2.13 and 3.10 in the interview schedule for convicted burglars, and Questions 1.4 and 2.13 in the interview schedule for people with expert knowledge, were also changed to provide the interviewees with a list of possibilities.

In order to enhance the correctness of the answers provided by the convicted burglars, three sets of control questions were included in Appendix 2, namely:

Questions 1.4 and 3.1 which respectively read:

*Where/how did you learn to burgle and
Why did you start to burgle?*

Questions 2.4 and 2.7 which respectively read:

*How did you gain entrance to the site and the building and
How did you overcome the security measures?*

Questions 3.9 and 3.10 which respectively read:

*What would you say are the best security/safety measures one can take to protect his/her house against burglary and
How effective do you think are the following security measures in preventing a burglary?*

The pilot study was an important phase in the research process that familiarized the researcher with an appropriate interview technique to improve the quality and reliability of the data collected.

3.8 SELECTION OF CASES FOR INTERVIEWING

Three sampling populations were identified from which cases were drawn for interviewing, namely: burglary victims in the two case study areas of Pretoria West and Garsfontein; convicted burglars; and people with expert knowledge on certain aspects of residential burglary. The sampling methods applied are explicated in the sections that follows.

3.8.1 Selection of burglary victims

The researcher took the decision to select a sample of 24 burglary cases (the four pilot cases were included), 12 from each of the two case study areas of Pretoria West and Pretoria East. The rationale for the relative small sample was based on the qualitative nature of the study and that no need existed to generalise the findings beyond the specific sample studied. The primary purpose of the study was not to determine generalised patterns and trends, but to refine and improve the conceptual framework that could be applied in the study of residential burglary.

A stratified probability sample as well as a snowball sampling method (Bailey, 1987:95) were used in the selection of burglary victims in the two case study areas. The sampling process occurred in stages. Initially the police stations of Pretoria West and Garsfontein were requested to assist the researcher to randomly select a few burglary cases, that occurred during the course of 1998, and to contact the burglary victims to ask their permission to be interviewed by the researcher. A stratified (probability) sampling method was used to select the initial burglary cases in the two police station areas of Garsfontein and Pretoria West. In the stratified sample, each subunit (neighbourhood) of the geographic region (police station area) under investigation was placed on a list from which the cases were then randomly drawn. The neighbourhoods were predetermined, and in this way the samples that reflected the geographical distribution of the research population could be drawn (Haring *et al.*, 1992: 70). The population for this study included all the residential burglaries that were registered at the Garsfontein and Pretoria West police stations, during the period of 1998. By this sampling process 20 burglary cases were identified in the Pretoria West police station area, and 20 cases in the Garsfontein police station area. Of these cases only six burglary victims in the Pretoria West area and eight burglary victims in the Garsfontein area gave their permission to be interviewed. In some instances the residents had sold their residences and could not be located, and in other instances the residents made excuses of being too busy or not interested in being interviewed.

To increase the number of interviews to the required 12 in each of the case study areas, a

snowball sampling method was used to identify more burglary victims to be included in the sample. The selected interviewees were asked if they could provide the names of other burglary victims that could be approached. This method was applied until the required number of interviews were obtained.

3.8.2 Selection of convicted burglars

A non-probability or purposive sampling method was used to select convicted burglars for inclusion in the sample. In co-operation with the Department of Correctional Services, eight convicted burglars in the Atteridgeville prison, who volunteered to be interviewed, were interviewed. It is, however, important to note that the convicted burglar interviewees were not in any way linked to any of the burglary cases selected in the two case study areas.

3.8.3 Selection of people with expert knowledge

People with expert knowledge on burglary were also purposively selected as the sample. The following eight people agreed to be interviewed:

- Detectives, one from the Pretoria West and one from the Garsfontein police station.
- Employees from two different private security companies in Pretoria.
- Staff of two different insurance companies in Pretoria.
- Representatives from the CPFs in Pretoria West and Garsfontein.

Table 3.3 provides a summary of the number of interviews conducted. The purpose was not to select a statistically representative sample of cases, but to make a selection of cases that

TABLE 3.3: NUMBER OF INTERVIEWEES SELECTED

SAMPLE CLUSTERS	SUB-CATEGORIES	NUMBER OF INTERVIEWS
▶ INTERVIEWS WITH BURGLARY VICTIMS	Garsfontein SAPS area	12
	Pretoria West SAPS area	12
▶ INTERVIEWS WITH CONVICTED BURGLARS	Convicted burglars	8
▶ INTERVIEWS WITH SPECIALISED PEOPLE/ EXPERTS	Police detectives	2
	Security companies	2
	Insurance companies	2
	CPF's representatives	2
TOTAL:		40

would represent the broad spectrum of role players involved in the residential burglary process, namely: the victim, the burglars, the police, the security organisations, and other role players.

3.9 CONDUCTING OF INTERVIEWS

Through the method of semi-structured interviewing, a total of 40 interviews were conducted. As experienced during the pilot study, the interviewer realised the importance of asking questions, listening, expressing interest and recording what was said.

Appointments were made with the prospective interviewees to confirm the date and time before being interviewed. The interviews with the burglary victims and the people with expert knowledge were conducted in the six-month period between June 1999 and November 1999, and were either held with the house owner, tenant or his/her spouse. The interviews with the convicted burglars in the Atteridgeville prison were conducted on two consecutive days during September 1999.

The two main challenges confronting the interviewer during the interviews were the ability to create an atmosphere of participation, and at the same time to record what was said by taking down written notes and in some instances verbatim quotations. These notes were the factual records of the interviews, without inferring or imposing any interpretation to it. Where possible, the interviewer tactfully probed to encourage the respondents to further elaborate on their responses.

The researcher also made use of analytical memo writing after the interviews. According to Neuman (1997:425), analytical memos forge a link between the concrete data and the more abstract, theoretical thinking. It also helped the researcher to elaborate on ideas and observations made during the interviewing sessions. Where the interview notes served as evidence, the analytical memos had a conceptual, theory- building intent. The purpose was not to report data, but to comment on how data were tied together or to identify emerging patterns. Memo writing also helped to establish similarities, differences or causal relationships between factors and cases. This procedure was followed throughout the data collection phase and new insights were periodically revealed and thus noted. The interview notes together with the analytical memos formed the basic input to the data analysis process.

3.10 PROFILING OF BURGLARS AND VICTIMS INTERVIEWED

The biographic information on the convicted burglars and the burglary victims added very little value to the research, because of the relative small and non-representative sample sizes. It was, nonetheless, appropriate to include some of the information as a background orientation to the research. Figures 3.5 and 3.6 provide an explanation of the racial composition of the burglars, as well as the age groups to which they belong. The burglars were all male and originally from the following areas: Mamelodi (two), Soshanguve (one), Hammanskraal (two), Eersterust (two), and Danville (one).

FIG. 3.5: RACIAL COMPOSITION OF THE BURGLARS

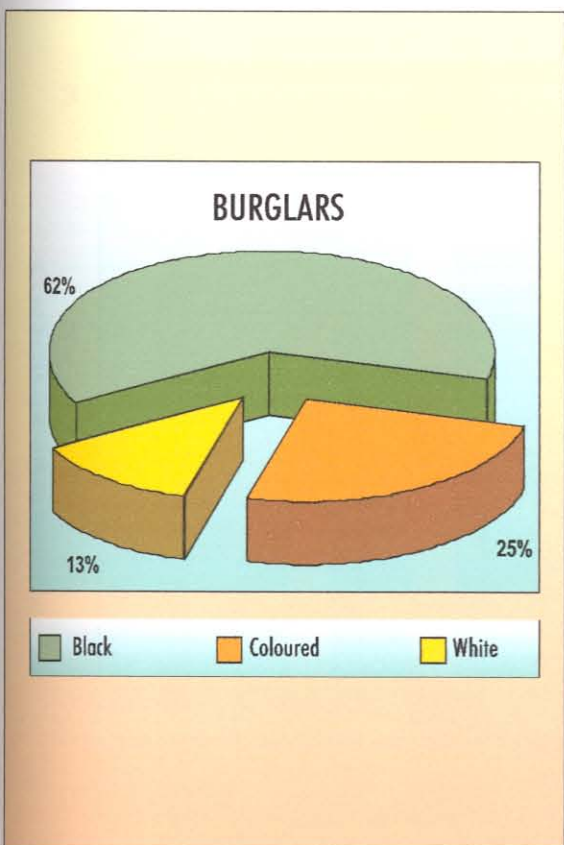


FIG 3.6: AGE DISTRIBUTION OF THE BURGLARS

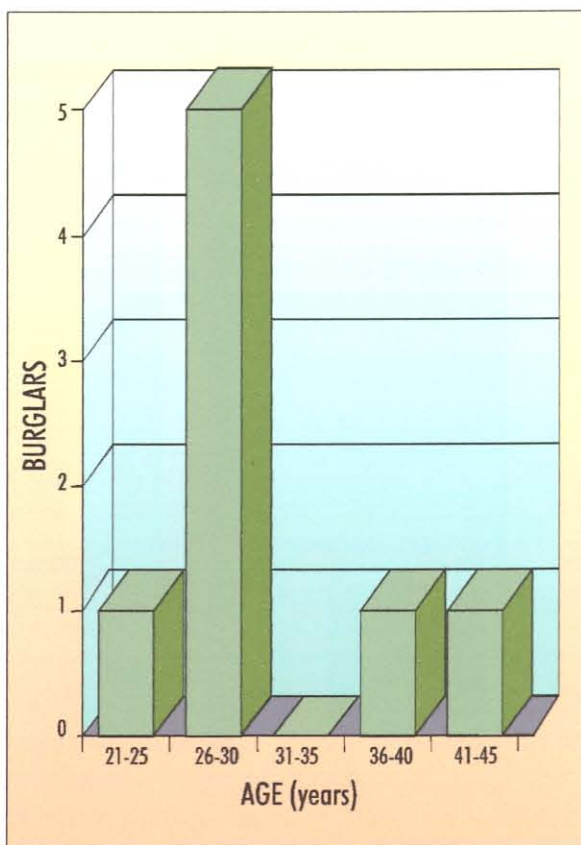


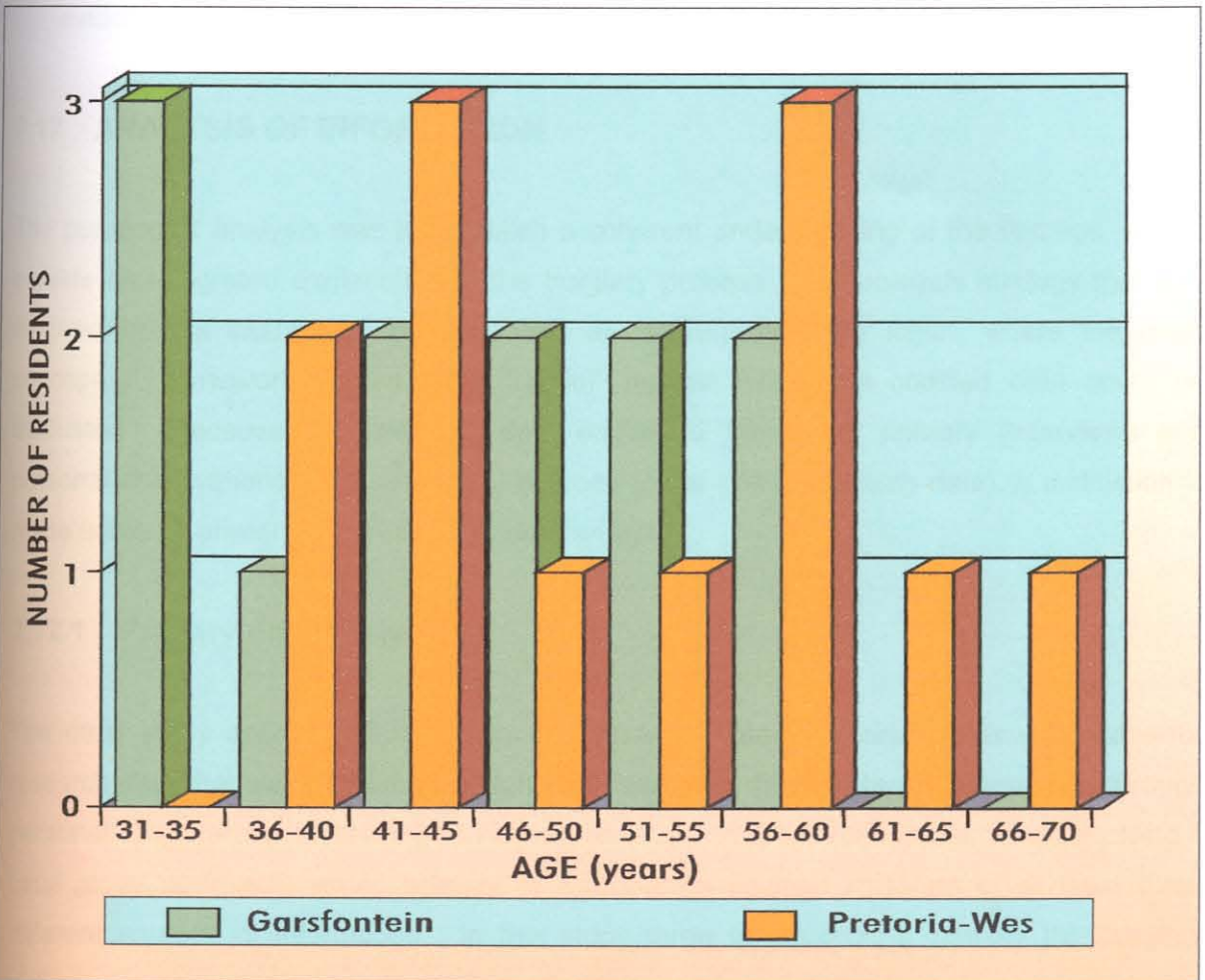
Figure 3.7 provides some background information on the age distribution of the burglary victims who were interviewed. Fifty per cent of the interviewees were male and the other fifty per cent were female.

3.11 PROCESSING OF INFORMATION

According to Neuman (1997:421), the qualitative researcher analyses data by organising it into categories on the basis of themes, concepts or similar features. He also stated that the qualitative researcher develops new concepts, formulates conceptual definitions and

examines relationships among concepts. In qualitative research the coding of data has a different meaning than in quantitative research where variables are codified for the purpose of statistical analysis. Researchers using qualitative techniques often conceptualise as they code qualitative data into conceptual categories, which in fact is already part of the data analysis process (Neuman, 1997:421). In this study the data collected through the interviews, personal observations, documentation and secondary sources, were coded into categories created by the conceptual framework (see par. 2.6) and the subsequent research expectations (see par. 2.7) that broadly coincided with the research questions of “why”, “how”, and with “what effect” residential burglaries took place.

FIG. 3.7: AGE DISTRIBUTION OF THE VICTIMS



Neuman (1997:422-424) distinguished between three forms for coding, which were also applied during the processing of data in this study, namely:

- Open coding.** During the first round of assessing the data, the researcher identified critical terms, key events or themes and attached labels to them in a first attempt to condense the mass of data into categories. This process had already commenced

earlier through analytical memo writing during the interviewing phase. The conceptual framework also provided categories for the coding of data.

- **Axial coding.** During this phase, the researcher began to organise the ideas or themes, and identified the axis of the key concepts in analysis. The aim was either to make connections between themes or to elaborate on the concepts that the themes represent. The themes and data were then integrated in the conceptual framework that represented the burglary process.
- **Selective coding.** Selective coding involves the scanning of data selectively, searching for cases that illustrate themes, and to make analytical comparisons and contrasts possible (Neuman, 1997:424). Here this phase represented the search for empirical evidence to verify the research expectations on residential burglary.

3.12 ANALYSIS OF INFORMATION

The purpose of analysis was to establish a coherent understanding of the findings, and to provide an integrated explanation of the burglary process. The analysis strategy that was followed in this study, can be described as “pattern-matching logic”, where the initial conceptual framework served as a “model” against which the codified data could be evaluated. Because the research data originated from both primary (interviews and personal observations) and secondary sources (other crime research data), a distinction is made between primary and secondary data analysis.

3.12.1 Primary data analysis

The case study approach followed in this study provided the researcher with authentic research data that was gathered through interviews with different target groups and through personal observation. According to Huysamen (1994:169) the researcher, when applying a case study approach, would attempt to corroborate findings in terms of at least three different sources of information. In this study three target groups, namely the burglary victims, convicted burglars, and a group of experts, were interviewed.

Through the data coding process, the interview data were categorised according to the themes as identified in the conceptual framework (see par. 2.6), that also corresponded with the main variables in the research expectations (see par. 2.7). Huberman and Miles (1994:436) refer to this search for themes across cases as the variable-orientated strategy. In the process, the researcher would search for confirmatory information, contradictions, or possible rival explanations, derived from various primary sources. Through this procedure a

chain of evidence, confirming or contradicting the research expectations, would be established. There is an affinity here with what Neuman (1997:428) called the illustrative method, where empirical evidence was gathered to illustrate or anchor a theory. In this regard the conceptual framework provided the "empty boxes" for the gathering of evidence to confirm or reject the research expectations.

Through the method of analytical comparison (Neuman, 1997:428), the researcher would develop ideas about regularities and patterned relations from the perspective of the conceptual framework. Instead of searching universal laws, the researcher focussed on regularities or patterned relations within a specific social context. Through the method of agreement the researcher focussed on common features across cases, whilst the method of difference was applied to account for different causal features and outcomes across cases.

According to Stake (1994:241) triangulation has been generally considered a process of using multiple perceptions to clarify meaning, verifying the repeatability of an observation or interpretation. It implies the use of evidence from different sources of information (Robson, 1993:404). The principle of triangulation was applied to the analysis of data to reduce the likelihood of misinterpretation and to improve the credibility of the findings.

The iterative approach implies a learning process through the succession of question-and-answer cycles, that entails the examination of a given set of cases and then refining or modifying those cases on the basis of subsequent ones (Huberman & Miles, 1994:431). After several iterations the research will progress from vague ideas and concrete details in the data toward a comprehensive analysis with meaningful outcomes (Neuman, 1997:427). The sequence in which the data coding was done, as well as the use of various sources of information were in accord with these principles.

Despite the qualitative nature of the research, the use of numbers and frequency counts were regarded as important techniques to verify the research expectations and subsequent judgements of agreement or disagreement. According to Miles and Huberman (1994:253), the "number of times" and "consistency" judgements, almost unconsciously made by the researcher during the analysis phase, are based on counting. Robson (1993:401) is of the opinion that not all qualitative data should be converted into quantitative data, but that if the researcher wants to make statements about frequencies, it is better to use numbers. The researcher also shared Robson's view that not all qualitative data are suitable for quantification. Unique features of a case for example cannot be quantified, although it may support a specific theoretical proposition.

The coding and analysis of data were done manually, as well as the counting of numbers and frequencies, that provided an indication of the degree of agreement or disagreement of variables across cases. The rationale was to establish the amount of evidence confirming or rejecting the research expectations. As a result of the relative small sample and the diversity of the information sources, it was, however, not possible to determine a specific threshold for all the categories of data at which point it could be said that the evidence suggested a specific tendency. In those cases where counting of data was possible, a majority of 50 per cent and more, were interpreted as a tendency in support or against the research expectation.

It should also be recognised that the aim of this study was not to "test" the conceptual framework through quantitative means, but to elaborate on the "usefulness" of the framework as an analytical instrument to describe and explain the occurrence of residential burglary. This approach can be compared with a statement by Dooley (1990:282), that "exploratory qualitative research seeks to build theory rather than test it".

3.12.2 Secondary data analysis

Whereas the primary data analysis focussed on the research data, gathered through the case study interviews in the micro-environment, secondary analysis was conducted on official crime statistics from the Department of Safety and Security and research data available through other research institutions. According to Neuman (1997:285) secondary analysis is increasingly used by researchers, for reasons that it is relatively inexpensive; it permits comparisons across groups, nations, or time, and it allows asking about issues not thought of by the original researchers. Possible disadvantages of secondary analysis are that the data may be incomplete for the purposes of the study, or that the original data may contain errors that the secondary researcher is not able to detect (Bailey, 1987:296).

Secondary analysis was applied in this study to describe and explain residential burglary patterns and tendencies in the macro- and meso-environment, where the macro-environment referred to the Greater Pretoria metropolitan area and South Africa as a whole, and the meso-environment, the case study areas in Pretoria West and Pretoria East. The main sources of information were crime statistics from the SAPS, and survey data from crime studies undertaken by, *inter alia*, the ISS, the Community Safety Unit of the Institute for Democracy in South Africa (IDASA), and Statistics South Africa (see Table 3.2). The researcher also made use of secondary data, such as maps and residential site values, obtained from the City Council of Pretoria. The findings that derived from secondary analysis were particularly used in Chapter 4 to describe and explain residential burglary patterns at the macro- and meso-levels.

Although mainly descriptive in nature, the researcher also made use of tables, lists and taxonomies to illustrate the research findings in Chapters 4 and 5.

3.13 CRITERIA FOR TRUSTWORTHINESS

Lincoln and Guba (1985:294-301) argued that conventional criteria for quantitative data, namely: 'internal validity', 'external validity', 'reliability', and 'objectivity' are inappropriate when dealing with qualitative case study data. They introduced four categories of criteria or strategies that can be applied to improve the 'trustworthiness' and 'authenticity' of qualitative research, namely: credibility, transferability, dependability, and confirmability. The pioneering work that was done by Lincoln and Guba (1985), was later complemented by other social scientists such as Lincoln (1985), Krefting (1991), Robson (1993), and Miles and Huberman (1994).

It is expected of any study to subject the final findings and conclusions to a set of criteria that will judge the quality or standard of the research undertaken. In a quantitative approach statistical methods and tests can be applied to ensure a certain level of validity and reliability, which is not the case in a qualitative approach. It was therefore decided to apply the criteria as advocated by Lincoln and Guba (1985) in this study, which can be summarised as follows:

- **Credibility** (equivalent to 'internal validity'): The goal with credibility is to demonstrate that the research was carried out in a way that ensures that the subject of the research was accurately identified and described. In this way the study should portrait a picture of authenticity, and should make sense to the readers.
- **Transferability** ('external validity'): Transferability tells whether the conclusions of the study have any larger import, or to what extent it can be generalised. The application of a theoretical framework can provide a basis for 'analytical generalisation' in as much as the research (case studies) ties into the framework of theory.
- **Dependability** ('reliability'): Dependability explains whether the processes followed in the research can be regarded as consistent, well documented, and reasonable stable over time and across researchers and methods.
- **Confirmability** ('objectivity'): By confirmability is understood relative neutrality and a minimization of researcher biases.

Miles and Huberman (1994:280) added a fifth dimension to the criteria for trustworthiness, namely: application or utilisation, to indicate the value of the findings and conclusions for

other researchers, institutions or possible consumers. Since one of the main objectives of this study is to provide a conceptual framework that would enhance a better understanding of residential burglary, and which could be applied in the construction of appropriate local crime prevention initiatives, it meets with such a criterion.

Throughout this study the researcher strove to maintain a high standard of research integrity by bearing in mind the five criteria as described. The credibility of the findings were largely embedded in the scientific methodology used for data collection and analysis, and the meaningfulness of the descriptions. There was a purposeful selection of complementary methods and data sources that would enable the researcher to seek for converging conclusions and coherent explanations of the phenomenon under research. This approach is also known as 'triangulation' where multiple perspectives for mutual confirmation of data are used to ensure that all aspects of a phenomenon have been investigated (Krefting, 1991:219). The results and findings were, for example, systematically linked to the theoretical/conceptual framework (see par 2.6).

With regard to transferability, the multi-case approach that was followed in this study did not allow for generalisation to a population wider than that of the cases involved. In as far the findings were congruent with, connected to, or confirmatory of the conceptual framework, it is possible to speak of analytical validity, which may allow for theory-connected transferability of findings to other cases or settings of a similar nature.

Dependability was enhanced by the fact that the research questions, research strategy and conceptual framework were constructed on a strong theoretical basis, within clearly defined research parameters. The data were also collected across a wide range of respondents, settings and institutions to ensure a meaningful parallelism across various data sources.

To increase confirmability, the research design, methodology and procedures that guided the research process, including data collection, processing and analysis were well described and documented, and were executed in the most objective manner possible.

3.14 CONCLUSION

The main objective of this chapter was to describe and explain the methodology used in this study and how it was customised to suit the requirements of the study as a whole. The results and findings of the research are analysed and interpreted in the following two chapters. In Chapter 4 an interpretation is given of the residential burglary patterns in the Greater Pretoria metropolitan area (the macro-environment) and in the two case study areas of Pretoria West and Pretoria East (the meso-environment).