

CHAPTER 3

RESEARCH DESIGN, METHODOLOGY AND FINDINGS

3.1 INTRODUCTION

This chapter contains a discussion on the development and conducting of the research. The first section of the chapter provides an explanation of the research design and methodology, and the second part contains the research findings.

Silverman (2000:8) states that qualitative research exemplifies a general belief that it can provide a deeper understanding of social phenomena than can be obtained from purely quantitative data. The researcher supports this and believes that qualitative research will provide knowledge and deeper understanding to identify the developmental and learning needs and the assets of the learner with type I diabetes in the foundation phase.

It is important to understand the learner with diabetes from the participant's perspective (Schumacher, 1993:373). Understanding the learner with diabetes requires analysing the many contexts of each participant and narrating the meanings that participants assign to these situations and events. Participants' meanings include their feelings, beliefs, ideals, thoughts and actions.

In the present study, the assumption was made that the actions of the learner with diabetes are bound to a particular historical, social, temporal and cultural context. Therefore human actions, institutions and events are interpreted from a qualitative perspective in order to construct a reading, or portrayal of what is being studied (Ary, *et al.* 2002: 422-423).

The intrinsic purpose of this study was to gain a better understanding of the learner with type I diabetes in the foundation phase in the context of South African education. To this end, it was necessary to identify these learners' developmental and learning needs as well as their assets. It is hoped that the knowledge gained will help learners with type I diabetes in the foundation phase and enable their families, friends, school, teachers and the community to participate as external and internal asset builders in the development of these learners.

3.2 RESEARCH QUESTION

As stated in Chapter 1 this study is based on the following research question:

What are the developmental and learning needs and the assets of the learner with type I diabetes in the foundation phase?

3.3 RESEARCH DESIGN

The research design used for this study is of a qualitative nature: it is an ethnographic study, using case studies. The interpretative paradigm was used in analysing the case studies.

Qualitative case studies are characterised by “researchers spending extended time on site, personally in contact with activities and operations of each case, reflecting, revising the meaning of what is going on” (Stake, 2000:445). The researcher spent a great deal of time at the diabetic clinic in close interaction with the learners, their parents and teachers.

The emphasis of this study was on understanding learners with type I diabetes in the foundation phase within their environment, where they respond to family, friends, school, teachers and the community.

3.3.1 Qualitative ethnographic study

The task of the ethnographer in research is to balance a commitment to capturing the diversity, creativity, individuality, uniqueness and spontaneity of social interactions with the requirements of scientific research (Cohen, *et al.* 2002:139).

As an ethnographer, the researcher has attempted to place specific encounters, events and understanding in a meaningful context. Research design and methods have been combined to produce personally situated accounts, descriptions, interpretations and representations of these learners’ lives. Since ethnography is both a process and a product, experience is meaningful. The actions of the learner with diabetes are generated from and informed by this meaningfulness (Tedlock, 2000:455).

This ethnographic study using case studies is based on the interpretative paradigm that is characterised by a concern for the learner with diabetes as an individual. The researcher supports the argument by Cohen, *et al.* (2002:22-23) that the aim is to understand the subjective world of human experience. The paradigm is a framework for understanding the interpretation that learners with diabetes give to the ecological environment around them. This gives rise to multi-faceted images of individual development, actions and assets as varied as the situations and contexts in which they take place.

The basic assumption guiding the interpretative paradigm is that the learners who are active in the research process construct their knowledge socially. The researcher has attempted to understand the complex world of lived experience from the point of view of the learners who live it. This paradigm also emphasises that research is influenced by the value systems of researchers and can never be independent of these systems or completely objective (Mertens, 1998: 11).

By entering into close and relatively prolonged interaction with learners with diabetes in their everyday lives, the researcher can better understand the beliefs, motivations and behaviour of these learners (Tedlock, 2000:456).

The following qualitative ethnographic research was employed in this study.

- The study was conducted at the Ferncrest Diabetic Clinic situated in the centre of the town of Rustenburg in the North West Province. This clinic is well known for its expertise and proficiency in work with children with diabetes. This clinic has contact with most of the diabetic learners in the vicinity. The specialist diabetic nurse at the clinic has daily experience of the concern, complications and uncertainties of diabetic learners and their families. As the participants and their parents visit the clinic frequently, they are familiar with the research location.
- Learners, parents and teachers of different cultures were included in the study.
- Questionnaires and semi-structured interviews were the research instruments.

- The data obtained from the first phase of the research were inductively analysed to reflect the meaning of what was stated and written.
- Case studies were the natural mode of reporting.
- An ideographic interpretation was also made to gain an understanding of individual learners with diabetes from different cultures in the foundation phase.
- The boundaries of the study were set by its purpose, namely to identify the developmental and learning needs and the assets of the learner with type I diabetes in the foundation phase.

This qualitative ethnographic study could contribute to identifying the developmental and learning needs as well as the assets of the learner with type I diabetes in the foundation phase. The learner with diabetes has interdependent and interpersonal relationships within a particular historical, social and cultural context. From a historical perspective the research examined the past through the narrative of the learner. Furthermore the learner's understanding and interpretation of the world around him/her were taken into account from a social perspective. From a cultural perspective the study endeavoured to be sensitive to the circumstances being studied and was committed to capturing the diversity of each participant. These had an influence on the creativity, individuality, uniqueness and spontaneity of the interactions that the diabetic learner had with his/her family, friends, school and community.

3.3.2 Case studies

According to Cohen, *et al.* (2002:181) case studies are an approach to seeking an understanding and interpreting the world in terms of its participants, and may be described as interpretative and subjective. Case studies provide a unique example of real people in real situations. A distinguishing feature of case studies is that "human systems have a wholeness or integrity to them rather than being loose connections of loose traits, necessitating in-depth investigation" (Cohen, *et al.* 2002:181).

The participants were selected for this study on the basis of non-probability or purposive sampling. This technique produced a sample of the target group, comprising three learners aged between seven and nine years, with type I diabetes in the foundation phase. These participants were learners who visited the Ferncrest Diabetic Clinic at Rustenburg in the North West Province. Non-probability samples are frequently used in ethnographic research using case studies (Cohen, *et al.* 2002: 102).

In purposive sampling the samples are composed of elements that contain the highest number of attributes representative or typical of the population being studied (De Vos, *et al.* 2002:207). With the aid of the specialist diabetic nurse at the clinic, the researcher used the description given in Cohen, *et al.* (2002:103) to select for their typicality the cases to be included in the sample. These cases had the greatest number of characteristics that would enable insight to be gained into identifying the developmental and learning needs and the assets of the learner with type I diabetes in the foundation phase.

The following participants were included in the study:

- Participant A
 - Diagnosed with type I diabetes
 - Boy
 - Eight years old
 - White

- Participant B
 - Diagnosed with type I diabetes
 - Boy
 - Nine years old
 - White
- Participant C
 - Diagnosed with type I diabetes
 - Girl
 - Eight years old
 - Black

The power of purposive sampling is that a few in-depth case studies yield many insights about the learner with diabetes in the foundation phase (McMillan & Schumacher, 1993:378-379).

Well-constructed case studies are holistic and context-sensitive (Patton, 2002:447). As described in Child (1997: 8-9) the three participants were examined in detail as individuals. According to Geertz (cited in Cohen, *et al.* 2002): “Case studies strive to portray what it is like to be in a particular situation to catch the close-up reality and thick description of participants” (Cohen, *et al.* 2002:182).

The advantage of case studies for this research as described by Ary, *et al.* (2002: 441) is the possibility of depth because they seek to understand the whole learner with diabetes in the totality of his or her environment. The present actions of the learner, his or her past, environment, emotions and thoughts can be probed. Case studies also provide an opportunity to develop insight into aspects of human actions. Stake (2000:448) mentions that the purpose of a case study is not to represent the world, but to present the case. Consequently the aim of this research was to present the case of the selected learners with type I diabetes in the foundation phase.

Descriptive data provide narrative accounts of the learner with diabetes and were obtained from questionnaires and semi-structured interviews, as described by Ary, *et al.* (2002:425). These data illustrated the experiences and perspectives of the participants (parents, learners and teachers).

3.4 RESEARCH METHODOLOGY

Research methodology comprises the methods and techniques used in studying a sample, and includes specific research techniques (Silverman, 2000:86). Silverman (2000:100) emphasises that the methodology determines which methods are used and how each method is used.

The research methodology for this study included data collection and analysis. It is important that the findings derived from the research should provide valid, reliable and objective information in order to identify the developmental and learning needs and the assets of learners with diabetes in the foundation phase.

3.4.1 Data collection

The literature survey discussed in Chapter 2 was a preparatory stage before collecting the data, and served to acquaint the researcher with previous research on the topic being

studied. The knowledge gained from earlier endeavours helped to place this study in context (Cohen, *et al.* 2002: 161).

Data are defined as “information obtained through research” (Papalia & Wendkos Olds, 1996:23). As this was an interpretative study, the researcher wished to make sense of the feelings, experiences and social situations as they occurred in the real world, and consequently to study the participants in their natural setting. The central axiom of the research was therefore to work with data in context (Terre Blanche & Durrheim, 2002:127). The Ferncrest Diabetic Clinic was selected as a natural setting for the research, where the participants could be studied as real people in their real world which included the participants’ family, friends, school, teachers and the community, in order to portray their life-worlds.

Papalia and Wendkos Olds (1996:47) define a questionnaire as “a research technique in which people complete a form that explores their attitudes, opinion, or behaviors” (Papalia & Wendkos Olds, 1997:47). Haslam and McGarty (1998:97) describe a questionnaire as a set of questions to be answered by a research participant. These questions could be printed or given to the participant or asked by the researcher in an interview. For the purpose of the present study, printed questionnaires were used as the foundation for the semi-structured interviews.

The data were collected by means of three questionnaires: one for the parents of the learner with diabetes in the foundation phase, a second questionnaire for the learner with diabetes in the foundation phase and a third questionnaire for their teachers. The information derived from the three questionnaires formed the basis for the semi-structured interviews that were conducted with the parents, learners and teachers of the selected sample of learners.

The researcher used the description given in Cohen, *et al.* (2002:255) to compile the questionnaires. The questionnaire for the parents and teachers contains several open-ended questions to encourage honest and personal comments from the participants. For the sake of simplicity, the questionnaire for the learners with type I diabetes has briefer questions to accommodate the age and developmental stage of these learners. These questionnaires became the foundation for a semi-structured interview to capture the authenticity, richness and depth of response, which are the hallmarks of qualitative data.

Collecting the data in a manner that would enabled one to learn to know the participant in the context of his/her reality was an important aspect of the study. Terre Blanche and Durrheim (2002:128) state that triangulation makes it possible to collect material in many different ways and from many diverse sources. In the present study, triangulation was applied to understand the learner with diabetes from different angles. In addition, the research setting was approached with the necessary care and empathy so that the researcher would become a natural part of the learner’s environmental context.

Triangulation helps to reduce the likelihood of misinterpretation and to clarify meaning by identifying the different ways in which the participant is seen (Stake, 2000:443). The questionnaires and the semi-structured interviews used in the narrative study extended the idea of text to include in-depth interview transcripts. As Patton (2002:115) states, the emphasis is on the lived experience and perceptions of experience as described by the participants.

Narratives are based on the assumption that all people construct and live a narrative for their lives, and that this narrative is often dramatically challenged by the onset of major health changes accompanying illness. The research was aimed at discovering the unique personal narratives of the learner with diabetes. The narrative approach seeks to understand and reveal the subjective meanings of health and illness and to make sense of health-related experiences. The World Health Organisation has recommended the use of narrative methods in studies of health. They argue that in comparison with traditional epidemiological research methods, narrative research can realistically describe patterns of behaviour (Terre Blanche & Durrheim, 2002: 359-260). Learners with diabetes each live a unique narrative. Using this approach, the developmental and learning needs and the assets of learners with diabetes could be revealed, identified and realistically described to family, friends, school, teachers and the community. Their narratives revealed the meaning and experience of diabetes as a chronic illness among the foundation phase learners in this sample.

Data were collected in four phases. The parents, learners and teachers were participants in the collection of the data and are referred to as such in the four phases described below.

3.4.1.1 Phase 1: Exploratory interview, compiling of letter, and questionnaires

TABLE 3.1: Phase 1 of data collection: description and activities.

DESCRIPTION	ACTIVITY
<ul style="list-style-type: none"> • Exploratory interview at the Ferncrest Diabetic Clinic • Letter to parents (see Appendix 1A/B) • Compiling of questionnaires 	<ul style="list-style-type: none"> • Exploratory interview with a diabetes specialist nurse at the Clinic • Compiling of letter to parents to obtain informed consent for the learner to participate in study • After an in-depth literature survey, three questionnaires were designed for parents, learners and teachers respectively

The exploratory interview with the diabetes specialist nurse had the following purpose:

- To introduce the study to her
- To formulate a clear and focused research problem
- To gather general information on learners with diabetes
- To determine which learners would be available to participate in the study
- To arrange to use the clinic as a research setting.

A letter to the parents was compiled (see Appendix 1A/B) to inform them that their child had been selected to participate in the study. They were informed of the purpose of the study and the methods of data collection. They were requested to give their informed consent for their child to participate in the study.

The questionnaires were compiled after an in-depth literature survey. The description given by Cohen, *et al.* (255-256) was used for compiling the questionnaires, which feature open-ended questions from an ecological perspective and an asset-based approach to the learners with diabetes. The divisions of the questionnaires were based on the purpose of

the study, and also indicate the interdependence and relationships within the ecological perspective. Each division consists of different themes which emerged from the literature survey. These themes were integrated into the developmental assets.

3.4.1.2 Phase 2: Questionnaires as foundation for semi-structured interviews

TABLE 3.2: Phase 2 of data collection: description and activities.

DESCRIPTION	ACTIVITY
<ul style="list-style-type: none"> Questionnaires as a guideline for the semi-structured interviews to be completed by each learner's parents (see Appendix 2A/B) and by the learners (see Appendix 3A/B) in collaboration with the researcher 	<ul style="list-style-type: none"> At the first meeting the researcher met the parents and the learner in order to build a relationship with these participants and to introduce them to the procedure that would be followed. A letter was given to the parents, requesting their permission for the learner to participate in the study. The parents completed the questionnaire in the research setting and the researcher remained nearby to answer any questions During phase 2 at the second meeting with each learner, the researcher requested the learner to draw pictures of him-/herself and his/her family to help in establishing a relationship of trust. The learner in collaboration with the researcher completed the questionnaire

- Questionnaire: Parents of learners with diabetes in the foundation phase.**

Each questionnaire (see Appendices 2A and 2B) comprises the following divisions, integrated with the developmental assets. The divisions and contents of the questionnaire were compiled after an in-depth literature survey as described in Chapter 2. These were also the divisions and themes used for analysing the data.

TABLE 3.3: Divisions and contents of the questionnaire for parents of learners with type I diabetes in the foundation phase.

Development	Learning	Family	Friends	School	Teacher	Community
Physical	Individual differences	Emotional reactions	Interpersonal relationships	Interpersonal relationships	Interpersonal relationships	Interpersonal relationships
Cognitive	Interests	Interaction with family members	Interactions with individuals and groups	Interactions with individuals and groups		Interaction
Emotional	Evaluation					
Social	Reasoning	Development of self-concept		Development of self-concept		
Moral				Emotional reactions		

				Emotional stress		
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• **Questionnaire: Learners with diabetes in the foundation phase.**

Each questionnaire (see Appendices 3A and 3B) comprises the following divisions, integrated with the developmental assets. The divisions and contents of the questionnaire were compiled after an in-depth literature survey as described in Chapter 2. These were also the divisions and themes used for analysing the data.

TABLE 3.4: Divisions and contents of the questionnaire for the learners with type I diabetes in the foundation phase.

Development	Learning	Friends	Family	School	Teacher	Community
Physical	Interests	Inter-personal relationships	Emotional reactions	Interpersonal relationships	Interpersonal relationships	Interpersonal relationships
Cognitive	Self-evaluation	Interactions with individuals and groups	Interaction with family members	Interactions with individuals and groups.	Interaction	Interaction
Emotional			Developing of self-concept	Development of self-concept		
Social				Emotional reactions		
Moral						

3.4.1.3 Phase 3: Semi-structured interviews with parents and learners

TABLE 3.5: Phase 3 of data collection: description and activities.

DESCRIPTION	ACTIVITY
<ul style="list-style-type: none"> • Semi-structured interviews with the parents as well as the learners • The interviews were semi-structured as the completed questionnaire formed the basis of the discussion 	<ul style="list-style-type: none"> • The researcher analysed both questionnaires and added questions regarding each of the participants where more information was needed. These questionnaires were used as guidelines for the semi-structured interviews • The first interview was with the parents and the second with the learners. The interviews were conducted separately except where the parent asked to attend the interview with the learner

The researcher decided on semi-structured interviews as a follow-up method after the questionnaires had been completed, because an interview has the advantage of supplying in-depth information. Ary, *et al.* (2002:434) state that semi-structured interviews provide insight into the participant's perspectives, the meaning of events for the people involved and information about unanticipated issues. In this study, semi-structured interviews were used for obtaining in-depth information so as to identify the developmental and learning needs and the assets of the learner with diabetes in the foundation phase.

The questionnaires for the parents and the learners were the basis for the interview schedule. These semi-structured interviews enabled the researcher to clarify questions, to ask participants to extend, elaborate on, add to, provide details and clarify their responses. Cohen, *et al.* (2002:278) state that this kind of interview addresses the depth of responses, comprehensiveness and honesty that are the hallmark of successful interviewing.

The semi-structured interviews contributed to the narrative approach to the interpretation of the data. This approach describes the relationship between knowledge, interests and intentions, within interlocking webs of evidence. Silverman (2000:34) states that structuring the participant's accounts as narratives gives a lively theoretically informed grip on the data. This made it possible to tell the story as a major textual strategy for representing the life-worlds and lives of these learners with diabetes, as described by Schostak (2002:164). The semi-structured interviews were recorded on audiotape.

3.4.1.4 Phase 4: Semi-structured interviews with teachers

TABLE 3.6: Phase 4 of data collection: description and activities.

DESCRIPTION	ACTIVITY
<ul style="list-style-type: none"> Questionnaire (see Appendix 4A/B) as guideline to gain specific information in the semi-structured interviews with the teachers of the learners with diabetes 	<ul style="list-style-type: none"> This activity was completed after the interviews had been conducted with the parents and the learners

The teacher is an individual in the community and is recognised as an important asset-builder and identifier of development and learning needs. With a knowledge and understanding of diabetes, the teacher of the learner with diabetes could improve and maintain relationships between these learners and the school, parents and community.

As described by McEvilly (1995:472-473) the parents of learners with diabetes often need the support of the teacher, not only to allow their child independence but also to encourage good diabetic control to prevent complications. The ultimate aim for the teacher should be to see the child grow into a healthy, fit, stable and emotionally secure young adult.

The questionnaire (see Appendices 4A and 4B) used as a method to obtain information from the teachers of the learners with diabetes, consisted of open-ended questions regarding learning, friends, family, school, teacher and the community. It was also used as guideline for the semi-structured interviews. This included the developmental and learning

needs and the assets of learners with diabetes. These were also the divisions and themes used for analysing the data.

TABLE 3.7: Divisions and foundation of the semi-structured interviews with the teachers of the learners with diabetes.

Learning	Family	Friends	School	Teacher	Community
Interest in learning	Interaction with parents	Interpersonal relationships	Interpersonal relationships	Interpersonal relationships	Interpersonal relationships
Individual differences		Interactions with individuals and group	Interactions with individuals and groups	Interactions with individuals and groups	Interactions with members of the community
Reasoning			Development of self-concept		
			Emotional reactions		

3.4.2 Data analysis

According to Terre Blanche and Durrheim (2002:140) data analysis seen in context involves reading through the data repeatedly and engaging in breaking down and rebuilding the data in order to elaborate and interpret the information.

As described by Ary, *et al.* (2002:426) and used by the researcher, the data were analysed inductively in the application of the qualitative ethnographic research. From the outset of the first phase of the present study, the researcher reflected on the meaning of what had been written. The researcher developed hypotheses of what the data meant and sought to confirm or reject these hypotheses using the data obtained in the subsequent phase of interviews. By means of a process of coding, clustering and determining the themes, a summary was compiled for each participant being studied.

Ryan and Bernard (2000:769) mention that the literature review is a rich source of knowledge. This knowledge was exploited by starting with some general themes derived from the literature survey discussed in Chapter 2 and adding more themes and subthemes as the research progressed. Through inductive coding the themes were refined to a point where they could be applied to an entire corpus of text in which a great deal of interpretative analysis had already been done.

A narrative approach was taken to the interpretation of the data. Erben (1996:171) states that “by narratives one mean the types, varieties and patterns of the accounts or stories that compose life-course experience”. Through this approach the learners describe their world. Narratives challenge stereotypical cultural stories and tell alternative stories. Glassner and Loughlin (cited in Silverman, 2000) state that this is also a methodology for listening (Silverman, 2000:125). Erben (1996:66) asserts that when participants use the narrative approach they give new meaning to their past, but always in terms of the present.

The researcher used this approach to give meaning and provide knowledge and understanding regarding learners with diabetes in the foundation phase.

Hardy (cited in Erben, 1996) states that we dream in narrative, remember, anticipate, hope, despair, believe, doubt, plan, revise, criticise, construct, gossip, learn and love by narrative (Erben, 1996: 164). MacIntyre (cited in Erben) emphasises that as individuals we enter upon a stage we did not design and we find ourselves part of an action not of our making. The guidelines given by the above-mentioned authors were used in analysing the data to capture the diversity, creativity, individuality and uniqueness of the learner with diabetes.

In addition the researcher used Cohen *et al.* (2002:284-286) as a framework, practical guideline and directive as illustrated in Table 3.8 to analyse the data. The work of these authors on research methodology is relevant to the study and contributes to the scientific value of the study.

Table 3.8 gives a summary of the procedure followed in analysing the data collected by means of the questionnaires and the semi-structured interviews, which were recorded on audiotape.

TABLE 3.8: Procedures used in analysing the data

QUESTIONNAIRES	
<ul style="list-style-type: none"> • The responses to each question in the questionnaires for the parent, learner and teacher were typed • After analysing the responses given in the questionnaires, the researcher added some questions to obtain more information and greater clarity. These questions were used as guidelines for the semi-structured interviews • Each questionnaire consists of divisions with specific themes. The same structure was used for the semi-structured interviews 	
SEMI-STRUCTURED INTERVIEWS	
TRANSCRIPTION	After the semi-structured interviews with the parents, learner and teacher, the audio tapes of each semi-structured interview were transcribed and combined with the responses given in the questionnaires
CREATE A SENSE OF THE WHOLE	The researcher read the typescript several times in order to provide a context for the emergence of specific units of meaning and themes
CODING	<p>Then two columns were placed next to the data, one for the descriptive code and the other for identifying the assets</p> <p>In coding the information, the researcher systematically went through the data line by line and wrote a descriptive code at the side of each item. This enabled the researcher to understand the issue described by the parent, learner and teacher and in this way to identify the developmental and learning needs of the learner with diabetes. The assets that were identified were also entered on the coding document</p>
CLUSTERING	<p>After grouping the codes into more general clusters, an attempt was made to determine whether there was a common theme for a relevant meaning</p> <div style="text-align: center;"> <p>Example</p> <p>Participant A was asked the following question (see Appendix 3B):</p> <p>Do other children want to be your friend? Explain.</p> <p>Response</p> <p>No, they are afraid that I will become ill or get hurt .</p> <p>General clusters</p> <p>Rejection and reasoning</p> </div>

DETERMINING THEMES FROM CLUSTERS OF MEANINGS	The researcher examined the clusters of meaning and determined the central themes
	Example Interpersonal relationships and interaction with friends
SUMMARIES	
INDIVIDUAL SUMMARY	The researcher summarised the combined information from the questionnaire and interview with each individual
SUMMARIES	Then for each learner a summary was compiled of the data obtained from the parent, the learner and the teacher. The divisions in the questionnaires were also used as the divisions in the summaries, capturing the essence of the participants being studied and describing the experiential world of the learner with diabetes

The information obtained from the questionnaires and the semi-structured interviews with the parents, learners and teachers was integrated to produce an easily readable narrative that could be used for gaining more knowledge and better understanding of the learner with type I diabetes in the foundation phase.

3.5 FINDINGS AND DISCUSSION

After completing the procedure illustrated in Table 3.8, the findings and discussion were compiled from the data obtained from the parents, the learners and their teachers. These learners construct and live their own narrative. Their narratives are challenged by the chronic disease of diabetes and realistically describe the needs and assets of the learner with diabetes in the foundation phase.

3.5.1 Participant A

GENDER: Male

AGE: 8 years

BACKGROUND: The participant was diagnosed with type I diabetes mellitus when he was 7 months old. The participant is one of three children. He and his twin sister are the first-born children. When he was diagnosed, the parents had only a limited knowledge of diabetes. At the age of two, he had to undergo a serious bladder operation, which affected him for the next year. After the diagnosis his parents noticed a change in his social behaviour. He was not the same friendly baby he had previously been. Over the next few years he had to be hospitalised several times. His mother worked full-time. After the age of eighteen months he attended nursery school. Since Grade 2, he and his twin sister have been placed in different classes at school.

GRADE: Two

FINDINGS AND DISCUSSION:

- **DEVELOPMENT**

Physical and motor development

During his physical and motor development in the foundation phase, it was not possible for him to run as fast, skip with a skipping rope or play ball games in the same way as the other children. Although he kept getting stronger, faster and better each day it was sometimes easier just to give up the activity. He feels self-conscious about his body since a remark about the swelling on his stomach where he injects himself each day. His parents have realistic expectations about his development. They know his strengths and know where he needs more support and understanding in his developmental progress, for example with participation in a sport such as cricket.

He values healthy living habits and thinks that it is important to rest every day. Sometimes at night when his blood sugar is low he has to eat something and wait before going back to sleep, or when his blood sugar is high his parents have to inject him and he has to wait before he can go back to sleep. He worries about his health when he eats something wrong. It also bothers him that his teacher would not know what to do if he falls asleep in class. When he is playing and running around, he forgets that he has diabetes.

Cognitive development

He has mastered the basic skills of reading, writing and arithmetic. He shows ability for self-evaluation. He experiences success at school and get positive feedback from his teacher. He is aware of the adult world and his place in it because he understands that his father has to work away from home and accepts the responsibility of being the man of the house when his father is not at home.

Emotional development

Emotionally he feels discouraged by his diabetes and sometimes acts rebelliously. He is sensitive to other people's feelings. It bothers him when his sister fights with him. When he is sad or unhappy he prefers to go and sleep in his room.

He knows the difference between acceptable and unacceptable behaviour, for example he knows he should not react angrily when other learners make remarks about his diabetes. His emotions are influenced by factors such as fatigue and his health status.

As a type I (insulin-dependent) diabetic who requires insulin treatment, he has injected himself since the age of four. This contributes to the development of his self-concept. Being able to help himself to control his diabetes and the fact that he does not depend on his father or mother to test his blood sugar or inject the correct dose of insulin have helped to gain a sense of personal power. He uses planning and decision-making skills in controlling his diabetes. In so doing, he manages the challenge in a way that has a positive result on him and his family. He has accepted and taken personal responsibility for his health.

Social development

In a social context, the participant finds that the other learners do not want to play with him. He may have friends on one day and the next he may have none. He is not invited to the other learners' birthday parties because they do not want to run the risk that something might happen to him.

His regular absences from school prevent him from spending significant time in the social group. It is difficult for him to create a satisfying place for himself in the group. As a result he does not find that the peer group offers him the sense of security that he previously experienced in the safe haven of his parents' home.

The parents describe him as a caring child who does not have to be encouraged to help other people. He is a child with integrity who will if necessary stand up for his beliefs. He describes himself as being special because he has diabetes.

Moral development

Morally he asks the question, "Why me?" If it were possible for him to change anything, he would like to change his illness. He can appreciate another person's point of view. He is able to distinguish between right and wrong, good and bad. He applies this in his everyday behaviour, for example if he and his older friend cause damage such as breaking a window while playing, they will repair it without being reminded to do so. He loves and respects his parents. His morality is also influenced by the example his teacher sets.

- **FAMILY**

Emotional reactions

His mother states that she felt depressed and despondent when her son was diagnosed with diabetes. At present she says she has accepted it to some extent. She mentions that she lives from day to day. One implication of his diabetes is that his mother has had to resign from her full-time job to care for him when he is ill, as her employer did not always understand the consequences of diabetes.

The father works away from home in Botswana. He is deeply concerned about his son's health. His son considers his father a very special person and is also concerned about his father's health.

Interaction with family members

The family does not always receive the support they need in their interaction with members of the extended family, but one grandmother does give support outside the home. His diabetes has caused negative emotional reactions from his twin sister. She becomes jealous of the attention he gets when he is ill.

In his relationship with his sisters, he is caring, avoids conflict with them and he does his best to keep them content. He finds it much easier to show his family when he is angry and sad, than it is to express these feelings at school. There is seldom interaction between the family and the school.

Development of a self-concept

When his father works away from home, he undertakes the responsibility of the man of the house. He manages various tasks in and around the house. He helps to care for the animals and helps his mother with different tasks. He sees these tasks as a way to learn new skills. This creates a sense of purpose. The family appreciates his value and attitude towards his health and his ability to accept his diabetes.

- **FRIENDS**

Interpersonal relationships

When he talks about his interpersonal relationships, he expresses a need to play with friends at school but they keep him at a distance. This makes him feel rejected and rebellious, and he reacts to these feelings by telling his classmates to leave him alone. He reasons that the learners at school do not want to play with him as they are afraid he will fall ill and something will happen to him.

It is difficult for him to play when he is not feeling well. Instead of playing, he just wants to sit and watch the others play.

He has one special friend, a boy four years older than he is. He can express and articulate his feelings to this friend. This friendship has helped to improve his self-esteem. They do exciting and stimulating things together, such as building electronic devices, which create a sense of purpose as they can engage in different skills. As a friend, he is caring, responsible and will always try to resolve conflict peacefully. The participant has empathy

for his friend's home circumstances, such as insufficient money and not having a father, and shows an interest in making his friend's life better.

The learners in the class know about his diabetes. They understand the implications of diabetes. He also tells other learners about his diabetes so that if he falls ill, they will be able to help him. The learners in the class do not joke about his diabetes. They appreciate his integrity. He is not a tattletale about his fellow learners.

- **LEARNING, SCHOOL AND THE TEACHER**

Interpersonal relationships

When he attended nursery school with his twin sister, his mother explained the situation and gave the necessary information to the people in charge. They were very attentive and would phone immediately when there was a problem.

He loved his nursery teacher. Emotionally and cognitively he relied on his twin sister throughout nursery school. She had to help him to pack the books and complete some of the activities. This affected his self-esteem. He sometimes used the excuse that he did not feel well and often hid behind his sister. He developed strategies for avoiding tasks, and saw his learning as someone else's responsibility by behaving passively and helplessly.

His Grade 2 teacher accommodates and interacts with him in the same way as she does with any other learner. She expects him to show the same level of acceptable behaviour as the other learners. Her knowledge of diabetes is limited. Her information concerning diabetes was obtained from written notes she received from the mother at the beginning of the year. It is obvious to her when he is not feeling well, as his behaviour in class changes radically. He just sits in his chair, and will only react to questions which need very limited answers.

He cares about his present school and feels proud of the school's achievements. He has a positive interpersonal relationship with his teacher. This interaction has a beneficial influence on his self-concept. He loves to clean the classroom for his teacher.

The participant's illness has placed a great deal of responsibility on his twin sister, causing her to suffer emotional stress. She has to tell the teacher when he felt ill. This situation has affected her interactions with her friends. She also has to play with her brother because he has no friends.

He avoids conflict with other learners. He will not show when he is angry at school, and merely withdraws from the other learners. His teacher describes him as a well-mannered boy who stands up for his beliefs. She appreciates his friendliness. He hates any injustice. After school, he will talk to his mother about what upset him at school because he feels that his family supports him.

Interests, evaluation and reasoning

With regard to self-evaluation, when he is asked by his parents or teacher he gives reasons for being more interested in some subjects than in others. He is engaged in learning, he does his homework when it is assigned. He prefers to work at home where he can ask his mother to help him. He does well in mathematics but has problems with

languages. His academic performance is precarious. His homework is always done, but it may not always comply with the minimum requirements.

He enjoys activities such as cricket and hockey. His parents also encourage him to explore different activities. Sometimes these activities are acceptable to him, but other times they are not. He never complains or shows unacceptable emotional reactions. He enjoys the caring, encouraging climate at school.

Emotional reactions, emotional stress and the development of a self-concept

His absences from school are emotionally stressful because he has to catch up the work he missed. This causes emotional reactions such as impatience and anger. His mother finds that when she helps him with homework he reasons that she should finish it for him. However, he will always ask the teacher to explain when he does not understand something in class. He takes an active part in class discussions and class activities.

In his present school, the lack of interpersonal relationships and interactions with friends has an adverse effect on his self-concept. He is happy when he has friends; otherwise he is quiet and miserable. He does not want to go to school alone when his twin sister is ill. Her absence causes emotional stress as he has no friends he can play with at school to take her place. When someone in class remarked about his diabetes, he reacted by saying: "You can be glad it is not one of you."

It disturbs him that there is a new principal at the school every year. He does not like change. He performs tasks at school, which include paying in money at school. Being valued for his honesty gives him a definite sense of purpose. He also had the privilege of being recognised by the school as one of the learners of the week. This added to the development of his positive self-esteem. He is given useful tasks appropriate to his age.

• COMMUNITY

Interpersonal relationships

He talks about his diabetes, which contributes to good interpersonal relationships. His knowledge of diabetes helps to empower his classmates and other people with whom he comes into contact, such as neighbours and friends of the family. This knowledge includes the use of insulin, a special diet and eliminating misconceptions about diabetes. This contributes to his useful role in the community. It is also important for him that people know he is not feigning illness.

It is important for him to be valued in the community by doing something to help other people. As part of his interaction with his community he regularly visits the diabetic clinic. His mother's friends pray for his healing and the prevention of the complications of diabetes.

His teacher made other people in the community aware of the circumstances children have to endure while staying in state hospitals when they are ill.

Based on the responses in the questionnaires, the information obtained in the semi-structured interviews and from the in-depth literature survey, the following developmental and learning needs as well as assets could be identified, as illustrated in Table 3.9.

TABLE 3.9: Developmental and learning needs and the assets of participant A

ASSETS		
LEARNER	<ul style="list-style-type: none"> • Enjoys stimulating activities, for example building electronic devices • Enjoys activities such as cricket and hockey • Has planning and decision-making skills • Is honest • Has integrity • Is given responsibility appropriate for his age • Believes in and lives a healthy lifestyle • Resolves conflict peacefully • Has a sense of purpose because he manages different skills in and around the house 	
NEEDS		ASSETS
FAMILY	<ul style="list-style-type: none"> • Needs his family to know he has a sense of incapacitation • Needs his family to help keep his emotional balance by managing his feelings of frustration, fear and isolation • Needs his family to help prepare him for a certain future • Needs all family members to understand that having to take insulin makes him more dependent • Needs the other siblings in the household to know about diabetes 	<ul style="list-style-type: none"> • Receives love and support from his parents • Parents provide adult role models • Receives other adult support e.g. from a grandmother • Parents have appropriate expectations for their child • Is motivated to do well in school and other activities • Parents provide clear boundaries because they monitor his activities and whereabouts
FRIENDS	<ul style="list-style-type: none"> • Needs friendships • Needs to learn better interpersonal skills to make friends in class and at school • Needs friends to have knowledge of diabetes so that they can understand his situation and condition • Needs to learn skills to resist negative reactions from other learners • Needs friends and classmates to visit him in hospital to help to deal with the hospital environment 	<ul style="list-style-type: none"> • Older friend provides empathy • Together they do stimulating and exciting things such as building electronic devices

LEARNING, SCHOOL, TEACHER	<ul style="list-style-type: none"> • Needs self-identity and self-respect • Needs success, achievement and recognition • Needs a caring away-from-home environment in class • Needs to feel safe at school • Needs an opportunity to develop useful interpersonal skills in relating to other learners in class • Needs the class to have knowledge of diabetes and to show understanding • Needs to eat lunch and snacks at a specific time, sometimes also during classes • Needs to test his blood sugar before doing any physical activity • Needs teacher to understand that learning may be affected on specific days. When his blood sugar is low, he may think about how hungry he is or that he is dizzy and shaky and wants to go home • Needs the teacher to understand that occasionally he might have problems with reading and writing clearly because of blurred vision. • Needs the teacher to know his behaviour may sometimes be affected by diabetes • Needs help to manage difficult feelings • Needs the school to know attendance may be a problem because high and low blood sugar affects all learners differently • Needs the school and teacher to help him keep a positive self-image • Needs the teacher to make an efforts to gain knowledge of what to do in an emergency 	<ul style="list-style-type: none"> • Actively engages in learning • Enhances activities such as sport • Generates expectations of academic achievement and by enabling learners to be recognised as learner of the week
COMMUNITY	<ul style="list-style-type: none"> • Needs the community to have appropriate knowledge and understanding of diabetes as a chronic illness • Needs to feel of service to others in the community • Needs community members to help him deal with the hospital environment • Participant and his family need to develop relationships with hospital staff • Needs collaboration between the school and the community, for example community members such as health workers and psychologists, and in some cases social workers could play a role at schools to help build knowledge and understanding of diabetes mellitus. The school could also provide information essential for the learners development and needs 	<ul style="list-style-type: none"> • Provides the diabetic clinic • Religious caring friends

3.5.2 Participant B

GENDER: Male

AGE: 9 years

BACKGROUND: The participant was diagnosed with diabetes at the age of nine. He is one of four children. His parents had no knowledge of diabetes. His mother feels concerned that something may happen to him. His blood sugar has not yet been stabilised. He did not attend nursery school. He is an extremely motivated child. He does well at school and enjoys participating in sport.

GRADE: Four (participant were diagnosed with type I diabetes in the foundation phase)

FINDINGS AND DISCUSSION

• DEVELOPMENT

Physical and motor development

He met the requirements for normal physical and motor development. He manifests the required physical skills for participation in play. He likes to participate in sport. He is able to run, jump, climb and kick. His gross and fine motor skills are sufficiently developed to enable him to use his body confidently. His parents have realistic expectations about his development. They know his strengths; they provide support and are positive about his progress. He values a healthy lifestyle and has a positive attitude towards his body, in terms of how it looks and what it can do. He has a good physical self-concept influenced by positive feedback from others about his competence in sport and physical activities.

He accepts responsibility for controlling his blood sugar. He does not go to sleep easily. If he feels sick at night he will test his blood sugar and if necessary eat something. He does not wake his mother. He does not normally worry about his diabetes, only when he experiences the physical symptoms of illness.

Cognitive development

He has mastered the basic skills of reading, writing and arithmetic. He has a strong academic self-concept formed by experiences of success in school and positive feedback from his teachers. He has a real interest in school and enjoys learning and reading. He is able to make up his own mind and make decisions.

Emotional development

He has positive self-esteem. He does not want to change anything about himself, except for the emotional reaction of behaving nastily when he becomes angry. It makes him sad when people argue with him, especially at school. He never shows his anger at school, he prefers to hide his emotions. At home, he will withdraw from a negative situation and lie down on his bed.

He feels it is important for his parents to acknowledge and appreciate that he does well at school. Their recognition is significant for him. He describes himself as special because he has diabetes. He thinks of himself as a unique person.

He injects himself, which contributes to his positive sense of identity, as he believes he has control over his diabetes. He has accepted personal responsibility for his health. His parents describe him as a quiet child. He avoids conflict and will always try to do his best. He will also try to help wherever he can.

Social development

Socially he holds his own in the peer group. He is responsible and dependable, for example he will help wherever he can and will complete the tasks given to him. He takes an interest in various activities at school and at home, such as sport, reading and computer games. He is sensitive to other people's feelings and needs, and responds well to group activities. He focuses on friends of his own sex.

Moral development

He distinguishes between right and wrong, good and bad and lives his moral values in his everyday life, for example his older brother's behaviour is unacceptable to him and he tries not to react in the same manner. Instead he focuses on other aspects of his life such as sport.

He is a deeply religious child. He believes that if he keeps on praying, God will heal his diabetes. He always uses his pocket money to buy presents for his mother and father. He likes to have responsibilities at home such as feeding the dog or assisting with household tasks.

• FAMILY

Emotional reactions

When he was diagnosed with diabetes at the age of nine, his family knew nothing about the disease. His mother did not anticipate that it would be necessary for him to inject himself. She found the diagnosis a shock and is deeply concerned about his health.

His father has similar emotions but prefers not to be involved. The father treats all four of his children in the same way. He does not want to gain any knowledge about diabetes. He thinks it is unfair that only the participant and not the other children should have snacks at certain times, as prescribed by the diabetic clinic. If there were an emergency, he would not be able to help the participant. He prefers to avoid giving attention to matters relating to diabetic information. He becomes angry with the participant when his blood sugar is high. The participant tells his mother, not his father, when he does not feel well and tells her in confidence to prevent his father from knowing.

Interaction with family members

The influence of his diagnosis on the family is clear at mealtimes. It is not possible to buy the same diabetic food for the other three children. This has a negative effect on the other siblings. They feel neglected and angry, causing conflict in the family. His relationship with his older brother is described as bad. His brother and sister tease him and make jokes

about his diabetes. His brother has a knowledge of diabetes but might only use it in an emergency. His older brother refuses to consider the participant's special circumstances, or to believe that the participant may have a legitimate claim to different food and special attention.

The participant describes his grandfather as a very special person who cares about him and supports him with his diabetes.

When the participant was diagnosed with insulin-dependent (type I) diabetes it brought him and his mother closer together and strengthened the bond between them. The mastery of his special diet, blood sugar tests and daily insulin injections contributed to positive experiences in the family, promoting the participant's self-confidence and self-esteem.

- **FRIENDS**

Interpersonal relationships

He appreciates his best friend's care and empathy. His friend shows concern about the participant's health. His friend always helps him catch up with work in class when he feels ill or was absent from school. When he feels ill at school, he sits down at the playground near his friends and watches them play. He does not want to tell them he is feeling ill. His friends never joke about his illness.

He interacts positively with his friends. He has visited a friend's home only once since the diagnosis of his diabetes. His mother is afraid something may happen to him if he visits a friend's house. Positive characteristics that other children can relate to are his friendliness, good humour and co-operativeness. He is a caring person and will always try to find a peaceful solution to conflict.

- **LEARNING, SCHOOL AND THE TEACHER**

Interpersonal relationships

He did not attend nursery school. He is well motivated in his present school and has a good relationship with his teacher. He has good interpersonal relationships with his classmates and friends, although he cannot always go out with them. They know he has diabetes and will always try to be helpful. He never talks to them about his diabetes.

The factors that have a positive influence on him at school are his good interpersonal relations and interaction with his classmates and friends. He avoids conflict. The teacher has a good knowledge of diabetes. She appreciates his sense of humour. She expects the same level of acceptable behaviour from him as from the other learners, but will always keep his illness in mind.

Interests, evaluation and reasoning

He cares about his school. He is keenly interested in sport such as rugby and cricket. He is not only a spectator but also takes part in these sports.

He enjoys doing his homework. His work at school is always very neat and his homework is always done. When he has been absent from school, he tends to complete the work on

the day he returns to school. He works very hard, and loves to read for pleasure and play computer games.

Emotional reaction, emotional stress and the development of a self-concept

He appreciates recognition for good work at school. He responds well to merited praise. He has formed a good academic self-concept from his experience of success at school. This was determined by class activities and assessment criteria. He does not give any indication of his emotions in the classroom, especially when he is angry.

His strengths at school are described as his love of taking part in rugby and his good academic achievements. He participates in class discussions and class activities, and will help with tasks in class when requested to do so.

- **COMMUNITY**

Interpersonal relationships

His family would appreciate it if more people in the community had some knowledge of diabetes. They want people to think of their child as normal.

He visits the diabetic clinic regularly. He would like to interact with other learners with diabetes. He likes to help other people.

Because his teacher has empowered the learners in his class with a knowledge of diabetes, she has enabled them to share their knowledge of diabetes when they interact with members of the community.

Based on the responses given in the questionnaires, the semi-structured interviews and in-depth literature survey, the following developmental and learning needs as well as assets could be identified, as shown below in Table 3.10.

TABLE 3.10: Developmental and learning needs and the assets of participant B

		ASSETS	
LEARNER	<ul style="list-style-type: none"> • Enjoys stimulating activities, for example reading and computer games • Greatly enjoys activities such as sport • Has planning and decision-making skills • Is honest • Has integrity • Has responsibility appropriate for his age • Believes in and lives a healthy lifestyle • Resolves conflict peacefully • Has a sense of purpose created by his experience of success at school 		
	NEEDS	ASSETS	
FAMILY	<ul style="list-style-type: none"> • Needs the love and support of both parents and rest of family • Needs the family to create a sense of security and trust at home • Needs the support of other adult relationships with for example grandparents or other family members • Needs the family to know he has a sense of incapacitation • Needs the family to help keep his emotional balance by managing feelings of frustration, fear and isolation • Needs the family to help him prepare for a certain future • Needs all family members to understand that having to take insulin makes him more dependent • Needs the other siblings in the household to have knowledge of diabetes • Needs the family to participate in therapy sessions after diagnosis to empower the whole family to neutralise potential conflict 	<ul style="list-style-type: none"> • Family members have other adult support, for example from the grandfather • Parents have appropriate expectations for his development • Parents motivate him to do well at school 	
	FRIENDS	<ul style="list-style-type: none"> • Needs his friends to have knowledge of diabetes so that they can understand his condition • Needs to learn skills to help him resist negative reactions from other learners • Needs friends and classmates to visit him in hospital to help him deal with the hospital environment. 	<ul style="list-style-type: none"> • Friends provide empathy • Friends create stimulating activities such as sport, games • They promote humour

LEARNING, SCHOOL, TEACHER	<ul style="list-style-type: none"> • Needs success, achievement and recognition • Needs to be given useful roles and tasks in the classroom • Needs to eat lunch and snacks at specific times, sometimes also during classes • Needs to test his blood sugar before any physical activity • Needs teacher to understand that learning may be affected on specific days. When his blood sugar is low, he may think about how hungry he is or that he is dizzy and shaky and wants to go home • Needs the teacher to understand that occasionally he might have problems with reading and writing clearly because of blurred vision • Needs the teacher to know his behaviour may sometimes be affected by diabetes • Needs help to manage difficult feelings • Needs the school to know attendance may be a problem because high and low blood sugar affects all learners differently • Needs the school and teacher to help him keep a positive self-image. 	<ul style="list-style-type: none"> • Learner is actively engaged in learning • School enhances activities such as sport • Teacher generates expectations of academic and personal achievement • Teacher and school create enjoyment of learning
COMMUNITY	<ul style="list-style-type: none"> • Needs to be valued by the community • Needs the community to have appropriate knowledge and understanding of diabetes as a chronic illness • Needs support from and interaction with neighbours • Needs to feel of service to others in the community • Needs to develop relationships with hospital staff • Needs collaboration between the school and the community, for example community members such as health workers and psychologists, and in some cases social workers could play a role at schools to help build knowledge and understanding of diabetes mellitus. The school could also provide information essential for the learners development and needs • Needs contact with other learners with diabetes 	<ul style="list-style-type: none"> • Diabetic clinic

3.5.3 Participant C

GENDER: Female

AGE: 8 Years

BACKGROUND: The participant is the elder of two children. There is an age difference of 7 years between the two sisters. Both her parents have diabetes mellitus. She was diagnosed with diabetes at the age of five. There are several examples of the complications of diabetes among the family members.

Participant C attended a nursery school from the age of three. She had to change primary schools. English was the language of instruction at the first primary school she attended but at her present school the language of instruction is Tswana. The language adjustment was difficult for her and diminished her enthusiasm for school. Her father is the only breadwinner in the family.

GRADE: Two

FINDINGS AND DISCUSSION:

- **DEVELOPMENT**

Physical and motor development

The participant has acquired the physical, gross and fine motor skills to participate in play and physical activities of her age group. Her blood sugar is not always well controlled. She agrees that good health is important. She worries about her health and feels that it is bad to be a diabetic. When she is sick, she does not tell her friends as she is afraid they will laugh at her. She enjoys physical activities but does not participate in sport at school.

Cognitive development

She has mastered the basic skills of reading, writing and arithmetic. She has a sense of right and wrong. She shows a capacity for self-evaluation since she is able to describe what she is doing wrong in the management of her diabetes. She is aware of the adult world and her place in it because she recognises the responsibility her diabetic parents have for managing their own diabetes and realises it is her duty to learn to manage her own diabetes. She has to help take care of her baby sister and helps to clean the house. She is also aware of the complications of diabetes as exemplified by her father and mother, for example the weakening of her mother's vision.

Emotional development

The daily injections of insulin distress her emotionally. She does not want to test her blood sugar. This stressor causes negative emotional reactions such as anger and frustration. She dislikes criticism of her diabetic care and these feelings are projected onto her mother and father. She does not like being treated like a sick child.

She is fully aware of her responsibility to inject herself. It is difficult for her to resist the temptation to eat what other children and her friends eat. She becomes angry when she is denied sweets. She is frequently told about the complications of diabetes, and given the example of family members she knows well.

Social development

Socially she is popular with her friends. She is described as a happy child with good interpersonal skills. She has made a satisfying place for herself in the social group and the members accept her as a friend. She enjoys dramatising. She can forget her illness when she is involved in playing. She describes as her strength the fact that her parents give her anything she wants because they love her. However, it is inaccurate to describe a strength as the ability to get what she wants from her parents.

Moral development

She is beginning to consider other circumstances, believing that her father and mother have a legitimate claim to expect her to manage her diabetes personally. Her morality is influenced by her parents' love, rewards and examples.

• **FAMILY**

Emotional reactions

When she was diagnosed with diabetes, her father accepted it. He felt that with the support of doctors and the medical staff at the clinic, he and her mother would be able to manage. The father is deeply concerned that she does not value her health enough to take responsibility for her diabetes. He is worried about her future.

The mother said her emotional reaction to the diagnosis was depression. She is deeply concerned that her daughter does not inject her insulin herself. Both parents feel it is important for their child to have a positive view of the future. They feel that this is possible if she realises the importance of good management of her illness.

Interaction with family members

She loves her baby sister and acts very responsibly in taking care of the baby. It is easier to show her family when she is sad and angry than it is to show her feelings at school. The parents have support from their extended family, especially from the mother's sister outside the home. She describes her mother as a special person.

Development of self-concept

Her family appreciates the happy and cheerful atmosphere she creates at home. She is responsible for tasks at home, and this responsibility develops her self-concept and creates a sense of purpose.

- **FRIENDS**

Interpersonal relationships

She has good interpersonal relationships with her friends. The peer group accepts her. Her friends interact with her daily and like to visit her at home. She sometimes sleeps over at the home of her mother's sister, who grew up with a diabetic (her mother) in the family.

She does not talk about her diabetes, neither to adults nor other children. Her friends describe her as talkative and happy. She enjoys engaging in stimulating activities with her friends; they play with dolls and discuss and dramatise the programmes they have seen on television. Her friends care about her and are concerned about her health. They will tell her mother when she has eaten anything wrong.

- **LEARNING, SCHOOL AND THE TEACHER**

Interpersonal relationships

She attended nursery school for three years. Her parents describe her nursery school years as happy. She enjoyed going to nursery school. The nursery school was close to the diabetic clinic and when she was sick the staff phoned the clinic and asked one of the nurses to come to the school to attend to her.

She is not happy in her present school. She does her homework when it is assigned. On some days she does not want to go to school. The parents are satisfied with her achievements at school. She had to change primary schools owing to a lack of funds. The language of instruction in her new school is Tswana, not English as was the case in her first school.

The participant enjoys stimulating and creative activities such as drawing and gymnastics. Her relationship with her teacher is described as good. She always talks about her teacher at home. She makes tea for her and is responsible for doing tasks appropriate to her age. She helps to clean the classroom at the end of each day. It is difficult for her to show emotional reactions such as anger at school.

The participant's mother interacted with the teacher once, when she informed her at the beginning of the year of the participant's diabetes. They have not discussed it again since then. The parents are not sure that the teacher has the knowledge to take the right action in an emergency. The parents feel that the teacher is not interested in their daughter's health. When she is absent from school, she is not given the work she missed, to complete at school or at home.

The teacher has no knowledge of diabetes. The information she received from the participant's mother at the beginning of the year is the only information she has about diabetes. She cannot identify the symptoms of low blood sugar and does not know what procedure should be followed when a diabetic's blood sugar is high or low. She is not aware that changes in the blood sugar level may influence the participant's conduct in class.

Her classmates do not know about her diabetes. They do not understand the implications, such as that she may have to eat food during classes, that she has to inject herself with

insulin, that she has to test her blood glucose levels regularly, that she cannot always take part in activities and that she is sometimes absent from school.

Interests, evaluation and reasoning

Her teacher describes her as a learner interested in learning and a hard worker. She accepted the responsibility for doing her homework. Her parents, especially her father, support her with her homework. She is shy and does not take an active part in class discussions and activities. She prefers to work on her own. She always helps to clean the classroom, which creates a sense of purpose as she is actively engaged in a skill she enjoys doing.

She does well in English and Tswana. The recognition she receives for good work has a favourable influence on her at school. She does not participate in extramural activities although she enjoys stimulating activities. She is excluded from these activities by teachers who are afraid she might get hurt.

Emotional reactions, emotional stress and the development of a self-concept

Her behaviour is described as quiet in class. The teacher does not punish her in the same way as the other learners and has never explained to the participant why she is not being punished. When the participant is angry or upset in class she starts to cry and then just keeps quiet. She appreciates positive feedback and responses from her teacher.

- **COMMUNITY**

Interpersonal relationships

She does not mind when other people know she has diabetes. Sometimes she wishes that she were like other children. She likes to help other people and would like to have contact with other learners with diabetes.

The parents expressed a need for support from the community. They expressed this as needing someone who could tell them what they were doing wrong, especially with helping their daughter develop the right attitude towards maintaining a healthy lifestyle.

Her teacher expressed a need to obtain more knowledge about diabetes. If she were better informed she could inform the other learners in the class. These learners could then play a useful role at school and in their own families and communities. They could interact with and inform members of their family, who could share the information with the community.

Based on the responses given in the questionnaires, the semi-structured interviews and in-depth literature survey, the following developmental and learning needs as well as assets could be identified, as explained below in Table 3.11.

TABLE 3.11: Developmental and learning needs and the assets of participant C

ASSETS			
LEARNER	<ul style="list-style-type: none"> • Enjoys stimulating activities such as drawing and gymnastics • Is honest • Has integrity • Recognises the importance of a healthy lifestyle • Has a sense of purpose when she is actively engaged in skills she enjoys doing 		
NEEDS			
ASSETS			
FAMILY	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> • Needs the support of other adult relatives such as grandparents or other family members • Needs her family to know she experiences a sense of incapacitation • Needs the family to help keep her emotional balance by managing feelings of frustration, fear and isolation • Needs the family to help prepare her for a certain future • Needs the family to participate in therapy sessions after diagnosis, to empower the whole family to neutralise potential conflict </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> • Parents give love and support • Parents provide adult role models • Other adults, such as mother's sister, support the family • Parents have appropriate expectations for their child </td> </tr> </table>	<ul style="list-style-type: none"> • Needs the support of other adult relatives such as grandparents or other family members • Needs her family to know she experiences a sense of incapacitation • Needs the family to help keep her emotional balance by managing feelings of frustration, fear and isolation • Needs the family to help prepare her for a certain future • Needs the family to participate in therapy sessions after diagnosis, to empower the whole family to neutralise potential conflict 	<ul style="list-style-type: none"> • Parents give love and support • Parents provide adult role models • Other adults, such as mother's sister, support the family • Parents have appropriate expectations for their child
<ul style="list-style-type: none"> • Needs the support of other adult relatives such as grandparents or other family members • Needs her family to know she experiences a sense of incapacitation • Needs the family to help keep her emotional balance by managing feelings of frustration, fear and isolation • Needs the family to help prepare her for a certain future • Needs the family to participate in therapy sessions after diagnosis, to empower the whole family to neutralise potential conflict 	<ul style="list-style-type: none"> • Parents give love and support • Parents provide adult role models • Other adults, such as mother's sister, support the family • Parents have appropriate expectations for their child 		
FRIENDS	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> • Needs friendships • Needs her friends to have knowledge about diabetes so that they can understand better • Needs her friends to understand that her diet has to be strictly controlled • Needs to learn skills to resist negative reactions from other learners • Needs her friends and classmates to visit her in hospital to help her deal with the hospital environment </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> • Creates stimulating activities such as playing with dolls and dramatising the programmes they have seen on television • Promotes humour </td> </tr> </table>	<ul style="list-style-type: none"> • Needs friendships • Needs her friends to have knowledge about diabetes so that they can understand better • Needs her friends to understand that her diet has to be strictly controlled • Needs to learn skills to resist negative reactions from other learners • Needs her friends and classmates to visit her in hospital to help her deal with the hospital environment 	<ul style="list-style-type: none"> • Creates stimulating activities such as playing with dolls and dramatising the programmes they have seen on television • Promotes humour
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LEARNING, SCHOOL, TEACHER	<ul style="list-style-type: none"> • Needs self-identity and self-respect • Needs success, achievement and recognition • The learner and the parents need a high level of support from the school, especially from the teacher • The learner, parents, and teacher ought to communicate frequently and positively • Needs a caring away-from-home environment in class • Needs to feel safe at school • Needs the class to have knowledge of diabetes to show understanding. • Needs to eat lunch and snacks at a specific time, sometimes during classes • Needs to test her blood sugar before any physical activity • Needs teacher to understand that learning may be affected on specific days. When her blood sugar is low she may think about how hungry she is or that she is dizzy and shaky and wants to go home. She might have problems with reading and writing clearly because of blurred vision • Needs the teacher to know her behaviour may sometimes be affected by diabetes • Needs help to manage difficult feelings • Needs the school to know attendance may be a problem because high and low blood sugar affects all learners differently • Needs the school and teacher to help her keep a positive self-image. • Needs the teacher to make an effort to gain knowledge and empower herself so that the teacher knows what to do in an emergency 	<ul style="list-style-type: none"> • Learner is actively engaged in learning • Enjoys stimulating class activities, for example drawing
COMMUNITY	<ul style="list-style-type: none"> • Needs to be valued by the community • Needs the community to have appropriate knowledge and understanding of diabetes as a chronic illness • Needs the support of and interaction with neighbours • Needs to feel of service to others in the community • Needs community members to help her deal with the hospital environment • Needs to develop relationships with hospital staff • Needs collaboration between the school and the community, for example community members such as health workers and psychologists, and in some cases social workers could play a role at schools to help build knowledge and understanding of diabetes mellitus. The school could also provide information essential for the learners development and needs • Needs the assets in the community that can support learners from poor socio-economic conditions, families with poor learning skills and community language 	<ul style="list-style-type: none"> • Diabetes clinic

3.6 COMMON AND UNIQUE CHARACTERISTICS OF THE PARTICIPANTS

Each participant lives his or her own narrative. The researcher believes that this study has captured the diversity, creativity and individual uniqueness of the participants, their situation, and their social interaction with their family members, school, teachers and the community. Table 3.12 lists the characteristics that the participants have in common and identifies those that distinguish them as unique individuals.

TABLE 3.12: Common and unique characteristics of the participants

COMMON CHARACTERISTICS	UNIQUE CHARACTERISTICS
<ul style="list-style-type: none"> • The participants mastered their development tasks as milestones, each at his/ her own pace • Their parents have realistic expectations of their growth • The participants recognise the importance of a healthy lifestyle • They are actively engaged in learning • They do well at school • Their teachers describe them as responsive, attentive learners • They have good interpersonal relationships with their teachers • They feel it is important to have useful roles and tasks at school and at home • They are caring learners who do not have to be encouraged to help others • Friendships are important to them • It is difficult for them to express their feelings at school • They avoid conflict and will strive for a peaceful resolution to conflict • They have the support and love of their family members. Sometimes there is conflict between them and other siblings in the family • The mother is the main caregiver • They have other adult relationships outside the home, which provide important support. These adults are mainly relatives 	<p style="text-align: center;">Participant A</p> <ul style="list-style-type: none"> • He was diagnosed with diabetes as a baby of 7 months • He is one of a pair of twins • Although he is a friendly, caring and responsible child, he has few friends • His teacher has a knowledge of diabetes • He takes personal responsibility for his diabetes • His academic performance is precarious • He likes to improve the lives of other people
	<p style="text-align: center;">Participant B</p> <ul style="list-style-type: none"> • He was diagnosed with diabetes when he was nine years old • He greatly enjoys learning • He enjoys participating in sport • He never talks about his diabetes • He achieves well academically • Religion is important to him • Recognition is important to him • His teacher has sufficient knowledge of diabetes
	<p style="text-align: center;">Participant C</p> <ul style="list-style-type: none"> • She was diagnosed with diabetes when she was five years old • Her father and mother are both diabetics • Her teacher has no knowledge of diabetes. • Her classmates do not know she has diabetes. • She feels it is bad to be a diabetic.

3.7 CONCLUSION

This chapter contains an explanation of the research design, methodology and findings.

The research question for the study is to determine the developmental and learning needs and the assets of the learner with diabetes in the foundation phase. The qualitative study on each of the three participants who were selected for the non-probability sample, was done as an ethnographic study using well-constructed case studies.

The case studies were examined in depth in a natural setting to portray and capture the diversity, individuality and uniqueness of each participant. This was also done by including learners from both genders and two different cultures. The interpretative paradigm was used in analysing the case studies. The case studies describe the narrative of each participant in the ecological environment for family, friends, school, teacher and the community, so that the narrative can be viewed as a close-up portrayal of reality.

The final chapter of the study contains the major conclusions drawn from the study and the recommendations made. The limitations of the research and implications for future research are also included.