CHAPTER 4:
RESEARCH METHODOLOGY

4.1 WHAT IS A RESEARCH DESIGN?

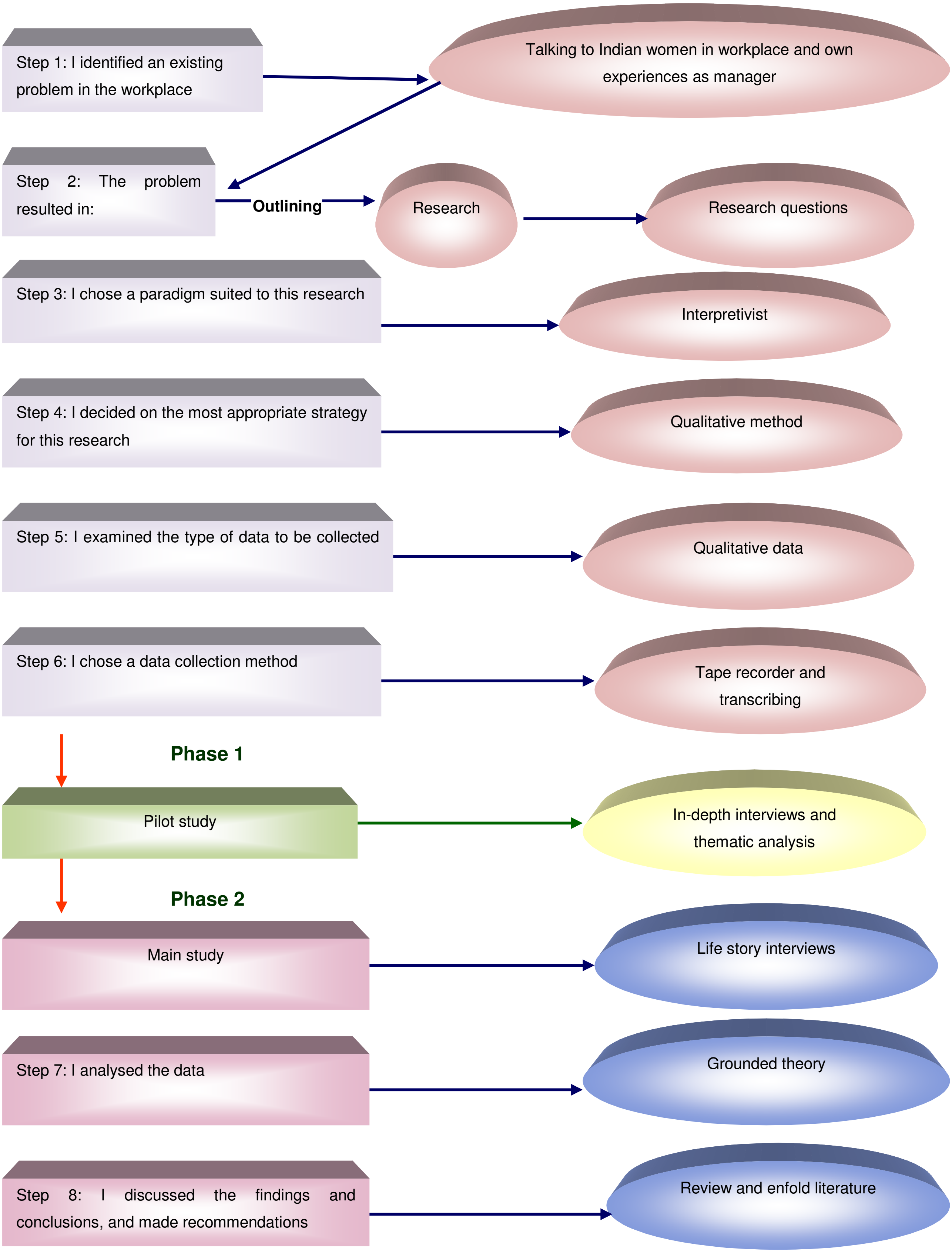
According to Babbie and Mouton (2006), a research design addresses the planning of a scientific enquiry, that is, it refers to an overall strategy for finding out something. Three aspects are usually included in a research design, namely, the research approach, the research strategy and the research methodology.

4.2 RESEARCH APPROACH

The research problem, the research aim and the research questions in this study all suggested that a qualitative approach should be used to study the phenomenon of the identity work engaged in by Indian women managers in South Africa. Since I wanted to gain an in-depth understanding of the identity work the Indian women who participated in my study engaged in, I realized that a survey would not capture the nuances and subtleties of the experiences of these women relating to their gender, racio-ethnic and professional identities. Also, I wished to gain an understanding of the subjective experiences of the women's childhood and workplace experiences and to obtain an insider's view, which is best captured by means of a qualitative research design and methodology.

The diagram in Figure 4.1 outlines the steps that were followed in the research process used in the study on the identity work of Indian women managers.

Figure 4.1: Research process used in the study



Source: Adapted from Mackenzie and Knipe (2006, p. 203)

4.2.1 Metatheory

According to Babbie and Mouton (2006), there are three main research approaches:

- the qualitative approach, which is related to phenomenology or interpretivism,
- the quantitative approach, which is related to positivism, and
- the participatory research, which is related to the critical paradigm in metatheory.

In this section, I defend my choice of the particular research approach selected to study the phenomenon in question. In order to defend the use of my particular research approach, the positivist, interpretivist and critical traditions are discussed.

Before I focus on the three research approaches I would like to define what I mean by metatheory. McGregor (2009, p. 146) postulates that "metatheory refers to members of a discipline systematically constructing and evaluating the theories, models, and conceptual frameworks of their field, not the empirical data". Depending on the aims and questions of their studies, the theories, models, hypotheses and frameworks of enquiry differ for different researchers. It is for this reason that I feel that I should explain why I have chosen a particular research approach to my study and how this approach informed my results. I start by outlining the critical and positivist traditions and provide reasons as to why these approaches were not suitable for my study, and thereafter demonstrate the appropriateness of the interpretivist approach for the present study.

4.2.2.1 The critical tradition

The main focus of critical theory is to discover and resolve problems in society (Kincheloe & McLaren, 2000). The main aim of critical researchers is action research, where the results of studies address injustices (Clark, 2007), for example, by redressing past oppression, highlighting problems and providing assistance to minorities, AIDS patients, the terminally ill, the poor, the sidelined and the silenced in order to give them a voice (Rubin & Rubin, 2005). In this model, knowledge is regarded as subjective; what one sees depends on whose perspective it comes from. This aspect of subjectivity is also referred to as the standpoint theory (Rubin &

Rubin, 2005). Critical research also focuses on enabling individuals to understand what caused the injustice, oppression and poverty in their lives and how these problems can be decreased (Kincheloe & McLaren, 2000).

Critical realism and critical interpretivism are important elements of critical theory. Critical realism originated as a result of the criticism against positivism. The main question in critical realism is what properties do societies and people have that make them possible objects of knowledge? (Danermark et al., 2006, p. 5) The central idea around which critical realism is based on is that the world is structured, differentiated, stratified and changing. Critical interpretivism on the other hand is based on local and detailed empirical interpretation of problems within organizations, a reflective approach that disrupts assumptions that reinforce the status quo within organizations and where interpretations are based on considering power and control (Doolin and McLeod, 2005).

In the current study, I focus on the life story of Indian women managers in the corporate environment and how they negotiated their identities on their journey toward top managerial positions. It was not my aim to become part of the participants' lives or to act as a change agent. Therefore, the critical tradition was not appropriate for the current study.

4.2.2.2 The positivist tradition

Positivists study phenomena through static empirical means (Henning, Van Rensburg, & Smit, 2004). Bryman and Bell (2007) maintain that positivists use natural science methods to study social reality and do not regard the two disciplines as separate entities. Positivists take a narrow perspective of phenomena and believe that there is only one true version of an event. They do not consider that people may have different perceptions of events, where there is truth in each view point (Rubin & Rubin, 2005). This narrow point of view makes positivists unable to come up with solutions to social problems – since they lack understanding of the causes of certain phenomena, they are unable to intervene (Taylor, 2007).

Positivists believe that human nature is universal and do not account for differences in people due to race, culture, religion and historical contexts (Babbie & Mouton, 2006). By quantifying the social world into static variables, positivists may destroy valuable data by imposing their world on the subjects. Positivists are unable to develop meaning and useful findings from experimental research and research techniques. Experiments in laboratories, field research and the use of questionnaires create suspicion in participants, and they may answer surveys in such a manner that it does not reflect what they believe or feel, but what researchers expect (Marshall & Rossman, 1999).

Since the current study deals with the lived experiences of Indian women managers, where variables such as race, culture, religion and the organisational context are vital and a deeper interpretation of phenomena is sought, the positivist tradition was an unsuitable paradigm. The emphasis on subjectivity in this study also precluded the use of questionnaires with predefined measures. The current research dealt not only with the Indian women's cultural background, but also with Indian women's cultural background against a South African background, which is different from Indian cultures in India and in other Western countries. South African Indians have a different history, which has influenced their culture and ways of thinking that are different to those of Indians in other parts of the world. One has to account for these cultural and historical differences which have had an impact on the Indian South African women who participated in the study.

4.2.2.3 The interpretivist tradition

According to Bryman and Bell (2007), interpretivism is an alternate view to positivism. Interpretivism is concerned with an understanding of complex human behaviour and social settings (De Villiers, 2005). Interpretivists believe that most of our knowledge is gained through social constructions such as language, consciousness, shared meanings, documents and other artefacts which have meaning in people's lives (Bryman & Bell, 2007). Thus, researchers have their own understanding, their own interpretations and world views regarding the phenomenon in question due to their own cultural and historical influences (Miles & Huberman, 1994). It is therefore imperative that social scientists understand and interpret the social world from individual participants' perspectives and to recognise that their own backgrounds will influence interpretations of the phenomenon under study (Creswell, 2007a).

In the current study, I was interested in understanding the social world of the participants and relating their experiences to their cultural and religious values and beliefs and the world of work which have had an influence on the identity of Indian women managers. One cannot understand these aspects without understanding the thoughts, feelings, beliefs, values and assumptive worlds in which Indian women managers operate, namely their communities, their homes, the broader South African society and the world of work. I therefore needed to come to understand the deeper perspectives of the issue under investigation, captured through face-to-face interaction with Indian women managers, in a form recommended by Marshall and Rossman (1999). I also had to understand my own interpretations as a researcher of the Indian culture.

De Villiers (2005) argues that the interpretivist approach is value-laden, as results cannot be generalised to settings other than the context in which the research was conducted, and different researchers will also interpret findings according to their orientations. The advantage of interpretivism lies in allowing a researcher to obtain rich, in-depth data from participants. This is illustrated in the current study, as I obtained in-depth information regarding the participants' early lives, cultural, religious and organisational backgrounds. I also built a relationship with the Indian women managers who participated, as suggested by Hesse-Biber and Leavy (2006), so that I was better able to comprehend the subjective worlds of my participants and was less focused on my subjective interpretations, as Weber (2004) advises.

An interpretivist researcher is also interested in gathering all the relevant information that relates to the lived experiences of subjects and the phenomenon in question (Denzin, 2002). The emphasis is on the context in which participants live and work, so that researchers are better able to comprehend the historical and cultural background of participants (Creswell, 2007b). I was interested in collecting data related to Indian women managers' childhoods, adult and professional lives that resulted in their upward mobility within organisations and how they negotiated their identities in the process.

Table 4.1 compares the positivist and interpretivist approaches to research, focusing on these approaches' metatheoretical assumptions.

Table 4.1: Metatheoretical assumptions of positivist vs. interpretivist research

Metatheoretical assumptions about:	**Positivism**	**Interpretivism**
Ontology	**The person (researcher) and reality are separate.**	The person (researcher) and reality are inseparable (life-world).
Epistemology	**Objective reality exists beyond the human mind.**	Knowledge of the world is intentionally constituted through a person's lived experience.
Research object	**The research object has inherent qualities that exist independently of the researcher.**	The research object is interpreted in the light of the meaning structure of a person's (researcher's) lived experience.
Method	**Statistics, content analysis.**	Hermeneutics, phenomenology, etc.
Theory of truth	**Correspondence theory of truth: one-to-one mapping between research statements and reality.**	Truth as intentional fulfilment: interpretations of the research object match the lived experience of object.
Validity	**Certainty: data truly measures reality.**	Defensible knowledge claims.
Reliability	**Replicability: research results can be reproduced.**	Interpretive awareness: researchers recognize and address the implications of their subjectivity.

Source: Adapted from Weber (2004, p. iv)

4.3 KEY SCIENTIFIC BELIEFS

In this section, I look at the research approach I selected and justify my choice by reflecting on the relevant key scientific beliefs.

4.3.1 Ontological position

Ontology deals with the nature of reality (Gioia, 2003). An ontology implies that researchers question the existence of things that are in the world (Christou & Anastasiadou, 2008; Marsh & Stoker, 2002). Snape and Spencer (2003, p. 20) explain that “within social research key ontological questions concern whether or not social reality exists independently of human conceptions and interpretations; whether there is a common, shared, social reality or just multiple context-specific realities; and whether or not social behaviour is governed by ‘laws’ that can be seen as immutable or generalisable”. Taylor (2007) posits that the societies in which we live influence and constrain how we act and think. Therefore, through their subjective understanding, individuals can attribute different meanings to the same situation, and conversely, different reactions result out of similarly expressed views, which in turn lead to a state of constant revision (Bryman, 2001; Niehaves & Stahl, 2006) and various interpretations of social reality (Williams, 2000) which are accessible to a researcher through respondents only (Ritchie & Lewis, 2003).

From an ontological perspective, I was able to access the life stories of the Indian women managers who participated in the study, and gained an understanding of the challenges they faced in negotiating identities due to cultural, societal and organisational factors. I was interested in finding out the reality for Indian women in corporate South Africa who were on their way to top managerial positions and how they experienced this journey.

4.3.2 Epistemological position

Ontology deals with the nature of a phenomenon. By contrast, epistemology focuses on how we acquire knowledge about a phenomenon which stems from a researcher’s view of the world (Marsh & Stoker, 2002; Ritchie & Lewis, 2003; Taylor, 2007; Weber 2004). Denzin and Lincoln (2005) point out that in an interpretivist paradigm, epistemology is subjective, as the researcher and the participants are engaged in jointly creating understandings.

I adopted interpretivism as the epistemological perspective most suited to the study, as I was interested in the lived experiences of Indian women managers and wanted to acquire a deeper understanding of their life and career journeys. An interpretivist epistemology allowed for rich, in-depth data to be collected through in-depth life stories. The analysis and themes that emerged were shared with the women in the study to assess whether their realities had been captured correctly. This implied a joint creation of understandings.

4.4 RESEARCH STRATEGY – THE QUALITATIVE METHOD

4.4.1 The qualitative research method

Strauss and Corbin (1998b, p. 10-11) explain that “qualitative research is not arrived at through statistical procedures or other means of quantification but deals with research about people’s lives, lived experiences, behaviours, emotions and feelings as well as about organisational functioning, social movements, cultural phenomena and interactions between nations”.

Qualitative studies deal with understanding phenomena that naturally occur in specific contexts, where researchers do not manipulate the phenomena that they are interested in (Patton, 2002). A qualitative researcher focuses on capturing what people say and do, and how they interpret the world (Bryman & Bell, 2007; Hancock, 2002; Lee, 1999) and how they feel about events in their lives (Beins, 2004). A qualitative method is a useful way of generating theories of what occurs in organisational settings. What are discovered through qualitative research are not generalisations, but contextual findings (Leedy & Ormrod, 2005).

In order to capture and analyse unstructured information, qualitative researchers use interview transcripts and recordings, notes, feedback forms, photos and videos (Leedy & Ormrod, 2005), verbal summaries of research findings (Shaughnessy, Zechmeister, & Zechmeister, 2003), flow diagrams and narrative descriptions of events and processes (Landy & Conte, 2004).

Qualitative researchers commence with general research questions, collect extensive verbal data from a few participants, organise data in a coherent fashion and use verbal descriptions to portray the situations they have studied (Neill, 2007). Data are used to develop concepts and theories that assist the researcher in understanding the social world. This is an inductive approach to the development of theory (Bryman & Bell, 2007). Qualitative researchers make specific observations and then draw inferences about larger and more general phenomena. Data analysis is subjective and driven by a search for patterns (Leedy & Ormrod, 2005).

A more personal, literary style is used in qualitative research reports, which includes the participants' language and perspectives (Leedy & Ormrod, 2005). Qualitative research reports are descriptive, encompassing expressive language and the 'presence of voice in the text" (Hoepfl, 1997). The criteria used to assess reliability and validity is different from those used in quantitative research.

Different sampling techniques are used as well. Qualitative sampling techniques are concerned with seeking information from specific groups and subgroups in the population (Golafshani, 2003). The intensive and time-consuming nature of data collection necessitates the use of small samples. A few participants who can shed light on the phenomenon are investigated (Leedy & Ormrod, 2005).

Qualitative research is a category of research methods in which the researcher plays an active role in interacting with the participants to be studied (Muchinsky, 2003) and becomes personally absorbed in the entire research process (Spector, 2005). Qualitative researchers do not dissociate themselves from their roles and involvement in the research process (Winter, 2000). The researcher is the human instrument of data collection (Hoepfl, 1997).

Lee (1999) points out that qualitative research designs are adaptable. Compared to quantitative research designs, qualitative research designs allow a researcher to react much more quickly to constraints in the context by switching to more suitable data collection methods and approaches. In qualitative research the methods of collecting data, the use of instruments and the methods of analysis vary across researchers (Lee, 1999).

Considering the dearth relating to research on identity work engaged in by Indian women managers in South African organisations, I felt that the best way to approach the current study would be from a qualitative perspective. Using the qualitative method, I was able to explore the issue at hand to reach a deeper, more complex and detailed understanding of the identity work engaged in by Indian women managers. I also wanted to hear the silenced voices of Indian women managers with regard to the identity negotiation they engaged in during their climb to top managerial positions.

I found a focus for the inquiry in my own experience of having to negotiate my career within a white male-dominated hierarchy. A pilot study was first conducted to identify central themes. Thereafter, the main data collection took place using the life story approach. A purposive sample of Indian women managers in senior and top managerial positions was interviewed. Snowball sampling was used to identify this purposive sample. The interviews were recorded on audiotape and transcribed. I completed the transcriptions of interviews and engaged in ongoing inductive data analysis, which yielded a more focused set of research questions. Data collection was conducted in the participants' offices and homes.

4.4.2 Researcher's role in the study

Rager (2005) points out that in qualitative research, the researcher is the instrument through which participants are studied. The researcher should therefore be empathetic towards participants and view the world from the subjects' perspectives. Wincup (2001) cautions that the emotional involvement of the researcher in the study should be acknowledged in qualitative research, as most studies disregard this aspect at their peril. According to Smit (2002), part of the role of the researcher is to be aware of personal bias and preconceived ideas, since assumptions will lead a researcher not to see some of the data.

A researcher should be experienced and skilled when interviewing participants, gathering information and analysing data, and he or she should have good communication skills (Nastasi & Schensul, 2005). The researcher should be familiar with the topic and should know when to probe deeper, get the participant to elaborate or broaden the topic of discussion (Ehigie & Ehigie, 2005). Patton (2002) suggests that the researcher should be involved and immersed in the research as the real world is subject to change.

I developed interviewing skills through my experience in the human resource field of recruitment and selection. This enabled me to be at ease with interviewing participants and at the same time I was able to make my research sample comfortable during the interviews. I also reflected on my role during the research process and was sensitive to how my personal experiences would shape the study. I explained the purpose of the study to the participants, as well as the benefits that would be gained from participating in the study and their roles within the study.

Because of my subjective experiences, I was able to probe and follow up on responses during the interviews. I also kept a journal to capture my reflections on and thoughts after the interviews.

4.5 RESEARCH METHODOLOGY

According to Babbie and Mouton (2006), research methodology focuses on the research process and the kinds of tools and procedures to be used. It focuses on specific tasks, such as data collection or sampling, and on the individual steps in the research process and the most objective procedures to be followed.

4.5.1 The manner in which entry was achieved

For the current study, I obtained the telephone numbers of some Indian women managers from Indian and non-Indian females (contact groups) in lower level positions. These contact groups briefed the Indian women managers regarding the study. I contacted the contact groups who provided the names and telephone numbers of the Indian women managers who were willing to be interviewed. Thereafter, I contacted the willing participants and provided more details on the purpose of the research. Participants were free to choose a venue that would allow audio privacy and visual privacy. A meeting was set up at the participants' work places and/or homes, in line with their preferences.

4.5.2 The sampling methods employed

Qualitative research uses non-probability samples for selecting the population for study. In a non-probability sample, units are deliberately selected to reflect certain features of or groups within the sampled population. The sample is not intended to be statistically representative: the chances of selection for each element are unknown. Instead, the characteristics of the population are used as a basis for selection. It is this feature that makes this kind of sampling suited to small-scale, in-depth studies (Ritchie, Lewis, & Elam, 2003). A non-probability sampling strategy was appropriate for the current study, given the purpose of the study.

There are four reasons for keeping sample sizes small in qualitative research. First, if the data are properly analysed, there is a point where very little new information is obtained from each new sample, as phenomena need appear only once. Second, the sample needs not be large enough to provide statistically significant results. Third, qualitative studies yield a substantial amount of information from each individual therefore sample sizes can be kept small. Lastly, it would be impossible to conduct and analyse hundreds of interviews, observations or groups unless a researcher intends to spend a few years doing this (Ritchie et al., 2003).

For the pilot study in the current study, in-depth interviews were conducted on a sample of seven Muslim and Hindu women at a middle management level. For the main study, I conducted in-depth life story interviews with Indian women managers regarding cultural, religious, family, personal and organisational aspects in their identity formation and identity work. For the main study, a larger group of 13 Muslim and Hindu women at senior and top management levels were chosen. The same samples were not used for the pilot and main studies.

4.5.2.1 Purposive sampling

Babbie (2008) states that, in terms of purposive sampling, a sample is chosen by the researcher on the basis of the researcher's knowledge of a population, its elements and the purpose of the study. The power of purposive sampling lies in choosing information-rich cases for in-depth analysis dealing with the central issues being studied (Berg, 2004).

I chose Indian women who were in middle, senior and top management posts, working in different business sectors, and who either belonged to Muslim or Hindu religious denominations. The women in such positions represent the first cohort of Indian women entering the South African workplace and were likely to have grown up in the apartheid era.

4.5.2.2 Snowball sampling

This kind of sampling refers to asking people who have already been interviewed to identify other people they know who may fit the selection criteria. It is a useful approach for dispersed and small populations (Ritchie et al., 2003). Babbie (2001) argues that this procedure is appropriate when the members of a special population are difficult to locate, such as homeless people. I used snowball sampling in the pilot and main phases of the study in order to identify Indian women managers in middle, senior and top management positions in organisations. The reason for this decision was that there were few Indian women managers in organisations and the most efficient way I could contact these women was by being recommended by others working in the same organisations as these women. However, I never indicated to those who made recommendations the identity of women in the final sample.

Since new members are generated through existing ones, there is a danger that the diversity of the sample frame is compromised. This risk can be mitigated to some extent by, for example, specifying the required characteristics of new sample members, by asking participants to identify people who meet the criteria, but who are dissimilar to them in particular ways, and by avoiding family members or close friends. An alternative approach would be to treat those identified by existing samples as links, not interviewing them, but asking them to identify another person who meets the criteria (Ritchie et al., 2003). In order to avoid these problems in snowball sampling, I asked Indian women in administrative positions to identify Indian women at middle, senior and top management levels to be interviewed. I also asked women from other races to identify Indian women in middle, senior and top management levels within their organisations to be interviewed for the pilot and main phases of the study.

4.5.3 Biographical data on the sample

Table 4.2 depicts the biographical data of the sample of women who participated in the main interview phase. Each participant was given a pseudonym so that her anonymity and confidentiality were guaranteed. To protect the women's anonymity and confidentiality, I also use ranges for some of the biographical details in the table.

See annexure B for a short narrative profile of the women.

Table 4.2: Biographical data of the Muslim and Hindu female managers in the main study

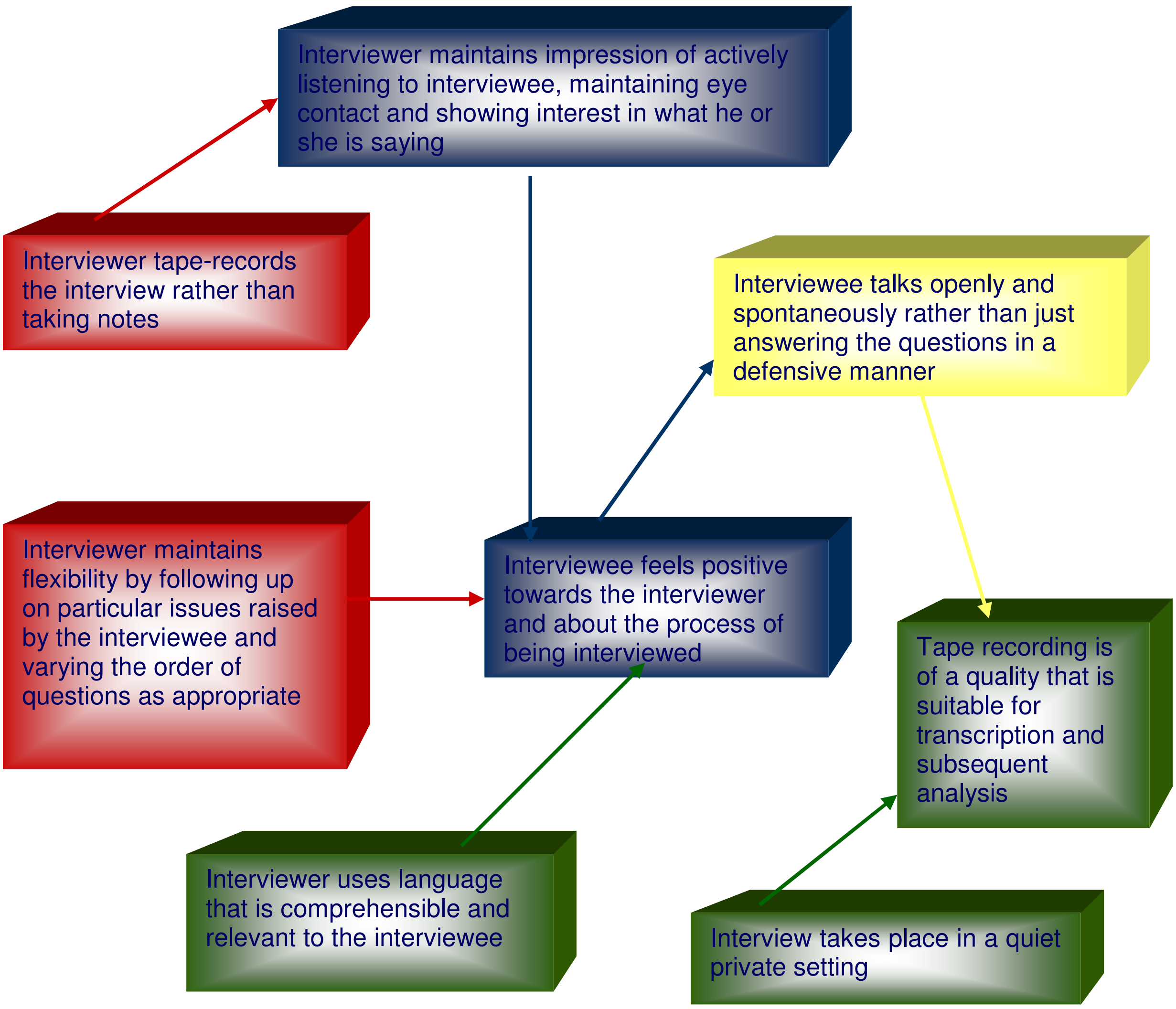
Pseudonym	Religion	Age range	Overall tenure (years)	Tenure in management (years)	Marital status	Educational level	Children (Yes/No)	Management level (Senior or Top)	Post
Shamila Rumi	Islam	40-46	> 10	> 10	Married	Postgraduate	Yes	Senior	Business Application Manager
Saira Rehman	Islam	33-39	> 10	5-7	Single	Postgraduate	No	Top	Chief Financial Officer
Waheeda Banu	Islam	33-39	> 10	3-5	Married	Postgraduate	Yes	Senior	Senior Public Prosecutor
Shabana Mahal	Islam	40-46	> 10	> 10	Married	Postgraduate	Yes	Top	Chief Financial Officer
Firdous Azmi	Islam	47-53	> 10	> 10	Married	Postgraduate	Yes	Senior	Executive Director Operations
Zeenat Khan	Islam	40-46	> 10	> 10	Married	Postgraduate	Yes	Top	Chief Communications Officer
Bipasha Chaudry	Hindu	33-39	> 10	7-9	Married	Postgraduate	Yes	Senior	Operations Manager
Mahima Basu	Hindu	33-39	> 10	5-7	Single	Postgraduate	No	Senior	Legal Manager
Preity Sen	Hindu	33-39	> 10	5-7	Single	Undergraduate	No	Senior	Project Manager
Sushmita Zinta	Hindu	47-53	> 10	> 10	Married	Postgraduate	Yes	Top	Human Resource Director
Rani Kapoor	Hindu	33-39	> 10	> 10	Divorced	Postgraduate	No	Top	Human Resource Director
Karina Mukerjee	Hindu	40-46	> 10	> 10	Married	Undergraduate	Yes	Top	Marketing Manager
Shilpa Chopra	Hindu	40-46	> 10	> 10	Married	Postgraduate	Yes	Top	Human Resource Director

4.5.4 Data collection method: interviews

4.5.4.1 Interview procedure

Before discussing the life story interviews with the women in the study, I briefly discuss the interview protocol I followed with the Indian women I interviewed. Figure 4.2 illustrates the interview procedure used in the current study, as adopted from Bryman and Bell (2007, p. 431).

Figure 4.2: Development of the interview



Source: Bryman and Bell (2007, p. 431)

None of the participants were coerced into taking part in the study. All participants were provided with information regarding the purpose of the interviews. Interviews were conducted in the offices or homes of the interviewees and questions were straightforward and simple to understand. Interviews were audio recorded and were easy to transcribe, as the sound was crisp and clear. The researcher was transparent and open at all times and where necessary would ask questions in order to obtain a better understanding of the phenomenon in question. The researcher also ensured participants' anonymity, which allowed the women to be more open in their answers.

4.5.4.2 Life story interviews

I now elaborate on the life story interview approach used in the current study:

A **life story** is an individual's internalized narrative rendering of his or her life in time, entailing the reconstructed past, perceived present and anticipated future. More than traits, motives, values, and so on, life stories function to establish identity, in that a story is the best available structure that persons have for integrating and making sense of a life in time (McAdams et al., 2001, p. 475).

Atkinson (2001) argues that in presenting their life stories, the research participants want to tell others about themselves and also that part of their past and present which they comprehend and believe is at the core of their lives. Through narrating their life stories, people convey their experiences to others and develop their identities by creating new possibilities in their lives (Douglas & Carless, 2009).

Life stories include how events have been interpreted at various stages of life and in different historical eras. Life stories also reveal how people use different strategies to reconcile and resolve past conflicts. A life story allows people to gain a sense of context and the meaning of their lives. The shape of a story allows the participant and researcher to arrange the information about the participant's personal and social life, how they view their past life, the values and beliefs that guide those understandings and their hopes and plans for the future. As participants tell their stories, a complex pattern of identity construction and re-construction emerges.

Life stories can change an individual, elicit an emotional response from a person and influence future action (Etherington, 2009). Shamir and Eilam (2005) suggest that in telling their life stories participants seek to interpret reality in terms of the meaning these stories add in their lives and self-concepts. Life stories, according to these authors, are people's identities of "who they were", "who they are" and "who they want to become" and are "created, told revised and retold" throughout people's lives (Shamir & Eilam, 2005, p. 402). Simmons (2002) claims that, besides answering the question of "who am I?", life stories also provide answers to questions such as "how did I end up being here?". In terms of the current study, this implies that the participants would answer the question of how they ended up in leadership positions.

Researchers can use different questions with different participants in a given study, depending on the focus of their research and what research subjects are discussing at that point in time (Rae & Carswell, 2001). I gained a broader contextual understanding of the identity work that the Indian women in the study were engaged in at the workplace by also taking into account their childhood identity formation, the apartheid system, the women's culture, religion and organisational experiences. Through this type of interviewing technique, I was able to ascertain how the participants' past influenced their present and could have an effect on their future.

Life story interviews delve into participants' personal lives and are intrusive, but such questions are necessary to gain a deeper understanding of the phenomena (Biesta, Hodkinson, & Goodson, 2005). I found in the life story interviews with the women in this study that when I touched on an especially sensitive and painful experience of one of the participants, she refused to elaborate on her experiences. She did not confide in me on this matter during that interview or in a subsequent interview.

As Shacklock and Thorp (2005) point out, the challenge in life story interviews is that the researcher has to convince the participants to take their narratives seriously and for the researcher to reflect on his/her role in the process. I also realised during the interviews that reflexivity on my part was essential, as it allowed me to reflect on my stance as a researcher (I elaborate on this reflexivity in Chapter 9, which is about my research journey), and it enabled me to establish a caring, understanding relationship with the participants.

Life story interviews were conducted on a total of 13 Muslim and Hindu females in senior and top management positions in various organisations in South Africa. Interviews ranged from one to two hours in length. Follow-up interviews were planned with all 13 participants, but, since data saturation was achieved after a few of the follow-up interviews (with only six of the participants), the rest of the participants were not interviewed again.

Two follow-up interviews were conducted with three Muslim and three Hindu females. I read through the initial interviews and noted further points stemming from these interviews for probing in follow-up interviews. I found it difficult to arrange interviews with some of the women, and usually follow-up interviews were conducted at the participants' convenience and took place, in some cases, two to four months after the initial interviews.

Overall, the interviews were conducted over a period of a year. The Indian women managers who agreed to participate in the current study were extremely busy and graciously fitted me into their busy schedules. I was fortunate to find that six of the women in my study agreed to two follow-up interviews each, although they were swamped with work and scheduled two hours from their busy schedules for each interview. The follow-up interviews were conducted to clarify points from previous interviews and to capture the long life stories of the women. I spent between four to six hours in total interviewing each of these six participants over the three interview sessions.

Clarke (2003) suggests that, in qualitative research interviews, researchers should approach the social world from an "experience-near" perspective. With regard to the idea of an "experience-near" perspective, I, like the participants in my study, am a South African Indian woman who has occupied a managerial position and was therefore able to relate to their childhood and work-related experiences. Something that was of concern to me, however, was that the women who participated in the study took a lot for granted when discussing Indian culture and religions with me because I am an Indian female. This necessitated my asking them to explain what they meant by their statements during the interviews, as I did not want to impose my thoughts and ideas on their stories or to interpret the data from my perspective.

The questions for the current study were open-ended, but semi-structured. These questions related to the main research question. The questions were designed in line with a life story approach. They began with the women's early childhood, followed by the adolescent stage, young adulthood to their adult and career years. At the same time they were asked questions focusing on the influence of culture, gender, race/ethnicity and apartheid in their lives. Although I had a list or schedule of questions to focus the interviews, I deviated from these questions where I needed to probe deeper into the life stories of the participants. As Atkinson (2001) mentions, researchers who are conducting life story interviews should be flexible and adaptable in eliciting information from participants during the interview. This principle was applicable to my interviews as well. Sometimes participants would start talking about their work problems and I would have to start my questions from the present and then move into their past. At other times, I could ask participants about their childhood and end up asking questions relating to their current work situations. Some examples of interview questions are given in Annexure C.

4.5.5 Managing and recording data

4.5.5.1 Recording data

Legard, Keegan, and Ward (2003) advise researchers to audio-record the interview and to take notes during the interview if necessary. This allows the researcher to pay full attention to the participant and to probe in-depth. There is also a flow of discussion, as the interviewer does not have to write down the answer to the previous question before moving on to the next one. In note-taking, a risk of bias arises, as the researcher is likely to make notes of comments which make immediate sense or are perceived as being directly relevant or interesting. Audio-recording ensures that the whole interview is captured and allows for complete data analysis later, so cues that were not taken cognisance of in the interview situation can be recognised when listening to the recording. Interviewees may also feel inhibited when the interviewer suddenly starts writing and the participants wonder whether what they have mentioned was of interest (Hancock, 2002).

This method allows a researcher to record interviews *verbatim* and with precision, as well as the language used by participants, which includes their hesitations and tone, in more detail than when the researcher takes notes only. Audio-recording becomes a more neutral and less intrusive way of recording the interview than note-taking, as note-taking gives participants cues such as that they should slow down or pause if the researcher is writing or that they have said enough if the researcher is not writing (Legard et al., 2003). Hancock (2002) postulates that a researcher can listen to the recording of the first interview and make a note of important points that can be pursued in a second interview. This can also be done for subsequent interviews. This leads to a first interview being different to the last interview, as in each interview more information is gained.

I used an audio-tape recorder to record the participants' conversations. I explained the value of recording their conversations to participants and reassured them of confidentiality and explained how tapes and transcripts are stored. After the interviews, I transcribed the taped interviews.

4.5.5.2 Managing data

According to Ritchie, Spencer and O'Connor (2003), data management usually involves deciding on the themes or concepts under which the data will be labelled, sorted and compared.

In the current study, at the start of the analysis, I first gained an overview of the data covered and became familiar with the data set. I focused especially on the data set that pertained to the objectives of the research. I also focused on the diversity within the Indian female sample so as to identify any gaps or overemphasis on certain issues, as well as differences between participants' characteristics and circumstances. I then identified recurring themes and ideas using the ATLAS.ti programme.

4.5.6 Lessons learned from the pilot study

In qualitative research, a pilot study allows a researcher to focus on specific areas that may have been unclear previously, or to test certain questions. This then allows the researcher to make modifications with a view to quality interviewing during the main study (Strydom, 2005).

I interviewed seven Indian female managers for the pilot study. They were all in middle management positions and were fairly young (their ages ranged from 26 to 30 years old). The women in the pilot study had been raised in and exposed to a different historical context, namely post-apartheid South Africa, when they attended university and entered the workforce. I realised that they were a generation apart from the cohort I was interested in exploring (namely older senior and top Indian female managers), so I did not choose them for the second phase of the study.

I also had a very limited glimpse of the childhood experiences and social contexts of the women in the pilot study, as the interviews were short (only one hour each). Since I was interested in exploring the life stories of senior and top female managers in the second phase of the study, I decided to probe childhood experiences of thirteen women managers in the main study. I believed that their experiences within the family, Indian community and the broader political context would in some way have influenced the choices they made in terms of their careers and these factors would have had an influence on their upward mobility within organisations. This led me to explore their life stories in more depth, as I believed this method would provide richness and would highlight the complexity of the various factors that had an impact on their lives even at this point in their careers.

4.5.7 Grounded theory

According to Creswell (2007a), the aim of grounded theory is not to provide descriptions of events, but to uncover a theory. Grounded theory methods deal with organised, yet flexible guidelines for collecting and analysing qualitative data to construct theories “grounded” in the data themselves (Strauss & Corbin, 1998). The researcher starts with an area of study and allows the theory to emerge from the data. Theory obtained from the data is more likely to resemble reality than when theory is imposed on a series of concepts based on experience or speculation. Since grounded theories are drawn from data, they are likely to offer insight, both enhancing understanding and providing a meaningful guide to action (Strauss & Corbin, 1998).

Grounded theory is an iterative process whereby researchers move between data collection and analysis (Bringer, 2002). Analysis of early data informs the researcher about the route to follow for subsequent data collection. The researcher may bring in participants with an alternate viewpoint or change the schedule of the interview (Kennedy & Lingard, 2006).

Glaser (2002) posits that grounded theory generates emergent conceptualisations into integrated patterns which are denoted by their categories and properties. This is achieved through the many rigorous steps of grounded theory woven together by a constant comparison process which is designed to generate concepts from all data. Thus, data form the basis of the theory and the analysis of the data generates the concepts that are constructed. One of the main doctrines of grounded theory is that coding should emerge from the data. Thus, any concept in the analysis should be supported from the data, rather than from preconceived models, theories or hypotheses (Bringer, 2002). The idea is to learn what happens in a research setting and what the participants' lives are like by studying how they explain their statements and actions and ask what analytic sense can be made of them (Daengbuppha, Hemmington, & Wilkes, 2006).

Participants in the study would all have experienced the process and the development of the theory may assist in explaining practice or offer a framework for further research. In the current study, I was interested in the challenges Indian women faced in corporate South Africa in reaching top managerial positions. This was where I started my enquiry and after I had listened to the stories and analysed the data from the participants in the pilot study, I realised that their culture, families and community played a major role in their identity formation. I followed the participants' lead and in the main study I delved more into the identity work in childhood and thereafter in adulthood of women in senior and top management levels.

Grounded theory is therefore a qualitative research design in which the enquirer generates a general explanation of a process, action or interaction shaped by the views of participants (Strauss & Corbin, 1998). In line with Glaser's (2002) contention (see above), I regarded everything related to my research topic as data. The data I collected highlighted the historical, social and situational conditions in which the Indian women managers who participated in this study operated in. In qualitative research, all sources of information (for example, interviews, observations, historical documents, organisational information in meetings, newsletter and memos) are regarded as facts which are constructed by people, although they may not be actual experiences (Charmaz, 2003a).

The main premise in this theory development is that theory does not come from the literature reviewed, but is generated or "grounded" in data from participants who have experienced the process (Strauss & Corbin, 1998). My analysis of the data gleaned from the interviews with the Indian women managers in the study was also grounded in the data. The initial aim of my research was to find the barriers Indian women managers faced in corporate South Africa. I used a general framework to guide the content of my life story interviews with the women. As the interviews with the women progressed, this changed, and intersectionality, identity work and hybrid identities became the main focus of the research, as described in the literature review in Chapter 3. By using inductive data analysis, I was able to generate themes relating to identity, which was not the original focus of my study.

The following are the reasons for my use of grounded theory in my research, in line with Daengbuppha et al.'s (2006) argument:

- through conducting grounded theory research I was able to explain complex social phenomena such as intersectionality, identity work and hybrid identities in my study,

- as a researcher I was fully immersed in the field and in the data, as I was interested in gaining insight into and an in-depth understanding of the subjectivity and diversity of Indian women's experiences,
- it is an approach which allowed me to pierce the reality of these Indian women managers' experiences,
- as a researcher I was able to interpret holistically the active role of the Indian women managers' shaping their lives and the experiences they engaged in, and
- it allowed me to gain rich data from a range of perspectives, as it emphasised a focus on meaning and interpretive understanding.

Grounded theory methods have been criticised by some postmodernists and poststructuralists, who argue that positivist principles are used overtly and covertly by researchers who use this method in their data analysis (Charmaz, 2003a). Charmaz (2003a, p. 250) claims:

> Strauss and Corbin's (1990, 1998) stance assumes an objective external reality, aims toward unbiased data collection, proposes a set of technical procedures, and espouses verification. Their position moves into post-positivism because they also believe in giving voice to their respondents representing them as accurately as possible, discovering and acknowledging how respondents' views of reality conflict with their own, and recognising art as well as science in the analytic product and process.

Charmaz (2003a) argues that grounded theory needs to be flexible and broad. Deriving meaning from grounded theory research enhances understanding rather than constrains interpretive meaning. Grounded theory can be used in research without having to use positivist methodologies. Due to the strictness with which grounded theory research is conducted, researchers have a set of logical guidelines from which they are able to build explicatory frameworks that indicate relationships between concepts. Grounded theory does not centre on providing explanations on how to collect data, but focuses instead on the creation, enhancement and connection of concepts with each other.

4.5.7.1 Constructivist grounded theory

Constructivist grounded theory focuses on knowledge of empirical data; it is situated between positivism and postmodernism and uses methodologies which are easily available (Charmaz, 2006). According to this method, multiple social realities can be compared; knowledge is created by the researcher and the participant (Mills, Bonner, & Francis, 2006), and subjective meaning is comprehended through interpretive understanding. The main premise of a constructivist approach to grounded theory is a focus on studying people in their natural setting and moving away from positivism (Charmaz, 2003a).

Constructivists look at and analyse data from shared experiences and relationships with participants. The interpretive work that participants engage in is theorised and is constructed by participants. The theory that emerges depends on the researcher's perspective. While various researchers may have similar ideas, the theory they employ will differ (Charmaz, 2006). A constructivist researcher has to be aware of situations when differences between people become visible and cannot treat participants in a vacuum divorced from their social contexts and situations. People's experiences should not be treated as isolated incidents as the power of analyses decreases. Constructivists also use a reflexive stance and work through their own assumptions and interpretations relating to the topic under study (Charmaz, 2006).

In the current study I engaged in reflecting on my assumptions relating to the study being an Indian woman who has also occupied a managerial position. I tried not to steer the analysis from my perspective but attempted to remain true to the data. I also approached the participants and discussed the analysis of the data with them to ascertain whether I had conducted the analysis as close to reality as possible.

4.5.7.2 Data coding for grounded theory

Walker and Myrick (2006) indicate that Strauss and Glaser (1967) proposed two procedures of data analysis. In the first procedure, the researcher codes all data and analyses the codes to verify a given proposal. In the second procedure, the researcher inspects the data for properties of categories, using memos to track the analysis, and develops theoretical ideas. Coding allows the researcher to gain a new perspective on the data presented, and opens up avenues for further data collection, and it may lead to unpredicted results (Charmaz, 2003a).

In grounded theory, the researcher's interpretation of the data determines the emerging codes. Codes lead to theory development. Codes that emerge from the researcher's analysis as a collective lead to emerging theory, which in turn results in the data being explained. This then leads to additional data-gathering (Charmaz, 2003a). In grounded theory, data are separated, sorted and created through qualitative coding. Coding implies that labels are attached to segments of data to represent what each segment is about. Coding refines data, sorts them and allows a researcher to manage making comparisons with other segments of data. Grounded theorists also emphasise what is happening in the scene when they code data (Charmaz, 2006).

In the current study, after I had completed the transcription of the interviews, I uploaded the data into the Atlas.ti program, where I coded segments. There were some codes that were significant in the lives of the women, such as the role of their fathers in their upward career mobility, which I probed even further. Focusing on another segment of the study, for example, Indian culture, I again noticed that the role of fathers was significant and therefore this area of the study was also probed for more data. The more I interacted with the Indian women managers in the study, the better I understood their views, and this allowed me to refine my codes and gain an understanding of the data from their perspectives. These strategies were combined with a number of other techniques to enhance the eventual interpretation of the data. These are discussed below.

- **Comparative methods**

Harry, Sturges and Klingner (2005, p. 5) mention that when conducting constant comparison, "researchers move back and forth among the data and gradually advance from coding to conceptual categories, and thence to theory development". I conducted comparisons at every level of analysis. I also compared interview statements within the same interview and with earlier and later interviews for each participant (Duchscher & Morgan, 2004). The constant comparison method also allowed me to decide what data to collect in subsequent interviews. Through the constant comparison method, I was able to compare new data to older data that I had already collected. Boeije (2002) states that conducting constant comparison, makes it easier for a researcher to obtain a theory inductively. In this way, the internal validity of a study is enhanced.

- **Open coding**

After transcribing the interviews, I coded the data line-by-line, which allowed me to look at the data critically and not to impose my ideas on the information obtained (Duchscher & Morgan, 2004). I identified, named and categorised each different idea, which I later grouped, and these became my categories, as recommended by Borgatti (2007) and Bryman and Bell (2007). My main questions reading through my interview transcripts were "What is the participant saying here?" and "What aspect of the participant's life is highlighted here?" Conducting coding early in the research allowed me to learn early in the interview process what the participants were saying and were grappling with (Charmaz, 2006).

After I had completed the coding and the interpretation of the data, I showed the results to my participants. They agreed with my interpretation of the codes. I also asked my participants more deeper and probing questions relating to intersectionality and how they negotiated their gender, racioethnic and professional identities as well as the formation of hybrid identities (Charmaz, 2006). Highlighting intersectionality, identity work and hybrid identities as part of the themes I had extracted also provided new insights to my participants, after which they viewed their struggles from a different perspective (Charmaz, 2006).

- **In vivo codes**

In vivo codes use the participants' terms and assist in maintaining their views through coding (Harry et al., 2005). *In vivo* codes also undergo comparative and analytic analysis and are incorporated into the theory. *In vivo* codes take three forms. The first is the terms one hears in everyday conversations. The second is the interviewees' creative terms that portray the events in their lives. The third is when participants use terms that are peculiar to their particular group. Interviewees may also use certain terms because they believe others also understand the use of these terms (Charmaz, 2006). I did not make use of participants' words in coding the data.

- **Focused coding**

After I had completed the line-by-line coding, I made a list of the most important and most common codes in my initial coding process. In this step, I sifted through huge amounts of data. I applied focused coding, as I wanted to ascertain whether the codes were sufficient or whether I required additional codes. This step proved to be fruitful, as I realised that I required additional information which I had not had sufficient time to probe. I compared participants' responses and realised that new information had also surfaced in some of the interviews which I needed more information on. This step also allowed me to decide which codes I would require to conduct my analytical categorisation of the data, as well as which codes could be combined. There were codes that consisted of only one line of data and could be incorporated with other codes (Charmaz, 2006).

- **Theoretical coding**

Glaser (1992) argues that theoretical coding should be done before axial coding. Open coding is like breaking up a building into smaller pieces and theoretical coding is a construction of the structure of the building but in a better form that is analytical and coherent. When used in a proper manner, theoretical coding can provide greater accuracy when the data analysis is sound. Cutcliffe (2000) points out that, when theoretical coding is conducted, it enables a researcher to see how codes relate to each other and form a theory. Theoretical coding allows a researcher to understand social processes and human interactions better.

As a researcher, I did not force my preconceived codes and categories onto the data. I ensured that I developed a deep understanding of the identity work the Indian women who participated in the study engaged in during their childhood and adulthood and the subsequent hybrid identities that emerged. The participants in my study also had a deep understanding of their experiences and this made my data collection easier (Charmaz, 2006).

- **Axial coding**

In the third step of coding, referred to as axial coding, I linked categories and sub-categories formed in the open coding phase (Rambaree, 2007) at a conceptual level (Bryman & Bell, 2007; Leedy & Ormrod, 2005) and ascertained their relationship with each other (Strauss & Corbin, 1998). In highlighting the links between categories, Strauss and Corbin (1998) start with *conditions*, which are the events that form the structure of the phenomenon under study. Then they list *actions/interactions,* which are interviewees' normal responses to problems and situations. Thirdly, they include *consequences*, which are the results of activities or dealings. Sub-categories answer questions about the phenomenon, such as when, where, who, how and with what consequences, thus giving the concept greater explanatory power (Strauss & Corbin, 1998). Hoepfl (1997) states that, during axial coding a researcher is responsible for building a conceptual model and determining whether there is enough information to support the interpretation.

Researchers who are able to work in more adaptable ways need not conduct axial coding. However, I preferred to use axial coding as described by Strauss and Corbin (1998). The connections between the categories and subcategories reveal how the data made sense to me. For example, the Indian women managers in my study spoke of how their brothers were favoured in their homes and how unfair they felt this was. Although this code related to the unfair treatment of women in the home, I related it to the Indian culture category where women are ascribed a low status within Indian society (Charmaz, 2006).

- **Writing memos**

Writing memos is one method through which a researcher analytically interprets data and transforms it into theory (Lempert, 2007). I wrote memos after coding each interview, which allowed me to explore ideas and to recognise the codes as being interrelated – it enabled me to see the bigger picture. The codes allowed me to develop a structure for sorting the data. This step allowed me to view the data from a different angle and led to further data collection. Since I had compiled memos from the outset I did not get lost in the data, as I was better able to focus on the analysis of my interviews (Charmaz, 2003a).

At the memo writing stage, a researcher elaborates on assumptions, processes and actions that form part of the codes. Memo writing allows a researcher to delve even deeper into discovering the codes and to develop the processes the codes suggest. If they omit this stage, researchers are not conducting grounded theory research (Duchscher & Morgan, 2004). After each interview, I would think through what the participant had said and tried to make sense of the data presented to me. I made short notes of my thoughts relating to the interview. For example, Saira's words to me after the first interview were: "I wonder what my father would have thought of my success if he was alive today?" These words struck me and I thought about her relationship with her father on my way home from the interview. I made a note of probing further into her relationship with her father when he was alive in a subsequent interview.

I searched for patterns in my study and probed for events in the lives of the Indian women managers in the study. For example, I found in my study that men were responsible for the Indian women managers' subordination and I probed this aspect even further in my study by focusing on the women's emotions and how Indian men's subordination of Indian women affected women's upward mobility in the workplace. When a researcher places participants' *verbatim* material into memos, it allows for comparisons to be made easily and accurately (Charmaz, 2006).

- **Theoretical sampling**

Theoretical sampling is a significant element in grounded theory and is dependent on the comparative methods in grounded theory research. Theoretical sampling is used to develop the nascent categories and makes them more constructive and precise. The objective is to refine the categories and data and not to increase the size of the sample. Conceptual boundaries are identified and the importance and how the categories fit into the overall picture are established through theoretical sampling (Charmaz, 2003a).

Charmaz (2003a, p. 266) explains theoretical sampling as follows:

> Theoretical sampling implies that grounded theory cannot be accomplished through one interview only. The researcher has to compare data, compile categories and then go back to the field to ascertain to what extent the categories are relevant. Theoretical sampling assists the researcher to define the properties of the categories; to identify the contexts in which they are relevant; to specify the conditions under which they arise, are maintained and vary; and to discover their consequences. Through using comparative methods we specify the conditions under which they link to other categories. After we decide which categories best explain what is happening in our study, we treat them as concepts. These concepts assist us to understand many issues or incidents in the data.

Strauss (1990) maintains that theoretical sampling should take place early in the research process, but Charmaz (2003a) believes it should take place later in the research, so that the direction of analysis emerges naturally from the data.

Once I had clarified the relevant categories and formed theoretical constructs, I identified gaps in my data. Theoretical sampling was the last stage of my analysis, in line with Duchscher and Morgan's (2004) advice. I probed for information until data saturation had been reached, in other words, when I could not find any new information (Charmaz, 2006). So, for example, when I probed into the apartheid era, I compared the information provided to me by the different respondents. This information centred on living in designated areas, difficulties interacting with different races, their parents not discussing the political situation in the country, inferior schooling, not being able to study at higher level educational institutions of their choice, limited career opportunities and upward mobility in the workplace. Once I was unable to obtain more incidents relating to the negative effects of apartheid, I knew data saturation had been reached relating to this category.

- **Sorting, diagrams and integrating information**

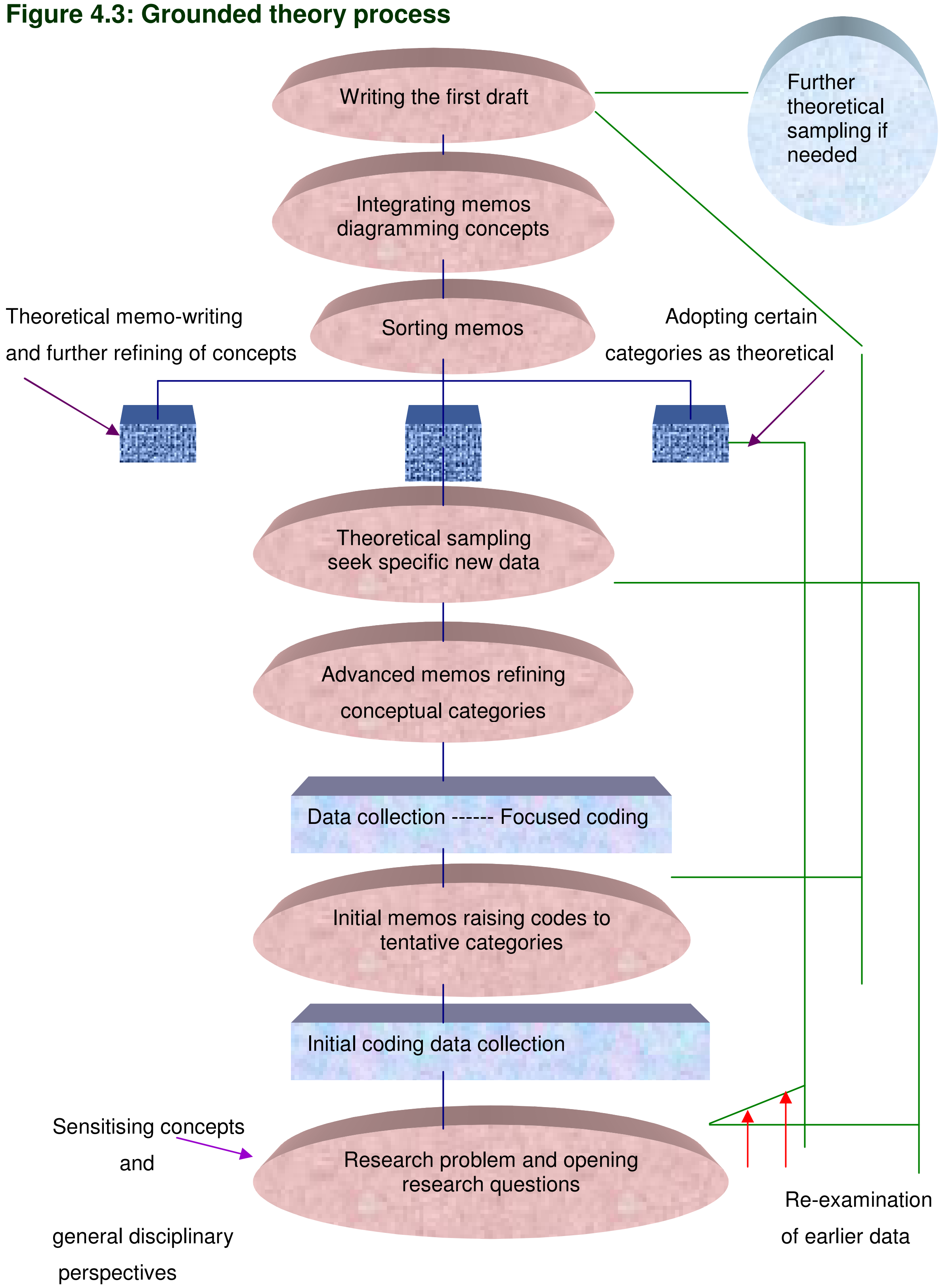
I engaged in comparing the various categories and conceptualised how they would be ordered. I then wrote the first draft of the analysis chapter, and then, after a discussion with my supervisor, I shuffled my categories once again and **sorted** them as they are currently presented in Chapters 5 and 6. Charmaz (2006) states that sorting provide a researcher with a nascent theory. Sorting also assists in generating and enhancing theoretical links and combining categories. Additionally, sorting enables a researcher to compare categories at an abstract level. In my study, significant events were both the negative and positive events in the participants' lives. Negative events were, for example, the women's experiences in the apartheid era, their subservient roles in their communities, homes and workplaces. Positive events in the Indian women managers' lives were, for example, their promotion into managerial positions, negotiating egalitarian roles with husbands, and fathers' encouraging them to study and work.

Diagrams in my study allowed me to visualise the relationships between the categories more easily. I mostly used figures to demonstrate and extract relationships during the analysis phase of my research. Examples are included in Annexure A.

In **integrating** my categories, I first focused on the childhood identity formation of the Indian women in the study, and thereafter I focused on the identity work in which the women engaged in their adult lives. This was done to ensure that grounded theory would reflect the sequencing of the women's lives. In the analysis of their childhood, I focused on the macro environment – Indian culture, the role of the community and parents in their identity formation. In the analysis of their adult lives I focused first on individual and corporate barriers to their career advancement and thereafter on the individual and corporate facilitators that advanced their careers. I compared the information relating to each theme across all participants. This enabled me to extract the information that the majority of participants mentioned related to a theme. This process made it easy for me to write up the analysis chapters as the information obtained became clear, and I was able to integrate the various categories.

Figure 4.3 provides a schema for summing up how I approached the grounded theory process. In the current research, there are several research questions relating to my study; however these changed and were added to due to the analysis that I conducted after each interview. The initial coding enables a researcher to use line-by-line coding, which allows for the data to be studied closely. Focused coding allows a researcher to separate, sort and synthesise large amounts of data. Writing memos allows a researcher to develop ideas, generate concepts and categories (Bryman & Bell, 2007). Memos also allow a researcher to compare data, to explore ideas about the codes and to direct further data-gathering (Strauss & Corbin, 1998; Charmaz, 2006). Memos "serve as reminders of what is meant by the terms being used and provide the building blocks for a certain amount of reflection" (Bryman & Bell, 2007, p. 589). The final concepts are discussed in the next chapters, and emerged from this process.

Figure 4.3: Grounded theory process



Source: Charmaz (2006, p. 11)

4.5.8. Data analysis using Atlas.ti

Qualitative data analysis takes place when a researcher has collected a huge amount of information that has to be condensed and explained (Lacey & Luff, 2007). Smith and Short (2001) point out technological advances have increased the efficiency of qualitative data analysis. However, qualitative data analysis can be time-consuming and expensive when one is using a huge amount of data. Broom (2005) laments, that qualitative data analysis is not an easy skill to develop. It is a skill developed from rigorous, high quality social science training.

Wickham and Woods (2005) indicate that software programs referred to as Computer Aided Qualitative Data Analysis Software (CAQDAS) can be used for data analysis and coding large amounts of data. The advantage of the CAQDAS system is that it allows a researcher to manage data more efficiently, and storage, search and retrieval becomes easier. The details of the steps involved in the development of the researcher's interpretation and analysis also become easier to record. This makes it easy for a reader to retrace the logical steps of the development and the basis of the researcher's conclusion (MacLaren & Catterall, 2002). Through efficient documentation, the transparency and rigour of the analysis process can be enhanced, and the study can then be replicated (Wickham & Woods, 2005). For the current study, I used Atlas.ti, which is a CAQDAS program.

Muhr (2004) points out that one advantage of the Atlas.ti program is that it allows a researcher to analyse unstructured data in an organised fashion. Atlas.ti assists in examining the complex phenomena concealed in the data. Data are transformed into useful knowledge. Muhr (2004) mentions that there are four attributes of Atlas.ti that can be captured by the acronym VISE:

- **Visualisation** – the researcher is able to approach the data in an organised manner and to picture diverse relations between objects during the analysis of data using various tools in the program;
- **Integration** – the various sections of a study are incorporated in such a way that the researcher does not lose sight of the whole when focusing on a

particular aspect of the study: all pertinent information is stored in the "Hermeneutic Unit";

- **Serendipity** – Atlas.ti allows a researcher to uncover constructs which the researcher may not even have been looking for; and
- **Exploration** – Atlas.ti allows for exploring data in a systematic manner.

The Atlas.ti package was developed to enable a grounded theory approach (Silverman, 2005). Atlas.ti is a qualitative data analysis program used to analyse large amounts of textual, visual, graphical and audio data (Guidry, 2002; Smit, 2002). It was used in the current study to discover the identity work and the formation of hybrid identities by Indian women managers in the workplace on their ascent to top managerial positions. Atlas.ti allowed me to manage a huge amount of data, but I also realised I had to perform the data analysis on my own and conceptualise the codes (Guidry, 2002). With the Atlas.ti program, I obtained a comprehensive overview of my study and was immediately able to search and retrieve information with ease. I was also able to connect certain texts, memos and codes by means of diagrams (Smit, 2002).

The Atlas.ti software program has been used in various types of research, including studies relating to diversity management. For example, Hibbins (2002) used Atlas.ti to manage and analyse data collected from semi-structured interviews conducted on migrant males relating to the role leisure plays in their lives and the influence of gender on the construction of their identities. Chang (2009) also analysed the responses of 28 IT staff in 12 multinational firms regarding the implementation of diversity training initiatives in the organisations using the Atlas.ti software program. Cadieux, Lorraine, and Hugron (2002) coded data gathered from interviews conducted on four women business owners in the manufacturing industry in order to gain an understanding of succession in family-owned businesses using the Atlas.ti program. Kemp (2005) used Atlas.ti to identify repetitive themes and patterns relating to the decision-making approaches used by women executives. McEldowney, Bobrowski, and Gramberg (2009) managed and analysed their data gathered from interviews relating to their study on how young women perceive the challenges of leadership. These are only a few examples of the use of the Atlas.ti software program in qualitative research. These are numerous examples in other fields of research (medical, anthropology, sociology) where the Atlas.ti program has been used to manage and analyse large amounts of qualitative data in a systematic manner.

4.5.9 Strategies used to ensure the quality of the research

Guba and Lincoln (1989) recommended four criteria for judging the soundness of qualitative research to reflect the underlying assumptions involved in qualitative research. Their criteria are listed in Table 4.3 below, comparing them to the criteria commonly used in quantitative research.

Table 4.3: Comparison of criteria for judging the quality of quantitative versus qualitative research

Conventional terms	***Naturalistic terms***
Internal validity	Credibility
External validity	Transferability
Reliability	Dependability
Objectivity	Confirmability

Source: Hoepfl (1997, p. 58)

The trustworthiness of a study is increased when a researcher keeps an audit trail (Koch, 2006). In the current research, I kept a journal and an audit trail to achieve a reasonable account of the investigation. The journal aided me in identifying my own biases before, during and after the study and to report on how subjectivity may have affected various facets of the study, in line with Mishoe's (2003) advice. The audit trail made it possible to examine the study's procedures and thus to verify credibility from the detailed account of the entire research process, which includes raw notes, edited notes, records of research meetings, data documents, guidelines used to analyse the data, decision rules to categorize data, interview guides and complete documents. The audit trail may be the single most pivotal technique for trustworthiness because it purposely organises the evidence so that someone external to the study can review the data and processes to form an independent opinion on the credibility and consistency of the results (Mishoe, 2003).

4.5.9.1 Credibility

In quantitative studies, internal validity deals with determining what one sets out to measure. Strong internal validity means that a researcher does not only have reliable measures of the independent and dependent variables, but is able to justify the links between them (Rolfe, 2006).

Patton (2002) posits the credibility of qualitative research depends on the ability and effort of the researcher. Shenton (2004) maintains that in qualitative research, credibility is achieved through ascertaining how compatible the findings of a particular study are with reality. Credibility in the current study was achieved in various ways. I use Shenton's (2004) measures of credibility to justify the extent to which my study achieved credibility.

Firstly, I conducted the study employing well-established qualitative methods such as life story interviews and grounded theory, which are used to a great extent by other researchers in the field of gender studies.

Secondly, while I was not able to spend time with my participants before the initial interviews were conducted, I was able to build a relationship of trust between the participants and myself. Because I am an Indian woman, the participants felt comfortable talking to me, and I was regarded as one of them. I had also informed the participants from the outset that I was in a managerial position and this made them feel they could be open with me, as they felt I was in a position to relate to their stories. However, I did not allow my familiarity with Indian culture and my personal experiences as an Indian woman manager in a South African organisation to influence my professional outlook relating to the study.

Thirdly, I used triangulation with regard to the data sources (Shenton, 2004), in that I sought the opinion of others who were familiar with Indian culture and who had lived through the apartheid era in order to verify the information supplied by the participants. I consulted with older people in the Indian community, who provided me with insight into Indian culture and religion in respect of certain issues which were highlighted during the interviews. These discussions provided me with a greater understanding of underlying reasons for Indians in South Africa to uphold their cultural beliefs, and these insights allowed me to write on the results with an in-depth understanding of the cultural expectations of South African Indian women.

Another method of triangulation I used was to use documents obtained from participants. I requested the participants to provide me with a copy of their CVs to peruse their work history and the time it took them to reach senior and top management positions. Site triangulation was achieved because I obtained the opinions of Indian women managers in different organisations to reduce the chances of obtaining information that was restricted to a particular organisation, and to obtain diverse views.

Fourthly, I allowed each participant I had approached for the study an opportunity to refuse to participate. Of the 27 Indian women I approached, 10 had responded in the negative, as their work and family commitments did not allow them free time for other activities. Four did not respond. I therefore only interviewed Indian women managers who were genuinely willing to be part of the study and offered information freely. Even before the interviews commenced I informed the participants that the utmost care would be taken to provide confidentiality and that they had the freedom to express themselves freely, as there were no right or wrong answers. I also made it clear to the participants before the interviews commenced they were free to withdraw at any stage of the study and that they did not need to provide any reason to me for doing so. Three participants did withdraw from the study after the first set of interviews had been conducted with them and I accepted their decision without questioning their motives for doing so. However, I still included the information they provided during their respective interviews.

Fifthly, I had frequent debriefing contact sessions with my supervisor. I discussed my findings with her. I initially also gave my supervisor the first interview transcript for her comments. She reviewed my analysis and raised questions that forced me to probe more deeply into my coding and interpretations. I was also challenged to provide more detailed and thick descriptions about the complexities of the women's life stories. All of this enhanced the quality of my interpretations and analysis.

Sixth, I also requested that my peers examine my research. When I attended the Academy of Management conference in August 2010 in Montreal (Canada), I also had an opportunity to share my research findings with scholars who conducted research in diversity management, especially relating to gender issues. They also provided me with valuable feedback relating to my study.

Seventh, I kept a reflective journal in which I recorded my thoughts, findings and made notes of my views of the interviews, the participants in the study and discussions with my sister. These thoughts and reflections are elaborated on in Chapter 9.

Eighth, before commencing with my PhD studies, I had already been working in the human resource field for about six years. I worked in recruitment and selection for two years, and was involved in conducting interviews and compiling reports on a daily basis because the organisation I worked for was huge (it had 14 000 employees). Managers were constantly filling vacant posts in their respective departments and this kept me extremely busy. I was therefore comfortable with conducting interviews, and I believed I had the knowledge I needed to elicit information from respondents. When I commenced my studies three years ago, I had already been working in corporate South Africa for more than eight years, and I believed I had the potential to conduct research, as part of my duties in human resources were to investigate problems in the workplace and to report on these.

Ninth, I conducted member checks (Bryman & Bell, 2007) with five participants after completing my analysis and discussion chapters. The participants expressed surprise that I had extracted such a comprehensive list of themes from the information they had supplied me with. They thought my write-up would deal mostly with their childhood experiences and the problems at work. Since they did not understand the concepts of identity work and hybrid identities, I explained these concepts to them and we had a discussion on identity negotiation and identity formation in general. They also mentioned that the concepts of religion and culture are fused and that they find them difficult to separate, which I had noticed from their responses.

Tenth, I used thick descriptions in the current study, which I believe adds to the credibility of the current study.

Lastly, I compared my results with prior research to assess the extent to which the results in my study are congruent with those found in other similar research. This comparison is discussed in Chapter 7.

4.5.9.2 Transferability

In quantitative research, external validity addresses the extent to which a study can be generalized to other people and other situations (Hoepfl, 1997). In qualitative research, the term transferability is used and refers to the extent to which the results can be generalized or transferred to other contexts or settings (Guba & Lincoln, 1989). Payne and Williams (2005) posit that transferability depends upon rich descriptions of the fieldwork, the richness of the data collected and a full report. The reason for this is that it demonstrates reliability and validity in the researcher's account, and secondly, it allows the reader to decide whether the findings can be transferred to other settings.

I have provided thick descriptions of the context in which my study was conducted. For example, I have provided information on the geographical location of the organisations in which the study took place, a description of the sample in the study, the number of participants in the study, the data collection methods used in the study, the number of interviews and their duration with each participant, and the period over which the interviews were conducted, as recommended by Shenton (2004). Another researcher can use the same methods I have used in another setting to ascertain the extent to which the same results can be obtained.

4.5.9.3 Dependability

Guba and Lincoln (1989) suggest that dependability refers to whether decisions, choices and analysis can be audited by reviewers. This implies ensuring that complete records are kept of all phases of the research process – from the problem formulation, to the selection of research participants, fieldwork notes, interview transcripts, data analysis decisions and so on, in an accessible manner (Bryman & Bell, 2007). I kept records of tape recordings of interviews, interview transcripts, all correspondence with participants and also the Atlas.ti document which I used to extract themes. These are stored in a secure place in line with ethical requirements.

4.5.9.4 Confirmability

Objectivity deals with reliable knowledge, checked and controlled, undistorted by personal bias and prejudice (Kvale, 1996). Confirmability refers to the degree to which the results are indeed reflective of the experiences of the participants (Shenton, 2004). There are a number of strategies for enhancing confirmability.

I tried to remain as objective as possible when conducting the current research. I used various forms of triangulation, as mentioned above, to reduce my personal bias. I have also explained in this chapter why I used a qualitative method and interpretivism rather than other methods in the current study. I have described the methodology I adopted comprehensively in the current chapter. I have also described how the data for the study were collected and processed in the current chapter. In order to enhance reliability, the contributions of another qualitative data analysis expert were sought, and I had a face-to-face discussion relating to the codes I had used with the qualitative research expert. The expert agreed that there was correspondence between our codes. I discussed with the expert how I had conceptualised my coding and the expert confirmed that I had used the correct procedure for my coding.

4.6 ETHICAL CONSIDERATIONS APPLICABLE TO THE STUDY

Marshall and Rossman (1999) mention, that ethical consideration such as informed consent and protecting participants' anonymity are vital in research. Researchers are expected not to pass judgement, even when they are dealing with people from their own culture. Bryman and Bell (2007) adopt Diener and Crandall's (1978) division of ethical issues into four main areas, all of which I applied in my research:

- I ensured that there was no **harm to the participants** in my study. I ensured that participants were protected from various forms of harm, such as physical harm, harm to their development or self-esteem, stress, harm to career prospects or future employment, and I did not invite or force participants to perform reprehensible acts.
- I ensured that where a **lack of informed consent** existed, I did not force potential participants to participate in the study, as Creswell (2003b) recommends. I provided the participants with as much information as possible so that they could make informed decisions about whether they wished to be part of the study or not. Each participant was given a consent letter (see annexure D) that described in detail the purpose of the study, the procedures followed during the study and the risks and benefits of the research, and alternatives to participating, as set out by Hoyle, Harris, and Judd (2002).
- I also ensured there was no **invasion of privacy**. Since each of my participants had a high regard for her privacy, I did not transgress this boundary. One of my participants refused to answer some personal questions relating to her family relationships, and I respected her right to privacy and did not pursue this line of enquiry any further.
- I also did not use deception in my research. I did not represent my study as something other than what it is.

I promised the participants confidentiality in my research. In order to maintain the confidentiality of each participant, I assigned a pseudonym to each participant in my study. I also clarified the procedure of the research from the onset, so that the participants knew what to expect, as recommended by Richards and Schwartz

(2002). I also practised mutual respect for my participants, as I opened myself to understanding their viewpoints, in line with Beale, Cole, Hillege, McMaster, and Nagy's (2003) advice.

In the application of these ethical principles, I also complied with the requirements of the University of Pretoria, which approved my research ethics at the proposal stage of the study.

4.7 CONCLUSION

In this chapter I described the research design and research methodology which formed the building blocks of my research. I also stated my ontological and epistemological stance, as well as explained the research methodology used. I used a grounded theory approach. Atlas.ti was the means by which I coded and organised data. The ethical issues relating to the study were also discussed.

The next two chapters report on the results of the analysis: Chapter 5 discusses the themes emerging from the women's childhoods, while Chapter 6 discusses the findings relating to their adulthood and professional lives.