1 AN INTRODUCTION TO THE STUDY

1.1 ORIENTATION

In schools, many adolescents develop successfully against the odds. This thesis discusses the relationship between the school context and successful development despite hardships. Resilience will be explored theoretically from different perspectives, and in depth for a specific age group, i.e. middle-adolescence. The normative terms "successful development" and "odds" are explored and grounded within a theoretical framework. The exploration of these terms implies an investigation of the resilience construct, since this construct has not been unambiguously defined by authors. The construct consists of conditions, assumptions, norms, expectations and psychological theories within a specific context. Normative patterns of development within normative surroundings form the basis for judging middle-adolescent development as successful (Masten, 1994). The emphasis in the present study is on the successful development of middle-adolescents within the surroundings of their school. The school context offers a frame of reference for assessing the development and possibly offers opportunities for positively influencing this development (Reynolds, 1994). Thereby it is assumed that successful development is not just evident in the obtaining of good grades, but is visible in various forms of behaviour of middle-adolescents.

The main question that guides the focus in this study is:

How does the school environment contribute to the resilience of middle-adolescent students?

The terms used in this research question will be specified before the background and rationale of the study are described:

- Contribution: The dynamic term "contribution" is used instead of "effect", as rather than measuring the causal influence in a statistical way, the relationship between school environment and middle-adolescents' resilience is explored in terms of dynamic, reciprocal interactions.

- School environment: The term "school environment" refers to all possible aspects of the immediate environment constituted by the school as a system in which the middle-adolescent is interactively participating. These aspects may include teachers, the school buildings, as well as lunch breaks and extramural activities. No pre-determined description of this term is postulated beforehand, because the school environment is studied from the viewpoint of the middle-adolescents: It is the middle-adolescents' description of the term "school environment" that is the focus of the study.
- Resilience: Before constructing the term "resilience" in a detail in Chapter Two, the term is used to denote the ability to develop successfully in the face of adversity.
- Successful development: Before explaining the frame of reference used in this thesis for successful development in detail in Chapter Two, the term is used to denote well adapted, competent behaviour.
- Middle-adolescent: A 14- or 15-year old girl or boy. The middle-adolescence stage is the focus of the study for three reasons. Firstly, in The Netherlands most early school-leaving (i.e. leaving school without basic qualifications, as defined by the Dutch government) occurs around the age of 15-17 and around one third of these youngsters leave school before the age of 16, the age limit for compulsory education in The Netherlands (Spiering, Van der Wolf, Van Limbeek & Wisselink, 1994; Dekkers, 2003). Hypothetically speaking, something happens to those youngsters prior to this drop-out that either does not prevent them from dropping out or otherwise encourages them to drop out. Secondly, an ability to reflect has to be developed before youngsters are able to reflect on their perceptions of the school context. This ability usually develops around the age of 11 (Piaget's stage of formal operations, Kaplan, 2004). Thirdly, in this phase of middle-adolescence the youngsters have already gone through the first adaptive stage in the developmental transition from primary to secondary school. Hypothetically speaking, their perception of the school context will by now be less clouded by their experience of this transition (which is not the focus of our study). Throughout the thesis the term middle-adolescent and youngster will be used interchangeably.

1.2 BACKGROUND AND RATIONALE

1.2.1 SOCIETAL BACKGROUND

The Dutch educational system is struggling with the fact that many students do not succeed in developing their talents. In particular, students from socio-economically deprived families of both immigrant and "Dutch"[2] origin tend to leave school earlier, drop out more often and complete their educational career at a lower level than student groups from a higher social economic status. Furthermore, these students start their professional career in jobs with less attractive career paths (Peschar & Wesselingh, 1995). In the 1960s, 70s and 80s, before there was a large group of immigrant students in the Netherlands, the specific group which was relatively deprived in relation to other groups of students consisted primarily of children whose parents were "manual workers" (Van der Wolf, 1984; Karsten & Sleegers, 2005).

For a number of decades an Educational Priority Policy has existed in The Netherlands in order to reduce the relative gap, formulated as the inequality of opportunities between specific groups in society in respect of others (Peschar & Wesselingh, 1995). The Educational Priority Policy is founded on the belief that students from a low SES background have fewer opportunities or experience more difficulties in school than students from a high SES background. Since the 1970s attempts have been made to compensate students with a low SES for their potential educational disadvantage through additional funding. In the 1970s and '80s government allocated additional teachers or government funding to a school when a pupil's father was a manual worker with no formal education, was self-employed with a low educational background or was unemployed. This pupil was counted as two children (weighting factor 2, Van der Wolf, 1984; Peschar & Wesselingh, 1995). Since the 1980s, in addition to the focus on gender as a form of social inequality, more and more attention has been spent on ethnic origin as an important form of social inequality (Van der Wolf, 1984; Peschar & Wesselingh, 1995; *Ministerie van Onderwijs Cultuur & Wetenschappen* / Department of Education, Culture & Science, (OC&W), 2000; Bosker, 2005). In secondary education the Educational Priority Policy has, over the last number of years, focused on immigrant pupils with a low

[2] The terms *immigrant* and *Dutch* mainly refer to the parents' status. Their children, who are the students in our study, are generally born in the Netherlands and therefore all "Dutch" themselves.

SES, the so-called *cumi-leerlingen* or cultural minority pupils. It is clear from the way in which the additional funding was invested that the focus of the Educational Priority Policy was on helping the individual pupil improve *his* level of educational *disadvantage*. The additional activities primarily took place outside of regular lessons (*Tweede Kamer* / Upper Chamber, 1997-1998).

The Educational Priority Policy did not produce the desired results. Nationally, the *Rekenkamer* (Netherlands Court of Audit, *Tweede Kamer* / Upper Chamber, 1997-1998) criticised the use of the extra financial means and the lack of transparency of the effects of this additional financial support. The way in which the extra money was spent, e.g. additional lessons, homework help, contact with parents, assisting teachers and adapting lessons, did not demonstrate a strong association with any increase in performance of those pupils for whom the additional money was intended (*Tweede Kamer* / Upper Chamber, 1997-1998).

Based on the above findings the Dutch government decided to intensify the Educational Priority Policy and make the intended outcomes more transparent starting in 2000 (*Ministerie van OC&W* / Department of Education, Culture & Science, 2000). One modification to the Education Priority Policy has been the *Onderwijskansenbeleid* or Educational Opportunities Policy, which was initiated in 2000 (*Ministerie van OC&W* / Department of Education, Culture & Science, 2000). The "Educational Opportunities Policy" is an Educational Priority Policy which is focused on the school environment rather than on individual students, as was the case in the Education Priority Policy. Measures within the policy are directed at the quality of schools (*Utrechts plan van aanpak Onderwijskansen PO en VO* / The Utrecht Approach to Educational Opportunities in Primary and Secondary Education, 2003). The policy consists of additional financial funds and is directed at schools which have a large number of pupils who, in terms of educational performance, are falling behind in comparison with the national average. The current weighting factor in primary education for a native Dutch child with a low social economic status is 1.25 and the weighting factor for a child from an immigrant background with a low social economic status is 1.9. Secondary education only receives additional facilities for immigrant pupils and therefore not for native Dutch pupils with a low social-economic status. During the introduction of the policy in 2000, the initial nationally

applied criteria for a school to be considered for additional financial support were that the school was attended by more than 40% of pupils from cultural minorities, that the school was situated in one of the four large cities (Amsterdam, Rotterdam, The Hague, Utrecht) and that the school was performing poorly (*Ministerie van OC&W* / Department of Education, Culture & Science, 2000). The schools were given a free choice of where to invest the money (Bosker, 2005).

A particular trend has become apparent since the introduction of the Education Priority Policy and the Educational Opportunities Policy. In secundary education it has been argued over the last number of years that native Dutch children from disadvantaged backgrounds have been excluded from additional support because of the emphasis on pupils from immigrant backgrounds (Ledoux, 2001; Smit, personal communication, June, 2004). It appears that native Dutch pupils with a 1.25 status at primary school take a backwards step in the first two years of secondary education in terms of results, whereas results from other pupils stay the same. Furthermore, teachers often judge the social and emotional functioning of the group of native Dutch pupils falling behind as weak. Similarly, not all immigrant pupils experience obstacles in their education, and some immigrant pupils with possible educational deficits are automatically excluded from the weighting policy. Examples of this group are Surinamese students who have been in the Dutch education system for longer than four years (Ledoux, 2001).

In summary, the evaluation of the Education Priority and the Educational Opportunities policy leads to the conclusion that a focus on cultural minorities alone does not contribute sufficiently to the successful development of disadvantaged pupils. Currently, it still seems unclear which aspects of a low SES background are related to educational deficits and a limited social-emotional development. In addition, it remains unclear at this moment which exact measures could contribute to good quality schools and how education may additionally contribute to the development of the talents of all disadvantaged pupils. Ledoux (2001) argues that it is not just those pupils who are evidently at risk (the drop-outs, truants, pupils with large language deficits) who should be subject to a specific policy, but all pupils who have to overcome additional problems. This therefore also includes pupils with few opportunities at all levels of secondary education, as well as native Dutch children.

According to Ledoux, in order to do this, schools need to acquire insight into *the mechanisms* that are related to an inequality in opportunities or the utilisation of opportunities.

Since 2004 (after the present research was started) a new weighting policy has been proposed in which, in addition to a factual assessment of the pupil's language deficit, social-economic background would continue to form the basis of the weighting policy, whereas ethnicity no longer would (Bosker, 2005). This new policy was not considered in the present research.

The present study is an attempt to identify and map *the mechanisms* through which education and the school environment as a whole can contribute to the successful development of children from a low SES, irrespective of their cultural status. Therefore a focus on the mechanisms that lead to children with a low SES *succeeding*, in addition to discussing the reasons for these children not succeeding is proposed.

1.2.2 PARADIGMATIC BACKGROUND

The focus on the contribution to successful development by the school environment follows a salutogenic paradigm[3], which is an answer to the pathogenic paradigm (Antonovsky, 1979). "Salutogenic" is a word derived from the Latin word "Salus", meaning health and well-being. After decades of research into the potential causes of developmental or psychological problems, for a number of years researchers within the salutogenic paradigm have been asking what the causes of success and successful development are. Within this paradigm illness and health are seen as two locations on the same continuum instead of as dichotomous variables. The salutogenic research question then becomes (Antonovsky, 1996, p. 14): "*How can we understand the movement of people towards the direction of the health- end of the continuum?"*. The research focus within this paradigm is on "salutary factors": factors that promote health and strength in individuals in order to manage stress and tensions in their lives and to grow from these, or in spite of them (Antonovsky, 1996).

[3] The consequences of this assumption for alternative medicine and behavioural sciences are not further discussed in this thesis. This paradigm is only mentioned to help characterise the health and pathology continuum.

The focus on "salutary factors" is different from the focus on reducing risk factors in order to facilitate healthy development. The focus on salutary factors is recognisable in the field of "Positive Psychology" (Seligman & Csikszentmihaly, 2000). Positive subjective experiences, positive individual characteristics and positive institutions (e.g. school environment) are central within Positive Psychology research into improving quality of life and the prevention of pathology. Positive Psychology acknowledges the value of understanding the causes of problems and of ways to "cure" problems. Positive Psychology is therefore not aiming at offering an alternative for a pathology-based way of thinking but wants to add to the research by explaining which factors lead to health (Seligman & Csikszentmihaly, 2000).

In Malka Margalit's words (2003, p. 82):

"The paradigm shift from the reductionist problem-oriented approach underlying the deficit models to the comprehensive empowering and nurturing strengths models is becoming a prevalent theme across academic disciplines and the helping professions. It should be clearly stated that empowering models do not deny deficiencies and difficulties; however, such are examined within a wider multidimensional and dynamic perspective".

The field of Positive Psychology and the significance of this field to the research presented here are discussed further in Chapter 2 (section 2.3.4.1). The research paradigm of 'pragmatism', which combines both postpositivistic and interpretavistic views on reality guides the present study in ontological, epistemological and methodological ways. This research paradigm is explained and discussed in Chapter 3.

1.2.3 SCIENTIFIC BACKGROUND

1.2.3.1 Research in the Netherlands

The factor that seems to be of constant influence on the development of differences in the learning capacity of children appears to be the parental environment in terms of SES. This influence also appears to be difficult to change through interventions (Karsten & Sleegers, 2005). Dutch research into the academic success of youngsters

from a low SES (Luykx, 1988; Klatter-Folmer, 1996; Ledoux, 1996; 1997, Crul, 1994, 2000; Van der Veen, 2001; Van der Veen & Meijnen, 2001) can be placed within the salutogenic paradigm. The above-mentioned Dutch studies have up to now been primarily focused on the contribution of factors to successful academic careers for youngsters from an immigrant background, and in particular the successful academy pathways of Turkish and Moroccan pupils. Often these studies explore the positive influence of family and individual factors on school success (Crul, 1994, 2000; Van der Veen 2001; Van der Veen & Meijnen, 2001) or the central role of primary school as a positive influence (Overmaat & Ledoux, 2001).

Although Luykx (1988) found that her research into the successful development of Turkish and Moroccan girls did not point to a positive influence of school factors (the negative impact of school factors appeared to be greater and the girls seemed to develop in a positive way despite the school), she still highlighted a number of school factors which, according to the girls, had been a positive influence on their development. The girls highlighted the intensive guidance by teachers in the transfer from primary to secondary education, the mixed *brugklassysteem* (bridge class system, the first year of secondary education, forming a bridge to different types of secondary education), which allowed the choice of a specific educational pathway to be postponed. They also highlighted the approach taken by the school leadership in promoting a school environment which allowed the girls to feel more at home amongst the majority of Dutch pupils. Klatter-Folmer (1996) found in her research that the characteristics of the schools attended by pupils in terms of the composition of the school population, teacher expectations and the effectiveness of the education were not significantly associated with the success of Turkish pupils (Klatter-Folmer, 1996). However, Klatter-Folmer (1996) adds as a comment to these results that these characteristics could have provided a contribution to individual differences in school success.

The comment made by Klatter-Folmer in her research results acquires additional significance when differences in the development of competence of children within the same school context are considered. There are differences in competent development observable in children between schools. These are partly based on their SES, and partly on the quality of the school. However, there are also differences

evident in competent development within schools in children from the same low SES. These differences do not appear to be attributable to the quality of schools or the children's low SES. Both of these variables do not appear to be able to explain the variance in full. The unexplained variance apparent in the development of children from the same low SES within the same school appears to be the result of an interaction between the children and their school environment.

The impetus for the present research is the observation of individual differences in the development of competence in pupils from a low SES within the same school context. This observation leads to the question of how some of these pupils are able to benefit from the conspicuous presence of factors and characteristics in the school context, whereas other pupils from the same low SES do not flourish in the same school environment. The present study seeks to clarify the mechanisms that lead to successful development in the context of a low SES, as well as those mechanisms that lead to unsuccessful development in the context of a low SES. A broad definition of competent development is central to this, rather than a definition which is based on the acquisition of good school results. This broader definition is explained in more detail and supported in Chapter 2.

1.2.3.2 Research on resilience

The origin of research into "resilience" is the fascination with the unexplained variance between children in their functioning when risk factors are present. According to Masten, Best and Garmezy (1990), resilient behaviour may be viewed as comprising three types of behaviour which reflect successful responses to differing environmental demands: (i) Basic success in spite of being a member of a group with high-risk status; (ii) Continued or sustained success under apparent stressful conditions; (iii) Successful performance in spite of an apparent intense conflict or trauma.

Zimmerman and Arunkumar (1994) state that more effort is required to understand how social institutions can contribute to, or hinder youths' resilience. They suggest that research should focus on the role schools may play in developing resilient youths through enhancing protective factors such as social skills, problem solving skills and self-esteem. Bartelt (1994) asks, in relation to the recommendations such as those

above by Zimmerman and Arunkumar, what the significance is to a youngster of a school promoting resilience, when what is being offered within the school environment does not link-in to the stressors experienced in the family and home environment. Bartelt (1994, p. 107) therefore proposes a focus on resilient systems: *"systems that link school, community, and student performance in a functional relationship"*.

Over the course of the last 50 years research into resilience has evolved from a phenomenological, descriptive tradition into a tradition which attempts to understand the process of successful development in the presence of risk factors. Initially, the study of resilience centred on notions of "traits". Gradually, the field has evolved to the point at which consideration of person-environment transactions is at the heart of the resilience phenomenon. Today, consistent with the basic tenets of positive psychology, many researchers assume that every person has the inner capacity to lead a meaningful and fulfilling life, and to develop and grow through adverse life experiences, or even because of experiences like those. A youngster does not just develop successfully through the presence of certain "traits", but also by making use of these "traits", within the individual as well as within his environment. The reasons why some youngsters use these "traits" and others do not have been considered and explored in various ways (Richardson, 2002).

The observed evolution within resilience research towards a focus on person-environment transactions and on a universal, internal capacity to successful development means the resilience perspective is the chosen perspective for answering the research question in the present research. Chapter 2 discusses how resilience of middle-adolescents from a low SES may be considered and explored according to various trends within resilience research, as well as how resilience is defined as a concept in this study.

1.3 AIM OF THE STUDY

The aim of the present study is to gain insight into how school environments contribute to the resilience of urban middle-adolescents from a low SES background. The present study intends to contribute to knowledge on increasing the fit between the

school environment and the needs of middle-adolescents from a low SES background to develop successfully. The present study will be a distinct contribution to existing knowledge derived from earlier studies due to the focus on the perception of middle-adolescents themselves on relevant environmental factors. In addition, this focus could contribute to an asset-based approach or, more specifically, to the asset-access-mapping process (Bouwer, 2005), as it is being developed in educational thinking today.

Three sub-questions[4] are proposed in order to fulfil these aims:

(i) What are resilient middle-adolescents' perceptions of the contribution of the school environment to their resilience?

(ii) What are the perceptions of middle-adolescents, who are not defined as being resilient, of the contribution of the school environment to their state of resilience?

(iii) How can the comparison between these two perceptions be explained?

1.4 STUDY ASSUMPTIONS

The main assumption of the study is that children do not necessarily succumb to hardship or risk factors. Some literature on resilience is presented in order to substantiate this assumption. Resilience is a relatively recent orientation in psychological, sociological and educational research. Within the theoretical frame that arises from the literature review there is reason to assume a possible positive influence from schools on resilience-building in middle-adolescents. In the present study it is assumed that this influence is not objectively measurable. It is suggested that the influence should be described as that perceived by the middle-adolescents themselves. The interest in the content and nature of the perceived influence of the school environment is founded on the assumption that the middle-adolescents' perception of the influence will be different from adults' perception and from the results of effective-school research. This last study assumption relates to the differences between resilient and not-resilient adolescents. In this respect, it is assumed that the

[4] The main research question is: "What is the contribution of the school environment to the resilience of middle-adolescent students?"

difference between the successful and less successful development in these groups is influenced by and/or reflected in their different perception, and/or utilisation of useful assets in their school, as well as by a fit or misfit between the middle-adolescents' developmental needs and their access to the available assets.

1.5 THEORETICAL FRAMEWORK

1.5.1 INTRODUCTION

The theoretical assumption in the Educational Priority and Educational Opportunity policy has been that the variance in school environments explains part of the variance in pupils' performance and development. It is thereby assumed that when the school environment is changed, pupils' performance and development will change as well. This assumption is supported by research which has focused on the quality of schools and comparisons between them (see: Rutter, Maughan, Mortimore, & Ouston, 1979; Rutter, 1981; Van der Wolf, 1984; Mortimore, Sammons, Stoll, Lewis & Ecob, 1988). A summary conclusion of these studies focussing on on variance between schools is that the variance in pupils' development in different school contexts is explicable through school factors. The present study is focused on the variance within school, where the fit or misfit between individuals and the environment is explored.

The aim of the present research is to explain how school factors as well as other aspects in addition to school factors play a role in creating pupils' successful development. Therefore, a link is sought within developmental psychology theories concerning children's and adolescents' development in various contexts. One of the frequently used theories in research into child and adolescent development is Bronfenbrenner's ecological model (1979, 1992). The model was refined at a later stage as the bio-ecological model (Bronfenbrenner & Ceci, 1994; Bronfenbrenner, 2001), which better fits the purpose of this study.

1.5.2 ECOLOGICAL MODEL

In the ecological model, Bronfenbrenner posits the interaction of five environmental systems within one large system. These are the microsystem, the mesosystem, the exosystem, the macrosystem and the chronosystem. The microsystem is characterised by those individuals and events most proximal in one's life, involved in continual

face-to-face contact, with each person reciprocally influencing other(s). Examples of the microsystem include the family, school and peer groups. The mesosystem refers to the relationships between microsystems. The exosystem refers to external influences on systems in which the person actively participates. External influences include systems such as the education system, health services or the parents' place of work. The macrosystem refers to the attitudes, beliefs, values and ideologies inherent to the systems of a particular society and culture. Finally, there is the chronosystem, which refers to the developmental time frames that cross through the interactions within the systems and the influence on and of individual development. An example of the chronosystem is the development of a child's life within the development of a family or a classroom setting as a system (Swart & Pettipher, 2005).

1.5.3 BIO-ECOLOGICAL MODEL

Although the urban middle-adolescent with a low SES in the school context can be positioned in and studied with the help of Bronfenbrenner's previous *ecological* model (Bronfenbrenner, 1979; 1992), his position in the ecological model can be seen as being "reactive": the middle-adolescent develops "under the influence" of factors in a variety of contexts (e.g. the school context). Summarising various publications regarding the *bio-ecological model* (Bronfenbrenner en Ceci, 1994; Bronfenbrenner, 2001; Leseman, 2005; Swart & Pettipher, 2005), the middle-adolescent does not just react to factors in his environment, he also has his own demands on his environment (e.g. the school environment). Middle-adolescents both shape and influence their environment through their demand and the specific characteristics of their demand. They influence how the environment reacts to themselves. The way in which middle-adolescents' demand is shaped in the environment plays more of a role here than the specific content of the demand. It is more the relationship between the middle-adolescents and their environment in which they posit their demands that matters, than the middle-adolescents' active demands. In addition to shaping the environment and provoking a response from the environment, demand characteristics are expressed in selective patterns of attention, expression and responses by middle-adolescents in their environment. These expressions are partly attributable to hereditary predispositions to specific characteristics, as well as to previous experiences of the individual with his environment.

A core theme within the bio-ecological perspective is the "activated genetic potential". The reasoning behind the "genetic potential" theme is that genes are indeed expressed in behaviour, however, an individual only "allows" genes to be expressed in interaction with his environment.

According to the bio-ecological model the realisation of genetic potential for an individual's competent development demands mediating mechanisms binding the internal (nature) with the external (nurture). These mechanisms are effective proximal interaction processes in the form of interactions between the individual and his environment. Only those genetic potentials belonging to an individual for which there are the necessary environmental opportunities, in terms of the needs for certain competences, will be realised.

According to the bio-ecological model effective proximal interaction processes are characterised by activities which demand initiatives from the middle-adolescent; activities which lie just above the threshold of what a middle-adolescent is already able to achieve (zone of proximal development, Vygotsky, 1978 cited in Bronfenbrenner en Ceci, 1994) and where the daily interaction of the middle-adolescent with his environment is both mutual and reciprocal (Bronfenbrenner & Ceci, 1994). This reciprocal interaction with people, objects and symbols in the direct surroundings should increase in complexity for competent development. The presence of certain aids in the environment for shaping the proximal processes, such as the availability of books, sports facilities and financial means, influence the outcome of competences. In addition to the presence of these aids, stability, in terms of the occurrence of proximal processes on a regular basis and over long periods of time, is important for the degree of effectiveness of the proximal processes.

According to the bio-ecological model increasing the effective interaction processes between the middle-adolescent and his environment allows an increase of the extent to which genetic opportunities are realised. In addition, it is possible to steer the substance of those genetic potentials realised towards the desired competences by increasing the effective interaction processes. Both effects lead to a more successful development of competence than when the middle-adolescent does not experience any increase in the effective interaction processes.

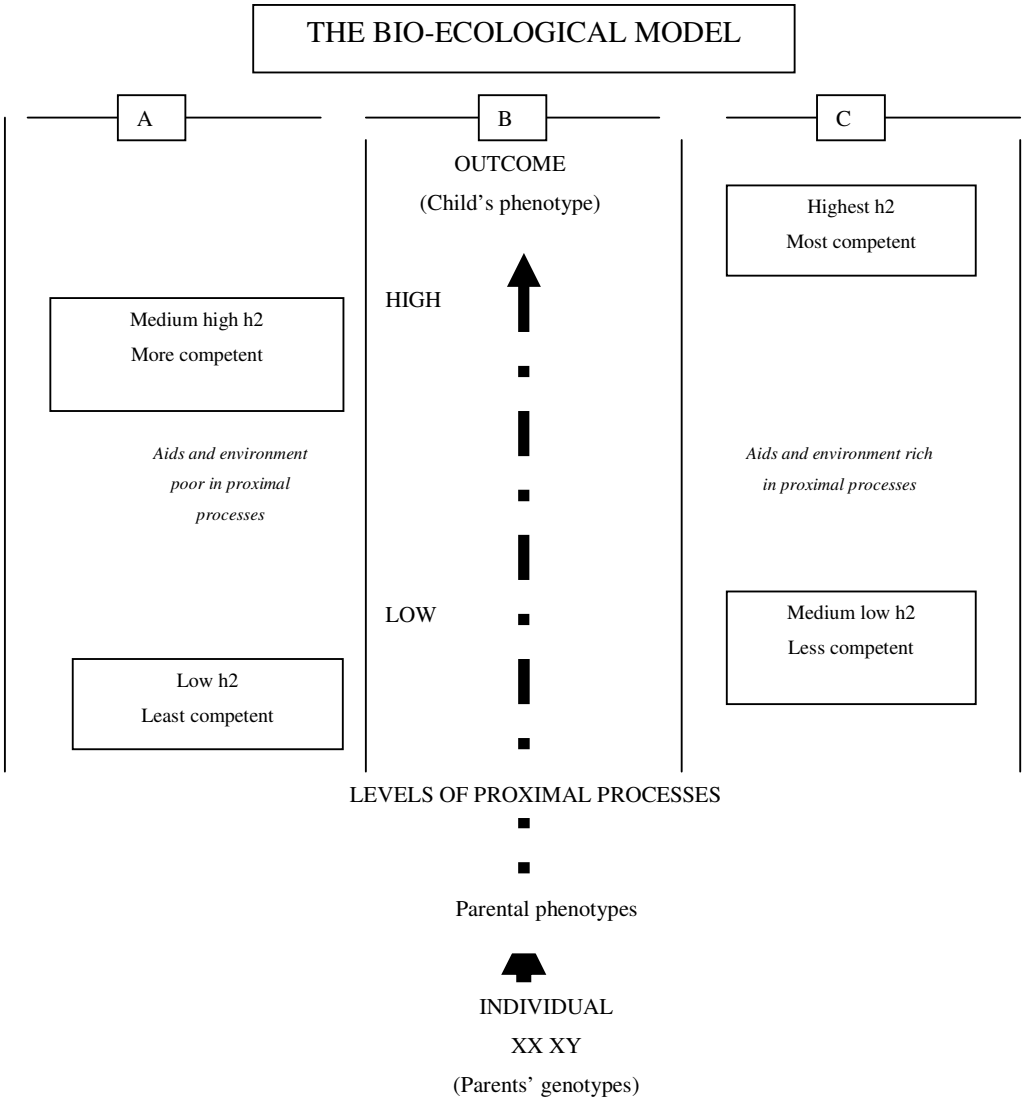
1.5.4 THE BIO-ECOLOGICAL MODEL AND EDUCATIONAL OPPORTUNITIES POLICY

1.5.4.1 Summary

In order to illustrate the above-mentioned bio-ecological perspective on competent development, Figure 1.1 graphically represents the bio-ecological model, interpreted in relation to middle-adolescents from a low SES background within the school context. The schematic representation demonstrates from the bottom upwards, how the presence of genetic potential (genotypes) is activated (transformed) in an individuals' form of expression (phenotype) through a bio-social trajectory of interactive processes between the individual and his environment. Leseman (2005) refers to a probabilistic view of the development of talent. The input and early direction of interaction processes originate from the genetic potential the middle-adolescent has inherited from his parents. However, the activation of the potential genetic potencies occurs through interaction processes.

The different sections A, B and C in the graphical representation of the bio-ecological perspective on competent development are to be interpreted as follows: section A represents a middle-adolescent in an environment (for instance, the family context) with a low SES, which has a dearth of effective interaction processes. When the quality of effective proximal interaction processes increases, for instance through an increase in the quality of these processes in the family or through the presence of these high-quality processes in another context, such as school (Section B), then the level of the activated genetic potential for competent development increases significantly (h2=the coefficient of genetic variance). Section C represents a middle-adolescent in an environment (for instance, the family context) with a high SES, which has a wealth of effective interaction processes. The activated genetic potential for competent development also increases for these middle-adolescents when the quality of effective proximal interaction processes increase.

Fig. 1.1 The bio-ecological model for competent development as outcome (Bronfenbrenner & Ceci, 1994, p. 580-581).



The core of the schematic is that when the quality of proximal interaction processes is low, then the present genetic potentials do not evolve into competent development. When the quality of the proximal processes increases, the competent development of an individual will also increase as a result of the genetic potentials being realised by the interaction processes.

According to the schematic the quality of proximal interaction processes has more influence on the development of middle-adolescents than the level of SES in the environment in which the processes arise. Therefore, according to the model, the

differences in development outcome between an environment with a low SES and an environment with a high SES are significantly smaller than those differences which may be associated with a low versus high quality of proximal processes.

The interrupted vertical column in the graphical representation emphasises that the influence of genes and environment on human development are never fully distinct, as described in terms of demand characteristics.

1.5.4.2 Discussion

Up to this point the Educational Opportunities Policy could contribute to the development of competence in middle-adolescents from a low SES background by increasing the quality of effective proximal processes in the school environment. However, there are still a number of sticking points regarding the mechanism of the effect of school environment: the Matthew Effect and the occurrence of effective proximal interaction processes.

The Matthew Effect

The impact of an increase in the quality of proximal interaction processes is greater in an environment with a high SES, which has a wealth of effective proximal interaction processes, than an environment that is low in SES, which has a dearth in effective proximal interaction processes. This effect is also referred to as the Matthew Effect (Van der Leij, 2005) and is related to the relative disadvantage of some groups in respect of others described in section 1.2.1: When all youngsters receive good education with high-quality interaction processes, then those who are growing up in a high SES environment will profit more from the high-quality interaction processes in the school environment than those growing up in a low SES environment *provided* (author's italics) that the high SES has a wealth of high-quality interaction processes. Taking this reasoning further, those youngsters growing up in a low SES environment which is rich in high-quality interaction processes should profit more from good education with high-quality interaction processes than youngsters growing up in a low SES environment, which is poor in high-quality interaction processes. They perhaps should also profit more than youngsters growing up in a high SES environment which has a dearth of high-quality interaction processes.

Establishing effective proximal interaction processes

As genetic potential is realised through proximal interaction processes between middle-adolescents and their environment, an individual unconsciously selects which genetic potentials are realised within him through his selective patterns. Therefore the middle-adolescent unconsciously controls which characteristics are established in his behaviour, including within the school environment. On the basis of the bio-ecological model it may be assumed that middle-adolescents differ in their access to effective proximal processes within the school environment because of selective patterns of attention and responses, which arise through genetic predispositions and prior experience. Leseman (2005) has remarked in this context that if, social-culturally speaking, there is unequal *access to* learning experiences shaping talent, that the ideal meritocracy (equal opportunities for equal aptitude), which is a highly characteristic aspiration of Dutch education, becomes problematical. Following this argument, an identical school environment for middle-adolescents with different experiences in other microsystems will have a different significance, as a result of their difference in *access to* effective proximal interaction processes in the school processes and therefore as a result of educational experiences.

According to the differences in successful development of middle-adolescents in the same school environment, middle-adolescents appear to have different levels of access to effective proximal interaction processes in the school environment. Those from a low SES background who do have access to and are able to benefit from effective proximal interaction processes with their environment are referred to in this study as resilient.

One could assume, based on the bio-ecological model, that resilient middle-adolescents generate different demands and different demand characteristics to their environment than not-resilient middle-adolescents. In other words, in order to create effective proximal interaction processes, they require different approaches from the school environment.

The “bio” aspect, in terms of a disposition of an individual and the individual’s demands on the environment, has received little attention within resilience research (Chapter 2). In this respect the individual’s perception of problems or risks influences

the inclination to seek support. Furthermore, the recognition and evaluation of certain factors as supportive determines the experience of support and use of support. Individuals who experience a given type of support as negative will reject this support and therefore experience less support (Tusaie and Dyer, 2004). It may be concluded from Bartelt's (1994) suggestion that the relationship between what a youngster is offered in terms of resilience promoting factors in a school environment and the stressors that both he and his family experience are of influence on the significance of this school environment to the youngster: the *significance* of certain factors in one of these microsystems (e.g. the school) as promoting resilience is associated with the pupil's experiences in another microsystem (e.g. the family).

In addition to the influence of a pupil's experiences in another microsystem, research into the differences in "fit" between the school environment and different middle-adolescents requires the acknowledgement of biological differences, which perhaps explain a proportion of the variance between levels of pupils' success. However, the ambition within education of allowing schools to be places where every child and youngster with differing characters and characteristics is able to develop successfully, means that researchers need to look beyond predisposition and limits on this predisposition.

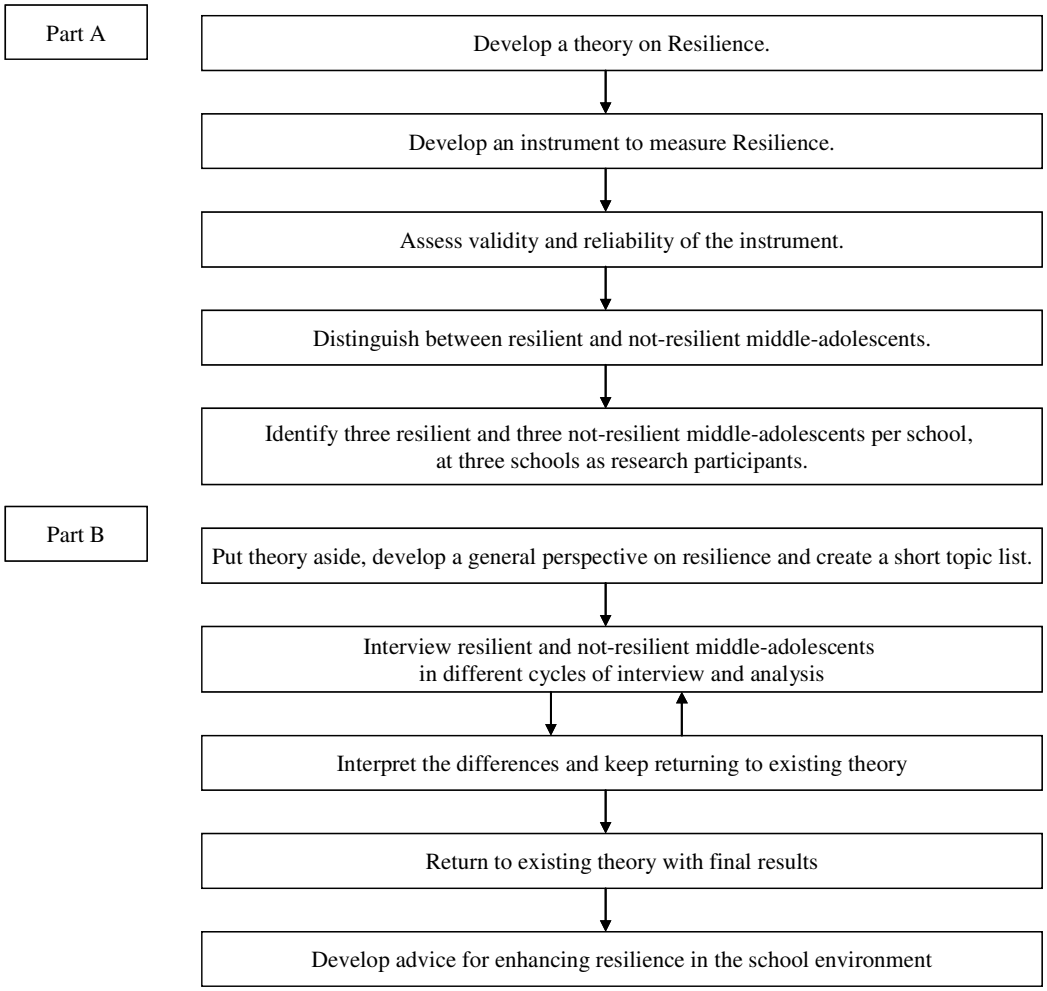
A focus on the relationship between middle-adolescents and their school environment in terms of proximal interaction processes offers an insight into the differences between pupils, and thereby offers the opportunity for schools to attempt to meet the differences between pupils. Additional insights will be acquired through studying how the benefits of effective proximal interaction processes are inhibited by middle-adolescents who do not develop successfully in the presence of risks factors. Why do these active, constructive and fruitful interactions between the school environment and the middle-adolescents fail to appear?

The bio-ecological perspective on competence development of middle-adolescents in the school environment is discussed in further detail in Chapter 6 when qualitative findings are interpreted.

1.6 STUDY DESIGN

The present study consists of two sections: A and B. Part A is a quantitative, instrumental study into identifying resilient and not-resilient middle-adolescents reliably. Part B is a qualitative study into the perception of resilient and not-resilient middle-adolescents of the contribution of the school environment to their resilience. Figure 1.2 visually presents the study design.

Fig. 1.2 Study design



A "bottom-up" approach was adopted for Part B of the study. The central focus is on the urban middle-adolescent with a low SES attending Educational Opportunities schools. Within this approach, which is explained in detail in Chapter 3, concepts such as school, risk, positive development and protective factors are defined from the perspective of the middle-adolescent.

1.7 DESCRIPTION OF THE STRUCTURE OF THE THESIS

The importance of an insight into the perceptions of middle-adolescents with a low SES of their development in relation to the school environment is sketched in **Chapter 1** against the background of the current "Education Opportunity Policy" in the Netherlands. The resilience theme is conceptualised as a perspective from which the development of middle-adolescents with a low SES is viewed in the school environment.

In **Chapter 2** those factors are explained which, according to various orientations within the resilience framework, are of influence on the successful development of adolescents despite the presence of high-risk environments. Subsequently, models are discussed relating to the mechanisms of resilience. Finally, different views are discussed on what is known about the (conscious or unconscious) control of middle-adolescents over the formation of successful or less successful development in the presence of a high-risk environment.

The research methodology employed in the study is discussed in **Chapter 3**. Central to this chapter is the description of the methods of nomological-instrumental research and "Grounded Theory" and a description of the research design and process.

Chapter 4 presents the results from the quantitative Part A of the study. In this nomological-instrumental study the resilient and not-resilient behaviour of middle-adolescents is studied in relation to resilient personality characteristics in different contexts. The Veerkracht Vragenlijst (VVL, Resilience Questionnaire) is validated according to the Nederlandse PersoonlijkheidsVragenlijst voor Jongeren (NPV-J, Dutch Personality Questionnaire for Young People). Subsequently, scores on the VVL are analysed.

Chapter 5 presents the results from the qualitative Part B of the study. Chapter 5 contains a description of qualitative data as well as logbook entries. Firstly, the definitive coding scheme used for the definitive analyses are explained in terms of the developed theory. Subsequently, there is a description and discussion of the results from the definitive analyses.

Chapter 6 presents a summary of the qualitative findings. These findings are discussed in relation to relevant literature and interpreted from the bio-ecological perspective. The qualitative findings are integrated with the quantitative findings, critical comments on the research design are made as well as recommendations for educational practice and research. Chapter 6 concludes with a short summary of the whole research.

2 TOWARDS A BIO-ECOLOGICAL DEFINITION OF RESILIENCE

2.1 INTRODUCTION

Resilience is an everyday, general term meaning elasticity and stretch, which according to the Oxford American English dictionary (ODE, 2005) refers to *"the ability to recoil or spring back into shape after bending, stretching or being compressed"*. For humans this term refers to *"the ability to withstand or recover quickly from difficult conditions"* according to the ODE. A resilient individual is someone with resilience and a great capacity for recovery and energy.

Studies taking a resilience-approach attempt to understand how successful development occurs and how this is established despite the presence of risk factors (Werner & Smith, 1992; Garmezy, Masten & Tellegen, 1984; Garmezy, 1991; Benard, 1993; Rutter, 1993; Gordon & Wang, 1994; Masten, 1994; Rigsby, 1994; Luthar, Cicchetti, & Becker, 2000; Henderson & Millstein, 2003; Luthar, 2003; Olsson, Bond, Burns, Vella-Brodrick & Sawyer, 2003; Tusaie & Dryer, 2004). In Chapter 1 of this thesis the focus on the reasons for individuals' success rather than individuals' failure was contextualised within the fields of salutogenesis and positive psychology (section 1.2.2).

Firstly, in this chapter the concept of resilience as successful development of urban middle-adolescents from a low SES background will be explained.

Secondly, various definitions of and approaches to resilience will be compared as trends in resilience research. A distinction will be made between three approaches. These approaches are distinguishable on the basis of their orientation to the nature of the "resilience" construct. The approaches differ in their focus on the role of the individual in establishing resilience. Therefore, these approaches have different significance to answering the research question in this thesis.

The discussion of the various approaches to resilience research is concluded with the statement that previous research into resilience has not fully captured individual

differences in activities in identifying, evaluating and making use of existing protective factors within themselves and their environment. Therefore, these approaches have not fully captured the mechanisms which lead to the associated differences in successful development of individuals.

At the end of the chapter the definition of resilience of middle-adolescents, as used in the present research, will be presented, which will incorporate a bio-ecological interpretation of the resilience concept. Following this bio-ecological definition of resilience, existing forms of assessing resilience will be discussed.

2.2 SUCCESSFUL DEVELOPMENT

2.2.1 ORIENTATION

In resilience literature a distinction can be made between studies which focus on educational resilience, reflected in the focus on academic success in the face of a low SES background as a resilient outcome, and studies which focus on resilience in a broader sense, as reflected in the focus on fulfilment of various developmental tasks in the face of a low SES background as a resilient outcome. In this paragraph these two orientations will be discussed after a description of the risk of a low SES background.

2.2.2 THE RISK OF A LOW SES BACKGROUND

Dutch and international authors (Garmezy et al., 1984; Garmezy, 1991; Van Heek, 1972; Schoon, Parsons & Sacker, 2004; Karsten & Sleegers, 2005) have described the positive relationship between low socio-economic status and disruption to adolescent development in the context of school. Low socio-economic status has been defined by the majority of authors as a measure of a combination of low family income, low levels of parental education, low parental job status and few household possessions (Peng, 1994). For youngsters with a low SES there are fewer means available at home, there are often fewer opportunities present in the neighbourhood where these pupils live. This means that they are exposed to negative influences more frequently than those pupils from a high socio-economic background (Peng, 1994).

2.2.3 RESILIENCE AS ACADEMIC SUCCESS IN THE FACE OF A LOW SES BACKGROUND

As low SES is associated with interference in school performance, adolescent resilience is defined in some international studies as an outcome: high school results in spite of a low SES background. For instance, Martin and Marsh (2006) define resilience as A-level success. Waxman, Huang and Wang (1997) define resilience as A-level success in combination with high levels of motivation. Connell, Spencer and Aber (1994) as well as Gutman, Sameroff and Eccles (2002) define resilience as A-level success in combination with high attendance rates. In relation to these definitions of resilience, Martin & Marsh (2006, p. 267) have defined academically resilient students as: "…*those who sustain high levels of achievement motivation and performance despite the presence of stressful events and conditions that place them at risk of doing poorly in school and ultimately dropping out of school"*

Crosnoe and Elder (2004) use a different description of resilience. They propose that youngsters growing up with high degrees of risk, such as family problems, would probably not be as successful at school as those youngsters growing up in a family which functions better. However, these pupils do display resilience when they perform better than expectations based on the risks present. Academically resilient students could then be defined as those who perform better than expectations based on the risk present. Crosnoe and Elder's nuance is in agreement with resilience described by Masten (1994, p.7-8) as "*Basic success in spite of being a member of a group with high-risk status*".

In studies, such as those by Smokowski, Reynolds en Bezruczko (1999) and Gordon Rouse (2001) adolescents are identified as resilient when they are able to keep up with the class level despite having a low SES background in comparison with those who are unable to keep up and who drop out.

2.2.4 RESILIENCE AS FULFILMENT OF VARIOUS DEVELOPMENTAL TASKS IN THE FACE OF A LOW SES BACKGROUND

Summarising the views of various authors on identifying resilience in youngsters (Masten, 1994; Rigsby, 1994; Tusaie & Dyer, 2004; Olsson et al., 2003), resilience should be regarded as a non-static, developmentally appropriate feature that

youngsters do not simply have or lack. Children may be more resilient or less resilient at different points in their lives depending on the interaction and accumulation of individual and environmental factors (Masten, 1994). In middle-adolescence and young adulthood, resilience may be measured by accomplishments higher than the norm in respect of a more independent relationship with parents and/or increasing self-directedness in high school despite of the presence of risk factors (Masten, 1994). Focussing on constructive outcomes in just one area disregards many middle-adolescents who might be dealing constructively with adversities in another area of their development. Acting resiliently in the family might lead to temporarily less than A-grade success in school. Functioning well under high stress might be associated with temporarily distressing emotions (Olsson et al., 2003).

Therefore, a broader definition of adolescent success in the school environment has been described by Wang, Haertal & Walberg (1994, p. 46) which represents the definitions used by other authors such as Morrison, Brown, D'Incau, Larson O'Farrell and Furlong (2006). Their definition of resilience is:

"The heightened likelihood of success in school and in other life accomplishments, despite environmental adversities brought about by early traits, conditions, and experiences".

In relation to success in life accomplishments, Masten (1994) argues that, in developmental psychology, success and life accomplishments are judged according to psychosocial milestones called *developmental tasks*, which have been defined by various authors for the development of youngsters into adulthood (e.g. Erickson, 1963; 1968; Havighurst, 1974). This argument leads to a definition of resilience as fulfilment of developmental tasks despite high-risk environments. Similar to Masten's statement, the School Mental Health Project of the University of California (University of California Los Angeles (UCLA), 1999, p. 5) proposes a synthesis of outcomes within which to frame their research on resilience and barriers to learning (Figure 2.1).

Fig. 2.1 Developmental tasks in the context of late twentieth-century US society (UCLA, 1999, p. 5)

Academics
Including such outcomes as school engagement, motivation and ability to work and relate at school; motivation for self-learning and enhancement of literacy; feelings of academic competence.
Healthy and safe behaviour
Including the ability to make good decisions about diet, hygiene, health care, involvement in activities; ability to solve interpersonal problems and resolve conflicts; ability to delay gratification and resist impulses and inappropriate social pressures.
Social-emotional functioning
Including such outcomes as the ability to relate socially and in working relationships with others encompassing cultural competencies and understanding behavioural norms; ability to handle and reduce stress; ability to express and manage feelings; positive feelings about self and others; feelings of social-emotional competence and connection with significant others; a resilient temperament.
Communication –verbal and nonverbal
Basic language skills and the ability to read and interpret social cues and understand the perspectives of others.
Character/Values
Personal, social and civic responsibility; integrity; self-regulation; sense of purpose; feelings of hope for the future.
Self-direction
Ability to make and follow through on good decisions for oneself; feelings of autonomy/self-determination.
Vocational and or adult roles
Knowledge, skills and attitudes for acquiring and maintaining employment, initiating and maintaining employment, initiating and maintaining intimate adult relationships, and providing effective parenting.
Recreational and Enrichment Pursuits
Ability to engage in activities for enhancing quality of life and creativity and for reducing stress.

Figure 2.1 illustrates which developmental tasks can be identified for youngsters in a western society in the late twentieth and early twenty-first century society.

2.2.5 DISCUSSION

In this study, successful development is seen as a normative construct wherein the synthesis of values, attitudes and beliefs in a society is decisive for the specific content of the construct. The normative frame, which grounds the notion of successful development in the present study, is made explicit because of this construct normativity. Successful fulfilment of developmental tasks as mentioned in Figure 2.1 is the most important indication of success for urban middle-adolescents with a low SES status in the present study. It is assumed that the school environment *can* contribute to fulfilling these developmental tasks and therefore can also contribute to the successful development of urban middle-adolescents with a low SES status. At the

same time the school environment, as a dynamic system in which youngsters, peers, teachers and others interact with each other, offers a framework for assessing the development of middle-adolescents as successful based on the developmental tasks defined above (Reynolds, 1994). The various ways in which researchers have studied the phenomenon of successful development in the presence of risk factors and the most appropriate way of studying the mechanisms which lead to successful development of middle-adolescents with a low SES are discussed in the next paragraphs.

2.3 DIFFERENT RESEARCH APPROACHES INTO RESILIENCE

2.3.1 ORIENTATION

The question as to *how* successful development occurs in the presence of risk factors is answered differently within various waves in resilience research. The following distinction will be employed in this thesis based on an interpretation of three waves distinguished by Richardson (2002) in combination with an additional review of the literature: "The Phenomenological wave", "The Operational wave" and The Energetic wave".

As a result of the bio-ecological perspective, it was assumed in Chapter 1 that middle-adolescents from a low SES background differ in the extent of their success in development due to different levels of access to effective interaction process in the school environment. In order to ascertain which wave in resilience research is best able to answer the research question presented in this study, the three different waves will be compared and discussed.

2.3.2 THE PHENOMENOLOGICAL WAVE IN RESILIENCE RESEARCH

2.3.2.1 Orientation

In the *phenomenological* wave the accent is on identifying resilient individuals (Richardson, 2002; Margalit, 2003). For the phenomenological wave, favourable outcomes, such as the completion of the developmental tasks summarised in Figure 2.1 in combination with the presence of objectively measurable risk factors, are "evidence" for the existence of resilience. The central question is: which features are characteristic for individuals who are developing successfully in the presence of risk

factors in contrast to those individuals who are not? It explores which personality, family and other factors are related to favourable results. This line of attack offers an extensive, yet non-exhaustive summary of personal and environmental characteristics which are related to successful development in individuals, despite the presence of high-risk conditions. These characteristics are distinguished in this discussion as characteristics of the individual and family, and characteristics outside of the family, such as the school.

2.3.2.2 Characteristics of the individual and family

Richardson (2002), as well as Garmezy (1991) Masten (1994) and Doll and Lyon (1998), provides overviews of various longitudinal studies which formed the initial impulse to identifying characteristics associated with resilience. The first and most frequently cited longitudinal study is that by Werner and Smith (Werner, 1989; Werner & Smith, 1977; 1982; 1992; 2001). From 1955 they investigated the entire birth cohort of children in a multi-ethnic population with low to medium socio-economic status on the Hawaiian island of Kauai. The study was intended to identify factors predictive of developmental problems for the entire birth cohort. The study was broadened and extended at a later stage to identify factors which were predictive of adaptation problems for the same birth cohort, such as mental health problems, school problems and delinquency of adolescents and adults at a later age. They studied risk factors such as chronic poverty, low parental education, parental psychopathology, the presence of genetic disorders and problems during birth. Poverty appeared to be related to an increase in delinquency and criminal activities in youngsters. Low parental education appeared to be related to lower intelligence in the youngsters. Marriage or family problems appeared to be co-related with school and learning problems. Finally, ineffective parenting appeared to be associated with an increased risk of physical and mental health problems. Accumulation of the above-mentioned risk factors led to problems in development and in adult life in the majority of the population studied. However, almost a third of the population studied developed well in the presence of the above risk factors. These individuals did not experience those problems that two-thirds of their peers experienced in the same conditions. It was initially thought that these individuals were immune or resistant to stressors. The term “stress-resistant” was used to describe individuals who experienced successful development in the presence of conditions which research had

demonstrated were high-risk. However, additional research demonstrated that these individuals were not resistant to stress. Some of the individuals studied did experience evident stress or problems with their circumstances. Despite the stress experienced, these individuals appeared to develop positively. They were "resilient". They were able to bounce back after experiencing problems. The question was posed about what assisted these individuals in "continuing and developing successfully", despite the considerable stress experienced. The "resilient" section of the population studied possessed personality characteristics and factors in their environment which researchers associated with their positive development: good intellectual capacities, even temperament, social competence, high expectations, goals and a warm, consistent relationship with parents or carers.

A second longitudinal study, the New Castle Thousand Family Survey (Kolvin, Miller, Fleeting & Kolvin, 1988) focused on risk factors such as marital problems in the family, parental illness, poor child care and house care, social dependence, large families in small houses and poor maternal parental skills. Kolvin and colleagues discovered the same relationships between combinations of the above risk factors and problems in later life as Werner and Smith did. They concluded that those individuals not demonstrating any problematical development, despite the presence of some risk factors, had received an effective upbringing, full of affection.

Both of these studies and other longitudinal studies from the same period (see for instance Glueck & Glueck, 1950; Long & Vaillant, 1984; Elder, 1974; Sameroff, Seifer, Baldwin & Baldwin, 1993) identified personality factors (e.g. tolerance for negative affect, self-efficacy, self esteem, foundational sense of self, internal locus of control, sense of humor and hopefulness) and a warm relationship with parents or carers (family factors) as affording protection against risk factors such as urban poverty, chronic poverty, low parental education, low parental job status, social dependence, psychopathology or parental emotional problems.

In addition to longitudinal studies which in the first instance have led to the identification of the resilience construct there have been many non-longitudinal studies directed at factors associated with successful development in individuals, despite the presence of the above risk factors (for an overview see, for instance,

Constantine, Benard & Diaz, 1999; Wolin & Wolin, 1993; Doll & Lyon, 1998; Masten & Coatsworth, 1998; Olsson et al., 2003). These studies have confirmed and supplemented the above-mentioned personality characteristics and have confirmed a warm, responsive relationship with at least one parent as an environmental resilience factor.

2.3.2.3 Friends and the school environment

In addition to an extension of those personality and family factors which are related to successful development despite the presence of various combinations of risk factors, the identification of resilience factors in the environment has expanded over the years into other contexts than the individual, family and relatives. Both the community and school context appear to play a large role for especially those children whose family contexts contain risk factors. This increased ecological approach demonstrates how protective factors have an influence in one context on the impact of risk factors from another context. Various studies (see, for instance, Werner, 1989) have demonstrated that children with a high-risk family background develop competently by either having strong interests outside the family or by strong relationships with trusted adults outside the family. Other studies (Fergusson & Lynskey, 1996; Hetherington & Elmore, 2003) have demonstrated that positive friendships with peers contribute to the resilience of children and youngsters from high-risk family backgrounds (e.g. depressed parents, marriage conflicts and divorce).

Research of youngsters into factors associated with the development of psychiatric disorders have shown that factors in the child, his family and school, such as teachers and other adults at school, reduce the risk of psychiatric disorders (Doll & Lyon, 1998). Beardslee and Podorefsky (1988) found that resilient children whose parents had depression were greatly involved in school and extra-curricular activities. Hetherington and Elmore (2003) found that the school environment could increase resilience in children from families with marital problems and divorce. The above findings have led to a focus on the possibility of changing the environment in order to stimulate individual resilience. The school environment has received particular attention (Doll & Lyon, 1998). Garmezy (1991, p. 424-425) for instance proposes that: *"Schools serve as a critical support system for children seeking to escape the disabling consequences of poor environments"*.

2.3.2.4 Overview of risk and resilience factors

The above studies may be summarised in an overview of “risk” and “protective” factors associated with resilience at the individual, familial and environmental levels. This overview is presented in Appendix 1 and 2.

For each new study the same essential factors recur as risk and protective factors. Risk factors may be best understood as related social problems. For instance, the risk factor "poverty" is related to problems in individual development, as poverty is mainly associated with different "social problems", such as financial dependence on government assistance, large families in small residences, disorganised family circumstances or poor living conditions through lack of financial means. The influence of a risk factor is evident whenever this is long-lasting, rather than acute and short-lived, whenever children and youngsters are powerless against the actions of factors which have a negative influence on their environment. The influence of risk factors increases exponentially when multiple concurrent risk factors are present. Resilience factors also work cumulatively. Children growing up in the presence of various risk factors need multiple resilience factors, both in themselves and their environment, in order to develop successfully (Doll & Lyon, 1998).

2.3.2.5 Discussion

In summary, in relation to resilience research, it may be argued that urban middle-adolescents with a low SES may experience potential disruption to their development when risk factors associated with a low SES accumulate, and when the protective factors either are not present or not present sufficiently to establish successful development. The phenomenological wave in resilience research has demonstrated that youngsters who develop successfully in the presence of risk factors are active at school and in extra-curricular activities. Furthermore, it appears that the school environment is able to offer protection against risk factors through the presence of trusted adults and through opportunities for developing positive friendships. However, the phenomenological approach does not offer a solution for understanding and explaining the *differences* in development of middle-adolescents with a low SES in the same school context, which was the study objective stated in Chapter 1. Why are some urban middle-adolescents from a low SES background active at school and in extra-curricular activities and others not? Why do some youngsters develop

relationship bonds with adults in the school environment and others not? Why do some youngsters have friendships against risks and others not? In order to investigate the mechanisms for establishing successful development and the lack of successful development, the "Operational wave" to resilience research is discussed in the next paragraph.

2.3.3 THE OPERATIONAL WAVE IN RESILIENCE RESEARCH

2.3.3.1 Orientation

Research in the "Operational wave" is directed towards the question of *how* the ability to develop successfully in the presence of risk factors is established. Within this wave the focus is on processes and mechanisms which strengthen or limit individuals' stress responses. Resilience is viewed here as a linear or curvilinear process which an individual experiences in interactions with life circumstances that are detrimental or beneficial. It appears to be less relevant within this approach whether an individual or his environment has all the resilience characteristics referred to in Appendix 2. For instance, Masten and Coatsworth (1998) found that resilient children do not have specific characteristics, but that the normal, basic and human protection mechanisms are still intact in these children. They propose that successful development under high-risk conditions occurs when the fundamental systems which normally stimulate successful development are active despite the high-risk conditions.

A number of models have evolved concerning factors involved in establishing successful development in the presence of risk factors. The models will be described in the following discussion as the:

1) Compensation model
2) Protection model
3) Challenge model
4) Resiliency model

The models form four ways of explaining how risk and protective factors work in a particular context to lead to succesful development.

2.3.3.2 Compensation model

The compensation model describes resilience as the outcome of a process in which a protective factor and the risk factor do not interact with each other, but both have an

independent influence on the individual (Hollister-Wagner & Foshee, 2001; Fergus & Horwood, 2003; Fergus & Zimmerman, 2005). An example of compensatory action is when a youngster is neglected by his parents, but has a strong bond with a teacher. The effect of parental neglect will potentially continue to interfere with the youngster's self-confidence, however, the good bond with the teacher will contribute to self-confidence. This means that the ultimate outcome for self-confidence will be higher than would have been the case if the youngster had not established a good bond with the teacher. Figure 2.2 presents a visual schematic of the compensation model.

Figure 2.2. The Compensation model, Fergus & Zimmerman, 2005, p. 402.

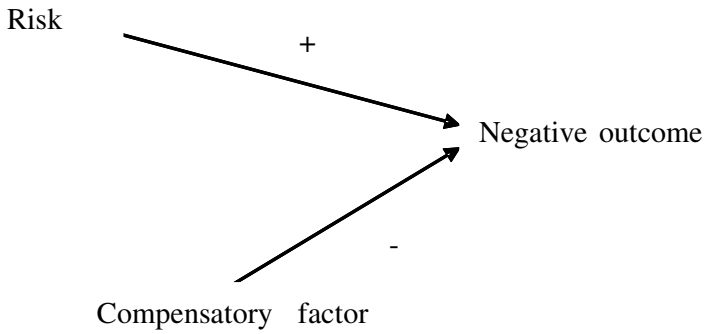


Figure 2.2 shows that the impact of the risk factor on the outcome is less negative through the presence of the compensatory factor. The greater the levels of compensatory factors present in relation to the risk factor, the more positive the outcome.

2.3.3.3 Protection model

In the protection model the protective factor does directly interact with the risk factor in the resilience process. A factor is only defined as a protective factor once it is more than just the opposite of a risk factor (Hollister-Wagner et al., 2001; Fergus and Horwood, 2003; Fergus & Zimmerman, 2005). The protection model may be illustrated using an example of a girl growing up in a neighbourhood with a lot of violence and active gang recruitment on the streets. The girl attends a school with strict rules and active supervision on the school playing fields. In this way the presence of the risk factor (a lot of violence in the neighbourhood) has less of an

effect on the outcome of her development, as the protective factors (stricter rules and supervision at school) directly intervene in the extent of exposure to the risk factor. Figure 2.3 presents a visual schematic of the protection model.

Figure 2.3 The Protection Model, Fergus & Zimmerman, 2005, p. 402

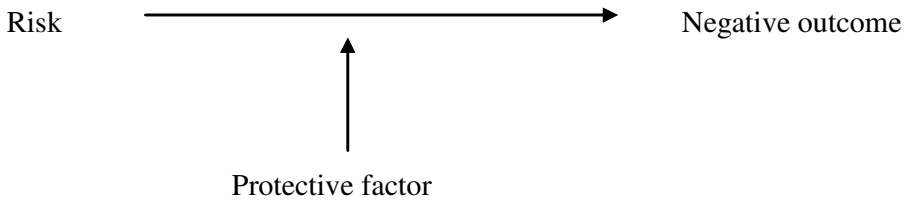
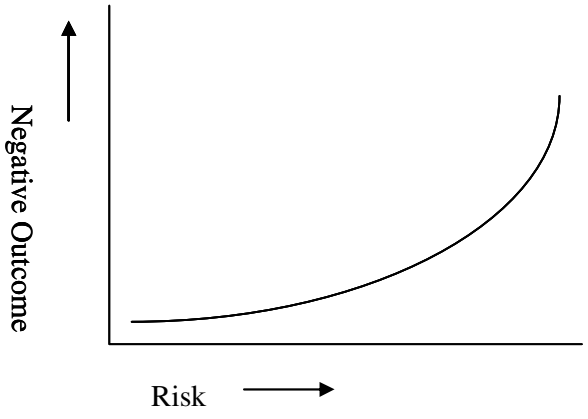


Figure 2.3 shows that the negative outcome, which could have been caused by the risk factor, becomes less negative through the protective factor reducing the presence of this risk factor.

2.3.3.4 Challenge model

The challenge model does not presuppose a linear process in the interaction between the protective and risk factors as the previous models. Rather, this model postulates a curvilinear relationship (Fergus & Zimmerman, 2005) Figure 2.4 presents a visual schematic of the challenge model.

Figure 2.4 The Challenge Model, Fergus & Zimmerman, 2005, p. 402



The curve in the challenge model in Figure 2.4 presents how exposure to very low levels or high levels of risk factors is related to negative outcomes, while the average

level of exposure to risk factors is related to less negative, or even positive outcomes. The notion in this model is that individuals who are exposed to a limited level of risk are confronted with sufficient levels of the risk factor in order to learn how to deal with the risk factor, whilst the actual level of the risk factor is not enough to become a problem. Overcoming one of the risk factors prepares the individual, as it were, for overcoming other risk factors. In the challenge model risk and protective factors are considered to be the same variable. Whether a factor is a risk or offers protection is determined by the level of exposure to the factor. This approach is similar to the idea of inoculation: inoculation with low levels of the pathogen results in the child becoming resistant to childhood diseases.

2.3.3.5 Applicability of the Compensation, Protective and Challenge models

Results of studies into the applicability of the various models in different contexts and under different conditions have demonstrated that whether the effect of a factor is protective, compensatory or challenging differs by the kind of risk factor identified, by the protective/challenging or compensatory factor investigated and by the characteristics of the individual investigated, such as age and gender.

For instance, Hollister-Wagner and colleagues (2001) found confirmation for both the protection model as well as the challenge model whenever risk factors for women consisted of *exposure to physical violence* and the protective factor consisted of *religion; self-confidence; proximity of an adult; relational capacities; constructive communication skills and constructive anger responses.* A limited level of exposure to physical violence did not lead to an increase in physical violence inflicted by these women. However, this was the case above a certain level of exposure. Hollister-Wagner and colleagues believed that these findings confirmed the challenge model. Furthermore, they also discovered that for each increase in the number of protective factors, the relationship between exposure to physical violence and physical aggression by these women reduced in strength. Hollister-Wagner and colleagues believed that these findings confirmed the protection model. However, none of these models appeared to apply to men in the same context: only the main effect of exposure to violence and an increase in aggression were apparent.

It can be concluded from the findings of Hollister-Wagner et al. (2001) that it is not just the accumulative effect of risk factors that is of influence in creating problems (as proposed in the discussion regarding the phenomenological approach), but that also the individual's characteristics such as gender, could be an influence on the effect of potential protective or resilience-promoting factors.

The research by Zimmerman, Bingenheimer and Notaro (2002) is relevant in connection with the central theme of this research. They investigated 770 adolescents and asked them about "natural mentors" in their lives. They related the existence of these natural mentors to the negative influence of contemporaries (e.g. friends with behavioural problems, behaviour of friends in the school environment and attitude of friends to school). From the total number of respondents 8% indicated they had a natural mentor (e.g. aunt, uncle, cousin or grandparent, parents' friends) and approximately 10% of this group indicated that the natural mentor in their lives was a teacher, coach or carer. Zimmerman and colleagues (2002) did find support for the compensation model, but not for the protection model in the context of when the risk factor was a *negative influence of friends' behavioural problems to one's own behaviour* and the protective factor was *the presence of a natural mentor*. In terms of the compensation model adolescents who indicated they had a natural mentor demonstrated fewer problem behaviours (such as the use of soft drugs or delinquent behaviour) than those who did not identify a natural mentor in their lives, even when they also highlighted that they had friends who exhibited a lot of problem behaviour. According to these results the presence of a natural mentor mediates the effects of the negative influence of contemporaries on individual behaviour. The protection model was not supported as the increase of the risk factor "friends with problem behaviours" led to an identical increase in the respondents' problem behaviour, regardless of whether they reported having natural mentors. Both the compensation and protection model are supported in Zimmerman et al.'s study (2002) regarding *the influence of friends in relation to a negative attitude towards school* as a risk factor and *the presence of a natural mentor* as a protective factor. Natural mentors do not only have a direct effect on the reduction of problem behaviour and increasing positive attitudes towards school; they also have an indirect effect by helping adolescents avoid friends who might have a potential negative influence on their behaviour.

Gomez and McLaren (2006) found confirmation for all models whenever the risk factor consisted of *an avoidance coping style* and the protective factor consisted of the *experience of parental support*. In respect of the compensation model the results demonstrated that an avoidant coping style predicted anxiety and depression, and that the experience of parental support had an independent negative effect on the occurrence of both problems. In respect of the challenge model, a limited amount of avoidant coping behaviour barely led to an increase in anxiety and depression, whereas a great deal of avoidant coping behaviour did indeed lead to an increase in comparison. In respect of the protection model, a great extent of maternal support provided a larger buffer against the negative effects of an avoidant coping style, in comparison with small levels of maternal support.

Although the adolescents in Gomez and McLaren's study had an avoidant coping style (considered by most authors as an ineffective coping style), this risk factor for anxiety and depression did not lead to negative outcomes. The parents of these resilient adolescents with an ineffective coping style appeared to act as protective and compensatory factors. The avoidant coping style of the adolescents was an individual risk factor, however, the environment, in the shape of parents, formed protection and compensation which enabled resilience to be identified in the adolescents' behaviour.

The findings on the applicability of the models point to the transactional nature of resilience: resilience is an expression of the interaction between individuals and the environment. The characteristics of an individual or the environment do not act in isolation as an indication of resilience.

2.3.3.6 Resiliency model

It may be concluded from the above that different individuals within the same context are able or unable to profit in different ways from different factors. These findings highlight a growing recognition within the resilience research tradition of the influence of the individual on the effect of various environmental factors.

Richardson, Neiger, Jensen and Kumpfer (1990) developed a model to describe the occurrence of resilient development based on the conscious and unconscious choices an individual makes in dealing with certain high-risk and disruptive events. The

individual plays a directive role within this model. Figure 2.5 presents a visual schematic of the Resiliency model.

Fig. 2.5, The Resiliency Model (Richardson, et al. 1990, in Richardson, 2002, p. 311)

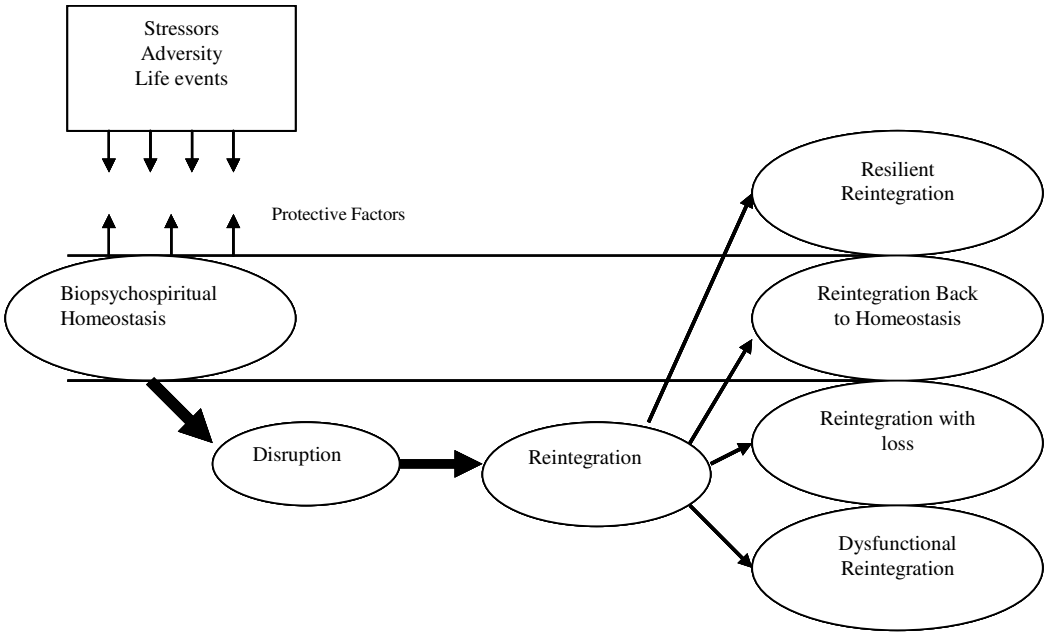


Figure 2.5 indicates that individuals differ in their responses to situations and circumstances experienced as challenging or disruptive. These responses may be seen as the result of interactions by the individual with taxing factors in the environment. According to the model above by Richardson et al. (1990) there are four ways in which individuals may reintegrate within their daily activities after having experienced a disruptive or difficult event or set of circumstances: dysfunctional reintegration, reintegration with loss, reintegration to a comfort zone and reintegration with resilience. Richardson et al. (1990) describe this as a linear process in which individuals make either a conscious or unconscious choice into what the outcome of the difficult experience will be. Reintegration with resilience is characterised by a process of dealing with the experience of difficult circumstances that is expressed as successful developmental growth within the individual. According to Richardson (2002), people are inclined to remain in the comfort zone which they were in prior to

the confrontation with the difficult circumstances. People will reject opportunities and support for growth in their desire for invariance. Reintegration to a comfort zone (stagnation) is characterised by overcoming the difficult circumstances and the sentiment of "just getting on with things". Reintegration with loss is characterised by the loss or reduction of resilient characteristics such as motivation, hope, lust for life or capacity for endurance. In dysfunctional reintegration there are additional problems within reintegration, such as alcohol or drug abuse. According to the model, successful development is development that constitutes of repetitive processes of reintegration with resilience.

2.3.3.7 Discussion

In the first instance, it may be concluded from the various models that insights into the occurrence of resilient behaviour may only be garnered by exploring the whole context in which the individual is actively and consciously interacting with his environment. According to the Resiliency Model, middle-adolescents have a choice in the way in which they reintegrate following experiences of difficult circumstances. The way in which a middle-adolescent reintegrates after these experiences is greatly influenced by the type of disruptive event and the so-called protective factors within the middle-adolescent and his environment, as was apparent in studies into the applicability of the Protection, Compensation and Challenge Model.

Secondly, the Resiliency Model acknowledges that the individual's role is both guiding and directive. Middle-adolescents appear to select the extent to which they will employ help. Middle-adolescents may be inclined to maintain invariance and thereby reject help, or they may be inclined to change or even grow and develop and thereby make use of help and support.

Thirdly, the Resiliency Model provides an insight into the process of successful development in the middle-adolescent. According to the Resiliency Model the growth, which is characteristic of resilient development, is not (purely) an improvement of circumstances in terms of overcoming challenges and improving circumstances. According to the model, resilient development in middle-adolescents is characterised by growth in personal development through experiencing challenges. Resilient personality characteristics are established and expanded through a constructive

interaction with the experience of stress or challenges with the aid of protective environmental factors. The middle-adolescent is therefore able to handle these types of challenges more easily in the future. The new or expanded resilient personality characteristics will enable him to experience similar events in the future as less difficult and will provide space for newer, taxing challenges. Therefore, real growth occurs when there is the opportunity for transfer of new or expanded resilient personality characteristics to other situations. A continuous development takes place through an individual coming across successive events he has not previously experienced. Richardson (2002, p. 311) refers to these experiences as "*non-protected events*". Each challenge therefore offers an opportunity to learn.

Resilience as a set of characteristics or factors as was the central notion in the Phenomenological Wave has changed in the Operational Wave into the idea of resilience as a potential and skill which is enhanced through constructive interactions with difficult experiences. The activation of existing protective, compensatory or challenging factors arises through intervention, involvement or direction of the individual.

In summary, in respect of resilience research, it may be argued that urban middle-adolescents with a low SES can develop successfully through a process of repeated resilient reintegration after the experience of difficult circumstances. Middle-adolescents need to identify and use protective factors in their school environment in order to experience successful interactions with high-risk situations. Following Margalit's statement (2003, p. 82), research into the resilience of urban middle-adolescents from a low SES background *"should identify the complex interactions and processes among internal and external (risk and protective) factors involved in that process"* (of repeated resilient reintegration).

Insights have been garnered with the help of the Resiliency Model into the questions which were posed within the discussion of the Phenomenological approach in section 2.3.2.5. The differences between middle-adolescents from the same low SES background in the same school context are, according to the Resiliency Model, partly the result of their differences in choices of growth and development, and partly of differences in identifying and using protective factors in the school environment.

The Resiliency Model (Richardson et al., 1990) is an appropriate model in a bio-ecological interpretation of the resilience concept as presented in this study. The development of characteristics, according to the Resiliency Model, through active interactions by middle-adolescents and their environment, whereby a middle-adolescent has a choice about a specific way of reintegration following the experience of difficult circumstances, agrees with the bio-ecological perspective: characteristics in the phenotype of the middle-adolescent arise through proximal interaction processes with the environment, and the middle-adolescent's disposition influences which proximal interaction processes he is actively involved in. This in turn influences which phenotypical characteristics are established. According to the bio-ecological perspective the reason for a given form of reintegration after the experience of a difficult event is not just the choice of the middle-adolescent. In the system (e.g. the school system) in which the middle-adolescent is active the presence and inclusion of co-participants in the system are also of importance. In addition, the middle-adolescent's demand characteristics also play an important role, along with those of the co-participants, in establishing middle-adolescents' behaviour, by eliciting reactions and actions from the co-participants.

What remains to be answered in the research question is an insight into how one urban (resilient) middle-adolescent with a low SES is disposed to respond actively in effective proximal interaction processes in the school environment or to respond in ways which lead to successful development, whilst other (not-resilient) middle-adolescents are either not active in these processes or are unable to profit from these processes in the school environment. The Energetic approach to resilience research will now be discussed for more insight into the remaining question.

2.3.4 THE ENERGETIC WAVE IN RESILIENCE RESEARCH

2.3.4.1 Overview

Research within the Energetic Wave is focused on the analysis of motivational energy in individuals and groups who are functioning under difficult circumstances. The most important line of attack in this approach is to obtain an insight into the subjective experiences of individuals which lead to the activation of personal sources. The

Energetic Wave is directed at the question: "What drives people to behave resiliently?" In other words, what motivates people to choose growth and development and to evaluate, identify and use sources within themselves and their environment for competent development in the presence of risk factors? Within the Energetic Wave resilience is viewed as a universal energy which is activated in different ways in different people. The subjective experience of situations as being motivational is central to this approach. The post-modern nature of this approach means that there are no objectively observable protective factors. Factors in the individual and his environment have a protective action when an individual identifies these as being protective and makes use of them (Richardson, 2002; Margalit, 2003).

Margalit (2003) believes there is an agreement between the Energetic Wave in resilience research and Positive Psychology. In Positive Psychology, amongst others, Seligman and Csikszentmihalyi (2000) speak of learned optimism in contrast to learned helplessness. According to positive psychology, each individual may be taught to identify factors and characteristics within themselves and their environment as protective or simply activating. It is the role of researchers within the Energetic Wave to resilience research to identify energy sources, which provide energy for exhibiting resilience. Themes such as spirituality and belief are seen in this third approach as potential sources from which people can draw energy in order to develop fully in the presence of risk factors (Richardson, 2002; Margalit, 2003).

Recent experiences or experiences in the past may also form energy sources. Within the Energetic Wave of resilience research proximal developmental influences are defined as recent experiences of "sources" in people's lives (Margalit, 2003). Margalit (2003) highlights success or failure on a school test or the experience of social support by a contemporary as examples of proximal developmental influences in the school context. According to Margalit (2003) distal influences are important experiences from the individual's own personal past which influence and colour recent experiences.

2.3.4.2 Discussion

It can be argued from the description of distal influences that a kind of ongoing cycle may be presupposed: middle-adolescents create experiences which colour new

experiences, based on their personality and previous experiences and their disposition (will and opportunity). According to the Energetic Wave, poor school performance will provide little energy for obtaining good school results in subsequent situations, whereas, in contrast, good school performances will do the opposite. Negative experiences with teachers provide little energy for establishing positive relationships with teachers in the future, whereas positive experiences have the opposite effect

In relation to promoting resilience in the school environment, Rigsby (1994, p. 89) has stated that:

"*Although there is still a lot left unknown about the way people can become (more) resilient, resilience can be described as "the response to a complex set of interactions involving person, social context and opportunities". The concept of resilience is useful for educational theorising and policy only if it is conceived as developing in such a multilevel set of causal structures and processes".*

In order to understand the concept of resilience, Rigsby (1994, p. 92) draws a comparison with Bourdieu's (1977; 1984) concept of the "habitus" and refers to Buchman's (1989 p. 32) definition of habitus as: "*an acquired system of dispositions, skills, knowledge, habits, worldviews and representations"*. Rigsby (p. 92) concludes that "*the habitus is the dynamically constituted self that behaves in interaction with a social context. This self reflects the cumulation of one's experience through time".*

Rigsby's view on resilience, with his emphasis on disposition and the significance of experiences, can be seen as equivalent to the Energetic Wave of resilience research. This view implies that the successful development of urban middle-adolescents from a low socio-economic background in the school context, which we label as "resilient", represents the actual expression of dispositions, skills, knowledge, habits, world-views and representations of this adolescent who is interacting in an environment full of opportunities. According to the Energetic Wave, experiences within the school context which have given resilient middle-adolescents energy to behave with resilience may be identified. This means, according to Richardson et al.'s (1990) Resiliency Model, that it is possible to distinguish between experiences which have encouraged resilient middle-adolescents to identify and make use of help from their

environment whenever they experience difficult circumstances. From the bio-ecological perspective they require, in the first instance, disposition (will and opportunity) to choose growth (resilient reintegration) in their development, based on which they are able to choose effective proximal interaction processes in their school environment.

This means, for the present study into the contribution of the school environment into resilience in urban middle-adolescents from a low SES background, that within this Energetic Wave of research into resilience, there should be a search for the subjective experiences of middle-adolescents in their school environment that have led to success in interacting with difficult experiences.

2.4 A BIO-ECOLOGICAL INTERPRETATION OF RESILIENCE

2.4.1 SUMMARY

In summary, in respect of the significance of the three waves of resilience research for the bio-ecological interpretation of the resilience concept presented here, it may be stated that resilient personality characteristics of middle-adolescents are related to successful development of these youngsters in the presence of high-risk situations. The personality characteristics are expressed in resilient behaviour through effective proximal interaction processes with the environment by the middle-adolescent. The presence of protective factors in the environment of the middle-adolescent is of less significance than the effective proximal interaction processes between these protective factors and the middle-adolescent. Effective proximal interaction processes arise on the basis of a combination of the availability of these processes in the school environment and the middle-adolescent's disposition to notice and make use of this opportunity. The disposition, as expressed in selective attention patterns, expressions and responses by the middle-adolescent to his environment arises, in part, through certain inherited characteristics and developmental areas, but also through previous experiences both in and outside school.

As argued in Chapter 1, one could assume that resilient middle-adolescents pose different demands and different demand-characteristics on their environment than not-resilient middle-adolescents. In other words, they both demand different ways of

approach from the school environment for their successful development. This research is therefore directed at the way in which the school environment contributes to resilience according to resilient middle-adolescents, in comparison with the way in which the school environment either does contribute to resilience (as personally experienced) or does not stimulate or even hinders not-resilient middle-adolescents in exhibiting resilience when experiencing difficult circumstances. The mechanisms which may or may not contribute to resilience are central to what follows in this thesis.

2.4.2 A BIO-ECOLOGICAL DEFINITION OF RESILIENCE

Based on the bio-ecological interpretation of resilience as presented in Paragraph 2.4, in this study, resilience of middle-adolescents is defined as:

A resilient middle-adolescent has the disposition to identify and use resilience qualities in himself and/or identify and use resilience qualities in a specific context whenever he is confronted with difficult and challenging circumstances. The interaction between the middle-adolescent and the context generates a constructive outcome in the development of the middle-adolescent, such as continuous learning (growth and renewal of resilience characteristics) and an increasingly flexible approach to challenging circumstances.

Once the nature of resilience as described above is taken into consideration the question then becomes how resilience or lack of resilience can be identified in urban middle-adolescents with a low SES? The following discussion considers the modes of identifying resilience as distinguished in the resilience literature.

2.4.3 ASSESSING RESILIENCE FROM A BIO-ECOLOGICAL PERSPECTIVE

Tusaie and Dyer (2004) found that the studying of resilience has lacked empirical instruments due to the diversity of definitions (as shown in Chapter 2) as well as the tendency to use qualitative studies for this complex phenomenon. The complexity of the resilience construct, where someone's disposition interacts with the environment resulting in behaviour that represents constructive outcomes, leads to a diversity in choices of measurements in order to assess resilience. Generally, existing instruments and studies focus on (i) assessment of resilient personality characteristics, e.g. *Adult*

resiliency scale (Jew, 1991), *Resilience Scale* (Wagnild & Young, 1993), *Resilience Subscales Inventory* (Armstrong, 1998), *Adolescent Resiliency Belief System* (Jew & Green, 1995 in Doll, Jew & Green, 1998); (ii) assessment of protective context factors, e.g. *Resilience Youth & Development Module* (Benard, 2002); or (iii) assessment of successful outcomes, e.g. Waxman Huang & Wang (1997), Jackson & Martin (1998) and Gordon Rouse (2001).

2.4.4 DISCUSSION

The objection made in the present study to assessment of resilient personality factors and/or resilient context factors as an indication of resilience is that it is not the presence of those factors that elicits resilient behaviour and constructive outcomes. Rather, it is the awareness and utilisation of these factors by the individual that contribute to resilient behaviour. The objection made in the present study to a focus on successful outcomes is that in most studies focusing on adolescents in the school context, successful outcomes are defined operationally in terms of academic success despite risk factors (Waxman, Huang & Wang, 1997, Gordon Rouse, 2001). Since the focus in the present study is not merely on academic success despite an urban, low SES status but on successful development as framed in Figure 2.1, focusing on academic success as indicator of resilience is not an option. In summary, none of the existing scales and operationalisations capture the process of resilience that unites both the identification and utilisation of internal and external assets and the growth and learning resulting from these actions. Quoting Gordon and Song's words (1994, p. 30) for the point being made: "*What seems to be missing from this viewpoint is concern with processual analyses of the multiple and interacting forces by which behaviour of almost any kind is more likely to be explained*".

2.5 LOOKING AHEAD

The objective of the present research is to provide an insight into the extent and manner in which the school context contributes to successful development of urban middle-adolescents with a low socio-economic status. The research is based on the definition of resilience provided in section 2.4.2. The following chapter discusses how this definition is related to existing paradigms and how the research methods for the study were chosen based on these paradigms.