IDENTIFICATION OF STRESS IN ADOLESCENTS: A PSYCHO-EDUCATIONAL PERSPECTIVE

by

ANNA CATHARINA MARIA KRUGER

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DEDICATED TO MY HUSBAND, BERT
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Praise Ye the Lord. O give thanks unto the Lord; for He is good: for His mercy endureth forever.

Psalm 106:1

Nicky Kruger
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SUMMARY

Stress is a pervasive phenomenon that occurs in the lives of people of all age groups but is particularly prominent in the lives of adolescents. A limited and manageable degree of stress motivates a person to perform and engenders a zest for living, but excessive stress is harmful, not only to the victim’s health, but also to his affective, social and cognitive development. Too much stress in the life of the adolescent may therefore exert a negative influence on his scholastic performance in that it may lead to underachievement, concentration problems, absenteeism, disinterest in class- and homework, and lowered student satisfaction and self-esteem. To prevent these problems teachers should be capable of identifying excessive stress in pupils and of assisting pupils to cope with stress.

Although a considerable number of questionnaires aimed at identifying stress in adolescents are available overseas, no such instrument has been developed for specific application under South African conditions. The purpose of this research is therefore to furnish the educator with an instrument for identifying stress in adolescents, not as a means of labelling the child, but to obtain a reference point from which assistance can be offered to the victim of stress.

The becoming and development of the adolescent, the definition, causes, mediators and consequences of stress, and responses to stress, have been researched by means of an extensive literature study. A model for the identification and handling of stress in pupils attending secondary schools is proposed, and emphasis is placed on the importance of the teacher’s role in the prevention and identification of stress and in assisting pupils who are overburdened with stress.

The Adolescent Stress Identification Inventory was developed with reference to the literature study and, following a nomothetic study, standardised by means of statistical methods. It appears from the research that the questionnaire has both a high reliability coefficient and construct validity. It can therefore be applied successfully by educationists and psychologists to identify stress in adolescents. It must be emphasised, however, that awareness and identification of stress in adolescents would be meaningless unless identification leads to prevention and assistance.
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CHAPTER 1

INTRODUCTORY ORIENTATION, PROBLEM ANALYSIS, RESEARCH GOAL, DEFINITION OF CONCEPTS AND RESEARCH PROGRAMME

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1.1 INTRODUCTORY ORIENTATION

Research on stress as a chronic psycho-social condition characterising modern life and the hurry and scurry of this century has been done for quite some time. Although the Canadian physiologist Hans Selye (1936 - 1976) is generally regarded as the primary inceptor of stress research, the term "stress" already appeared in 14th century English literature (Kleber 1982:11). The word "stress" probably derives from the Latin "stringere" meaning to stretch (Thoresen and Eagleston 1983:48).

Although stress had a physical meaning at first and was mainly researched by natural scientists, it acquired a more psychological meaning over time. The work of the renowned physiologist Cannon (1871-1945) is mainly responsible for the definition of the later acquired meaning of "stress". This scientist was the first to use the term in the sense of emotional tension in a publication on the connection between the hormonal processes and the emotions (Mason 1975:6). His work led to a worldwide extension of the meaning of "stress", with the result that the phenomenon of stress became the subject of an increasing amount of research.

The stress phenomenon has also been the subject of physiological, psychological, psychiatric, sociological, internal physiological and cultural-anthropological investigation, but very little empirical-pedagogical research has been done on the subject. According to Price (1985:36), Band and Weisz (1988:247) and Fimian and Cross (1986:247) there is a paucity of empirical studies on child and adolescent stress. The increase in depression, suicide, drug and alcohol abuse, underachievement, burnout and psychosomatic disease among school-going children has caused an increasing realisation among researchers that stress is not only a millstone around the neck of adults, but is also part of the child's life. It has therefore become imperative that educationists familiarise themselves with the causes of stress and its influence on the becoming, development and learning abilities of the child, and especially the adolescent.

1.2 PROBLEM ANALYSIS

On reading the title: Identification of stress in adolescents: a psycho-educational perspective, the question arises:

Why does the identification of stress, more particularly as manifested in the adolescent, require the attention of researchers who deal with this question from a psycho-educational perspective?
In the first place it is this researcher's opinion that research on stress should begin with what lies at the root of the stress problem, that is to say, with the causes and effects of stress. The way in which a person makes his stress known and experiences and handles it could then be subjected to in-depth research. The results of research will enable educationists to understand the stress phenomenon as it occurs in different phases of life, and to intervene in the life of the child who cannot cope with his stress. Before such intervention can take place, however, "psychometrically valid and reliable means of measuring student stress and burnout must be developed" (Fimian, Fastenau, Tashner and Cross 1989:139). Since there is no standardised test in South Africa that has been expressly developed to identify stress in the adolescent, however, this lack is the first hurdle confronting the researcher who wants to analyse the research problem.

Secondly, the question arises: Why is it the identification of stress in the adolescent that requires the researcher's attention? According to Basch and Kersch (1986:4) adolescents in America are the only age group whose mortality rate has gone up in recent years. The said researchers also contend that adolescents suffer from an inordinately high incidence of disease, accidents, suicide, alcohol abuse, unwanted pregnancies and intense anxiety. Although research done abroad cannot be applied directly to the South African adolescent, Yamamoto (1979:581) observes that stress research done in the United States of America produces surprisingly similar findings both for subpopulations in that country and for young people in other countries.

Adolescence is a period of unparalleled biological, cognitive, affective, social, conative and normative change. Puberty involves dramatic changes in the endocrine system that influence both the internal and external structures, and the functioning of the body. In the cognitive area the adolescent's intellectual abilities develop to such an extent that he can reflect on thought. It is also a period in which security is sought in conformity with the peer group, in uniformity, and in gaining acceptance. It is a period during which social rejection, difference and ostracism by peers are feared. Independence and self-sufficiency are pursued and the establishment of a personal value system leads to internal conflict, as well as to conflict with figures of authority.

The adolescent's course of becoming is also fraught with unavoidable changes. According to Hans Selye "the most common cause of psychic stress is change, even when the change is a good and needed one" (Traviss 1987:9). Alvin Toffler concurs by stating that the increase in crime, psychological disorder, heart attacks and a host of other stress-related conditions are symptomatic of the pace at which change is taking place in modern society (Toffler 1971:365).
South Africa, too, is experiencing a period of unprecedented growth and change in all areas, but more particularly in social and political contexts. These changes lead to uncertainty about the future, which can be especially unsettling to the adolescent who is standing at the threshold of adulthood. In the child’s course of becoming that leads to adulthood he is probably most exposed to change during adolescence - not only change affecting all facets of his becoming and development, but social change. The "storm-and-stress" emotions that are so typical of the adolescent years are frequently attributed to stress caused by physical, social, emotional and communal changes. Thus, although stress is a universal, unavoidable and dynamic phenomenon occurring in people of all ages, this researcher feels that stress in adolescents should become a primary focus of research.

Accordingly, in the analysis of the problem, the necessity of studying the stress phenomenon from a psycho-educational perspective should be a prime consideration. As a psycho-social phenomenon that often causes emotional, psychic and medical problems, research on this subject seems to be largely concentrated in the fields of psychology and medicine. For various reasons, however, it is essential that educationists also undertake stress research.

Besides parents, teachers are the most intensively involved with the child in his daily comings and goings. Through this involvement they become intimately acquainted with the child and are often the first to notice when he is overexposed to stress or fails to cope with the stress in his life.

According to Chandler (1987:11) the teacher's role is that of "mediator, filtering the experience and cushioning the impact of stress". To act as mediator, however, the teacher must be sufficiently informed about the stress phenomenon. This is why teachers should attend information courses, work sessions and "life skills" seminars, in addition to studying the latest relevant literature. Since such information-gathering exercises are not always practicable, however, the researcher feels that the teacher should have a mechanism at his disposal that can help him to determine how much stress a child is exposed to and whether he can cope with it. Empirical research can furnish the educationist with a yardstick, not only to measure stress by, but to give him an indication of when the problem lies outside his area of expertise so that he can refer the child for professional assistance.

Another reason why educationists should get involved with stress research is that excessive stress and inability to cope with it are detrimental to the becoming, development and learning ability of the child. Caudill and Carrington (1986:7) maintain that stress causes high absenteeism, disinterest in class and homework, and lower student satisfaction and self-esteem.
According to Hash and Vernon (1987:22) excessive stress causes irritability, inattentiveness, aggressive, self-destructive behaviours such as anorexia nervosa, bulimia, self-denigration, suicide threats and increased smoking, drinking or drug usage. Crowley (1981:98) found from his research that there is a negative correlation between worry and stress and academic performance.

Finally, it is essential that educationists become involved in stress research because, in performing their role as mediators, they should create an environment in which children can learn, experiment and develop. Armed with knowledge of the stress phenomenon, educationists can try to ensure that this environment is not unduly stressful. According to Chandler (1987:11) environmental stress in the home and family, or in the classroom, can be reduced by imposing some order, structure, and predictability on the environment. He maintains, too, that clear adult expectations, effective communication and reasonable control and discipline reduce ambiguity, minimise the opportunities for frustration, and reduce stress and insecurity in children.

1.3 STATEMENT OF THE PROBLEM

It is clear from the problem analysis above that adolescence is a phase of life during which dramatic physical, cognitive and social development and change come about. The child is therefore exposed, especially during this phase of his becoming, to a wide range of stress inducing factors. Excessive stress causes not only physical and psychic problems in the becoming and development of the child, but also influences his self-concept, academic performance, concentration and learning abilities.

Teachers, as secondary educators, are only surpassed by parents in the extent of their close involvement with the becoming and development of the adolescent. They are therefore ideally placed to identify the above-mentioned influence of stress and to lend assistance to stress victims. However, in order to offer assistance to the child who cannot cope with stress, the teacher must be sufficiently knowledgeable about stress and be able to identify stress in adolescents. The following questions therefore arise:

- What is meant by the term "stress"?
- Who is the adolescent?
- What is the typical history of the becoming and development of the adolescent?
- What are the main sources or causes of excessive stress in the life of the adolescent?
- Does this excessive stress arise from traumatic experiences or from situations that are perceived/experienced as traumatic?

- How does excessive stress manifest in the adolescent?

- Is it possible to identify excessive stress in the life of the adolescent by means of a scientifically standardised questionnaire?

- If excessive stress can be identified by means of the above-mentioned questionnaire, and the experience of it can be determined by the same means, what information does this present to the educator?

- Does the information thus gained serve merely to label the child suffering from excessive stress, or can the information be applied towards rendering appropriate assistance?

- What should a model for identifying and handling of stress in adolescents look like?

- To what extent can such a model be implemented in secondary schools?

From these questions the primary problem addressed by this study can be formulated as follows:

The researcher endeavours to prepare a scientifically standardised questionnaire for identifying stress in adolescents by drawing on information obtained from an extensive literature study, in addition to conducting wide-ranging nomothetic research. The questionnaire must form part of a scientifically sound model for identifying stress and lending assistance to victims, and it must be possible for teachers in secondary schools to apply the questionnaire.

1.4 DELIMITING THE AREA OF INVESTIGATION

The research under review is confined to the identification of stress in adolescents. To identify stress, however, acceptable definitions of the terms "stress" and "adolescent" must be formulated. The causes of stress will also have to be examined, as will the manifestation and experience of actual or perceived stress in the adolescent.
The becoming and development of the adolescent's being-under-way to adulthood will also be subjected to scrutiny.

The following matters arising from the literature study will receive preferential attention:

- becoming and development of the adolescent
- reasons for identifying stress in the adolescent
- stress approaches emanating from physiology, psychology and pedagogics
- definition of the term "stress"
- classification of stressors
- symptoms or manifestations of stress
- coping techniques and defence mechanisms
- problems with existing identification techniques
- methodological aspects of stress research.

The nomothetic research will embrace the following:

- establishment of a scientifically selected sample
- development of a structured inventory for identifying stressors in the life of the adolescent and determining how the adolescent experiences it
- administering the inventory
- determining the reliability and validity of the inventory
- processing the answers to the final inventory and determining norms.

In demarcating the research parameters a clear profile should also be obtained of the respondents involved in the research.
In this study 1 285 Afrikaans and English speaking adolescents between the ages of 15 and 18 are examined. The socio-economic status of the pupils' parents ranges from below average to very high. The children are all reasonably healthy and attend government supported schools. The sample is also composed of children from both rural\(^1\) and urban\(^2\) areas.

Determining the research parameters had one overriding objective, namely to create a standardised inventory for identifying stress in adolescents that can be applied by teachers and has diagnostic value.

### 1.5 OBJECTIVES OF THE STUDY

Various researchers have investigated the effects of stress on the lives of adolescents, but most of them merely offer information on stress handling techniques (Allen and Green 1988; Brenner 1984; Caudill and Carrington 1986; Compas 1987, and Garmezy and Rutter 1983) or evaluate intervention strategies for stress prevention (Blom, Cheney and Snoddy 1986; Angus 1989; Cahnmann 1987 and Edwards 1989). Fimian et al. (1989:139) states categorically, however, that "...before the impact of existing interventions can be assessed, psychometrically valid and reliable means of measuring student stress and burnout must be developed". Omizo, Omizo and Suzuki (1988:267) note that no study has provided data on stressors and symptoms from studying school-age children. The primary purpose of this study is therefore:

- to study the becoming and development of the adolescent

- to investigate the causes, characteristics and consequences of stress by means of a literature study and to investigate the ways in which stress manifests in the life of the adolescent

- to devise a model for identifying and handling stress in secondary schools

- to compile a structured inventory for identifying stress in the adolescent by drawing on data obtained from the literature study and a nomothetic investigation – it must be possible for trained teachers in secondary schools to administer this questionnaire

- to standardise the newly developed questionnaire by means of scientific methods

\(^1\) The rural schools involved in the investigation are all situated in large towns. The results are therefore not representative for villages in rural areas.

\(^2\) The urban schools involved in the investigation are situated in the Pretoria area.
to isolate problems concerning identification procedures and methods and to outline further research on the same theme.

The secondary object of this study is to show that there is a specific need for timely identification of stress in the adolescent. Identification is not merely aimed at categorising or labelling the child, however, but has the ultimate object of preventing excessive stress in the life of the child, and of lending assistance to children who cannot handle stress. Omizo et al. (1988:268) note in this regard: "In order for school counsellors, teachers and parents to assist children in coping with stress, we believe it is important to have a better understanding of what events are stressful to them and what the indicators are that they are under stress".

The ultimate goal of assistance by educationists lies beyond the parameters of this study, however, and will therefore be considered in passing only, but it remains an exciting challenge awaiting educational researchers once the primary object is attained.

It is important to give an indication of the methods that will determine the course of this study.

1.6 RESEARCH METHOD

The researcher employs the following methods:

- an extensive literature study including foreign and local sources dealing with the nature and causation of stress, the becoming and development of the adolescent, and the means of identifying stress in the child and adolescent

- formulating guidelines and developing a model for identifying and handling of stress in adolescents

- an investigation towards practical guidelines for the compilation and use of questionnaires and inventories, and for standardising an inventory for the identification of stress in adolescents

- conducting an empirical investigation according to the nomothetic method, which entails testing of 1 285 adolescents by means of the newly developed inventory for identifying stress in adolescents

- standardising the inventory by means of statistical techniques calculated to determine the reliability and validity of the test
- determining norms by using stanines
- finally, application of the analytical method with a view to arriving at conclusions about the findings emerging from the study.

A clear definition of concepts is necessary, however, to obviate confusion and vagueness in the following chapters.

1.7 DEFINITION OF CONCEPTS

1.7.1 Stress

A whole range of definitions of stress can be found in the literature because stress is studied from a variety of perspectives and reference frameworks. For the purpose of the research under review stress is defined as a phenomenon that manifests in the individual under the influence of various stressors (cf. par. 1.7.2) that arise from the self and the environment, and that affect the individual in accordance with the way in which he attributes meaning to, experiences and engages with or handles the events, stimuli or demands that affect him (cf. also par. 3.4.2).

A person can attribute either a positive or a negative meaning to a stressor and can consequently experience the event, demand or stimuli constituting the stressor as either negative or positive. Accordingly stress can be either positive (eustress) or negative (distress). Stress is positive where the person exposed to it experiences the event, demand or stimuli causing the stress as a challenge rather than a threat, and attributes meaning to the stress in accordance with his experience of it. For the purposes of the present investigation specific attention will be paid to negative experiencing of, and attribution of meaning to, stress.

1.7.2 Stressor

The term “stressor” is also used in different ways by different researchers. Thoresen and Eagleston (1983:48) define stressors as demands made on the individual, while Honig (1986a:51) describes stressors as causes of stress and Swick (1987:12) contends that stressors are sources of stress. The researcher defines a stressor as a stress-inducing factor acting on the individual and emanating from the self or the environment, to which a positive or a negative meaning is ascribed, and which the person experiences as a threat or a challenge. Accordingly, the way in which the individual attributes meaning to a particular stressor and grapples with it occasion the manifestation of stress in that individual. In the research under review the main emphasis is placed on negative stressors to which the individual is prone.
1.7.3 Adolescence

Adolescence is the development stage that occurs between childhood and adulthood. The term "adolescence", which is derived from the Latin verb *adolescere*, means "to grow up" or "to grow to adulthood" (Manaster 1989:4). Depending on individual and cultural differences, adolescence begins between the ages of 11 and 13 years and ends between the ages of 17 and 21 (cf. par. 2.3.2.1).

1.7.4 Adolescent

"The adolescent is the youth at the stage between childhood and adulthood, termed adolescence" (Van den Aardweg and Van den Aardweg 1988:13). For the purpose of the present research adolescents will therefore be viewed as youths on their way to adulthood. They are total, complete individuals, whose own feelings and perspectives influence their own personal goals within their own environments as each lives as a member of society (Manaster 1989:14) (cf. par. 2.3.2.2).

1.7.5 Questionnaire

Plug, Meyer, Louw and Gouws (1988:391) define a *questionnaire* as a series of questions that cover a single subject, or a group of related subjects, and that have to be answered by a testee. Questionnaires can be used to measure interests, attitudes, opinions and personality traits, as well as to collect biographic information.

Unlike intelligence, aptitude and competence tests that mainly measure the intellectual systems of personality, self-assessment questionnaires measure the non-intellectual systems of behaviour, such as emotions, traits, attitudes, interests, fantasies and the like. Thorndike (in Smit 1981:235) defines a self-assessment questionnaire as: "A set of questions about some aspects of the individual's life history, feelings, preferences or actions presented in a standard way and scored with a standard scoring key".

1.7.6 Inventory

An *inventory* is a kind of questionnaire (De Wet, Monteith, Venter and Steyn 1981:160). Instead of questions an inventory makes use of statements to which the testee has to respond. Whereas a formulation such as "Are your parents involved in your life?" is typical for a questionnaire, the same item in an inventory would read: "My parents are involved in my life". In the latter case the testee is required to answer "never", "sometimes", "always" and so on to
indicate the degree to which the statement describes him and his circumstances.

1.7.7 Model

Since a model for the identification and handling of stress in adolescence is proposed later in this research, we should briefly consider what the term "model" signifies here.

Etymologically the word "model" derives from the Latin word *modulus* which is the diminutive form of "modus", which means measure (n) or to measure (v). The word "model" has retained the original meaning of "measure", but a symbolic element has been added to its meaning. Booyse (1987:21) is therefore justified in his declaration that a model is an exemplar, a representation or simplified schema used to express a complicated configuration that is difficult to analyse into separate components.

1.7.8 Identification

*Identification* can be seen as the process of recognition, or as the differentiation of characteristics or traits that are observable in an individual person and according to which the person concerned can be classified in a particular group or category.

Identification is also defined by the Collins English Dictionary as "the process of recognizing specific objects as the result of remembering".

1.8 RESEARCH PROGRAMME

According to Landman (1990:8) research planning, a research programme or strategy, is already constituted in stating the problem. Such a strategy arises from a correct perspective on that aspect of reality which one wishes to control scientifically, to which end knowledge is required of whatever is problematic. That is to say, the researcher takes his problem from the social reality confronting him and subjects it to scientific scrutiny in order to arrive at solutions to the problem. This researcher holds that in his capacity as a scientist the researcher (in the generic sense) should not withhold his knowledge of the problem from society, which means that the research programme cannot be completed unless and until the researcher has made his findings known to society (refer to figure 1.1). In view of the allocation of subject matter to chapters, the research programme will consist of the following:

**CHAPTER 1**: Preliminary study, introductory orientation, statement of problem, delimiting parameters, methodology, definition of concepts and the research programme.
CHAPTER 2: The adolescent is studied from a psycho-educational perspective, and the becoming and development of the adolescent are considered in the light of existing literature.

CHAPTER 3: Stress is studied with reference to theories, models, stressors, consequences, modes of manifestation, and so on.

CHAPTER 4: A model for the use of teachers to identify stress and lend assistance is proposed, and the possibility of implementation in secondary schools is examined.

CHAPTER 5: In this chapter the first three steps involved in the compilation of the questionnaire and some guidelines and criteria pertaining to both such compilation and the administration of questionnaires are discussed.

CHAPTER 6: Here a description of a standardised inventory for identifying stress in the adolescent and the last steps in the compilation of a questionnaire are given. Data on the nomothetic investigation, as well as results obtained with the standardisation and application of the newly developed identification inventory, are discussed.

CHAPTER 7: Finally, the researcher attempts by means of analysis to arrive at conclusions and findings from the literature. Implications of the study in hand are discussed critically and recommendations for further study are made.

1.9 SUMMARY

Stress is a widely diversified phenomenon that is defined and researched in different ways by different researchers. It is a universal, unavoidable and dynamic condition that manifests in people of all age groups, and accordingly this phenomenon has been researched from a number of different perspectives. Unfortunately most of the stress research done in the past was centred on the adult and his problems. Recently, however, the emphasis has shifted and the causes of stress in children and adolescents are attracting increasing attention. Creative ways of handling stress that can be learned at school level are also investigated.

Educationists are realising more and more that stress is integral to the life of school-going children and adolescents, and that excessive stress harms the physical and mental well-being of those undergoing it. It also militates against optimal actualisation of their potential and has a detrimental effect on academic performance. Consequently it has become necessary for educators to inform themselves as to the causes and manifestations of stress. The incidence of alcohol and drug abuse, depression and suicide among adolescents has alerted the
researcher to the fact that the adolescent phase of life is fraught with factors that could cause stress overloading. Knowledge of and insight into the stress phenomenon will enable educationists to accompany pupils in their classes to effective stress handling and, therefore, to the peace of mind required for sustained optimal functioning.

In the next chapter the becoming and development of the adolescent are considered with reference to psycho-educational theory. The stress phenomenon is then thoroughly discussed with reference to a variety of models, and attention is also paid to the causes of stress in adolescence. In the closing chapters a model for the identification and handling of stress in adolescence is proposed and an inventory for the identification of stress is developed.
CHAPTER 2

THE ADOLESCENT:
A PSYCHO-EDUCATIONAL PERCEPTION
OF THE HUMAN BEING

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2.1 INTRODUCTION

Psychology of Education is grounded in the education phenomenon, deals with those involved in the education situation, and observes the education phenomenon from a particular perspective. This science concentrates on a description of the facts concerning the child as educand and the adult as educator. It concerns itself with the perceptible, factually descriptive, experimental and measurable (Vrey 1979:5).

When the identification of stress in the adolescent is approached from a psycho-educational perspective, attention must be paid to the general becoming and development of the adolescent-in-education, and to the role played by the educator in this connection. Particular attention must also be given to the means whereby the adolescent makes his stress known and the means whereby the educator can become aware of the adolescent's predicament. For a meaningful study of the stress phenomenon and successful identification of stress in adolescents, however, the researcher first has to gain a clear picture of the adolescent, his becoming and development, his founding of relationships, and his needs and requirements.

In this chapter an effort is made to give a brief overview of the theory underlying the psycho-educational perception of the human being. Attention is paid to the presuppositions and categories of the psycho-educationist. Emphasis is placed on the interrelatedness of the categories as well as the fact that the various domains of becoming and development are distinguished exclusively for the purpose of scientific study, but that they can never be separated. The involvement of the adolescent-in-totality with reality and, more particularly, his experience of stress, are closely examined in this research.

2.2 PSYCHO-EDUCATIONAL THEORY

Vrey (1979:30-49) identifies some essences of the state of being an educand and asseverates that these essences can apply as categories of Empirical Education (the Psychology of Education). They are the following:

- meaning attribution
- experience
- involvement
- self-actualisation
• forming of self-identity and self-concept.

He describes these categories as illustrative modes of thought, milestones or fixation points that are essences which will ensure that our information regarding the educand will be pedagogic (Vrey 1979:28).

Jacobs (1981:50) takes the theory a step further and declares that meaning attribution, experience, involvement and self-actualisation, in concert with the presuppositions, namely the forming of relationships, the life world and the educational climate, form the basis or foundation on which the intra-psychic structure - comprising the I; the self; the identity; and the self-concept - is supported. He further notes that the intra-psychic interaction between these structural components is decisive for the person's actual behaviour. Figure 2.1 shows a schematic representation of psycho-educational theory as interpreted by Jacobs (Raath and Jacobs 1990:5).

![Figure 2.1: Schematic representation of the psycho-educational theory](image)

In this chapter the theory in question is briefly discussed with reference to its interpretation by Jacobs (1987:2-7).

2.2.1 The adolescent as person

2.2.1.1 The "I"

Since the "I" always has a "my" character, it can never be seen as a separate entity, but must always be seen in relation to the empirical "I", that is the self (Jacobs: 1981:109). The "my" can
be described as the object of experience that is known to the consciousness; the "I", on the other hand, is the subject. The "I" is regarded as belonging to the psychological dimension of being human, which is present in every act and thought of people. The "I" is therefore the psychological impetuous and directive force behind people's thoughts and actions.

2.2.1.2 The self

Vrey (1979:13) defines the individual's self as "the Gestalt of what he can call his own. It includes his system of ideas, attitudes, values and whatever he commits himself to". The self is therefore the core of a person's life world as seen, observed and experienced by him (Raath and Jacobs 1990:7). As a construct the self comprises everything that can be the object of a person's consciousness. In other words, it includes all the person's affective actions, characterogenous factors, habits, congenital and acquired characteristics - in brief, everything a person possesses as his own (Jacobs 1987:3).

2.2.1.3 Identity

Identity can be defined as the meaning a person attaches to himself as a person. This simply amounts to an answer to the question "Who am I?". The child is not born with a consciousness of an identity of his own, but as he advances in age he gradually begins to distinguish between himself and his environment. He becomes aware of himself as a separate entity by discovering his body (Raath & Jacobs 1990:10). Interaction with other persons in his life helps him to become acquainted with himself as, for example, the child of his parents, as a scholar, as a member of a group, and so on. The concept of identity is therefore not simple but multifaceted, since just as many facets of the self are distinguishable as there are separate identities.

Although identity formation usually reaches a plateau of stability after adolescence, Erikson maintains that it never really stops (Raath & Jacobs 1990:11). Vrey (1979:49) puts it as follows: "The formation of a self-identity is a life-long task. The individual and his society are largely unaware of this process. The important point is this: with educational support an own identity gradually takes shape: it is accepted by others and a certain dignity is assigned to it".

2.2.1.4 Self-concept

Vrey (1979:95) defines self-concept as "a configuration of convictions concerning oneself and attitudes toward oneself that is dynamic and of which one normally is aware or may become aware". Felker (1974:2) endorses this by saying that the self-concept comprises a unique set of observations, ideas and attitudes which the individual has about himself.
In the subject literature there are numerous opinions about exactly what a self-concept is. Although these opinions and theories neither correspond in every respect nor emphasise the same aspects of the self-concept, they are nevertheless essentially in agreement. Raath and Jacobs (1990:15) therefore conclude that the following generally accepted characteristics can be attributed to the self-concept:

- The self-concept is complex and encompasses various subordinate concepts that are all integrated into the whole of the person’s overall self-concept.

- Every person’s self-concept is unique and therefore distinct from that of every other person.

- The self-concept is the core of the self.

- The self-concept is an organised configuration of conceptions.

- The self-concept is dynamic and develops cognitively and affectively through the child’s experiences in his life world.

The self-concept is patently the central determinant of an individual’s relationships in his life world, and therefore exerts a crucial influence on the individual’s experience of life events (including stress situations). Accordingly the self-concept as a category forms an important area of study for the psycho-educationist.

2.2.1.5 Areas of becoming

Although in his exposition of the first principles of psycho-educational theory Jacobs (1987:2) makes no reference to the various domains of the child’s becoming, the researcher deems it indispensable to include these domains in a discussion of the said theory. The child as a person comprises several dimensions or domains of being which can be differentiated for the purpose of scientific study but are inseparable in practice, namely the:

- physical

- cognitive

- affective
The child is always involved as a totality in his own becoming. Consequently his becoming and development in such areas as the physical, cognitive and affective domains take place as a unitary event involving the child as an indivisible person. The interwovenness of the various domains can be represented schematically as follows:


According to Du Toit and Kruger (1991:68) it is pedagogically indefensible to treat, for example, the physical or cognitive development of the child as an independent course of events that takes place without being affected at all by any other domain. The different domains influence each other so much that cognitive development problems can have a negative influence on the child's social, affective and conative becoming, while emotional problems can lead to problems with school work (cognitive) or with friends (social). It is this very interaction between the various domains, in conjunction with the intra-psychic structure (I, self, identity, self-concept), that leads to the self-actualisation of the child. Vrey (1979:59) says in this connection: "These aspects are components of larger structures that are meaningful only in terms of a much broader dynamic whole. We may term this Gestalt self-actualisation".
Although the interwovenness of the various domains may not be lost from sight, the becoming of the adolescent in the individual domains per se are dealt with in greater detail in paragraphs 2.3.3.1 to 2.3.3.5.

2.2.2 Activities required for maturation

2.2.2.1 Meaning attribution

In order to make progress on the way to adulthood the child has to assign meaning to whatever he encounters in the course of his becoming. In other words he must recognise, distinguish, understand and know. These cognitive abilities enable the child to orientate himself in his world and to create a uniquely personal life world for himself.

The child's meaning attribution always has a logical as well as a psychological component. The logical part of his meaning attribution is termed the denotative activity that makes mutual comprehension as well as communication possible. Denotative meaning attribution is mainly cognitive and depends to a greater or lesser extent on differentiation, integration, comparing and memorising (Vrey 1979:34).

By assigning logical meanings with educational assistance the child acquires familiarity with and comprehension of his world. The meanings he assigns are always related to other (already assigned) meanings, and the nature, extent and quality of relations with objects or persons are determined with reference to such assigned meanings. Because the child has to orientate himself increasingly by means of meaning attribution as he grows up, his effective maturation is only made possible to the extent that he keeps on assigning logical meanings. To this end he requires the assistance of educators who can open up the logical meanings embedded in his culture.

Note, however, that the individual is always involved as a totality (and not merely as a logical or cognitive being) in the act of attributing meaning. His meaning attribution is therefore coloured by affective (feeling related), conative (will-related) and other, individual, attributes (psychological meaning attribution). This feeling-related or connotative dimension of meaning sometimes influences the person so much that it obscures the real, logical meaning. If the connotative meaning dimension predominates it may confuse meaning, which can induce anxiety in the person concerned. Du Toit and Kruger (1991:16) maintains that the assignment of illogical meanings can cause retardations of becoming.
Meaning attribution as a category is therefore especially important for a study of the identification of stress in the adolescent. The way in which the individual assigns meaning to certain situations will determine how stressful his experience of the situation will be. In other words, whether a person finds a situation negatively stressful will depend on the meaning he attributes to it (also compare par. 3.2.2).

2.2.2.2 Involvement

Involvement as a category is closely allied to experience since it is impossible for anybody to acquire knowledge of any matter or situation without becoming involved in it through direct action, whether physical or psychological. Involvement implies the will to act, purposefulness, persistence, diligence and commitment. It can also be described as the psychic vitality invested in pursuing and realising a meaningful goal. This psychic vitality is the motivating and directive force behind the actualisation of learning and becoming tasks.

Involvement, according to Van den Aardweg and Van den Aardweg (1988:82), is not a passive state but one which is associated with, and precipitated by, action. It leads to identification with an object, event or person with a view to obtaining more knowledge and information. Involvement therefore requires some measure of functional knowledge, because a person cannot become involved in a matter of which he knows nothing and in which he has no interest.

As with any other situation, the handling of stress requires a measure of involvement from the individual. Successful stress handling is largely determined by the intensity and quality of involvement. The researcher feels that involvement as a category is intimately linked to locus of control as a moderator of stress (cf. par. 3.6.1.5). By this is meant that an individual with a strong perception of personal control over life-events tends to assess a stressor as manageable and controllable and to see it as a challenge rather than a threat, with the result that he becomes productively involved in its management. Individuals with an external locus of control tend to experience a stressor as a threat and avoid involvement with the situation or person, or they try to handle the stress situation in maladaptive ways (Trad and Greenblatt 1990:39). These maladaptive, inappropriate and inadequate attempts to respond to stress are ineffectual and even counterproductive (cf. par. 3.9). A lack of involvement also leads to a lack of goals, purposefulness and intentionality.

The intensity and quality of the educand’s involvement in a matter depends, however, on educational help in activation and direction. The role of the educator in the becoming and development of the educand must therefore be emphasised at all times and must also be subjected to scrutiny in this research.
2.2.2.3 Experience

Through a person's involvement in the assignment of meanings to events he experiences such feelings as elation, joy, fear, anxiety, a sense of success, a sense of failure, frustration and so on. These feelings indicate that a person is touched or moved by a situation. He must also lay himself open to the situation and be receptive, or he must be involved in the situation, so that its meaning can be borne in on him. A person cannot decide beforehand to experience certain feelings, however, since the desired feeling often keeps on eluding the seeker. A person's experience of pleasant or unpleasant feelings in a situation determines the quality of the meaning he ascribes to that situation.

According to Jacobs (1987:4) a person's involvement indicates how he experiences and evaluates the situation concerned. The two categories of meaning attribution and experience complement each other: How a person attributes meaning to a relation or situation will influence his experience (evaluation) of it, while in turn his experience of the situation will determine how he will attribute meaning to similar situations in the future.

The feelings experienced by a person cause him to attribute meaning to and experience situations in a unique, distinct or personalised way. Van den Aardweg and Van den Aardweg (1988:83) says in this regard: "What I know another may know, but what I experience is unique to me". Experience therefore has both a denotative and a connotative character. It is therefore important from a psycho-educational point of view to emphasise at an early stage in this research that an event, for example a divorce, will be experienced differently by different individuals. The occurrence of such a situation in the lives of different individuals will therefore be given different meanings and will be experienced uniquely by every individual person. Unique experiencing as a category will therefore have to be considered throughout as a factor in the identification of stress in adolescents.

As with the other categories, namely meaning attribution and involvement, the quality of educational help determines to a large extent what a child experiences subjectively (Vrey 1979:41). The adolescent's meaning attribution to events and his experience of distress or eustress, among other things, will therefore be largely determined by the educational support and guidance he receives in this regard.

2.2.2.4 Self-actualisation

The educational goal pursued in Psychology of Education is the self-actualisation of the educand as a person. In other words the educand is "accompanied with educational assistance
to arrive in his becoming at the fullest height that the human species can stand up to or that the particular individual can come to (that is) helping the person to become the best that he is able to become" (Maslow 1971:169).

Vrey (1979:43) further asserts that self-actualisation implies all a person's deliberate efforts to realise all his latent potential, which encompasses all his domains of becoming, namely the physical, cognitive, affective, social, normative and conative, so that he can accede to and realise the human selfness which he actually is.

The self-actualiser can therefore be described as a human being who is fully engaged in life; who is capable of experiencing both intense pleasure and deep sorrow. He is not only involved in what affects him personally, however, but also in the weal and woe of other people. He possesses the resources to direct his energies toward problems and vicissitudes that do not concern him directly. Such a person has a realistic self-perception and can therefore accept himself. He can accept his particular deficiencies or limitations, which therefore neither affect his sense of self-worth as a human being nor impinge on his self-image.

If a person is to realise possibilities that are located somewhere outside himself or in the future he must transcend himself or rise above the apparent immediate limits of space and time and physical and psychic abilities. According to Jacobs (1987:5) and Vrey (1979:43) this presupposes a realistic self-concept incorporating objective self-knowledge and evaluation of the self-identity.

An important implication for the educationist is therefore that the appropriate action of the educand to actualise himself in this way should be supported by educational assistance. The question can be asked:

- Can the adolescent who is bowed down by excessive stress or who is incapable of handling the stress in his life effectively achieve full self-actualisation?

or

- Does negative stress or an incapacity for handling stress effectively have implications for the actualisation of all the adolescent's possibilities?

2.2.2.5 Interaction between activities required for maturation

The activities required for maturation as indicated by Jacobs (1987:3-5) are distinguishable from
each other but inseparable in practice. The central issue throughout is the educand as a person who is involved in totality in every self-actualising action. These activities or essences of the psycho-educational theory affect each other: the way in which a child experiences a situation influences the significance he attaches to it - for example, if he experiences school as unpleasant he will attribute a negative meaning to it and will not become spontaneously involved with it and participate in activities. Vrey (1979:48) observes in this regard: "The assignment of meaning demands involvement, and the quality of meaning is determined by experience. As meaning increases, involvement intensifies and experience is clarified: in its turn, meaning is intensified and becomes more finely differentiated". Experience, involvement and meaning attribution therefore exert an influence on the educand's self-actualisation and his experience of himself as a person. The said factors also influence his intrapsychic structure (I, self, identity and self-concept) just as the intrapsychic structure in turn influences meaning attribution, experience, involvement and self-actualisation.

This interaction between experience, meaning attribution, involvement, self-actualisation and the intra-psychic structure (in particular the self-concept) determines the educand's behaviour. The psycho-educationist studies the educand's behaviour in order to expand his knowledge of the educand and with a view to directing the educand's educational accompaniment. He may therefore utilise significance attribution, involvement, experience and self-actualisation as well as the intrapsychic structure of the educand as criteria for the study and identification of stress in the adolescent. The psycho-educationist also takes an interest in the educator's accompaniment of the educand on his way to maturity.

2.2.3 The educator

Although Jacobs (1987:2) makes no direct reference to the educator in his discussion of psycho-educational theory, the educator and his role in the maturation of the child are implied throughout. It is important for the purpose of the present research, however, to define the role of both the primary and the secondary educator.

2.2.3.1 The primary educator

The parents are the child's primary educators because they are involved with his education from his earliest years. They fulfil a special role in the becoming and development of the child; they are an important component of the education situation, and they are therefore a significant subordinate consideration in the formulation of psycho-educational theory. The first human relations contracted by the child, namely those with his parents, are also the most important in his life since they serve as a reference framework for the contracting of all other social relations.
Under the influence of his experiences in this first relationship he assigns meaning to and becomes involved in other relations.

Since the adolescent seeks independence from them, his parents must be prepared to play a gradually changing role in his life. The adolescent endeavours to loosen his ties with his parents or emancipate himself from them, but despite outward bravado and self-assurance he still needs the support and accompaniment of his parents continuously. However, the adolescent who possesses the required emotional stability will be prepared and will have sufficient self-assurance to take independent decisions and contract independent relations with increasing frequency.

The acquisition of independence is an important developmental task of the adolescent since without it he can hardly hope to engage in adult relations, make a realistic choice of occupation, develop a personal value system and an identity, or to recognise in himself a unique, autonomous individual (Thorn 1990:447). It is therefore essential that the degree of independence which the adolescent wishes to achieve be synchronised with the concession of independence by the parents. In his relationship with his parents, therefore, the adolescent must act with increasing independence and an increasing acceptance of personal responsibility for himself and his actions, while the parents must allow him to assume increasing responsibility. Although the parent still plays a major role in decisions affecting the child’s future, the adolescent handles an increasing number of routine tasks affecting his life (Monteith, Postma and Scott 1988:97).

Emancipation from his parents frequently imposes considerable stress on the adolescent, but not only the child is affected by the change and loosening of ties taking place in the parent-child relationship during his adolescence. The parents also have to adapt to the becoming and independence of their child, and they have to adapt their educative efforts accordingly. Some parents experience considerable difficulty in this regard, with the result that misunderstandings and clashes occur between parents and their adolescent children. The child’s adolescent years may be a considerable source of stress for both his parents and himself if, in the course of his becoming, disruption of the educational relationship gives rise to problems for him or his parents.

2.2.3.2 The secondary educator

Primary and secondary educators support and strengthen each other and should stand together rather than in a confrontational configuration where the child’s education is concerned. Like the primary educators, the secondary educators, that is the teachers, have an important role to fulfill in the becoming and development of the child. As an adult whom the child copies closely and
identifies himself with, the teacher is co-responsible for the child’s becoming.

Initially the teacher gradually supplants the parent as an identification figure and role model and acts as a surrogate parent during the long school hours (Du Toit and Kruger 1991:125). During adolescence, however, the teacher’s role as surrogate parent gradually diminishes as he becomes a companion and leader instead.

As with the parent-child relationship, relations between adolescent and teacher frequently cause stress for both. In the school context there are many potential causes of stress: teacher behaviour, pupil behaviour, classroom organisation, curriculum focus, student relationships, disciplinary code, and so on (Swick 1987:32). The teacher can play a special role in this regard. Chandler (1987:11) asserts that the role of the teacher is that of a mediator, filtering the experience and cushioning the impact of stress. He further suggests that teachers can take a number of specific steps to create a low-stress environment in the classroom. Such a classroom might provide some adolescents with the only stability in their lives.

In order to fulfil their role as primary and secondary educators effectively, parents and teachers must constantly endeavour to create a harmonious educational climate between educator and educand. Where the education event between educator and educand goes awry, reference is made to a disharmonious educational dynamic (Van Niekerk 1984:129) (cf. par. 2.2.4.2). The educator must take the initiative to restore the necessary harmonious climate or relationship, so that the educational relationship can meet the psycho-educational prerequisites for a positive educational climate.

2.2.4 The psycho-educational conditions

2.2.4.1 Relation foundation

The educand orientates himself in his world by forming a variety of relations. In fact, no person can orientate himself in his world unless he forms relations with it. Buitendijk (in Vrey 1979:21) characterises this ontic phenomenon by saying that the child or educand initiates relationships. Vrey (1979:21) further maintains that relations should be understood as a bipolar bond between the child as one of the poles and the other person as the opposite pole. At each of these poles there is a polarisation effect with two components, the affective and the cognitive. The cognitive component refers to knowledge while the affective element refers to quality of experience measured as the balance or residue of the effect remaining when relenting/rapprochement is weighed against estrangement. The intensity of the polarity effect will depend on the importance of the relation for the self-concept.
The way in which a person experiences joy, elation, sorrow, aggression and the like determines the quality of his relations. The educand desires to become involved with persons and situations he feels attracted to, and turns away from persons and situations he finds repellent. Every person is co-responsible for the relations he contracts. The person who experiences a predominantly negative polarisation effect needs assistance and support to realise his potentialities (Jacobs 1987:5).

The adolescent's involvement with the world can be divided into relations with

- parents and family members
- teachers and other adults
- peer group
- objects
- himself and
- other entities, such as God for the Christian, Buddha for the Buddhist and Allah for the Muslim.

This forming of relations as a basic condition for maturation has considerable stress potential for the adolescent, however. It is therefore a facet of his becoming that must be given thorough attention. The stress caused by disturbed family relations is briefly discussed in paragraph 3.5.2.1, while in paragraph 3.5.2.2 attention is paid to the stress that can be caused by peer group relations. A number of other relations can also cause stress, as can be seen in a discussion of the causes of stress (cf. par. 3.5.2).

2.2.4.2 Educational climate

In his formulation of psycho-educational theory Jacobs (1987:6-7) postulates educational climate as a condition for a meaningful encounter between educator and educand. He contends that education is an inter-human activity and that the educational climate lowers the protective barriers behind which the individual shelters and that by this means the two persons are enabled to meet and communicate with each other.
Vrey (1979:94) makes use of Erich Fromm's (1956) description of love and differentiates knowledge, care, respect, responsibility and trust as components of pedagogic love. He notes that "if the association of parent and child is such that pedagogical criteria are met, pedagogical love is a pre-condition for the possibility of such an event". He sees this pedagogical love as particularly applicable to the relation between parent and child, but admits that parental love is not necessarily identical with pedagogical love since parents often display their love by overprotecting or spoiling their children, which has far-reaching educational implications.

Jacobs (1987:6), on the other hand, contends categorically that educational climate should be integral to the relation between any educator and any educand, and not only between parents and children. As regards the components of the educational climate he draws heavily on Fromm's conception of love, omitting responsibility, however, and adding love and honesty instead. The components of the educational climate are briefly as follows:

- **Love**
  
The love between educator and educand is characterised by affinity, rapprochement and self-sacrifice. Unconditional acceptance of each other is indispensable.

- **Knowledge**
  
  Knowledge within the educational climate presupposes more than a denotative description of one by the other; it implies much more than objective knowledge and intellectual insight; it entails empathy, engagement and involvement with the weal and woe of the other person. The affective factor plays an important role in knowledge of the educand and his educator.

- **Care**
  
  Knowledge goes hand in hand with care. In the educational climate, however, care embraces far more than the provision of nourishment and clothing; it entails caring-in-totality, that is to say, being concerned about the other's health, welfare, happiness, suffering, successes and failures.
- Respect

Respect implies that one accepts the other in a positive sense as he is. It is the recognition of the uniqueness and integrity of the other without wanting to shape him according to one's own image (Vrey 1979:96). Respect means that neither will violate the other's human dignity and integrity by scoffing, disparagement or sarcasm.

- Trust

Mutual trust is a basic prerequisite for a sound and satisfactory educational climate. Trust engenders a sense of security and self-confidence in the educand which enables him to be adventurous.

- Honesty

According to Jacobs (1987:7) honesty entails complete genuineness, which is a precondition for authentic communication between all persons. When someone is honest he communicates his feelings in a way that leaves no-one in doubt as to where he stands on a particular issue.

When the components discussed above are absent from the educational climate the education process goes awry and the educational essences are enveloped in a disharmonious educational climate that leads to a disharmonious educational dynamic. Since a discussion of the whole range of disharmonious educational phenomena is not to the present purpose, a schematic representation of a disharmonious educational dynamic produced by Van Niekerk (1984:129) (cf. Fig. 2.3) will suffice here.
A

ADULT'S ACCOMPANIMENT INADEQUATE

IN TERMS OF

INSUFFICIENT

LOVINGNESS

DISBELIEFNESS

OVERPROTECTION

OVERESTIMATING

LACK OF SELF-CONTROL

REJECTION

INCONSISTENCY

AUTHORITARIANISM

INDIFFERENCE

MORAL DESIRE FOR

ACHIEVEMENT

AND SO ON

TRUST

UNDERSTANDING

AUTHORITY

DURING

INADEQUATE

INTERCOURSE

CONFLICT

CONSENT

INTERVENTION

AND SO ON

CHILD

CAN MATURE AND LEARN

BY DINT OF

EXPLORATION

EMANCIPATION

DISTANCING

OBJECTIFICATION

DIFFERENTIATION

IN TERMS OF

EXPERIENCE

EXJECTION OF WILL

LIVED EXPERIENCE

KNOWING

BEHAVIOUR

BY MEANS OF

BECOMING AWARE

PAYING ATTENTION

OBSERVING

THINKING

REPRESENTING

FANTASISING

MODELLING

RESISTIVE

AGGRESSION

WITHDRAWAL

ASSUMPTION

SHYNESS

DISORIENTATION

ENCOPRESIS

TENSION

OUTBURST OF RAGE

EXAGGERATION

PERIODICITY

ADVERSITY

OVERPROTECTION

SELF-EFFACEMENT

OUTBURST OF RAGE

THEFT

LACK OF SELF-CONFIDENCE

LACK OF WILL POWER

LACK OF INTEREST

DISBIDENCE

INDECENCY

CIVIL DISOBEDIENCE

HARD WORK

TRAITOR

POOR APPETITE

DERIVATIONALITY

SHITTING OUT OF SCHOOL

REBELLIOUSNESS

SEXUAL MISBEHAVIOURS

ATTENTION FLUCTUATIONS

ATTENTION SEEKING

ATTENTION DEFICIT

PLAYING WITH FIRE

NERVOUSNESS

INABILITY

AND SO ON

NON-PREPAREDNESS FOR LEARNING

NON-PREPAREDNESS FOR MATURATION

PERSONAL

FEELINGS

IDEAS

NON

WHAT IS MANIFESTED AS

ANXIETY

UNCERTAINTY

HESITANCE

AND SO ON

DISORGANIZED

UNCLEAR

DISORDERLY

AND SO ON

LACK

STUPID

INFERIOR

AND SO ON

EXPERIENCES

PERSONAL

IN THE REAL WORLD

MEDITATION

PRACTICE

EXPERIENCE

OBSERVATION

THOUGHT

PRACTICE

PERCEPTION

IMAGINATION

MEMORY

PERCEPTION

EXPERIENCE

AND SO ON

NON-PREPAREDNESS FOR LEARNING

AND SO ON
It is clear from the schematic representation that there is a correlation between a disharmonious educational dynamic and stress in the life of the adolescent. Inadequate accompaniment by the adult owing to lovelessness, dismissiveness, overprotection and the like (cf. A in Fig. 2.3 with stressors in par. 3.5) may cause stress for the adolescent. Similarly certain manifestations in the child's behaviour (cf. B in Fig. 2.3 with consequences in par. 3.7) may impose further stress on both the child and the educator and may therefore intensify the disharmonious educational climate.

The child's whole existence is affected deleteriously if his primary and secondary educators do not create a space where he can feel safe and secure, and if he does not receive the love, affection, acceptance, understanding and guidance he needs (Van Niekerk 1984:128). In such instances the child makes himself conspicuous by engaging in unacceptable activities and behaviour that ultimately undermine his self-concept and self-actualisation. In the next section concepts relating to the adolescent and adolescence are explained and the becoming and development of the adolescent are briefly reviewed.

2.3 THE ADOLESCENT

2.3.1 The period of adolescence

Adolescence (cf. par. 2.3.2.1) is a distinct phase which occurs in the period between childhood and adulthood in the life of every person. Although authors such as Vrey (1979:165) try to link this phase to a particular age by stating that it occurs between the ages of 11 and 21, this is not necessarily an accurate assumption because at present the age at which the onset of adolescence generally occurs is diminishing while at the same time the duration of adolescence is increasing (Papalia and Olds 1981:33). The duration of adolescence may also vary according to individual development rates (Monteith et al. 1988:16).

It is not particularly difficult to identify the onset of adolescence (puberty: cf. par. 2.3.2.3) because it is marked by clearly discernible physical and physiological changes. During puberty body growth accelerates, the reproductive organs become functional, sexual maturity is attained and secondary sexual characteristics appear. To determine the end of adolescence seems less easy, however, since it is characterised by less conspicuous changes than puberty. Unlike the onset of puberty where physical development is the main criterion of distinction, a variety of social, legal, psychological and economic criteria are applied to distinguish the end of adolescence.

From the social perspective adolescence ends when the individual assumes such adult roles as
matrimony or parenthood. In the South African context adolescence ends legally when the adolescent accedes to suffrage (at the age of 18), begins his military service (from the age of 16), attains to majority when he no longer needs parental consent for his actions (at the age of 21), and accedes to independent contractual competence and liability (also at the age of 21). Psychologically adolescence ends when the person attains to certainty of identity, can be emotionally independent of his parents, has developed his own system of values and norms, and can enter into adult relationships based on love and friendship (Thorn 1990:394). If economic considerations are taken as criteria, then adolescence ends with the individual's accession to the ability to live by his own means and follow an occupation successfully.

In addition to the divergent criteria for determining the end of adolescence the individual also has to comply with certain culturally prescribed norms for adulthood before the end of his adolescence will be generally recognised (Monteith et al. 1988:18; Thom 1990:394 and Vrey 1979:165). In the more traditional communities as represented, for example, by the black cultures of the RSA, the individual has to pass through certain ritual initiation procedures to gain social recognition as an adult. In Western society today a considerably longer adolescent period prevails than in traditional cultures since the typical Westerner is reaching puberty at a diminishing age while the period during which he is forced to remain financially dependent on his parents is being extended by conditions prevailing in the complex industrialised society to which he belongs. Periods of training required to start an occupation are also growing longer for the same reasons. De Wit and Van der Veer (1982:16) note in this regard that the onset of adolescence is a physiological phenomenon while its end is culturally determined. The more complex the relevant culture and the more exacting the demands imposed on its members by adulthood, the longer the adolescent phase will be.

Since it is so difficult to determine exact age limits for the duration of adolescence it would be more advantageous to describe the adolescent development phase in terms of specific developmental characteristics (cf. par. 2.3.3). It is nevertheless necessary to provide a few brief definitions of terms that occur frequently in the research material.

2.3.2 Definition of terms

2.3.2.1 Adolescence

Adolescence is the development stage that occurs between childhood and adulthood (Thom 1990:393; Van den Aardweg and Van den Aardweg 1988:10). Dorothy Rogers (in Manaster 1989:4) traces the term "adolescence" to its Latin root adolescere which means "to grow to maturity". She defines adolescence as "a process rather than a period, a process of achieving
the attitudes and beliefs needed for effective participation in society". Although age limits that accurately demarcate the duration of adolescence cannot be set owing to individual and cultural differences, it is generally accepted that its onset occurs somewhere between the ages of 11 and 13, while its end generally occurs somewhere between the ages of 17 and 22. Vrey (1979:165) differentiates this period into the early adolescent phase which accounts for the period between the ages of 12 and 15, middle adolescence which accounts for the period between the ages of 15 and 18, and late adolescence which extends between the ages of 18 and 22. Santrock (in Thom 1990:394) only distinguishes an early (10 to 15 years) and a late (16 to 22 years) adolescent phase.

2.3.2.2 Adolescent

"The adolescent is the youth at the stage between childhood and adulthood, termed adolescence" (Van den Aardweg and Van den Aardweg 1988:13). Years ago it was customary to refer to adolescence as a period of storm and stress and to the adolescent as an individual racked by inner turmoil (Turner and Helms 1987:273). Attention was usually directed toward adolescents' problems. Most contemporary researchers, however, have altered their perspective on the adolescent phase. Adolescents are not simply classified by definition as rebels who are in conflict with their parents; nor are their lives seen to be fraught with great tension, disruption and impulsive action (Thom 1990:395). For the purpose of the present research, therefore, the adolescent is deemed to be a complete individual who is going through the development phase typifying the period between childhood and adulthood, and who is just as prone as any other individual in any other phase of life to the influence of, and concomitant stress caused by, the stimuli emanating both from his particular environment and from his inner self. Continuing in this vein, the perception propagated by Manaster (1989:14) is endorsed: "To the extent allowed by existing theory and data, adolescents will be viewed as total, complete individuals (holistic), whose own feelings and perspectives (phenomenological) influence their own personal goals (teleological) within their own environments (field-theoretical) as each lives as a member of society, as they must (sic) (socially oriented approach)."

2.3.2.3 Puberty

The word "puberty" derives from the Latin *pubertas*, meaning "age of manhood" (Coleman and Hendry 1990:16), and it refers to the first phase of adolescence, in which sexual maturation becomes evident (Mussen, Conger, Kagan and Huston 1990:569). Van den Aardweg and Van den Aardweg (1988:10) also refer to the puberty phase as preadolescence and assert that this is the period during which an individual's reproductive organs become functional and secondary sex characteristics (body hair, breasts etc.) develop.
2.3.2.4 Becoming

The word "becoming" means changeover to another state and it can be defined as the purposeful transition to adulthood starting at birth. According to Van den Aardweg and Van den Aardweg (1988:28) it is "more embracing and less visible than development as it includes the enrichment of dialogue, the acceptance of responsibility, the assigning of meaning, self-actualization, the realization of aspirations, initiative, the exercise of the will, purposiveness, intentionality and a host of other qualities all of which include far more than the inevitable process of growth and development".

2.3.2.5 Development

*Development* means gradual growth, taking shape and unfolding. Van den Aardweg and Van den Aardweg (1988:60) define development as "a gradual, perceptible change or unfolding which is empirically manifested as the child is able to accomplish more and more tasks on the road towards realization of the goal of becoming which is ultimate adulthood". According to Monteith *et al.* (1988:30) development is characterised by maturation and growth. Growth comprises the quantitative changes of the body (e.g. increase in body size, mass and length), while maturation embraces the qualitative changes of the body structures (e.g. the physical development of the various organs and their ability to function effectively).

2.3.3 Becoming and development of the adolescent

The adolescent must always be studied as a totality. His becoming and development in the physical, cognitive and affective domains, for example, take place as an undifferentiated event in which the adolescent is involved as an indivisible person. It would therefore be pedagogically indefensible to treat the physical or affective development of the adolescent as unrelated entities, as if these aspects of development proceeded without involving or being affected by other domains. The different domains of development and the specific characteristics of development in these domains are subjected to thematic discussion in the next section, but the interwovenness of these domains must be constantly borne in mind as the discussion proceeds.

2.3.3.1 Physical development

In most children the onset of adolescence is marked by a "growth spurt" and a whole range of pubertal changes that are divisible into external bodily changes and internal physiological changes. With due allowance for considerable individual differences pertaining to onset and intensity, the following pubertal changes can be noted as universal for adolescents:
- accelerated rate of increase in height and weight
- accelerated growth of lungs, and a decline in basal metabolism
- hormonal changes which stimulate the growth of mature sperm and ova that lead to sexual maturity
- development of primary and secondary sexual characteristics
- increasing sexual needs.

Tanner (1973:1) notes that in some instances the adolescent is a fascinated or even shocked observer of these changes in his body. He consciously takes note of these changes and assigns his own unique meaning to them, which profoundly influences his experience of and involvement with his body. His experience of these changes is often characterised by feelings of wonderment, pride and joy as well as feelings of uncertainty, shame and aversion. The meaning attached by the adolescent to pubertal changes and, therefore, to his body depends to a considerable degree on such factors as:

- early as against late bodily maturation
- menstruation
- erection, ejaculation and nocturnal semen emissions
- breaking of the voice
- acne
- obesity.

The drastic and rapid change of his body, in concert with the above factors, frequently occasions problems and stress for the adolescent (cf. par. 3.5.1.1). He is acutely aware of his body and worries whether it will develop naturally and acceptably (Monteith et al. 1988:57). Irregular growth or asynchronism causes awkwardness and the adolescent frequently seems uncoordinated and all arms and legs. The first menstruation can be a traumatic experience for a girl who is not prepared for it (Monteith et al. 1988:63), while nightly semen emissions, which are beyond his control, can be a source of shame, humiliation and uneasiness and guilt feelings.
to a boy (Thom 1990:407). Likewise, a change in voice pitch and quality is a source of embarrassment and uneasiness to boys. Both sexes are upset by the appearance of acne because of the adolescent's sensitivity about things that affect his or her appearance. Obesity, which tends to be a general cause of negative psychological factors, can also damage the adolescent's self-image (Monteith et al. 1988:62).

The adolescent also has to learn to express and seek fulfillment of his sexual needs in a socially acceptable way so that his sexuality will render a positive contribution to the development of his identity. His new-found sexuality also has to be integrated with his interpersonal relationships. Heterosexual relationships often occasion considerable stress for the adolescent (cf. par. 3.5.2.2(ii)).

In order to develop his sense of identity the adolescent must accept the above-mentioned changes in his body and integrate them to a unity. Moreover, he has to retain a sense of continuity, that is, the feeling that he is still the same person (Mussen et al. 1990:576). His self-concept is determined by his self-image. Hamachek (1978:125) says in this connection "... the particular way a person perceives his physical body - whether distorted or not - may have important psychological consequences for him".

His self-concept also depends on what he considers to be other people's perception of him. This is why the adolescent finds it extremely humiliating to be the butt of jokes about his clumsiness, appetite and so on. He is particularly concerned about the impression he makes on his peer group. He therefore conforms not only to the social behaviour of the group, but at times also to their norms with regard to physical appearance and accomplishments. The degree to which the adolescent meets these criteria often determines how the group will behave towards him and how he will perceive and evaluate himself.

Physical changes are probably among the most critical and difficult for the adolescent to cope with (Coleman and Hendry 1990:16). They not only affect the forming of his identity and body-image, but also his self-esteem. Adolescence is therefore a critical period for the development of the self-concept.

2.3.3.2 Cognitive development

According to Piaget's theory the last stage of cognitive development, the formal operational stage, begins during early adolescence and becomes firmly established in some people by age 15 (Rice 1984:192). During adolescence, therefore, important cognitive changes take place as the concrete literal thinking of the younger child gives way to the more rational thinking of the
adolescent. This new way of thinking is characterized by a progressive differentiation of thought and conception of reality. Through inductive reasoning they systematize ideas and deal critically with their own thinking. Accordingly the adolescent becomes aware that his hypotheses or conclusions are arbitrary and that it is necessary to test them against reality. At this stage he is capable of imagining possibilities and understanding symbols. He is also capable of using scientific methods of investigation, carrying out experiments and constructing theories. He can also think in terms of what may or could be, an accomplishment that is the key element of hypothetical-deductive thought which, according to Piaget (1972:4), consists in the ability to subordinate reality to a possibility. Through deductive reasoning the adolescent is also capable of testing theories logically and scientifically, considering several variables in the process.

Other characteristics of formal-operational thought are the use of abstract concepts, the replacement of objects with verbal statements (propositional thought) (Monteith et al. 1988:13), and a capacity for combinatory thinking. At this stage the adolescent also understands direct and indirect proportionality, that is, he understands relationships.

Piaget's theory is so widely accepted that we take many of its basic assumptions for granted, but a number of researchers question his theory of formal-operational thought, as well as his methods of testing for such thought (Mussen et al. 1990:293). These commentators contend that although qualitative changes in thought can be identified, many skills appear to develop more gradually and continuously than Piaget's theory suggests. This, together with the fact that some people never reach the formal-operational thought phase, has led to the perception of formal-operational thinking as a task-specific way of thinking, characteristic of people who have had certain experiences. Formal-operational thinking is therefore not, as Piaget believed, an overall pattern of thinking that generalises to all situations once it has been achieved.

Findings concerning the task and situation-specific nature of formal-operational thinking have persuaded researchers that cognitive advances are due, not to changes in overall modes of thinking, but to improvements in memory, attention, knowledge and problem-solving strategies (Schickedanz, Hansen and Forsyth 1990:599).

In conclusion it can be said that formal-operational thought is the highest form of thought of which human individuals are capable. Although typical evidence of formal-operational thought is generally observable in adolescents, research has shown that not all adolescents (or even adults) attain to formal-operational thinking (Schickedanz et al. 1990:597), which suggests that it is not a universal developmental milestone. Research indicates that differences in experience can be the reason why some people's cognitive development attains to the level of formal-operational thought while that of others does not. According to Schickedanz et al. 40
this accomplishment appears more commonly in those who live in Western cultural settings than in others; in adolescent boys than girls; and in those who have had training in mathematics and science.

In the following paragraphs the influence of the adolescent’s cognitive development on his development in other domains are discussed.

(i) **Development of an implicit personal perspective and self-concept**

At the formal operational stage of cognitive development the adolescent can think in a complex way about himself and other persons. He is highly critical and analytical both about himself and about other people, including his parents. In his evaluation of a person he is capable of seeing beyond what is superficially observable. This observation and analysis of himself and others often induces him to mete out harsh criticism to whatever comes under his scrutiny, including himself. He also becomes aware of how things are and in what way they could have been different. This gives rise to mood swings from depression and dissatisfaction to joy and happiness (Thorn 1990:424). The adolescent’s ability to contemplate himself introspectively is therefore important for the development of his self-concept and sense of identity.

(ii) **Egocentrism**

Some researchers (Rice 1984:198; Schickedanz et al. 1990:607; and Thom 1990:424) emphasise the influence of a form of egocentrism on the personality and behaviour of the adolescent. His ability to think introspectively about himself makes him acutely aware of himself, his person and his ideas, with the result that he becomes egocentric and self-conscious (Rice 1984:198). According to Elkind (in Thom 1990:424) adolescent egocentrism manifests in the creation of an *imaginary audience* and a *personal fable*. Since the adolescent is preoccupied with his own thoughts, appearance and behaviour, he believes that other people share this preoccupation and that they are intensely interested in everything he says and does. By this means, that is because he feels that everybody in his immediate vicinity is exclusively concerned with his existence, he creates an imaginary audience. His consciousness of this audience frequently gives rise to intense self-consciousness, shyness and a need for privacy (Thom 1990:424), all of which can obviously cause stress.

Another manifestation of adolescent egocentrism is the personal fable. Adolescents believe that they are special, that bad things happen only to others. They feel that they are immune, exempt, even immortal (Schickedanz et al. 1990:607). Personal fable beliefs can be the underlying reason for some of the reckless, seemingly self-destructive behaviour that is so often
typical of adolescents. Their licentious experimentation with alcohol, drugs and sex is based on the belief that nothing untoward can happen to them. And it is this general belief that he is exceptional that makes an adolescent believe that no-one has ever loved as he does, or that no-one has ever experienced so much agony over the break-up of a love affair.

(iii) **Idealistic rebellion**

Rice (1984:198) notes that "... adolescents begin to discard their childhood inferiority and subordination to adults and to consider themselves as their equals, and to judge them with complete reciprocity, on the same plane as themselves. Because they want to be adults, they are motivated to take their places in the adult social framework ... ". Their youthful idealism and their ability to theorise (Thom 1990:423) and investigate values, norms, religious beliefs, roles, social and political systems leads them to construe ideal families, societies, ideologies, systems of religious belief or solutions. Reality is therefore often lost from sight and utopian solutions are proposed for the world's problems. If his educators fail to empathise with his idealism he may rebel against existing norms, values and the like.

(iv) **Parent-child relationship**

The adolescent's increasing independence and ability to solve his own problems causes conflict between him and what his parents deem right and good for him (cf. par. 3.5.2.1 (xiv)). Whereas he used to believe blindly that his parents' decisions were sound, he now weighs the possible against reality. He becomes aware of discrepancies between the values and actual behaviour of his parents and no longer idealises them. Since in his view reality often falls short of the ideal, he sometimes rebels against his parents and society as a whole.

(v) **Decentering and a life plan**

According to Monteith *et al.* (1988:140) relinquishment or decentering takes place as the adolescent increasingly acquires cognitive perspective and objectivity. He now cures himself of his idealism and returns to reality in that he begins to assume a more adult role. Decentering of his ego also takes place and he therefore begins to adopt a more realistic life plan. Decentering and consequent realism may render the adolescent cynical about reality, however.

As a rule the adolescent's improved ratiocinative accomplishments enable him to move on a higher plane in other domains of becoming (cf. par. 2.3.3.5), but by doing so he may also incur stress, particularly as a result of conflict in the parent-child relationship, the development of a self-concept, egocentrism and idealistic rebelliousness.
The influence of physical and cognitive development on the emotional life of the adolescent was briefly touched on in paragraphs 2.3.3.1 and 2.3.3.2. It was also mentioned in paragraph 2.3.2.2 that researchers were once divided into two groups: those who believed that adolescence is by definition a period of storm and stress (e.g., G. Stanley Hall and Anna Freud), and opponents of this theory (e.g., Margaret Mead). The researcher endorses the perception represented by Clarke-Stewart, Perlmutter and Friedman (1988:408): "One reason for these different views was probably that different observers based their conclusions on different groups of adolescents. Clinicians, seeing patients in psychotherapy, were likely to see adolescents who were experiencing a great deal of stress. Researchers who saw a more representative example of "normal" adolescents would see less stress". It is therefore probably correct to conclude that under comparable conditions some adolescents suffer severe stress while others are subject to much less stress. Although some adolescents experience more stress than others, almost all adolescents are subject to mood swings. Monteith et al. (1988:82) are therefore agreed that adolescence can be attended by considerable stress and conflict.

The reason why adolescence is typified as a storm-and-stress phase is usually the intense experience of extreme emotions, emotional outbursts or at least emotional tension caused by a variety of physical, cognitive, affective, social and other factors. Thus the adolescent's emotional life is characterised by heightened emotionality which is expressed in his relations. Emotion is the expression of the total human being as he develops under the influence of hereditary and environmental factors: the educators, peer group, social expectations and other facets of development influence the emotional experience of the adolescent.

According to Monteith et al. (1988:83) the most important causes of heightened emotionality in the adolescent derive from his interaction with and adaptation to the environment:

- Adaptation to new situations that differ from those occurring in the child's experiential world
- Excessively high standards of maturity expected of the adolescent by society
- Unrealistic aspirations that lead to feelings of inadequacy
- Demands of social situations and relations with the opposite sex
- School problems and realisation of the importance of teaching undergone at school and
of academic progress

- Problems with choosing a career, which leads to apprehensions
- Obstacles in the way of identifying with the peer group
- Troubled family relationships.

Although adolescence is not inevitably a period of storm and stress, a variety of problems nevertheless tend to emerge during this phase. Some problems seem to arise from the adolescent's increasing independence, his curiosity, his interest in new and unfamiliar experiences, his daring and tendency to take risks, or his tendency not to consider the point of view of others or the consequences of his actions (Schickedanz et al. 1990:642). Some researchers (Clarke-Stewart et al. 1988:427; Shickedanz et al. 1990:642; Turner and Helms 1987:304) enumerate problems that generally occur during adolescence:

- drug and alcohol abuse
- dropping out of school
- juvenile delinquency
- suicidal tendencies
- anorexia nervosa and bulimia
- running away from home.

It is not always clear whether the adolescent's problems are caused by his emotional instability or vice versa. All the same, the adolescent is often heavily burdened by his emotional problems, which are therefore stressors in his life (cf. par. 3.5.1). One of the problems to which adolescents are prone is the difficulty they experience in adapting to their changing bodies and budding sexuality.

(i) *Adolescent sexuality*

A particularly important development task of the adolescent is that of giving vent to his sexual needs in a socially acceptable way so that his sexuality can render a positive contribution to the
development of his identity. The development of sexuality and the first heterosexual relationships therefore constitute a major component of the adolescent's emotional life. Mussen et al. (1990:584) notes in this regard that among the many developmental events that characterise puberty and the onset of adolescence, none is more dramatic than the physical and psychological changes associated with sexual development. Adolescent sexuality as a stressor is addressed in paragraphs 3.5.1.5 and 3.5.1.6. Here it is sufficient to mention that adolescent sexuality is characterised by an increasing degree of sexual freedom for both sexes. Such things as dates and steady relationships, intimate caresses, premarital sexual intercourse, extramarital pregnancies, masturbation, male and female homosexual relations or feelings, sexually transmitted diseases, menstruation, erection, ejaculation and nightly semen emissions can plunge the life of the adolescent girl or boy into emotional turmoil.

(ii) Occurrence of negative emotions during adolescence

The adolescent's capacity for formal-operational thinking improves not only his ability to exercise effective control over his environment, but predisposes him to self-criticism and comparison of what he perceives himself to be with the image others have of him. (The development of his sense of identity and his self-concept per se, as well as the influence of this development on the adolescent's becoming will be discussed in par. 2.3.3.7). When he perceives a discrepancy between his self-concept and the image of himself that others have conceived he may experience feelings of anxiety. According to Conger and Petersen (1984:53) anxiety is a central determinant of behaviour because it engenders thoughts, emotions and reactions that militate against the satisfaction of another need (eg. the adolescent who would like to take a girl out, but is afraid that she will refuse him, or the adolescent who has an aversion to the unreasonable or unrealistic demands of his parents, but fears that he will forfeit their love if he fails to conform to their wishes). The above authors note that the following factors can cause feelings of anxiety during adolescence:

- Memories of unreconciled childhood experiences
- The possibility of committing misdemeanours that may have harmful consequences for him
- Fear of losing self-control
- Fear of his own aggression
- Anxiety about sexuality
• Anxiety about his dependent/independent condition

• Fear for his reason — incomprehension of own feelings can arouse apprehension that he may be abnormal

• Anxiety about acceptance by peer group

• Anxiety about personal adequacy

• Anxiety about his physical self-image

• Anxiety about sexual identity

• Anxiety about personal values (Conger and Petersen 1984:54-57).

Apart from anxiety and fear the adolescent is also a frequent prey to other negative feelings, such as dejection, depression, jealousy, rage, aggression and the like. Accordingly Monteith et al. (1988:89) regard adolescence as a stage of heightened conflict during which intense emotions are experienced that may find singular forms of expression. The adolescent’s emotional development is especially prone to the influence of environmental and social factors.

2.3.3.4 Social development

Among the most critical development tasks that have to be performed by the adolescent are those of socialisation; carving out a niche for himself in society; acquiring interpersonal skills; cultivating tolerance for personal and cultural differences; and developing self-confidence (Monteith et al. 1988:92). He is confronted by new social-interaction situations that demand social-interaction skills that differ from those required in early childhood. Since the adolescent’s social development is critically influenced by his relations with his parents, teachers, friends and peer group, these relations will be briefly considered here.

(i) Relations with parents

The relationship between an adolescent and his parents changes gradually as he proceeds on his way to adulthood. This changing relationship is merely an extension of the relationship that existed in the preceding years. The parent's authority over him is still decisive and remains a haven of safety and security despite his increasing autonomy and independence.
Although the adolescent frequently rebels against parental authority in the process of his emancipation from the parental home, most adolescents nevertheless still maintain a positive relationship with their parents. In contrast with former belief, most teenagers do not want to sever their relationships with their parents. According to Schickedanz et al. (1990:635) they rather want their parents to be expansive and flexible enough to accept all their experiments and mistakes without rejecting them as people. Independence from parents therefore does not mean a total breach in relations, but rather freedom within the family to make day-to-day decisions, emotional freedom to engage in new relationships, and personal freedom to take responsibility for himself in such things as education, political beliefs and future career.

(ii) Relations with teachers and other adults

The literature pays little attention to the adolescent's relations with other adults who are important to him, yet these relations exert a tremendous influence on his maturation. Unlike the young child, the adolescent no longer accepts without question whatever his teachers tell him. His critical attitude and his understanding of what is and what can be often leads him to depression, dissatisfaction and rebellion against authority and school rules.

The adolescent also strives to achieve independence in the school context, and during the secondary school years he attains autonomy in the execution of many tasks. He realises that he must accept responsibility for his own life and decisions, even for the choice of a career. During this phase the teacher takes the part of escort and companion. He no longer takes the lead, but walks by the pupil's side. The adolescent's physical maturation can turn his admiration of a teacher into infatuation (a crush), with the result that adolescents sometimes fantasise about relations with their teachers or with other adults who are much older than them. The relations between adults and adolescents must therefore be handled with great circumspection and with due recognition of the adolescent's independence/dependence fluctuations.

(iii) Relations with peer group

Peer groups can be divided into a number of categories ranging from the informal circle of friends to organised groups, such as the Pathfinders or an athletics team; from the clique - a group of friends with similar interests and backgrounds - to a crowd - a larger group, often a collection of cliques or children in the same class group. These groups exert a greater or lesser influence on the becoming and development of the adolescent.

Relations with peers are critical for the adolescent's self-actualisation. He shares a great deal of his life with his peer group; goes to school with them, participates in sports with them,
spends leisure time with them and sleeps over at their homes. His peer group serves as a sounding board for his ideas, thoughts and concerns. Matters that cannot be discussed with parents in some instances are freely discussed with the peer group, for example teachers, personal problems, military service, the future, sex, drugs, alcohol and so on.

Since he feels that he is accepted in its ranks the adolescent conforms with the peer group in matters of dress, speech and conduct. The peer group constitutes a world with its own customs, traditions and, sometimes, language and dress. Adults are always more or less excluded from the peer group, although clashes and antagonism between adults and peer group are not necessarily the order of the day.

During his adolescence the child becomes aware that he is moving away from his childhood. In his struggle to differentiate and define himself, he seeks the support of people like himself, that is his peers with whom he can practice adult roles, share problems and learn to adjust to other people. It seems as though the price of emotional autonomy from parents may be a type of emotional dependence on peers. Vrey (1979:104) notes in this regard: "In order to emancipate from the role of child as subordinate, the parental home as sanctuary is functionally replaced by the peer group as a basis of safety".

(iv) **Friendships**

Friendships are relations between individuals rather than with the peer group as a whole. Coleman (in Monteith *et al.* 1988:98) distinguishes different phases in the development of friendships. During early adolescence (11-13 years) friendships centre on the activities of the friends rather than on interaction with them. Depth and feeling are not significantly present in the friendship. During mid-adolescence (14-16 years) the principal demand made on friends is dependability. At this stage the adolescent feels that his friend may not let him down. Friendship during late adolescence (17 years and older) is a more relaxed experience that is shared and in which personalities and interests are the more prominent concerns.

The friendships contracted by boys and girls display the same basic development pattern. The main difference is that the friendships between girls are more personal and emotional, while those between boys concentrate mainly on activities and shared interests.

(v) **Heterosexual friendships**

During early adolescence heterosexual friendships are usually rather casual and informal. Initially contact is limited to sports gatherings, school functions and so on. The informal nature
of the relationship gradually becomes more formal and the couple go out together and see each other regularly.

Heterosexual relationships often offer the adolescent the security and acceptance that is absent from the family context. The realisation that someone else likes, or even loves, him so much strengthens the adolescent’s sense of identity and often confers status within the peer group (Smart 1973:141).

Stressors emanating from the adolescent's relations with friends are discussed in greater depth in par. 3.5.2.2 (ii).

2.3.3.5 Conative and moral development

The conative development of the adolescent depends on his will or inner drive to achieve a particular goal. The will is therefore a dynamic force that carries him towards the realisation of a goal. Conative development involves such matters as aspirations, choices and decision-making. The adolescent's conative development is characterised by the greater psychic vitality with which he pursues and realises a significant goal. He becomes increasingly independent in his choices and decision-making. This need for independent decision-making often leads to disagreements between him and his parents, and between him and other adults, such as teachers.

Moral development is a key aspect of the adolescent's overall development. It bears on both the conative (will-related) and the cognitive aspects of the adolescent's development and is influenced by his progress towards independence and identity. Social and environmental factors also exert a major influence on the adolescent's moral development.

At this stage the adolescent is confronted by a variety of situations. He has to take an increasing number of independent decisions and bear the consequences of such decisions. He also has to judge whether his decisions were right or wrong. To achieve moral maturity he must have conscious knowledge at his disposal that can be applied to evaluate good and evil and that can serve as a frame of reference to guide his behaviour by. This conscious knowledge of good and evil is a touchstone for the adolescent’s founding of a personal value system. He is well-equipped to arrive at an internalised value system at just this juncture in the course of his development. Cognitively he is capable of critical thought, of connecting cause and effect and of seeing past, present and future in perspective. He strives for independence and autonomy and already possesses the ability to exercise responsible choices and, finally, education has already laid the foundation on which his value system, philosophy of life and
perception of the world can be based (Monteith et al. 1988:156).

The development of such a personal, internalised value system is prone, however, to the influence of several factors that may even affect it detrimentally:

- In traditional societies more values and rules are prescribed than in modern society. At present the social fabric is very heterogeneous and values are fluid and relative. The onus rests on the individual to direct his behaviour in accordance with values of his own choice. This responsibility which devolves on the individual in modern society can create problems for the adolescent because he is confronted by a bewildering variety of values without guidelines or rules to help him decide which of these to accept and which not (Thom 1990:427).

- Whether moral values are internalised during adolescence depends largely on the child's relationship with his parents. According to Monteith et al. (1988:159) mutual acceptance, trust and respect between parent and adolescent, as well as good communication between them, lead to mutual empathy and conduce to the forming of the adolescent's conscience. Research also indicates that consistent discipline practised by both parents is one of the crucial factors in moral development, and that undue permissiveness retards moral development because the adolescent receives no guidance towards the development of internal control and the forming of an active conscience (Rice 1984:484).

- The peer group is a critical determinant in the development of a value system. Since acceptance by the peer group is essential for the adolescent, he conforms with the standards and limits for admissible behaviour set by the group. This is particularly the case in families in which parental influence has declined. Adolescents primarily turn to peers in reaction against parental neglect and rejection. According to Rice (1984:486) adolescents who are surrounded by deviant moral values may become delinquent because of their environment. Such delinquency has its origin in the values represented by the surrounding subculture.

- The values of the peer group are not inevitably in conflict with those of parents, although such cases may occur. Conformity with the peer group can have the effect that the values inculcated by the parents are reinforced since parents usually encourage adolescents to befriend peers with the same value orientation as that prevailing in the parental home.
The adolescent’s religious disposition also influences his moral development and behaviour. For example, religious youths display a livelier and more advanced sense of responsibility than irreligious ones. They see their future and that of humanity at large as predictable and certain; they are less anxious, experience a greater sense of security, and identify themselves more readily with parental attitudes, values and behaviour than do people who are not committed to a religious faith. Moreover premarital sexual intercourse and drug and alcohol abuse are less prevalent among them than among their irreligious peers (Thom 1990:431).

The adolescent’s level of cognitive development also influences his moral development. According to Mussen et al. (1990:641) adolescent thinking about moral issues has usually advanced at least to the level of conventional morality. However, many adolescents or even adults do not advance beyond this level to post-conventional stages of moral judgement.

Although adolescence is usually represented as a stage during which the individual spurns traditional and religious values, research such as that conducted by Vener, Zaenglein and Stewart (in Thom 1990:432) has not borne out this perception. Instead they found that adolescents’ respect for authority and their religious convictions remain largely unaltered. Their faith does become more abstract, however, and their religious outlook becomes more tolerant and less dogmatic.

2.3.3.6 Identity formation

Adolescence is the period in the human life cycle when the individual person’s identity development takes its greatest leap forward because of the bodily maturation and the drastic sexual, moral, cognitive and social changes he undergoes at this stage. According to Thom (1990:460) these changes threaten the individual’s sense of integration. Erikson (1968) therefore regards adolescence as a critical phase in the process of identity formation. According to him adolescence is attended by an identity crisis since the adolescent is redefining himself and his role in society. He theorises that “adolescence is a crisis among crises, a period when old issues resurface from childhood and must be resolved once again and put into a new order in a newly emerging sense of self” (Clarke-Stewart et al. 1988:412). The adolescent forms a sense of identity by integrating all the identifications of the preceding phases of development. Erikson refers to this process as ego-synthesis. The adolescent also has to be aware of his identity, repose confidence in his self-sameness and experience a sense of continuity, that is, that he is a unique person and that he is still the person he was in his childhood.
According to Havighurst (Freiberg 1987:361) the adolescent has to master the following tasks in order to overcome the identity crisis:

- Accepting one's physique and using the body effectively
- Achieving new and more mature relations with age-mates of both sexes
- Achieving a masculine or feminine gender role
- Achieving emotional independence from parents and other adults
- Preparing for a career
- Preparing for marriage and family life
- Desiring and achieving socially acceptable/responsible behaviour
- Acquiring a set of values and an ethical system as a guide to behaviour - developing an ideology.


It seems, therefore, that all adolescents seek certainty of identity, but that with some a stage of identity achievement is effected with greater certainty. According to Thom (1990:467) adolescents who struggle with confusion about their identity or role are inclined to delinquent acts, drug abuse and acts of alienation. By contrast the adolescent who has solved the identity problem successfully, or who has successfully concluded his quest for an identity of his own, is characterised by the following:

- tolerance towards himself and others
- the ability to take decisions and carry out tasks
- awareness of his abilities in an occupation
the courage to be alone and independent

a vision for the future and the ability to cope with new realities and conflicts

the ability to realise his full human potential (Thom 1990:467).

However, even if the adolescent feels that he has appropriated his own identity, this identity is not permanent (Monteith et al. 1988:173). His personal identity will keep on changing throughout his life under the influence of various experiences he will be exposed to, expectations and demands that will be imposed on him, and ideals he will pursue.

Another problem area in identity formation concerns the adolescent's sexual identification. According to traditional schools of thought social forces exert a sustained and cumulative influence on the sex-role identification of the child, which leads to increasing conformity to cultural norms as the child grows up (Monteith et al. 1988:177).

According to a more recent conception of sex-role identification its ultimate goal is not to assume a male or female sex-role, but to transcend the sex-role and establish an identity that possesses the positive attributes that typify both male and female configurations. This identity is described as androgynous (Hock and Curry 1983:462).

Just how the adolescent accedes to sex-role identification is of less importance for this research than the fact that, as with identity formation, some adolescents experience more stress and problems with sex-role identification than others. It is sex-role typing that causes stress for the adolescent who finds it difficult to fit into the role assigned to him by society. Homosexual and lesbian tendencies can act as severe stressors during adolescence.

2.3.3.7 Self-concept formation

Self-concept formation has many implications for the becoming and development of the adolescent. It can be a stressor or a mediator of the impact of stress (cf. par. 3.6) in the life of the adolescent. The self-concept comprises the following dimensions:

- the physical self
- the personal self
- family self
social self

moral self (Raath and Jacobs 1990:17).

These dimensions of the self-concept are acquired by a process that continues throughout the life of the individual, that is, throughout the past, the present and the future.

It is therefore justifiable to conclude that the individual's self-concept is not innate, but that he acquires self-knowledge in a particular way dictated by his personal experience and by this means forms a self-concept. A number of researchers therefore emphasise the dynamic quality of the self-concept (Epstein 1973:407; Raath and Jacobs 1990:24; Rice 1984:225 and Vrey 1979:46). Epstein (1973:407) says in this connection that the self-concept is a dynamic organisation that changes with experience ... "it appears to seek out change and exhibits a tendency to assimilate increasing amounts of information, thereby manifesting something like a growth principle".

Rice (1984:224) contends that the self-concept stabilises during adolescence; that for most adolescents there are no sex differences per se in the level of self-esteem; and that ego identity becomes more positive during the secondary school years. In spite of reported relative stability of the inner core of the self during adolescence, youths are extremely sensitive to the evaluations and opinions of others, as well as to important events and changes in their lives. This sensitivity and the changes in the adolescent's body, his capacity for formal-operational thinking, his egocentrism, his heightened emotional experience, his sexuality and his changed social relationships and moral development therefore increase the dynamics of the self-concept. He is highly critical and analytical about himself and therefore tends to move between the poles of a positive and a negative self-concept: "As he spends an evening alone, a teenager worries about whether anyone really likes him; the next afternoon, he is buoyed by his friends' infectious high spirits and hijinks" (Clarke-Stewart et al. 1988:408). This fluctuation in what he knows about and thinks of himself can cause considerable stress for the adolescent. According to Coleman and Hendry (1990:47) low self-esteem can be related to depression, anxiety and poor school performance, all of which can act as stressors.

2.4 Conclusion

In this chapter the theory underlying a psycho-educational perception of mankind was briefly discussed. The adolescent's becoming and development in different domains of human existence were also examined. Brief reference was made to the fact that some researchers and authors regard adolescence as a period of "storm and stress" while others consider the
adolescent to be relatively free from undue stress, exactly because their ego is strong enough to withstand the pressures (Offer in Coleman and Hendry 1990:201).

Nevertheless it cannot be denied that adolescence is a difficult phase during which changes take place in all the domains of becoming and adaptations have to be made. Mussen et al. (1990:568) contends that it seems almost unfair that so many socialisation demands - for independence, for changing relationships with peers and adults, for sexual adjustment, for educational and vocational preparation - are made at the same time that the young person is experiencing an almost unprecedented rate of biological maturation. Above all the adolescent struggles with the forming of his own identity and the stabilisation of a realistically positive self-concept. The high incidence of stress-related problems in the adolescent, such as suicidal tendencies, depression, eating disorders and the like compel the researcher to examine the stress phenomenon more closely.

In the next chapter some stress theories will be discussed. The causes (stressors), symptoms and mediators of stress, with specific reference to those relating to the adolescent, are examined with a view to constructing a knowledge base that can serve as a reference framework for the design of an inventory calculated to identify stress in the adolescent.
CHAPTER 3

STRESS

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3.1 INTRODUCTION

Since stress is approached from different perspectives the literature contains numerous divergent and often confusing definitions of the concept of stress (Thoresen and Eagleston 1983:48). According to Price (1985:36)

"the absence of an adequate theoretical and conceptual framework of stress is a major obstacle in studying stress. How one conceptualizes stress etiology and the effects of stress, strongly influences how one attempts to study and measure it".

Defining stress is hampered further by methodological difficulties inherent in such studies, particularly the difficulties of measuring in any precise form such relatively intangible processes.

Innumerable general approaches to and models and theories of stress have been formulated, but according to Kleber (1982:47) most of these are of little theoretical value. In a few isolated instances the researcher's specific approach or model has led to scientific empirical investigations; and only a few researchers have exerted a significant influence on stress research in general. Here the works of Selye (1956), Lazarus (1981), Holmes and Rahe (1967), and the research done by the Michigan group (± 1962), can be singled out as being generally important for the theoretical groundwork of this study.

As a resultant extension of the work done by the above-mentioned researchers, several other researchers have been using children and adolescents since the turn of the decade as subjects in research studies on life and school stress. This work was also greatly influenced by the work of such researchers as Moore, Schultz, Chandler, Compernolle, Lazarus and Cohen. Of these Chandler and Schultz, two Americans, provided the main thrust, by way of their personal inputs, to concept formulation and the determining of research methods for this particular research project. The contribution of both groups of researchers will be examined in paragraphs 3.2.1 to 3.3.5.

In this chapter an attempt is made with reference to the above-mentioned theories and approaches to elucidate the concept of stress to such effect that, in conjunction with characteristic manifestations of stress, it can serve as a guideline for the identification of stress in adolescents. On the identification per se more will be said in chapters 4, 5 and 6. A distinction is made between general theoretical and empirical approaches to stress as opposed to definitional models that are expressly designed for the study of stress in children.
3.2 GENERAL THEORETICAL MODELS

3.2.1 Hans Selye’s physiological stress model

The Canadian physiologist Hans Selye studied the stress phenomenon from a medical perspective (Sutherland and Cooper 1990:13). He defined stress as "a state manifested by a syndrome which consists of all the non-specifically induced changes in a biologic system" and continues by observing that "stress is the non-specific response of the body to any demand made upon it" (Selye 1956:54). With these definitions he draws a clear distinction between specific and aspecific or non-specific processes. For example, in cold weather blood vessels in the body become constricted due to heat loss while hot weather causes dilation of blood vessels to aid evaporation and cooling of the body. According to Selye the narrowing and dilation of blood vessels are specific processes that are characteristic responses to certain stimuli. In both cases, however, if the temperature variation is 'alarming' enough, other non-specific processes also occur in which the adrenal glands are closely involved. As a result various physiological processes (physical and chemical) set in that enable the organism1 to defend itself against harmful stimuli and to prepare itself to adapt to changing circumstances. According to Selye (1956:54) the general or non-specific physiological processes as a whole constitute a stress state, and stress is independent of the nature of the stimuli. Kleber (1982:17) asserts that according to Selye's perception stress has no specific cause.

The stress state occasioned by non-specific physiological reactions manifests in a syndrome termed the General Adaptation Syndrome (GAS), which includes wasting of the body as a result of these reactions. He holds that "stress is essentially the rate of all the wear and tear caused by life" (Selye 1956:viii). Kleber (1982:17) observes that GAS is the observable manifestation of stress and Selye thereby makes a distinction between the condition itself and the physiological phenomena that typify it.

Although stress has no specific causes in Selye's view, he emphasises that GAS is recognisable by physiological symptoms. The syndrome appears in three phases that reflect the course of the organism's adaptation to a stressor, namely the alarm/shock stage, the resistance stage and the collapse stage (cf. Figure. 3.1).

---

1) Organism: In his research material Selye refers to stress in the 'organism' because he believes that stress also occurs in lower life forms without nervous systems and in tissue cultures developed outside the organism (Kleber 1982:19).
The alarm (shock) reaction is the organism's immediate psycho-physiological response to a threatening stimulus. The sympathetic nervous system and the adrenal glands are responsible for the secretion of hormones in the bloodstream which cause various chemical and organic changes involving various parts of the body, such as the kidneys, the heart and blood vessels, the liver, the pituitary gland and the adrenal glands (Kleber 1982:18).

The phenomena typifying the second or resistance phase of the adaptation syndrome are distinctly different from those of the preceding phase. Physiological processes decline and are primarily determined by the specific nature of the harmful or threatening stimuli. During this phase the organism's resistance to stimuli is optimal but cannot last indefinitely.

If the organism is confronted with a stressor for prolonged periods, with the result that it cannot return to homeostasis, then according to Selye it enters the third and last phase of GAS, that is, the collapse phase. Its energy becomes depleted and its bodily resistance declines. The symptoms of the alarm (shock) phase reappear, but now they can no longer be reversed; the organism is no longer capable of defending itself and it may die (Sutherland and Cooper 1990:14). Accordingly Selye defines stress in relation to GAS as a "stimulus event of sufficient severity to produce disequilibrium in the homeostatic physiological systems" (Honig 1986a:51).
To sum up the following points may be stated as the principal findings emanating from Selye's research (Kleber 1982:21):

- Stress is a condition that comprises a complex whole of physiological reactions in an organism.
- Stress has no specific and special causes; in fact everything can cause stress.
- The stress syndrome can lead to what are termed diseases of adaptation, which are caused by excessive or inadequate defence against a stressor.

3.2.1.1 Marginal notes on the work of Hans Selye

Although Selye's research rendered a major contribution to stress research in general and more particularly in relation to physiology, his approach and research inputs have been questioned for quite some time (Lacey 1967, Mason 1975, Kleber 1982 and Sutherland and Cooper 1990). His use of stress concepts is not only inconsistent and ambiguous, but he sometimes describes GAS as the *manifestation* of stress and on other occasions, as the *reaction* to stress (Kleber 1982:20). Moreover research has shown that responses to stimuli do not always follow the same pattern because they are stimulus-specific and dependent on the type of hormonal secretion. In his research Selye also neglected to address the issue of psychological responses to stress, or to take into account that a response to a potential threat may, in turn, become the stimulus for a different response (Sutherland and Cooper 1990:14). He also disregarded the individual's ability to recognise stress and act in various ways to change his or her situation.

For the purposes of the present study, however, Selye's research is useful in some respects. Probably the most significant consideration here is the fact, according to Selye (1974:xv), that stress is an inevitable part of living and is not necessarily harmful in itself. For example, it is an essential requirement for motivation, growth, development and change, all of which are major determinants in the becoming and development of the adolescent. Excessive stress can have damaging consequences, however, and can call forth extreme emotional reactions which can lead to marked changes in attitudes and behaviour (Chandler 1981a:164). Accordingly Selye distinguishes between:

- eustress - the result of proactive, positive or adaptive responses to stressful life events and
distress - the result of negative, non-constructive or maladaptive responses to stressful life events (Schultz and Heuchert 1983:22).

In conclusion it must be emphasised that Selye's research contributed significantly to an understanding of the impact of stress on the human body. Without absolutising physical considerations the physiological approach must be studied in context with other approaches so that a comprehensive perception of the stress phenomenon can be gained.

3.2.2 The cognitive perception of stress as presented by Lazarus

Unlike the physiological approach to stress propagated by Hans Selye, the American psychologist, Richard S Lazarus, studied stress from the viewpoint of psychology. He characterised his approach as transactional and cognitive-phenomenological (Coyne and Lazarus 1980:144-159), explaining that transactional means that an analysis of his situation is determined by a particular relationship between people and their environment. In this relationship the demands of the environment, and sometimes those emanating from the person himself, may dominate or threaten to dominate the individual's skills.

Stress is clearly a relational concept that embraces both environmental and the personal variables. In order to understand stress as a phenomenon, therefore, both the environment and the person must be understood first. A person may feel threatened if the demands of the environment are too exacting, but also if such demands are negligible or if the person lacks the skills to overcome problems emanating from the environment.

By using the term cognitive-phenomenological Lazarus emphasises the person's objective experience and processing of his relationship with his environment (Kleber 1982:48). People interpret whatever they are confronted by and use the information thus gained to give a shape to their situation. Thus the relationship between the person and his environment is influenced by his subjective experience and interpretation of events. The person observes environmental changes, evaluates them according to his subjective judgment, and acts accordingly. By this means a constant flow of psychological, social and physiological processes is kept in train. According to Lazarus knowledge and understanding of this ongoing transaction is essential for the study of stress (Lazarus and Launier 1978:287).

Under certain circumstances a person rates a situation as dangerous or threatening to his

---

There is a difference between the concepts of transaction and interaction. The latter refers to two separate, independent entities — person and environment — that affect each other. The term "transaction" does not refer to the said two systems as separate entities, but as elements that cannot exist independently. Lazarus took to using the term "transaction" largely under the influence of the work of the American philosopher Dewey (Kleber 1982:48).
psychic or physical well-being. It is this interpretation that leads to stress reactions. Thus the mere sight of a dentist preparing to administer an injection causes the same bodily reactions as the actual injection. For Lazarus, the appraisal of a situation or event is the underlying cause of psychic stress. If a stimulus is therefore not perceived as dangerous it does not cause stress that is significant from a psychological point of view. He therefore places considerable emphasis in his research on the way in which a situation is perceived and interpreted.

By appraisal every person evaluates at once, and automatically, whatever he encounters in the light of its relevance and meaning for himself. If a stimulus is interpreted as "good" the person experiences a positive emotion while the opposite is true if the stimulus is perceived to be negative. Cognitive activity, that is to say the evaluation of a situation, therefore precedes emotions, according to Lazarus, and consequently the process of appraisal determines the person's reactions, the emotions he experiences and the ultimate consequences. Here Lazarus seems to be contradicting himself. In the preceding paragraph it was mentioned that a stimulus that is not perceived as dangerous or threatening does not cause stress that is significant from a psychological point of view. Yet Lazarus avers that a stimulus that is interpreted as "good" elicits a positive emotion. The researcher therefore considers that Selye's concept of eustress (cf. par. 3.2.1) can be implemented by Lazarus in this context to describe the positive emotions following a stimulus that is not interpreted as threatening or harmful.

Lazarus distinguishes three forms of appraisal, namely primary appraisal, secondary appraisal and reappraisal (Lazarus and Launier 1978:302-308).

- **Primary appraisal**

During the primary appraisal a situation is evaluated by considering the question: "Could the situation threaten personal well-being in any way?" In answer to this question, one could evaluate a situation as neutral, positive or stressful, that is, as more or less negative for the person's well-being. A negative or stressful situation could be interpreted as harm-loss, threat or challenge. The term "harm-loss" in this context refers to damage already suffered by the person as a result of losing a family member, failing an examination and so on. On the other hand "threat" refers to something that has not happened yet, that is, to a danger somewhere in the future: apprehension at the possibility of contracting a serious illness, or of not passing an important examination. The difference between harm-loss and threat is particularly significant for behaviour that follows the interpretation of situations. If a person is experiencing, or has experienced unpleasant circumstances he will try to come to terms
with the experience in some way or other, or to modify circumstances as much as possible. When an unpleasant event appears imminent, however, efforts are made instead to preserve the status quo or to prevent or ward off the impending situation. The difference between threat and challenge is merely one of degree, the former being referenced to potential injury while in the case of challenge the demands emanating from the environment are interpreted as severely taxing yet still manageable and not too difficult.

- **Secondary appraisal**

Primary appraisal is followed by secondary appraisal, which proceeds from the question: "What can I do about this?" Here the person weighs up all the possibilities of overcoming his tension and problems. He evaluates the different coping strategies with a view to their possible chance of success. This process is a function of earlier experiences in similar situations, the individual's self-image and the availability of means to cope with (overcome) his stress (Lazarus and Launier 1978:306). Primary and secondary appraisal bear close resemblances, and respond interactively, to each other. The difference between them resides in the underlying question informing each of these processes, namely: "Am I okay or in trouble?" (primary appraisal) and "What to do about it?" (secondary appraisal) (Coyne and Lazarus 1980:150).

- **Reappraisal**

A person reinterprets his situation with reference to information obtained by observing his own reactions and those of his environment. The term "reappraisal" refers to the changes in personal evaluations due to changes in his internal and external circumstances. The relation between person and environment is in constant flux, after all, so reappraisal bears on the feedback from this process to the person.

The concept of appraisal as applied by Lazarus is somewhat vague and raises the question of whether evaluating the significance of a situation is a rational occurrence. According to Kleber (1982:51) Lazarus denies this and maintains instead that appraisal can be the very opposite of rational, that it can even be irreal or erroneous. Moreover, it is not necessarily a conscious process since the interpretation of a situation can also be implicit or unconscious. Lazarus maintains that his intention in resorting to the concept of appraisal is to indicate that thought processes, such as those involved in the forming of concepts and expectations, exert an important influence on emotional phenomena. He compares the concept of appraisal with the modern sense in which the term "observation" is understood. Observation is invariably also interpretation, in other words an appraisal of a situation to
determine its significance and relevance for the individual.

In his later publications Lazarus shifts his emphasis increasingly to the way in which people handle stress. His focus on primary appraisal recedes and is turned increasingly on secondary appraisal and the coping responses generated from it. The way in which people deal with tensions and problems, according to Lazarus, is more important for their health, personal welfare and social functioning than the gravity or magnitude and the nature of stress factors (Lazarus and Launier 1978:321).

3.2.2.1 Marginal notes on the work of R.S. Lazarus

Next to Selye, Lazarus is probably one of the most frequently quoted authors on stress. His main contribution to stress research is his perception of stress as a transaction between a person and his environment, and his concentration on the cognitive factors whence stress reactions originate. These preoccupations on his part pioneered "coping with stress" as a research field (Kleber 1982:54). Kleber (1982:54) criticises the research done by Lazarus, maintaining that the contribution made by Lazarus to theory formulation is not based on the necessary exhaustive empirical investigations. He also contends that the answers given by Lazarus to the question of exactly how research should be done on the subject of stress remains unclear. Furthermore, he criticises Lazarus for the elusive character of his concepts, maintaining that Lazarus emphasises the circularity and complexity of the processes he deals with to such an extent that the reader gains the impression that everything is intimately connected with everything else.

For the researcher working with the psychology of education, however, the work done by Lazarus is especially significant. Although he does not use the same concepts, the categories of psychology of education, namely meaning attribution (cf. par. 2.2.2.1), involvement (cf. par. 2.2.2.2) and experience (cf. par. 2.2.2.3) as well as self-concept (cf. par. 2.2.1.4) and self-actualization (cf. par. 2.2.2.4), are implicitly accounted for in his paradigm1.

In the psychological sense and as defined by Lazarus, meaning attribution is first of all pivotal for stress. Lazarus maintains that the cognitive evaluation of a situation during primary appraisal results in the interpretation of that situation as positive, negative or neutral. The researcher contends that the same applies from the viewpoint of psycho-education.

Secondly, the question probed by secondary appraisal is "What to do about it?" (Coyne and

---

1) The work done by Lazarus amounts much more to a perception of or perspective (paradigm) on the stress phenomenon than to a detailed theory.
Lazarus 1980:150), in other words from the perspective of psycho-education: "How can I involve myself in the situation?"

Lazarus further contends that his intention in resorting to the concept of appraisal is to indicate that the thought processes that produce concepts and expectations influence emotions (Kleber 1982:51). As indicated, the concept of appraisal is closely related to the psycho-educational concept of observation. Just as observation is always both interpretation and experience, so stress and the appraisal of a stress situation exerts a direct influence on the individual's emotions and experience. Kleber (1982:51) notes in this regard that the attribution of meaning to situations is always at the root of feelings and emotions (experience).

Finally, Cooper, Cooper and Eaker (1988:11) note that, according to Lazarus, the intensity of the stress experience is determined significantly by how well a person feels he can cope with an identified threat. If a person is unsure of his coping abilities, he is also likely to feel overwhelmed and helpless. It seems, therefore, that a person's inability to cope with stress can have a negative impact on his self-concept and his self-actualization. However, since there is always an interactive relationship between the psycho-educational categories, this researcher is of the opinion that a realistically positive self-concept and self-actualization may lead to a sense of control over stress. The researcher therefore endorses the ideas of Lazarus about circularity and complexity despite Kleber's criticism. And by the same token, both the cognitive perception of stress and the appraisal theory as represented by Lazarus are considered invaluable aids to the construction of stress theory in a psycho-educational context.

### 3.2.3 The Michigan approach to stress

The stress phenomenon as manifested in the work situation has been subjected to systematic investigation by the renowned Institute for Social Research at Ann Arbor, Michigan (Kleber 1982:54). The model proposed by the Institute comprises six groups of variables: the objective environment, the subjective environment, individual stress reactions, ultimate consequences, personality and social support (cf. Figure 3.2).
In this model, special consideration is given to the size of the enterprise, the hierarchy within it, the amount of work to be done and the description of one employee's function as well as other employees' perception of functions and roles in the organisation. The objective environment is observed by the person and therefore engenders the subjective environment which comprises a totality of observations and perceptions of the work situation.

In the median-level investigation – a large-scale study of the tensions of median-level employees in 17 Dutch organisations, undertaken in accordance with the Michigan model, 13 stressors are differentiated as variables in the subjective environment (Kleber 1982:58). The most prominent among these are role unclarity, work load, role conflict, lack of support and uncertainty about the future. The following group of variables in the Michigan model was formed by the individual reactions to the various environmental factors and are termed stress reactions or the observable symptoms of stress. A distinction is made between physiological reactions (high blood pressure, high cholesterol level in blood, heart rate), psychological reactions (job dissatisfaction, anxiety, irritation, depression) and behavioural reactions (smoking, alcohol use, absenteeism).
The following group of variables are consequences of long-term stress reactions, which can damage the health of those experiencing them. The variables concerned are absence from work, unfitness for work and many other ill effects. In the Michigan investigation special attention was paid to cardiovascular diseases.

Personality and social support are regarded as further conditioning variables. The term "conditioning" here indicates that a particular aspect of the organisation will only cause tension in an individual if he possesses a particular personality trait, or if he receives little support from his superiors or colleagues (Kahn 1970:99). Personality traits concerned here are flexibility or rigidity, type A or B personality (behaviour) and control.

Social support is integral to most recent studies conforming to the Michigan model. Investigations are particularly referenced to the so-called "buffering hypothesis": good social relations form a buffer so that in stress situations few, if any, stress reactions become manifest (La Rocco, House and French 1980:216).

3.2.3.1 Marginal notes on the work of the Michigan group

In contrast to the work done by Lazarus, the Michigan approach is supported by a number of empirical investigations (Van Vucht Tijssen, Van den Broecke, Dijkhuizen, Van Reiche and Wolff 1978; and Caplan, Cobb, French, Van Harrison and Pinneau 1975). Unfortunately, only stressors found in the workplace are incorporated into this model and little attention is paid to such matters as the relation between work situation and family situation. Kleber (1982:65) notes that coping, that is, how people deal with their problems, is not investigated consistently. People’s active efforts to overcome and handle stress successfully are therefore neglected in this model. Similarly, little attention is paid to the transactional character of stress processes as represented by Lazarus (cf. par. 3.2.2).

The work of the Michigan group does have certain implications for the psycho-educational researcher, however. The work situation could have features in common with the school situation, and such stressors as work load, role conflict, lack of support and uncertainty about the future should be investigated in the school context. Similarly, stress reactions as represented by the Michigan group are common among adolescents, for example dissatisfaction with work (Omizo et al. 1988:269), alcohol and drug abuse (Omizo et al. 1988:269 and Price 1985:36), absence from school (Caudill and Carrington 1986:7 and Friesen 1985:19) and anxiety, irritation and depression (Omizo et al. 1988:269; Price 1985:36 and Schultz 1980:13).
Although the Michigan model cannot be applied as a whole, some of its elements can serve as a reference framework for theory and model construction pertaining to the identification of stress in adolescents.

### 3.2.4 The Person-Environment fit approach

The Person-Environment fit (PE fit) approach should be seen as a corollary to the Michigan model rather than as an independent approach. This is borne out by the frequent use made of it by theoreticians to replace the subjective environment in the Michigan model (Kleber 1982:63). PE fit is an indicator of the extent of correspondence between observed demands emanating from the work environment and the desires and needs of the person as regards the work environment. *Fit* is therefore assessed in terms of the desired and actual levels of various job conditions.

One of the principal problems/disadvantages of this approach is the fact that it infers some static situation, whereas in reality stress reactions and potential stress reactions are dynamic processes (Sutherland and Cooper 1990:20). The model nevertheless has some use in cases where some personality traits are relatively stable. For example: Rigid people tend to avoid conflict. According to Kahn et al. (in Sutherland and Cooper 1990:21) they rely on compulsive work habits and show increased dependence on authority figures when under threat. In contrast to this, flexible people react chiefly by complying with work demands and by seeking support from peers and subordinates, which can lead to overworking. Rigid and flexible personality types will both therefore create potentially the same, but actually very different problems. Personality type can therefore exert a significant moderating influence on PE fit, and the PE fit approach therefore favours the inference that a particular personality composition will render the person endowed with it more suitable for some occupations than for others.

### 3.2.4.1 Marginal notes on the PE fit approach

The importance of the PE fit approach for the present research project lies in the fact that it shows that a discrepancy between perceived demands of the environment (in this case demands made by parents, teachers and peer group) and the desires, potentialities and needs of the person can cause stress. Elkind (1983:30) identifies the stressors applied to young children in an attempt to hurry them into premature adulthood. Among others he notes pressures to grow up too quickly, to be successful at all costs, to cope with increasing demands for academic and athletic achievements, and to survive in environments that are based on factory, product models. An investigation should therefore be made into the extent
to which unrealistically high or low demands imposed on adolescents by parents, teachers and peer groups as regards academic, athletic and social performance correlates with the stress experienced by adolescents as a result of such pressures. Unnecessary competition, performance pressure and status consciousness should also be closely examined: The PE fit approach can be a useful aid to theory construction in this regard (cf. items 25, 33, 79, 90, 117 of the ASII Appendix A).

3.2.5 The stressful life-events approach

The effect of stressful life-events on the etiology of a number of diseases has been researched for over 40 years by a wide diversity of researchers. Derived from William B. Cannon’s early observations of how emotions are related to certain bodily changes and Adolph Meyer’s (Kleber 1982:67) interest in the life chart as an aid to medical diagnosis, stressful life-events as a research field was first given formal recognition at the 1949 Conference on Life Stress and Bodily Disease sponsored by the Association for Research in Nervous and Mental Diseases (Rabkin and Struening 1976:1013). Since then a number of research groups have adopted this life-events approach to stress and a wealth of articles has appeared in major psychological, psychiatric, psychosomatic and sociological journals and, to a lesser extent, in those of clinical medicine and epidemiology.

The general purpose of the life-events approach is to indicate that there is a temporal association between the onset of a disease and a recent increase in the number of events that require socially adaptive responses from the individual. It is presumed, furthermore, that the more stressful life-events are and the more radical their influence on the individual’s life, the more physical and mental disorders the person will suffer, the underlying assumption being that stressful events act as precipitating factors that influence the frequency rather than the type of illness episodes experienced. The onset of psychiatric as well as physical disorders and accidents has been researched both prospectively and retrospectively. Most researchers have availed themselves of the 43 item checklist of Holmes and Rahe (1967) in its original form or in an adapted form (cf. Table 3.1).
<table>
<thead>
<tr>
<th>Rank</th>
<th>Life Event</th>
<th>Mean Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Death of spouse</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Divorce</td>
<td>73</td>
</tr>
<tr>
<td>3</td>
<td>Marital separation</td>
<td>65</td>
</tr>
<tr>
<td>4</td>
<td>Jail term</td>
<td>63</td>
</tr>
<tr>
<td>5</td>
<td>Death of close family member</td>
<td>63</td>
</tr>
<tr>
<td>6</td>
<td>Personal injury or illness</td>
<td>53</td>
</tr>
<tr>
<td>7</td>
<td>Marriage</td>
<td>50</td>
</tr>
<tr>
<td>8</td>
<td>Fired at work</td>
<td>47</td>
</tr>
<tr>
<td>9</td>
<td>Marital reconciliation</td>
<td>45</td>
</tr>
<tr>
<td>10</td>
<td>Retirement</td>
<td>45</td>
</tr>
<tr>
<td>11</td>
<td>Change in health of family member</td>
<td>44</td>
</tr>
<tr>
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<td>Pregnancy</td>
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<td>Sex difficulties</td>
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<td>14</td>
<td>Gain of new family member</td>
<td>39</td>
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<tr>
<td>15</td>
<td>Business readjustment</td>
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<tr>
<td>16</td>
<td>Change in financial state</td>
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<tr>
<td>17</td>
<td>Death of close friend</td>
<td>37</td>
</tr>
<tr>
<td>18</td>
<td>Change to different line of work</td>
<td>36</td>
</tr>
<tr>
<td>19</td>
<td>Change in number of arguments with spouse</td>
<td>35</td>
</tr>
<tr>
<td>20</td>
<td>Mortgage over $10,000</td>
<td>31</td>
</tr>
<tr>
<td>21</td>
<td>Foreclosure of mortgage or loan</td>
<td>30</td>
</tr>
<tr>
<td>22</td>
<td>Change in responsibilities at work</td>
<td>29</td>
</tr>
<tr>
<td>23</td>
<td>Son or daughter leaving home</td>
<td>29</td>
</tr>
<tr>
<td>24</td>
<td>Trouble with in-laws</td>
<td>29</td>
</tr>
<tr>
<td>25</td>
<td>Outstanding personal achievement</td>
<td>28</td>
</tr>
<tr>
<td>26</td>
<td>Wife begins or stops work</td>
<td>26</td>
</tr>
<tr>
<td>27</td>
<td>Begin or end school</td>
<td>26</td>
</tr>
<tr>
<td>28</td>
<td>Change in living conditions</td>
<td>25</td>
</tr>
<tr>
<td>29</td>
<td>Revision of personal habits</td>
<td>24</td>
</tr>
<tr>
<td>30</td>
<td>Trouble with boss</td>
<td>23</td>
</tr>
<tr>
<td>31</td>
<td>Change in work hours or conditions</td>
<td>20</td>
</tr>
<tr>
<td>32</td>
<td>Change in residence</td>
<td>20</td>
</tr>
<tr>
<td>33</td>
<td>Change in schools</td>
<td>20</td>
</tr>
<tr>
<td>34</td>
<td>Change in recreation</td>
<td>19</td>
</tr>
<tr>
<td>35</td>
<td>Change in church activities</td>
<td>19</td>
</tr>
<tr>
<td>36</td>
<td>Change in social activities</td>
<td>18</td>
</tr>
<tr>
<td>37</td>
<td>Mortgage or loan less than $10,000</td>
<td>17</td>
</tr>
<tr>
<td>38</td>
<td>Change in sleeping habits</td>
<td>16</td>
</tr>
<tr>
<td>39</td>
<td>Change in number of family get-togethers</td>
<td>15</td>
</tr>
<tr>
<td>40</td>
<td>Change in eating habits</td>
<td>15</td>
</tr>
<tr>
<td>41</td>
<td>Vacation</td>
<td>13</td>
</tr>
<tr>
<td>42</td>
<td>Christmas</td>
<td>12</td>
</tr>
<tr>
<td>43</td>
<td>Minor violations of the law</td>
<td>11</td>
</tr>
</tbody>
</table>

The Social Readjustment Rating Scale (SRRS) devised by Holmes and Rahe comprises a list of events arranged in order of gravity rating, the death of a spouse being given the highest...
rating (100) and minor law infractions the lowest (11). In the compilation of this checklist an effort was made to incorporate fairly common situations that arise from familial, personal, occupational and financial events that occasion a change in ongoing adjustment. Adaptations of and changes to this scale followed rapidly and scales relating to particular populations, such as children, college students and athletes, were developed (cf. Table 3.2).

<table>
<thead>
<tr>
<th>TABLE 3.2: THE STRESS SCALE FOR CHILDREN</th>
</tr>
</thead>
<tbody>
<tr>
<td>The scale below, based on Holmes and Rahe Stress Scale for adults, ranks the life events that cause stress in children (Forman, Erdson and Hagan 1983:573)</td>
</tr>
<tr>
<td>Life Event</td>
</tr>
<tr>
<td>Death of a parent</td>
</tr>
<tr>
<td>Parent's new relationship</td>
</tr>
<tr>
<td>(new siblings involved)</td>
</tr>
<tr>
<td>Divorce of parents</td>
</tr>
<tr>
<td>Parent's new relationship</td>
</tr>
<tr>
<td>Separation of parents</td>
</tr>
<tr>
<td>Parent's jail term</td>
</tr>
<tr>
<td>Death of a close family member (i.e. grandparent)</td>
</tr>
<tr>
<td>Personal injury or illness</td>
</tr>
<tr>
<td>Parent's marriage</td>
</tr>
<tr>
<td>Suspension or expulsion from school</td>
</tr>
<tr>
<td>Parent's remarriage</td>
</tr>
<tr>
<td>Parents' reconciliation</td>
</tr>
<tr>
<td>Summer vacation</td>
</tr>
<tr>
<td>Parent or sibling illness</td>
</tr>
<tr>
<td>Mother's pregnancy</td>
</tr>
<tr>
<td>Anxiety over sex</td>
</tr>
<tr>
<td>Birth of a new baby (or adoption)</td>
</tr>
<tr>
<td>New school or new classroom or new teacher</td>
</tr>
<tr>
<td>Money problems at home</td>
</tr>
<tr>
<td>Death (or moving away) of a close friend</td>
</tr>
<tr>
<td>Death of a valued pet</td>
</tr>
<tr>
<td>Change in school work</td>
</tr>
</tbody>
</table>

Mark the items that happened in the last 12 months and add up the points. If the score exceeds 300 points, the child may be (but not necessarily is) more vulnerable to stress-related problems.

Coddington (1972) adapted the SRRS to include items made relevant to children and adolescents (Forman, Erdson and Hagan 1983:573). He also constructed a different list of experiences for various age groups. Item values were not allocated on the strength of self-
reporting, but by enlisting the services of such professional persons as teachers, medical doctors and mental health workers.

In his research Chandler (1981a:164) concluded that Coddington's research paid insufficient attention to certain school-related problems. He contends that speech problems, learning problems, vision and hearing difficulties, and needs for special education services can be added to the list of stressful life-events. Other items, such as those with relatively low prevalence, for example discovery of being an adopted child, or items that are not normally experienced as stressful, for example outstanding personal achievement, decrease in number of arguments with parents and joining a church can be disregarded, according to Chandler, especially if the emphasis has been on negative stress.

Chandler modified Coddington's list of 36 life-events by omitting 10 of the original items and inserting 11 new items. His Source of Stress Inventory comprises 37 life-events that are usually associated with some degree of negative stress. Like Coddington, Chandler enlists the services of mental health professionals and teachers to establish the rankings for the stress inventory (Table 3.3). The mental health professionals involved were school and clinical psychologists, psychiatrists, psychotherapists and social workers in the western Pennsylvania area (USA) who worked primarily with children.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Event</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Physical Child Abuse</td>
<td>20.00</td>
<td>1.00</td>
</tr>
<tr>
<td>2</td>
<td>Death of a Parent</td>
<td>19.43</td>
<td>1.50</td>
</tr>
<tr>
<td>3</td>
<td>Divorce of Parents</td>
<td>17.80</td>
<td>2.56</td>
</tr>
<tr>
<td>4</td>
<td>Death of a Brother or Sister</td>
<td>17.78</td>
<td>2.63</td>
</tr>
<tr>
<td>5</td>
<td>Acquiring a Visible Deformity</td>
<td>16.71</td>
<td>3.02</td>
</tr>
<tr>
<td>6</td>
<td>Marital Separation of Parents</td>
<td>16.66</td>
<td>2.55</td>
</tr>
<tr>
<td>7</td>
<td>Foster Home Placement</td>
<td>16.39</td>
<td>3.51</td>
</tr>
<tr>
<td>8</td>
<td>Serious Illness Requiring Hospitalization of Child</td>
<td>15.87</td>
<td>3.55</td>
</tr>
<tr>
<td>9</td>
<td>Death of a Close Friend</td>
<td>15.47</td>
<td>3.95</td>
</tr>
<tr>
<td>10</td>
<td>Jail Sentence of a Parent</td>
<td>15.16</td>
<td>3.82</td>
</tr>
<tr>
<td>11</td>
<td>Severe Illness Requiring Hospitalization of Parents</td>
<td>15.12</td>
<td>3.38</td>
</tr>
<tr>
<td>12</td>
<td>Having a Visible Congenital Deformity</td>
<td>14.16</td>
<td>3.83</td>
</tr>
<tr>
<td>13</td>
<td>Increase in Number of Arguments Between Parents</td>
<td>13.66</td>
<td>3.50</td>
</tr>
<tr>
<td>14</td>
<td>Becoming Involved with Drugs and Alcohol</td>
<td>13.57</td>
<td>3.50</td>
</tr>
<tr>
<td>15</td>
<td>Marriage of Parent to Step-parent</td>
<td>13.57</td>
<td>4.32</td>
</tr>
<tr>
<td>16</td>
<td>Increase in Number of Arguments with Parents</td>
<td>13.31</td>
<td>3.86</td>
</tr>
<tr>
<td>17</td>
<td>Frequent Absence of One or Both Parents</td>
<td>12.92</td>
<td>3.24</td>
</tr>
<tr>
<td>18</td>
<td>Change in Child's Acceptance by Peers</td>
<td>12.83</td>
<td>4.26</td>
</tr>
<tr>
<td>19</td>
<td>Family Moves; Relocations</td>
<td>12.68</td>
<td>4.18</td>
</tr>
<tr>
<td>20</td>
<td>Academic Failure</td>
<td>12.27</td>
<td>5.00</td>
</tr>
<tr>
<td>21</td>
<td>Changed Schools</td>
<td>12.27</td>
<td>4.21</td>
</tr>
</tbody>
</table>
In the course of his research Chandler arrived at the conclusion that stress may arise from:

- traumatic life-events
- situations perceived as traumatic.

He notes, too, that some general agreement exists among professionals as to those life events of children that may be traumatic, and that these events can be identified as reflected by the list given in Table 3.3, which can be used as a checklist of sources of stress for children.

Moreover, information concerning situations perceived as traumatic can be obtained by psychological evaluation, psychiatric examination and interviews with the child, his teachers and his parents. This information, according to Chandler (1981a:166), can be used in conjunction with information obtained by applying the stress inventory to describe sources/causes of stress in the child’s life situations.

Research predicated on the life-events approach has been done on a wide range of subjects, such as the connection between stressful life-events and

- classroom social status and ethnicity (Yamamoto and Byrnes 1984)
• delinquent conduct including conduct indicating a need for supervision (Novy and Donohue 1985)
• psychological distress in young adolescents (Swearingen and Cohen 1985)
• substance use among adolescents (Newcomb and Harlow 1986)
• illness symptoms and depressed mood among adolescent girls (Siegel and Brown 1988).

Johnson (1986:91) maintains that there is a connection between the life-stress scores of children and their measures of anxiety and depression, as well as a significant correlation between life-stress scores and decreased levels of self-esteem, an external locus of control orientation, delinquent behaviour, poorer school performance, and overall level of psychiatric symptomatology. According to Compas, Slavin, Wagner and Vannatta (1986:218) there is a significant correlation between negative life-events and psychological problems such as depression, anxiety, obsessive-compulsiveness, interpersonal sensitivity and somatization.

The research referred to above, as well as that done by Forman et al. (1983:573) and Chandler (1981a:166) provides clear support for the association of negative life events with psychological dysfunction among adolescents.

Lazarus (1981:58), however, questions the view that major life-events are the main source of stress. In 1981 he conducted a study for the duration of that year on the effects of daily hassles and uplifts and found that they are more closely linked to, and may have a greater effect on moods and health than the major misfortunes of life.

3.2.5.1 Daily hassles and uplifts

Hassles can be defined as the "irritating, frustrating, distressing demands that to some degree characterize everyday transactions with the environment" (Kanner, Coyne, Schaefeer and Lazarus 1981:3) and may range from getting stuck in a traffic jam or losing a wallet to arguing with a son or boss. A poem by Charles Bukowski aptly illustrates the association between hassles and adaptational outcomes (in Kanner et al. 1981:4):
It is not the large things that send a man to the madhouse..... 
No, it's the continuing series of small tragedies that send a man to the madhouse 
Not the death of his love but a shoelace that snaps with no time left.

Lazarus also studied the influence of uplifts as emotional buffers against negative stressors. He defined uplifts as pleasant, happy or satisfying experiences like hearing good news, getting a good night’s rest and solving a difficult problem (Lazarus 1981:60). The assessment of both hassles and uplifts offers a more comprehensive general impression of the affective bases of daily living in that by this means an overview of both positive and negative elements is gained – which would be impossible if hassles alone had been studied.

On the grounds of research done with the aid of a new Hassles Scale as well as a new Uplifts Scale, Lazarus concluded that people differ widely in the problems and pleasures that typify their lives, but also that especially three hassles are common to different groups: misplacing or losing things, physical appearance, and too many things to do. Uplifts, that are commonest among middle-aged men and women, that is among the older members of society on the one hand, and also among students, that is, among the fairly juvenile members of society on the other hand, include completing a task and having good times with friends (Lazarus 1981:61).

Lazarus (1981:61) emphasises that the impact of hassles on physical and mental health depends largely on their frequency, duration and intensity. A person’s reaction to hassles and uplifts also depends on such factors as his personality, coping style, other resources and how the rest of the day has gone. Clearly, therefore, psychological stress resides neither in the situation nor in the person; it depends on a transaction between the two (cf. par. 3.2.2). It can be concluded, therefore, that stress arises from how the person appraises an event and adapts to it.

Consequently events experienced by some as hassles and that have been appraised as salient and harmful or threatening to the endorser’s well-being, may be experienced by others as uplifts and can be appraised as salient and positive or favourable to the endorser’s well-being, or vice versa (Lazarus 1984:377). Thus the reading of a paper may be a distressing chore for one person and an exhilarating experience for others. Lazarus concludes that “the petty annoyances, frustrations, and unpleasant surprises that plague us every day may add up to more grief than life’s major stressful events”. He also notes, however, that his research findings on the influence of uplifts as emotional buffers seemed less fruitful than those with
3.2.5.2 Marginal notes on the work based on the stressful life-events approach

Research predicated on the stressful life-events approach does not constitute a coherent group of studies proceeding from a theory formulated in clear and exhaustive detail. Rather it is a collection of investigations in which similar instruments of investigation were used to determine the connection between major life-events or hassles and uplifts and illness and stress. The approach has found wide application and popularity with many researchers (Holmes and Rahe 1967; Coddington 1972; Chandler 1981 and Compas et al. 1986).

Concern has been expressed, however, that many studies repeat both the findings and the flaws of earlier ones, delaying a hierarchical growth and development of knowledge in the field of life-events research (Rabkin and Struening 1976:1013). The life-events approach was also subjected to increasing criticism on a number of different conceptual and methodological grounds:

- The particular occurrences included in the list of stressful life-events are not invariably the most significant for certain groups, such as students, working mothers, the poor or elderly, et cetera (Lazarus 1981:60).

- The procedure of merely adding together the values given to major events in the lives of individual persons included in investigations fails to account for the circumstances in which the events take place, how the individual appraises the events, and his ability or inability to cope with stress. According to Kleber (1982:72) a stressful life-event can be unpleasant and negative in itself while the effect of the event may be positive for the person concerned in that it may improve his ability to cope with problems.

- The correlation between the frequency of changes in the lives of people and their health problems is positive but low (0.30), which suggests that life events may account at best for a low percentage of the variance in illness (Rabkin and Struening 1976:1015).

- The life-events approach mainly hinges on the idea of change that causes illness – yet much stress arises from chronic or repeated conditions of living – boredom, continuing tension in a family relationship, lack of occupational progress, isolation and loneliness, absence of meaning and commitment (Lazarus 1981:60).
According to Rabkin and Struening (1976:1017) the possibility of interaction between life changes and other factors, such as availability of social support systems to serve as protective buffers for the affected individual, is another issue that should be investigated as part of the research effort conforming to the life-events approach.

A number of researchers (Basch and Kersch 1986:5; Yamamoto and Byrnes 1987:117) emphasise that adults and adolescents differ considerably in their conceptions of what is termed stressful. In this regard Anthony (1974:106) observes that

"stress as experienced by the child and stress as estimated by the adult observing the impact of the stress on the child are frequently of very different orders of magnitude".

It seems, therefore, that many disadvantages adhere to the stressful life-events approach. More particularly, it is the fact that this approach fails to account for the individual’s attribution of meaning that creates problems for this researcher. After all, it stands to reason that a sixteen-year old schoolgirl will see pregnancy in a light that gives the event a meaning that differs greatly from the conception held of it by people in other social categories, and that her experience of the event will bear little resemblance to that of, say, a married woman whose dearest wish is to have a child of her own. And yet the research done by such pioneers as Holmes and Rahe in this field is not altogether irrelevant. Although the approach seems far too simplistic and oversimplified, aspects of it can be employed to build up a fully detailed profile of a person since the research guided by this approach does lend prominence to events that are commonly found to be stressful. Accordingly the researcher is persuaded that neither major life-events nor minor hassles are alone responsible for stress, but that the two kinds of experience complement each other, which is why items contained in the Social Readjustment Rating Scale (Holmes and Rahe 1967) and in the Hassles Scale (Kanner et al. 1981) are brought into this research.

3.2.6 Marginal notes on the general theoretical models

Some of the approaches to stress research were discussed in paragraphs 3.2.1 to 3.2.5 above. The models used vary from simple ones that proceed on a linear basis to more complex ones.

In summary and broadly speaking, there are 3 approaches, each being based on one of the following decisive criteria:
3.2.6.1 Stress as a dependent variable — a response-based model of stress

A response-based approach to stress (cf. Figure 3.3) deals with stress in terms of the dependent variable (i.e. as a response to disturbing stimuli). It is the work of Hans Selye that really marks the beginning of a response-based approach to the study of stress (cf. par. 3.2.1).

3.2.6.2 Stress as independent variable — a stimulus-based model of stress

The rationale underlying this approach is that an external force impinges disruptively on the organism (Sutherland and Cooper 1990:15). The overriding consideration entertained in applying the stimulus-based model of stress is that of identifying potential sources of stress (cf. Figure and par. 3.2.5).
3.2.6.3 Interactive model of stress

This approach hinges on the view that individual differences and variability in tolerance levels and expectations account for the fact that two individuals exposed to exactly the same situation might react in completely different ways. The emphasis is placed on the procedure whereby individual persons attribute meaning to an event, an approach that is particularly endorsed by Lazarus. The approach accommodates both response-based and stimulus-based models.

According to Sutherland and Cooper (1990:20) an interactive stress model embraces all the conceptual domains of the stress process, namely:

- Source of stress
- Mediators of the stress response
- Manifestation of stress.
Situations are not regarded as inherently stressful, but as potentially stressful. The above-mentioned researchers provide a diagrammatic representation of an interactive stress model (cf. Figure 3.5), but a number of other interpretations and variants are also possible.
The discussion of general theoretical stress models is confined to general theories with adults as a research group, and to models that exerted a major influence on the researcher’s ideas concerning the creation of a psycho-educational stress model. In the following paragraphs some definitional models with children and adolescents as subjects in research studies on life and school stress are subjected to scrutiny.

3.3 SOME DEFINITIONAL MODELS OF CHILDHOOD STRESS

Through a study of the general theoretical models the researcher arrives at knowledge of and insight into the stress phenomenon. It appears that stress is integral to the life of all human beings, including that of the adolescent. A limited and manageable degree of stress motivates a person to perform and engenders a zest for living, but an unmanageable stress load may overwhelm the individual and cause serious illness (cf. Selye, par. 3.2.1). A person may be exposed to a variety of stressors, some of these persisting for lengthy periods and others for shorter periods, some having a high intensity (cf. life-events and hassles approach, par. 3.2.5) and others a low intensity. Furthermore, stress is actually a diverse collection of events, as well as the child’s perception and appraisal of, and reactions to, those events (cf. Lazarus, par. 3.2.2). An eminently suitable means of gaining a just appreciation of the complexity of the stress phenomenon is that of becoming familiar with the variety of definitions and definitional models that have been developed through research. A number of researchers (Chandler 1981, Lazarus and Cohen 1977, Moore 1975 and Schultz 1980) have proposed definitional models that pertain specifically to stress in children and adolescents.

3.3.1 T. Moore

In his definitional model (cf. Figure 3.6) Moore (1975) describes three types of stress: ordinary tensions of daily life, developmental stress and life crises. He notes that ordinary daily tensions are caused by minor problems or annoyances, or by unmet needs and goals. He maintains, too, that the individual person’s ways of handling stress must be altered continually in order to adapt to stress situations effectively. Doing so early and often can create a foundation for the person’s future effective handling of stress and the establishment of successful coping strategies. He associates the developmental tensions with the longer-term life stages of the child (childhood, adolescence, etc.), while life crises include serious illness, the death of a family member, or rapid moves within or beyond the school setting. Although life crises are usually of brief duration, they are also often the most severe form of stress.
Lazarus and Cohen (1977) distinguish in their definitional model of child stress (cf. Figure 3.7) between environmental or external stress and personal and internal stress. The dynamics of external stress vary widely: from the major and catastrophic life-events to the common pressures and tensions (hassles) of daily life. The dynamics of internal stress include those events occurring within the person as a result of his perceptual orientation towards the external world. It is therefore a function of the person's appraisal of a particular situation.
Schultz (1980: 12) defined stress as the condition of increased wear and tear on the body that results from demands with which the child finds it difficult to cope. In his definitional model of child stress (cf. Figure 3.8) he differentiates between physical and psychological stress. Physical stress is caused by such things as sustaining an injury, viral infection, being physically exhausted, being too hot or too cold, or any other irritants to the body. By contrast psychological stress emanates from any perceived threat to one's security, self-esteem, way of life or safety.

In his defining and conceptualisation of the stress phenomenon Schultz was profoundly influenced by the work of Hans Selye. As might be expected, therefore, he adopts Selye's distinction between eustress and distress, using the former term to denote the personal outcome for the child if he or she meets a stressful school event in a positive, proactive or adaptive manner. In contradistinction, he defines distress as the personal outcome of meeting a stressful school event in a non-positive, unproductive or maladaptive manner (Schultz 1980: 12). This interactive, multifaceted nature of stress as it manifests in the school situation is illustrated in Figure 3.9.
According to D'Aurora and Fimian (1988:46), Chandler (unlike Schultz) defines stress as a state of emotional tension arising from traumatic life-events or situations. This definition is consistent with his life-events approach (cf. par. 3.2.5). Yet he agrees with Schultz (cf. par. 3.3.3) that the concept of stress has both physical and psychological meaning (Chandler 1981a:164). In later publications he defines stress as "a state of emotional tension arising from two main conditions: failure of the environment to meet the needs of the individual, or events or situations which the individual perceives as threatening" (Chandler 1985b:39). In contrast with his earlier definition, Chandler maintains in later publications that stressful life-events or traumatic life-events are only one class of stressors (Chandler 1985b:40), but that stress can also be experienced when there is no apparent problem (Chandler 1985a:6). Since stressors can be experienced on a continuous scale of intensity, ranging from the mildly unpleasant to the excruciatingly painful, they often serve as motivators and compel the person to seek solutions for his stress problem. In the process of such endeavours changes may be brought about in the person's physiological functioning as the body seeks to adapt, and also in the person's behaviour patterns as he attempts to cope.

From this it appears that Chandler's definitional stress model (cf. Figure 3.10) has changed
with the passage of years, but that stressful life-events remain a prominent feature of his approach. He regards stress as a stimulus and life-events as stressors (Chandler 1985b:39).

3.3.5 Marginal notes on the definitional models under discussion

The definitional models of child stress construed by Moore (1975), Lazarus and Cohen (1977), Schultz (1980), and Chandler (1985) have been briefly examined. The main features of stress that emerge from this research are as follows:

- Stress has two faces, psychological and biological (physical), meaning that these are two aspects of some complex phenomenon, not two different entities (Schultz and Chandler).

- Stress is caused by internal factors, but also by factors impacting on the child from the environment (Lazarus and Cohen; Moore; Schultz and Chandler).

- The stress experience of the child depends on how he appraises the situation or attributes meaning to it (Lazarus and Cohen, Schultz and Chandler).

- Stress is defined in terms of three different forms: ordinary tension resulting from
day to day stress (Lazarus and Cohen; Moore); developmental stress that occurs at times of life-change or person change (Moore); and crisis-related life stress caused by events beyond the child's or youth's control (Lazarus and Cohen, Moore, Chandler).

- Though physical stress often results from actual environmental conditions, psychological stress can result from situations that are either actually or perceived to be threatening (Schultz and Chandler).

- Two conditions are stated as being prerequisite for increased stress levels: the environment must fail to meet the needs of the child or youth; and the environment demands must exceed the level to which the child or youth can respond successfully (Chandler).

- Although most researchers place the preponderant emphasis on distress or negative stress, eustress or positive stress can also be distinguished (Schultz).

The work of the researchers under discussion made a major contribution to the understanding of child stress. Every model has advantages and disadvantages, however, and not one of them can be applied to the South African situation without some adaptation.

The researcher therefore endeavours to create a conceptual model or framework that can be used in the research at issue here, and that can especially pave the way to a study of stress from a psycho-educational perspective (cf. par.3.4.1 and Figure 3.11).

3.4 DEFINING THE CONCEPT OF STRESS: A PSYCHO-EDUCATIONAL PERSPECTIVE

It is important to recognise the semantic difficulties attending the use of the term "stress". Stress was first understood to be an autogenous bodily state, and not an effect induced by the environment. The researchers Selye and Wolff are foremost among those who have used the term "stress" to indicate that state within a living creature which results from the interaction of the organism with noxious stimuli or circumstances (Cassel 1974:472).

Other researchers have used the term "stress" when referring to noxious social or psychological stimuli (Cassel 1974:472). In due course the term "stressor" was adopted to indicate the environmental noxious stimulus, while "stress state" or, more frequently, "stress disease" was adopted to indicate the harmful consequences of exposure to stress. This differentiation clarifies the semantic difficulty, but highlights the more important conceptual
issue. According to Cassel (1974:472) such a differentiation urges the conclusion that the relationship between a stressor and the disease outcome it causes will be similar to the relationship between a micro-organism and the disease outcome it causes. In other words, the postulated noxious social or psychologic stimulus is perceived as a stressor capable of having a direct pathogenic effect analogous to that of a physicochemical or micro-biologic environment disease agent. The corollaries of such a supposition are that there will be etiologic specificity (each stressor leading to a specific stress disease), and there will be a dose-response relationship (the greater the stressor, the more likelihood of disease) (Cassel 1974:472), as suggested by the life-events approach.

The correctness and usefulness of notions of this sort are questioned at once, since one of the most striking findings of stress research is in fact the considerable variability in the responses of the individuals exposed to the same stressful circumstances. Davis and Compas (1986:378) maintain that major life changes, and the chronic stresses and strains of daily living, are associated with increased psychological and/or somatic disturbance in some individuals; others display no indications of significant distress, and still others experience increased mastery and competence. Thoresen and Eagleston (1983:52) assert that stress in adolescents is indeed a response to the demands of such factors as developmental transitions, but that the demands of transitions and daily living are perhaps best thought of as potential demands, since children experience the demands made on them differently.

Thus it is clear that stress in a psycho-educational context should rather be seen as harms, threats and challenges, the quality and intensity of which depend on personal agendas, resources and vulnerabilities of the person, and as environmental conditions. The person appraises every event, situation or stimulus and as a result of the appraisal the demand is taken as more or less serious, as one that can be ignored or one that must be met. The main consideration brought to light by the approach at issue here is that every person attributes meaning in a unique way to situations and demands confronting him; that some moderators influence the way in which he attributes meaning; that he experiences the impact such moderators exert on him in a unique way that does not necessarily correlate with the intensity of the stimuli, and that he endeavours in his own particular way, but often unconsciously, to take a hand in the influencing process by trying to cope. This implies a knowing person who construes or appraises the significance of what is happening for the benefit of his or her well-being.

How one conceptualises stress etiology and stress effects strongly influences how one attempts to measure it. A paradigm shift such as that implied in the preceding paragraphs
therefore also calls for a different approach to the definition, identification and measurement of stress. Hence in defining stress the researcher must account for the cognitive activity of evaluating the personal significance of transactions and for the multiple specific variables of person and environment that influence the appraisal process. To this end a conceptual framework is required that will be broad enough to incorporate a diverse group of factors affecting one’s perception of stress.

3.4.1 A conceptual framework for the study of the stress phenomenon

In Figure 3.11 a framework is proposed for the study of stress. In the first place the researcher proceeds from the view that various stressors emanating from the self and the environment impact on the person. These stressors can be major life-events, daily hassles, developmental or physical stress, or psychological stress.

The individual gives meaning to the stressor that affects him (cf. par. 3.5), but is influenced by predisposing factors such as attitudes, needs, values, past experience or personality traits. His cognitive appraisal is also influenced by reinforcing and enabling factors (cf. par. 3.6). He may experience the stress as either positive or negative for his well-being (cf. par. 3.7). Moreover, the meaning he attributes to, and his experience of, the stressor determines his involvement with it (cf. par. 3.8).
Some of the determinants are derived from the cognitive-social learning model of stress development as proposed by Moore and Eagleson (in press, 1985:37).
The approach adopted in attributing meaning to a stressor, and in experiencing and coming to terms with it, also affects the forming of the self-concept, which in turn influences the person's behaviour, his self-actualization, and consequently his experience and perception of situations, the meaning he attributes to them and his involvement with them. It is clear, therefore, that the stress phenomenon conforms to a cyclical pattern and that earlier experiences with stress influence the way in which a person will attribute meaning to a stressor, experience it and come to terms with it in later life. It is therefore important for the educational researcher to take cognisance of the correlation between the child’s self-concept, the stress he experiences, and his self-actualization.

The interdependence of all the determinants makes it difficult to represent them graphically, yet the framework does provide a way of studying relationships between the components and, in turn, their relationship to perceived stress. It is therefore no more than a structural aid to thought.

3.4.2 Definition of stress from a psycho-educational perspective

Finally, the researcher attempts, despite all counter-indications, to formulate a definition of stress from a psycho-educational angle:

Stress is a phenomenon that manifests in the individual person as a result of various stressors that arise from the self and the environment and affect the individual person in accordance with the way in which he attributes meaning to the events, stimuli or demands affecting him, and in accordance with the way in which he experiences and enters into or handles such events, stimuli or demands.

There are two forms of stress, namely eustress and distress. Eustress is a phenomenon that manifests in the individual person under the influence of stressors that affect such individual person in accordance with the positive meaning ascribed to them by such person, and/or in accordance with his experience of the stressors as a manageable challenge, and/or in accordance with his positive, proactive and adaptive way of handling the stressors.

Distress, in contrast, is a phenomenon that manifests in the individual person under the

1) These stressors originate from major life-events, ordinary tensions of daily life or developmental and psychological stress. In this research more emphasis will be placed on stressors to which individual persons give a negative meaning and which they experience and become involved with in a negative way.
influence of particular stressors to which the individual concerned ascribes a negative meaning, and which he experiences as a threat and/or handles in a negative, unproductive or maladaptive way.

An understanding of potential stressor sources and of moderation of the response to stress is essential for further insight into the stress phenomenon.

3.5 SOURCES OF STRESS

In the conceptual framework (Figure 3.11) stressors are the first determinant. There is considerable confusion about the concept of a stressor, however. In some cases the concepts of stresses and stressors are used as synonyms (Arnold 1990:10; Honig 1986a:51; Omizo et al. 1988:267). Stressors are also characterised as demands (Thoresen and Eagleston 1983:48), causes of stress (Omizo et al. 1988:267; Allen and Green 1988:2; Honig 1986a:51) and sources of stress (Swick 1987:12). Compernolle (1987:5) defines a stressor as a stimulus that disturbs or threatens the eco-psychosomatic equilibrium of an individual, either objectively or subjectively, to such effect that the individual can neither react normally to the stimulus, nor "routinely" come to terms with it. The researcher endorses this perception and accordingly defines a stressor as

a stress-inducing factor acting on the individual person and emanating from the self or the environment, to which a positive or a negative meaning is ascribed by the person, and which he experiences as a threat or a challenge. Accordingly, the way in which the individual attributes meaning to a particular stressor and comes to terms with it occasions the manifestation of stress in that individual.

The large diversity of stressors affecting the self-actualization of the individual complicates stress research. Not only are there many categories, but there is also a considerable range of difference in intensity and duration between individual stressors and categories of stressors. Furthermore, stressors tend to cluster and interact. They can therefore act addictively and synergistically. For example: discrimination can aggravate poverty, and both can aggravate the effects of illness. The same cause can also engender stress in two or more ways. Thus poverty can stress the child through malnutrition, poor environmental stimulation and poor parenting due to worry, preoccupation, discouragement, or resentment of another mouth to feed (Arnold 1990:3). Consequently it is of little use to classify stressors or devise a taxonomy of stressors (Compernolle 1987:6). Yet various researchers endeavour
to classify stressors on the grounds of

- the kind of threat they represent
- innate versus acquired stressors (Compernolle 1987:6)
- the duration and intensity of stress they induce (Arnold 1990:27-33; Honig 1986a:51)
- objectivity versus subjectivity
- controllability versus uncontrollability
- probability, predictability and certainty (Compernolle 1987:6)
- internal versus external stressors (Honig 1986a:51).

For the purpose of this research stressors are classified according to source at the micro-, meso- and macro-levels (cf. Figure 3.12). With this classification the researcher merely wishes to provide a structure to the many facts and the wealth of information available on the subject. Special emphasis is placed on specific adolescent stressors. The magnitude of the research area precludes a discussion of all stressors; accordingly a discussion of the principal stressors will be given and it will be kept as brief and concise as possible.
At the micro-level there are endogenous stressors that induce stress from within the individual. Among these factors are the emerging of the self, the forming of a self-identity,
physical development, physical appearance, and so on.

At the meso-level relations with parents, family members, peer group and teachers all induce stress. Stressors that are inherent in the school situation are also identified at this level. In view of the wide range of adolescent stressors, the researcher confines herself to those arising from the family, the peer group and the school.

At the macro-level stress is induced by factors emanating from the culture and native country of the individual, but the wider outside world also influences his self-actualization. Factors in this sphere include political unrest, uncertainty about the future, general social and racial tension, threat of violence, television stress, catastrophic events and the threat of nuclear war.

3.5.1 Stressors at micro-level: the self

A large variety of stress-inducing factors or stressors act on the individual person from the self. Lazarus (1981:61) mentions misplacing or losing things, physical appearance and too many things to do as the main hassles (stressors) in the individual's life. According to him, students were most hassled by anxiety over wasting time, meeting high standards and being lonely. The adolescent is also concerned about body mass, acceptance into the peer group and sexual attractiveness. Although such considerations as personality, health, loss of control, self-concept and social support can be human moderators of stress and can serve as buffers against stress, these same factors can also act as stressors in certain circumstances.

3.5.1.1 Biological changes in adolescence

During the first years of adolescence puberty changes take place that are characterised by changes in external bodily appearances and internal physiological changes. The following puberty changes occur universally in adolescents: rapid body growth, hormonal changes, increasing sexual needs, development of primary sexual characteristics (e.g. beard and breasts), and attainment to sexual maturity (the ability to reproduce) (Thorn 1990:401).

The age at which the adolescent attains to bodily maturity influences his affective development and correlates with his identity anxiety. Adolescent boys who mature earlier look older and are assigned certain responsibilities that would otherwise not be entrusted to them. Because their bodily maturity is more advanced than that of adolescents who mature later they incline more towards performing well in sports and accordingly they earn leadership roles that give them a high status position in their peer group. The self-concept
of these adolescents naturally tends to be better than that of adolescents who mature later. By contrast adolescent boys whose bodily development is slower tend to feel inferior and they experience feelings of rejection (Thom 1990:405). The slow development of their bodies therefore acts as a factor that imposes stress on them.

The girl who matures early is often attractive to boys at an early stage. Studies of the onset of puberty in boys and girls indicate that early maturation is socially advantageous for girls (Hendren 1990:250). She is not emotionally ready, however, to engage in the more intimate relationships associated with her more mature bodily appearance. This circumstance often leads to stress in the adolescent years, as may be expected.

Stressors that cluster with biological changes in adolescence include hormonal changes, genetic vulnerability to illness (Hendren 1990:250), heightened sexual, cultural and social expectations, and problems involving gender role, sexual mistreatment, bodily appearance, skin disorders, menstruation, premenstrual stress, ejaculation and wet dreams (nightly emissions of seminal fluid).

The adolescent has the task of handling his bodily changes and sexual urges in a socially acceptable manner so that his behaviour in this regard may contribute positively to his identity development. His newly acquired sexuality must be integrated with his interpersonal relationships. The heterosexual relationships that begin with the onset of adolescence offer the adolescent the opportunity of obtaining a certain measure of sexual and bodily satisfaction, but also cause considerable stress at this time of life.

3.5.1.2 Identity, anxiety and the emerging self

Swick (1987:20) notes that social scientists appear to agree that modern stress is most intense where the development of a secure identity is concerned. Although such factors as the family, work place, school or peer group are often characterised as the greatest sources of stress, it is likely that most people are really expressing their frustration over being unable to define themselves as valid and meaningful parts of the world.

According to Erikson (1968:203) adolescence is a critical phase in the identity forming process. The adolescent must develop an identity that will bridge the gap between what he was as a child and what he has to become as an adult. Often torn between two worlds the adolescent is no longer a child, but he is also not yet ready to meet the demands imposed on him by the adult world. The ambiguity of his position, which he experiences as a sense of being in a state of limbo, induces stress in the adolescent. Although he occasionally still
displays the egocentrism of a two-year old he may also display strong social concern for others; although he rejects conformity he accedes to the demands of the peer group in matters of behaviour, apparel, ideas and the like. His life is fraught with contradictions that may lead to considerable tension, uncertainty and despair. The result of this is that he constantly questions himself and endeavours to arrive at an acceptable self by trial and error. Although the adolescent's struggle can be described as an identity crisis it is not a unique and unitary event (Chandler 1985a:21); rather it is a series of interlocking stress situations with each involving the personal, sexual, social and occupational or school spheres.

The adolescent's identity anxiety is closely linked to establishing self-image consistency. It is this inner consistency that will define the adolescent as a person in his own right. However, to obtain consistency in his beliefs, attitudes, behaviours, values and styles he experiments with different roles. This experimentation is unpredictable, however, and erratic, sometimes prolonged and fraught with difficulties, and always stressful (Chandler 1985a:22).

The adolescent must also cope with his emerging sexual identity. This aspect of his identity formation must obviously be potentially stressful. It not only unleashes powerful emotions, but the fact that a person presents himself or herself to another for evaluation as a sexual being, as it happens in friendships between the sexes, creates the possibility of rejection. Rejection creates feelings of inadequacy that have a negative influence on the self-concept. The adolescent's sexual development also influences his parents' attitude towards him. His yearning for independence and the change in his relationship with his parents often cause conflict and tension (cf. Figure 3.13).

**FIGURE 3.13: CHANGING ADOLESCENT-PARENT RELATIONS, INITIATED BY THE EMERGING SEXUAL IDENTITY OF THE ADOLESCENT**

(Hendren 1990:253)
In his search for identity the adolescent asks himself: "Who am I?" "What do others think of me?" "What do I expect of myself?" "What do I want to do with my life?" In times of self-examination, inner doubt and uncertainty the adolescent relies on others for acceptance and approval. To be part of a group becomes an important objective. Membership of a group often calls for sacrifices, however. To ensure membership the adolescent often has to transgress against other norms that may be personal, parental or legal. With such transgressions he incurs further problems since he now has to subordinate his self-identity to the demands of the peer group.

Finally, the adolescent experiences identity anxiety concerning his academic self. On the threshold of adulthood he questions his ability to enter the workaday world. He harbours expectations concerning his future that are often thwarted by his intellectual abilities, and he is forced to square up to realities and reconcile himself to the direction his life is taking. For this reason, learning problems are particularly stressful to the adolescent. The choice of an occupation and the implications of that choice for his adult life are severe stressors for the adolescent.

### 3.5.1.3 Physical illness and disability

Physical illness and disability are other stressors faced by many adolescents (Hendren 1990:256 and Schultz s.a.:67). Healthy adolescents struggle with their own attractiveness, their physical appearance, and their abilities to work and compete and achieve. On the other hand sick and handicapped adolescents have so much more reason to feel anxious about their bodies, their appearance and their abilities. Diseases featuring prominently as stressors in the adolescent years are epilepsy, asthma, diabetes, heart defects, irritable bowel syndrome, juvenile rheumatoid arthritis, muscular dystrophy and acute CNS infection (bacterial meningitis) (O'Dougherty and Brown 1990:327-329). Physical handicaps such as deafness, blindness, muteness, paralysis and physical deformity, as well as emotional disturbance, mental retardation, autism and delinquency are also extremely stressful to the adolescent (Schultz s.a.:71).

However, adolescents attribute meaning to physical illness and disability in different ways: individuals experience their defects differently and their engagement with their defects also differs individually. Where one person would take his medication faithfully, follow a diet and take the doctor's advice seriously, another might prefer to disregard his problem. Various factors must therefore be allowed for in assessing the impact of disease or disability on the adolescent. Among these are:
the child's age at onset

severity

symptomatology

visibility of the illness

type and extent of medical intervention

attitude of the peer group, teachers, parents, etc.

degree of family disruption

influence on school work and sports activities

influence on independence

extent of financial burden

social support

individual child and parent characteristics that can moderate successful coping (e.g. personality traits, IQ, family structure, family involvement and the like).

Stressors that tend to cluster with physical illness and disability are hospitalisation, stressful medical interventions such as regular blood tests, surgery, injections, physical therapy, restrictions on activity and diet, heightened dependency on parents, lack of peer acceptance, effect of disease on physical growth and development, and frequent school absences (O'Dougherty and Brown 1990:333-335).

3.5.1.4 Personality traits

The close link between stressors, mediating factors and coping becomes clear once more when an attempt is made to indicate how personality traits can at times act as stressors. Although the personality of the individual can function as a stress moderator (cf. par. 3.5.1.2) and determines how he attributes meaning to, experiences and engages with stress, some personality traits, such as moodiness, a short temper, stubbornness, subservience,
untidiness, fastidiousness, unpunctuality, introversion, extroversion and many more themselves lead to stress in the adolescent.

As early as 1870 Ralph Waldo Emerson observed: "We boil at different degrees". The adolescent who is more short-tempered than his peers is more frequently landed in stressful situations. He is frequently involved in vehement altercations and sometimes clashes with his superiors or even with law-enforcement agencies. His own personality can therefore act as a stressor.

Another personality trait that commonly acts as a stressor in the life of the adolescent is excessive reticence. Zimbardo (1977) (in Biemer 1983:53) observes that shyness is a social epidemic in America, and he contends that six out of 10 adolescents have problems with shyness. Biemer (1983:54) defines shyness as "the habit of being afraid of people or social situations". He holds that the shy person bombards himself with a steady stream of absolute and negative self-statements. The content of the shy person's private world is therefore predominantly self-critical, leading to a lowered self-esteem. He further maintains that shy persons exhibit more hand tremors, perspire more, get drier in the mouth and generally are more nervous in public than non-shy people. Shyness also makes it difficult for the adolescent to meet new people, make and maintain friendships or enjoy social experiences. Shyness therefore obviously acts as a stressor, particularly in the adolescent years, since adolescence is a time of heightened social activities, more intimate relationships with the opposite sex, and increased independence.

Stressors that cluster with shyness are loneliness, teasing by peers, lack of peer group acceptance, the "wallflower syndrome", and so on.

3.5.1.5 Changed values concerning sexual behaviour

The changed values concerning sexual behaviour lead to greater freedom and frankness about sexuality. Such subjects as masturbation, sexual intercourse, premarital sexual intercourse, homosexuality and cohabitation are openly discussed in a variety of periodicals and are dealt with in the cinema and on television. This greater openness has the effect that parents can discuss these matters openly and freely with their children, but it may also stimulate the adolescent's curiosity about them.

Sexual practices, such as masturbation, intimate caresses, sexual intercourse and other sexual practices can occasion intense stress and guilt feelings in the adolescent, particularly if he has grown up in a strict Christian home. These practices can also lead to extramarital
pregnancies with all the stress and heartache such eventualities bring in their wake for both the boy and the girl concerned.

Note that sexual practices are in themselves a considerable stress factor in the lives of adolescents, but that such stressors as fear of detection, of under-achievement, of falling pregnant or making a girl pregnant, or of contracting a sexually transmissible disease cluster with such indulgences. Teenage pregnancies cluster with financial problems, scandal, health problems, illegal abortions and emotional and social problems.

3.5.1.6 Sexually transmissible diseases

Since an increasing number of adolescents are sexually active, have more than one sexual partner and are disinclined to practise contraception by using a condom, there is a high risk of contracting such diseases as gonorrhoea, genital herpes, syphilis and acquired immune deficiency syndrome (AIDS).

Although only 665 cases of AIDS had been reported in the RSA by 4 March 1991 (Van Dyk 1991:21) it is safe to assume that there are unreported cases of AIDS among teenagers since it is not a notifiable disease and medical practitioners therefore do not have to report such cases. Drug abuse and prostitution, as well as an increase in premarital sexual intercourse, inadequate sex and AIDS guidance, and a tendency not to use contraceptives (Thorn 1990:413) may lead to an increasing incidence of AIDS among adolescents so that sexually active adolescents may become the next high-risk group for AIDS. Sexually transmissible diseases and the fear of them are therefore acquiring increasing prominence as a stressor among sexually active adolescents.

3.5.2 Stressors at meso-level

3.5.2.1 The family and relatives

(i) Death of a parent or sibling

The death of a loved one is always a bitter experience. Of all the stressors that a child may encounter in his life, the death of a parent seems most devastating (Honig 1986a:58), the loss least reparable, and the potential for harmful psychological consequences greatest (Kranzler 1990:406). The death of a parent increases a child's sense of profound helplessness and loss. And yet Brenner (1984:44) contends that most children survive the death of a parent with just a few minor emotional scars to show for it. She also postulates that the death of
a sibling may be more difficult to understand and accept than that of a parent. Most people believe that only old people die—a child’s death therefore has a greater shock impact and shakes the adolescent’s faith in his own immortality.

Every child attributes meaning to death in his own way, experiences it uniquely and engages uniquely with the death of a parent or sibling. However, all children and adolescents need adult help in order to cope effectively. According to Brenner (1984:44) long-term functioning can be damaged or helped by

- the way in which children learn of a parent’s death (a child who is informed of the death of his sick father by an adult who is sincerely committed to the Christian faith, will attribute a different meaning to death and will differ in his experience of it from the child who discovers the body of his father who has committed suicide by some violent means)

- whether they take part in some sort of funeral or memorial rite (the degree of involvement with the event) and

- the quality of care they receive in the following weeks and months.

Other factors and mediators that may influence the stressfulness of the death of a parent or sibling are:

- parent’s reactions

- sibling reactions

- circumstances of death

- pre-traumatic variables

- age

- concept of death

- affective development

- sex
Caretaking deficits, concerns about surviving parent, economic hardship, surviving parent's preoccupation with grief; sibling's grief and uncertainty about the future are stressors that tend to cluster with death in the family.

Arnold (1990:13) maintains that if a parent dies at a critical transitional stage of the child's development, passage to the next stage may be delayed, suspended or incomplete. Yet the death of a parent or sibling is not ranked with the prime specific adolescent stressors by Hendren (1990:254), possibly owing to the adolescent's affective development and his conception of death. Firstly, the death of a parent before a child reaches age 10 causes the most negative impact on long-term follow-up, possibly owing to the young child's need for basic caretaking and nurturance, and the possibility that the younger child is treated differently from older children in the same situation, for example in some way excluded from the family's grieving process (Kranzler 1990:412). Secondly, the adolescent increasingly acquires the capacity to recognise his own and others' emotions. They can control their own emotional responses and engage in purposive response to their surviving parent's distress and conflict. They therefore come to terms with death in a way that differs from that of the young child. Finally, by the time they reach adolescence many children have already acquired a well-established concept of death by virtue of their religious faith, and this can serve as a stress moderator for them.

Despite this Chandler (1985a:24) holds that children who had experienced the loss of a parent by death showed reduced academic achievement, more physical illness and psychological adjustment reactions. The death of a parent or sibling is therefore an important stressor that should receive the attention of the educational researcher of stress.

(ii) Marital discord

Children who grow up in a family where parents are constantly involved in altercation and conflict suffer from ongoing stress that can exert a debilitating effect through ineffectual family functioning (Trad and Greenblatt 1990:28). Marital discord is frequently accompanied by considerable aggression and even violence. Alternatively the parents withdraw from each other and preserve a cold aloofness from each other. The adolescent senses the tension between his parents and sometimes joins the fray, becoming irritable, loud and aggressive or creating crises to break the silence and force the parents to talk to each other (Rosenzweig in Brenner 1984:82). Marital discord, dysfunction and turmoil are frequently experienced as the first phase of divorce, and the fear of an imminent divorce together with
the resultant uncertainty may therefore be a major stressor in the life of the adolescent.

(iii) **Divorce**

Divorce is a traumatic event and a devastating stressor for children (Honig 1986a:59; Humphrey 1988:34 and Rhiner 1983:6). Psychologists are agreed, therefore, that few events can disrupt the child's development as much as the divorce of his parents. Considering that more than 24,266 White children, more than 8,683 Coloured children and more than 2,289 Asian children (Central Statistical Service, 1992) were affected by divorce in South Africa in 1991, the magnitude of divorce as a stressor in the lives of South African children can be appreciated. Unfortunately no figures are available for Blacks in South Africa.

Divorce is not a single life-event, however. Rather it comprises a series of stressful experiences for the whole family that starts with marital conflict and continues long after the legal divorce. Brenner (1984:82-86) therefore divides the divorce process into different phases:

- **Stage One:** Troubled marriage
- **Stage Two:** Separation
- **Stage Three:** Transition and legal steps
- **Stage Four:** Divorce and aftermath.

Each phase presents the adolescent with unique problems and extra stressors of such wide-ranging diversity and magnitude that only a few of them can be discussed here. *Interparental hostilities*, which normally characterise the entire divorce process, result in painful memories of verbal abuse and even physical violence. Arnold and Carnahan (1990:388) contend that it is the inter-parental hostility, rather than the divorce itself, that causes the deleterious effects of divorce for children.

Unlike stress caused by the death of a parent, stress caused by divorce is increased by the child's "accurate perception that the parents are the agents of his distress, and that they have become such agents voluntarily" (Wallerstein 1983:272). The child may also blame himself for the divorce, however, in that he may see himself as the cause of it. In this case he may constantly endeavour to reunite his parents, and then feel guilty if he fails (Rhiner 1983:6).
Older children of socially prestigious parents are especially inclined to feel embarrassed about their parents' divorce. Consequently they endeavour to conceal the fact from their friends and rarely speak about their feelings. Out of respect for the feelings of their parents they are often reluctant to discuss the matter with them. The child may also be torn between two parents, as both parents strive for his affection. In some instances the adolescent may become the confidant of the parent with whom he resides and thus be forced to act more like an adult friend than a child. While the divorce is in progress the child therefore has to change roles in many instances, switching between child, friend, confidant, surrogate parent, custodian of siblings, and so on. Divorce also brings change in his routine and responsibilities.

However, the most important stress cluster concerns the loss of parent time and attention (Arnold and Carnahan 1990:384; Allen and Green 1988:3; Honig 1986a:60; Trad and Greenblatt 1990:28). Marital dysfunction, divorce and consequent problems such as the single parent's efforts to create a new sexual/social life may absorb the time, attention and energy of the parents to the extent that their needed support is not available to the child. The result is that household disorder increases, discipline in the home becomes slack, family instability increases, regularity in enforcing household routines declines (Wallerstein 1983:277) and the child is increasingly left to his own devices.

Other stressors that cluster with divorce are moves and relocations, financial difficulties, different child care arrangements, change of schools and friends. Also, the adolescent questions his own abilities to form and maintain a stable marital bond (Arnold and Carnahan 1990:380). It is clear, therefore, that divorce causes considerable disruption in the life of the child, even in circumstances where the adults separate on more or less amicable terms.

The result of divorce and all its stress clusters is that conduct disorders and antisocial behaviour are more common among children of divorced parents; they also show a higher incidence of physiological responses, such as hyperactivity, sleep disturbances and tension, than do children from intact families. According to Honig (1986a:59) schools have reported higher rates of disrupted learning, erratic attendance, increased tardiness, school dropout and social misbehaviour among children from divorced families. Older adolescents, especially girls, show signs of a significantly lowered self-concept; they are inclined to seek the attention and affection of men and to become involved in early or difficult heterosexual relationships (Robson 1986:13).

Although it is therefore common cause among psychologists that virtually all children are negatively affected by divorce in some way or other, it is equally true that the way in which
the child attributes meaning to the event, experiences and comes to terms with it is determined by a variety of factors. According to Craig (in Louw, Schoeman, Van Ede and Wait 1990:372) the foremost of these factors are:

- the degree of hostility preceding the divorce
- the extent of change caused in the child's life
- the nature of the parent-child relationship.

Other factors that determine the child's experience of divorce are age, sex, coping abilities, custody, allegations of abuse, visitation, sibling separation and the child's participation in custody disputes.

(iv) Changed family structures

The influence of divorce on the child was discussed in the preceding sections. It was indicated, too, that divorce is not a single event but a series of stressful occurrences that continue into the changed family structure that is the inevitable consequence of divorce. Among such structural consequences are the one-parent, step-parent and multi-parent, multiple-dwelling families, as well as non-traditional families that include social-contract families (unmarried parents), communal-living groups and live-in lovers (heterosexual or homosexual).

There are a number of obvious reasons why a change in family structure may contribute to the child's and adolescent's experience of stress. Some changes may also help to reduce the stress suffered by the child to a lower level than that occurring in some traditional two-parent families. Every child's situation is therefore unique, as are his meaning attribution, experience and involvement. The age of adults in reconstituted families may range from adolescence to late adulthood; their economic status may range from very wealthy to living below the bread line; their educational status may vary between well-educated and school dropout; and occupationally they may range between workaholic and joblessness. They may also be anything from excellent parents to complete failures as parents. Brenner (1984:25) cites research material in which it is alleged that there are no studies that can even prove that children need two parents of opposite gender in order to become well-adjusted adults.

Basically children in reconstituted families and other non-traditional families experience the
same stressors as children in traditional families. However, some of the stressors they have to face are peculiar to their status.

For children in one-parent families stress arises from the presence or absence of extra adults (grandparents, aunts or unrelated adults) in their homes. Often the remaining parent treats them as equals rather than as children so that they often take over the role of the absent parent. Brenner (1984:26) maintains that the companionship between the adolescent and his parent becomes so close that the roles of parent and child seem to merge. In some instances he is even consulted about financial decisions or decisions about the friends of the parent. This elevates the adolescent to a status equal to that of the parent and subjects him to responsibilities that are particularly stressful.

The complexity of the multi-parent and stepparent family causes considerable stress: two fathers, one biological, the other step; two mothers, one biological, the other step; eight grandparents, four biological, four step; biological siblings, step-siblings, and perhaps one or two half-siblings born to the remarried couples. Apart from the extensive and complicated ramifications of a multi-parent family, which are a problem in themselves, such a family also forces the child to give up his cherished dream that his biological parents will get together again. He is also forced to adjust to the step family and he is expected to love the new stepparent, and even step-siblings, from the outset. Research indicates, however, that friction between children and their stepparents, and fights among step-siblings, create the most stress in remarried households (Brenner 1984:35).

The stress in non-traditional families resides particularly in the unique parent-child relationship typical of this form of family. In communal families the child is expected, among other things, to relate warmly to multiple caretakers and to depend less on their biological parents. The child must therefore obey the instructions of all the adults. In the case of social-contract families and live-in lovers the child experiences the normal stress of traditional families but sometimes also has to endure the jibes of his mates. The informality characterising the relationships also offers little security to the children. Depending on the culture and the community in which the child finds himself, the behaviour of his parents may mean a very serious loss of prestige for him and may therefore subject him to serious stress.

(v) Emergence of nuclear family and lack of support

Urbanisation, industrialisation and increased geographic mobility in Western society has shrunk the extended family structure to the nuclear family comprising the father, mother and children. Major cultural differences occur, however. The black population groups in the RSA
are only partially involved in the urbanisation, industrialisation and modernisation process of South African society, hence the multi-generation family is still in evidence here. Although the Coloured community is predominantly made up of multi-generation families, its higher socio-economic group has nuclear families.

The parents in the nuclear family are often isolated geographically; they raise their children without guidance and are often confused by contradictory advice from other parents and popular magazines (Thorn 1990:434). The child and the adolescent must therefore master their developmental tasks without the assistance of a reference framework from their parents.

Kuczen (1982:211) refers to the "phantom parent syndrome" and observes that for various reasons parents in the nuclear families are no longer as child-centred as in previous times. He maintains that this lack of attention has forced an entire generation of children to turn to others for information and companionship.

Coddington (1984:123) notes an incredible lack of support in some families. Family members spend little time in each other's company and seldom discuss any issues and problems. Meals are frequently taken in isolation or in front of the television. The current hectic lifestyle has resulted in a lack of the family involvement that used to give children support and reassurance. The adolescent in particular needs the support and guidance of adults to form his occupational, social and sexual identity. Failing such support the adolescent feels insecure, isolated and insignificant; he frequently turns to the peer group and seeks support and acceptance outside the family context.

(vi) Work involvement of parents

Work involvement of parents is closely associated with the lack of support characterising the nuclear family in this hurried age. The fact that both the mother and the father work does not have nearly the same negative impact on the adolescent that it has on the young child, however, for by now he is reasonably independent. Nevertheless, the adolescent may suffer more stress as a result of both parents' working full-time and even longer hours. These "latchkey" children frequently are responsible for not only themselves but also for the care of a home and younger siblings. Such children have to assume adult roles at very young ages.

Children of workaholic parents are often deprived of their parents' attention and support. Despite the fact that their parents love them dearly, they are subjected to emotional pressure for the sake of their parent's ambitions. In their efforts to gain the undivided attention of their
workaholic parents they resort to behaviour that increases the family’s level of stress (Brenner 1984:16).

Another stressor associated with parents’ occupation (or rather with the lack thereof), is parental unemployment. Particularly in South Africa it is a stressor that impinges increasingly on the black, but also on the average white child’s life. The stress increases as time passes until the parent is re-employed, and meanwhile the family’s financial resources are depleted.

Unemployment influences the family’s diet, the amount of medical care, recreation and clothing the family has. Particularly significant for the adolescent is the loss of things that facilitate peer acceptance, such as special types of clothing, games and fad items. Unemployment also creates uncertainty and ambiguity as to family status and social standing (Toomey and Christie 1990:426).

(vii) Socio-economic hardship

In a study of socio-economic hardship as stressor a distinction must be drawn between chronic poverty (long-term type experienced by the poor) and the crisis type (experienced by the middle-class family that suddenly loses income). The stressor itself, as well as other stressors that cluster with it, differ for children in families where poverty is a chronic condition in comparison with children whose family income suddenly diminishes drastically. The second group, that is the newly poor, is composed of parents who, until recently, had been providing adequately for their children. Most of these families still own their house, car and other belongings. To retain these, however, everybody in the family has to learn quickly and radically to make do with much less. This causes considerable stress in the family and such stressors as depression in parents, marital discord, suicidal tendencies and lower peer acceptance cluster with a sudden decline in income (Toomey and Christie 1990:427-428).

Lempers, Clark-Lempers and Simons (1989:25) observe that economic hardship is associated with a variety of physical and psychological health problems in children and adolescents. The same researchers note further that a severe income loss increases marital conflict and leads for adolescent boys to decreased respect for the father and increased dependence on the peer group, while for adolescent girls, effects were lowered feelings of self-adequacy and reduced goal aspirations.

In contrast with the newly poor, the main causes of stress among the chronically poor are the parents’ inability to provide for the basic needs of family members, particularly where food and health care are concerned (Brenner 1984:19). As a result of this problem children in the affected families are restless and irritable. Brenner (1984:20) notes that researchers
are agreed that hunger decreases children's ability to learn, which is why children suffering such deprivation are often poor academic performers. Stressors that cluster with chronic socio-economic hardship and severe poverty are crowding (Honig 1986a:55 and Epstein 1981:127), depression in parents, decreasing their emotional availability and responsiveness, marital conflict and physical and psychological health problems (Lempers et al. 1989:25).

As with other stressful life-events, the two types of socio-economic hardship do not always affect the victims in the same way. Personal variables such as age, sex, temperament, social structure, intelligence, culture and social relationships are important determinants of a person's response to poverty and socio-economic hardship (Lempers et al. 1989:26).

(viii) **Crowding**

Crowding and household density (number of persons per room) are stressors that frequently cluster with poverty and particularly influence the older children in families. It is important to note, however, that the experience of crowding differs from culture to culture. In the USA household density seems to increase both the extent to which parents hit their children and the number of verbal quarrels. In Hong Kong, however, high density and crowding are not stressors (Honig 1986a:54). How a person gives meaning to a lack of privacy, for example, how he experiences it and engages with the problem depends, therefore, on cultural accommodations and attitudes as well as on personality factors and age.

It is axiomatic however, that resources become scarce as an environment becomes crowded; activities of one person may interfere with those of another; unavoidable interpersonal interaction may distract the individual or may cause group maintenance behaviours which prevent the individual from attaining his or her personal goals; while violations of spatial norms may increase arousal and discomfort (Epstein 1981:138). Child-rearing stress is also greater in high-rise, high-density apartment houses (Honig 1986a:55). The normal differences between parents and children about such things as loud music are intensified by a lack of privacy.

(ix) **Moves**

Moving has been identified by many researchers as having a disruptive or even adverse influence on children (Pollari and Bullock 1989:115). The child and the adolescent have to re-establish themselves not only in a new school and church, but have to build a new circle of friends, bid the old one farewell and meet the new demands of new teachers. Research has proven, in fact, that moving and attending a new school depress achievement,
particularly when children are possessed of low intelligence or command a low socio-economic status (Pollari and Bullock 1989:117). Furthermore, marital and parent-child relationships are subject, for various reasons, to more stress during the months before and after relocation.

It can be taken as a general rule, then, that moving creates emotional stress for children and adolescents, and this stress can result in adjustment problems if the child is not effectively socialised in the new setting. However, the effect of moving will depend on the surrounding circumstances. Initiating factors such as job promotions or unemployment, deaths, inheritance, marriages and divorces affect the meaning attribution, experience and direct involvement of the child to such effect that while one child experiences these eventualities as a stressor, the same events would be experienced by another child as delightful. Researchers (Cramer and Dorsey 1970:390; and Pollari and Bullock 1989:117) are agreed, however, that as a rule children deal successfully with relocation after a brief period of stress and disorganisation.

(x)  
\textit{Parental illness}

Serious and prolonged illness of one or both parents in a family can be a major stressor for all members of the family. The child, and particularly the adolescent, has to cope not only with the fear of loss of a beloved parent, but often has to assume the burden of many household tasks. Taking care of the sick parent and other siblings takes up a great deal of his time and in addition he may feel guilty if he goes out and leaves the sick parent alone. The kind of illness suffered by the parent (e.g. AIDS or cancer) may also affect the child's attribution of meaning, experience and involvement. A stressor that frequently clusters with prolonged and grave parental illness is parental depression.

(xi)  
\textit{Parental depression}

It has been clear to researchers for a number of years that youngsters whose parents have serious mood disorders experience a great deal of stress in the family situation (Beardslee 1990:352). It is particularly the more life-threatening diseases such as serious cardiac and pulmonary disorders, cancer and the like that cause depression; but other diseases, such as ME syndrome, burnout syndrome and premenstrual stress can also cause serious depression in the sufferer. The commonest consequence of parental depression is its deleterious effect on parental caretaking functions. The children and adolescents involved experience their parents as limited in energy and attention. The child often finds the parent's behaviour mystifying and symptoms of depression such as lack of interest, lack of energy,
irritability, sleeplessness, temper tantrums and bouts of crying that become severe at times, are bewildering for the child. He also experiences confusion at times about the parent's illness status since indications of a physical condition are not always in evidence. He therefore doubts on occasion whether his parent is really ill at all.

Other stressors that tend to accompany a major mental illness are: loss of income, loss of social supports, marital discord, economic hardship, feeling of responsibility for the ill parent, increased stress on the healthy parent, increased divorce risk, parental irritability, psychological unavailability of the parent, and many more (Beardslee 1990:352).

(xii) Parental alcoholism/substance abuse

Maternal alcohol intake during pregnancy is reported by many researchers to be detrimental to the human foetus (Burns and Arnold 1990:75). For the purpose of this research, however, emphasis is placed on the influence of parental alcoholism and substance abuse as a stressor in the life of the adolescent and of other members of his family.

The most widespread cause of severe stress for school-age children in the USA is life with an alcoholic parent (Brenner 1984:151). This statement is probably equally true for South Africa with its high alcohol-abuse figure. It is not only fathers today who become guilty of alcohol and substance abuse, but a rising number of women/mothers are also becoming alcoholics.

According to Brenner (1984:151-152) every family imposes certain demands on its various members, but there are certain typical sets of unreasonable demands which all children of alcoholics are expected to accede to regardless of their socio-economic level, race, religion or ethnic group.

First of all absolute secrecy is expected of the whole family. Secondly, the children are expected to take responsibility for their alcoholic parents. This may mean that an older child has to distract the attention of a drunken father to save a younger sibling from a beating; staying home from school to care for a stuporous mother or father; or making excuses to parents' employers, family or friends.

The third demand is that the child's own feelings be neither acknowledged nor expressed, and the fourth is that children accept the blame for their parents' drinking. The final demand is that at least one child in the family become a substitute for the alcoholic spouse.
The claim made by Brenner (1984:152) that the same patterns and unreasonable demands in families occur at every socio-economic level and in every racial, religious and ethnic group can probably be challenged, but there can be no doubt that each of these demands causes stress for the child and adolescent. In combination with other stressors that cluster with alcohol misuse these demands may create an untenable situation for the child of alcoholic parents.

(xiii) **Abuse**

One of the most stressful experiences for adolescents and younger children is to be abused by their parents or siblings. Four kinds of abuse are distinguishable: physical abuse, sexual maltreatment, emotional abuse, and neglect.

*Physical abuse* includes the whole spectrum of human savagery. Children who are subjected to physical abuse are beaten, kicked, pushed, slapped, they are tortured, locked in closets, tied to beds, they are assaulted with guns, clubs and knives and are deprived of food, shelter and schooling. They are expected to subordinate their own needs to those of the aggressor. They are constantly subjected to unreasonable and inconsistent rules and brutal punishment. Brenner (1984:94) claims that the same injuries that warrant a charge of child abuse against a parent are generally ignored when they are committed by a sibling.

Two forms of sexual maltreatment can be distinguished, namely abuse and exploitation, but both forms cause severe stress in the lives of children and adolescents.

*Sexual abuse* ranges in severity from situations where the parent or sibling has no physical contact with the victim (exposure; voyeurism - looking at the child/adolescent from a concealed vantage point while he/she is taking a bath, undressing or using the toilet; and masturbating with the child looking on) to touching, kissing, fondling of breasts, genitals and buttocks, and intrusion. The trauma has extremely negative emotional, physical and attitudinal impacts on the victim. In South Africa one out of four girls and one out of nine boys are sexually molested before they reach adulthood. Of this molestation 75% takes place within the family and immediate family (Pienaar and de Swardt 1989:40). In the case of sexual exploitation youngsters are used by adults to pose for pornographic films, photographs or videos, to participate in group sex or to work as prostitutes. The children are paid for their services with affection, money, trips, clothes, cigarettes, liquor, drugs and special privileges (Brenner 1984:145).

*Emotional abuse* and neglect is difficult to define and identify, with the result that it is also
less frequently reported and adjudicated (Johnson and Cohn 1990:269). Although it is always part of the process of physical and sexual abuse, it is also a maltreatment in its own right when practised by parents who would never dream of inflicting physical harm on their children. According to Brenner (1984:97) emotional maltreatment takes place "when adults attempt to shape children's behaviour through the use of severe disparagement, humiliation, rejection, guilt and fear". Children and adolescents who are emotionally abused are constantly criticised, disparaged and held to impossible standards. The child is not only subjected to unreasonable punishment and discipline, but is also publicly disparaged and humiliated. The child often lives for days in a climate of icy silence or hysterical vituperation.

Neglect, on the other hand, is defined as a "failure to attend to important aspects of child care such as provision of physical needs, safety, a sense of love and belonging and discipline" (Freiberg 1987:257). In contrast with the manifestations of emotional abuse the parent ignores the child and his needs, shows little or no interest in the child's education and development, and does not provide sufficiently in the child's nutritional, safety and health needs.

It would seem that all forms of abuse occur at all developmental levels, but that the adolescent, owing to his greater independence and physical strength, his better developed physique and imminent attainment to maturity is more prone to sexual exploitation and emotional abuse than to sexual abuse and neglect. Research also indicates that abusive adults can be found in all socio-economic levels of society and in all ethnic groups (Freiberg 1987:255).

Various factors, singly or in combination, contribute to high-risk situations in which child abuse occurs more readily. Parents who experience considerable stress owing to unemployment, marital discord, social isolation, depression or health problems may be at risk for abusive behaviour on account of such stress factors alone, but adolescents may trigger aggressive outbursts and by having a difficult temperament may provoke abusive reactions in their parents. Other stressors that are associated with abuse include first birth, economic distress, more children, less education, lower occupational status, abuse suffered by parent in his own childhood, crowding, drug and alcohol abuse. High authorisation values (where absolute obedience is rated very highly) and a negative perception of the child are associated with maternal abuse, and a correlation also exists between abuse and parental emotional difficulties, poverty and marital distress (Honig 1986b:50).
Parenthood generally imposes a good deal of stress on adults, but adolescents may constitute a special source of stress to their parents. Research on the parenting of children in various developmental stages confirms that parents of adolescents often feel the least comfortable and the least adequate, and accordingly they report the lowest levels of life satisfaction and the highest levels of stress (Small, Eastman and Cornelius 1988:377-378). Research on family stressors and strains also indicates that no phase of the family life cycle is more stressful than the adolescent years.

An important development task of the adolescent is that of attaining independence since without it he will hardly be able to engage in adult relationships, make a realistic choice of occupation and develop a personal value system and an authentic identity of his own. His quest for autonomy involves movement away from dependence on parents toward independence in decision-making, values, emotional attachment and behaviour generally. This may lead to friction between him and his parents, however.

Although parents naturally expect their children to mature and act independently, parents and children sometimes disagree about the rate at which independence develops. Both parties experience ambivalent feelings about this at times, which may occasion inconsistent behaviours (Thom 1990:447-448). Parents and adolescents therefore often clash about such matters as the time at which a child should get home from a date, style of dress, music, friends, money-spending patterns, indulgence in liquor, smoking, and so on.

Adolescents experience stress because their new-found independence also imposes greater responsibility on them. They are often uncertain because in the process of emancipation they are confronted by numerous new experiences and decisions. Stressors that cluster with adolescent autonomy include the choice of academic subjects, occupation choice and peer group pressure concerning such matters as drugs, alcohol and sex.

Parents are proud of their children on the one hand, but they are also frequently concerned about the well-being of their child because independence also means exposure to dangers and, in some cases, behaviour that may disappoint the parents. Consequently parents often respond to the adolescent's striving for autonomy with inappropriate parenting practices and discipline techniques that may raise the adolescent's stress level considerably. Baumrind (in Honig 1986b:48) characterises parental discipline techniques as authoritarian, permissive and authoritative. He further maintains that the first two methods or techniques are stressful to children because through adult coercion or overindulgence they take away opportunities for
children to make responsible choices and to become more mature, well socialised people.

By contrast authoritative parents produce children who work well in classrooms, get along with peers and are pleasant in the family. Despite the firm rules and high expectancies set by these parents, they create a stress-free environment for the child to develop and test his independence in. Once more, therefore, it is clear that in the case of parental discipline techniques and adolescent autonomy, as in other respects, each child’s situation is unique and that the meaning attributed to situations, as well as the experience of and involvement with situations on the part of both the child and the parent, are influenced by a number of variables.

3.5.2.2 Peer group

The child’s social life changes radically with the arrival of adolescence. Friendships, intimate relationships and peer group activities become all-important features of the child’s life. The peer groups occurring during adolescence can be divided into three types, the clique, the crowd and the gang (Thom 1990:438). A clique is a small, intimate group comprising two to nine members who share the same interests and background. The relationship between the members is one of intimate camaraderie in which ideas and experiences are shared. Accordingly they are usually members of the same sex and socio-economic class and are in the same school standard. Membership is voluntary and new members are only allowed in if all the members are agreeable.

A crowd comprises 20 to 30 members and can also be seen as an association of cliques (Schickedanz et al. 1990:631). All cliques are not inevitably assimilated into a crowd, however. The crowd often provides the framework within which heterosexual relationships originate and develop.

A gang consists of a group of adolescents who are often associated with illegal, antisocial and criminal activities. In such a gang the roles of the leader and the members are clearly defined and the gang usually has a name, too. According to Coleman (in Thom 1990:438), characteristics that typify the members are usually poverty, broken homes, absence of suitable adult role models, parents with criminal histories, low scores in intelligence tests, lack of control over irrational impulses, the fact that members rely on physical and verbal aggression to maintain their position in the gang, and a tendency to indulge in dangerous behaviour.

The peer group (clique, crowd and gang) performs a distinct function in the becoming and
development of the adolescent. Acceptance within the group gives the child a sense of status that is essential for the forming of a positive self-concept. In the group leadership qualities are developed and the child also learns to be a follower. The peer group also exerts pressure on the adolescent to conform to the ideas, values, behaviour, and even the style of dress affected by the group. The adolescent who fails to gain acceptance by the group for some reason suffers a traumatic experience that may occasion a sense of rejection. For many pupils acceptance by the peer group is more important than that of his teacher and he cannot devote his attention to academic studies unless and until he is sure of his peers' acceptance (La Benne and Greene in Raath and Jacobs 1990:75). The peer group and peer group pressure can therefore act as stressors in the life of the adolescent.

(i) Peer pressure

During adolescence the youngster becomes increasingly independent from his parents. He displays a sudden all-consuming interest in friends and peers and his social life changes radically. Schickedanz et al. (1990:631) attributes this to the fact that the adolescent is in a transitional phase. Rapid physical growth during puberty, maturation of genitalia and the experience of surging sexual interest and energy, referred to as libido, all tell him that the end of childhood is approaching rapidly. Adolescents become aware of the possibilities of adulthood and increasingly ask themselves: Who am I and how and what will I become one day?

Amidst all this uncertainty — struggling to differentiate and define themselves and facing the challenge of adulthood, they seek the advice and support of people like themselves — their peers. In an effort to be accepted by the peer group the adolescent begins to resemble his peers and to dress and speak like them. Adolescents indulge in the same activities and they go everywhere and do everything together. At times the teenager seems to identify himself with his peer group to the extent where, instead of forming his own identity, he seems to lose whatever identity he has. It seems that the price of independence from parents is some degree of emotional dependence on the peer group. This is borne out by the fact that the peer group exerts its greatest influence in early adolescence (Schickedanz et al. 1990:631).

This dependence on the peer group, the need for acceptance, has the effect that the peer group exerts pressure on the adolescent to conform to the standards and meet the demands imposed by it. Freiberg (1987:373) defines peer pressure as "compelling influences to behave in certain ways brought to bear by one's age cohorts". This is why early researchers placed considerable emphasis on the importance of the peer group as an opinion maker against the influence of the parents. However, more recent studies show that parents'
counsel is more often preferred to that of peers in important situations involving values and future decision-making, while adolescents are more likely to seek help from peers when they perceive their parents as rejecting or different (Coleman and Hendry 1990:110). The influence of peer group pressure on the child can therefore be questioned with justification, but it is nevertheless a fact that many adolescents experience their parents as rejecting and different in this phase, and are reliant on the peer group for that reason. In a study on The Extent and Effects of Peer Pressure Among High School Students by Brown (1982:121) it was found that one-third of both genders identified peer pressure as one of the hardest things they had to face as teenagers. As a rule peer pressure appeared stronger for females than males and the sexes differ in areas where peer group pressure is the most intense.

Peer group pressure is particularly heavy in the following areas: dating attitudes, sexual activity and use of drugs and alcohol (Brown 1982:121). Omizo et al. (1988:267) maintain that wanting to be accepted by friends, participating in activities they don’t feel comfortable with (i.e. drugs, sex, smoking, drinking) and not having the resources to be part of the “in” group are all typical stressors of the adolescent years. Different peer groups exert different kinds of pressure just as adolescents’ susceptibility to peer pressure differs from one individual to the next. The content, extent and intensity of peer group pressure differ with the situation and from culture to culture. At the moment, for example, black adolescents in South Africa are being subjected to considerable pressure to boycott schools and participate in violence. They are also under considerable peer group pressure to abuse a variety of substances. The white child is more under pressure to show off (“hang out”) financially, abuse substances and experiment sexually. The matric farewell function is an occasion that evinces considerable peer pressure: from the price of the adolescent’s dress/suit to the car in which the arrival at the function is made, including attendance of the after-party, which is often “wild”. The adolescent who cannot or will not accede to the demands of the peer group on this occasion often experiences it as extremely stressful. However, the stress of resisting unhealthy peer pressure can be buffered by good family relationships and a high self-esteem. According to Hendren (1990:254) it is often those adolescents with neither who succumb to unhealthy pressure from peers.

(ii) **Friends and heterosexual relationships**

Here the emphasis is on friendships between individuals rather than on the peer group as a whole. In his quest for independence the adolescent increasingly relinquishes his dependence on his parents and seeks support for his behaviour from other people, such as his friends. Although friendship can be a stress mediator, ill-chosen friends or constant conflict or competition with friends can be a source of stress for the adolescent.
A desire for sexual satisfaction is often a major motivation for engagement in heterosexual relationships (Cole & Hall 1970:364). Yet sexual considerations are not necessarily dominant in heterosexual relationships. The erotic aspect of the adolescent’s life, which is characterised by the urge to be together, mutual admiration, gazing at each other, affirmations of love—without any clear-cut sexual intention (Langeveld in Vrey 1979:172)—can be one of the most beautiful experiences in his life. There is no other time in a person’s life when he can experience such ecstasy, when the world can look so enchanting and the joy of living can be so great, as when he is in love. A boy and a girl can stimulate and inspire each other to high achievement. The opposite can also happen, however. Sexual considerations may dominate the relationship between two people to such an extent that the other components of the interpersonal relationship are virtually excluded. In cases of sexual exploitation leading to promiscuity the chances are excellent that great suffering will ensue. In these circumstances heterosexual relationships can be a considerable source of stress for the adolescent.

(iii) **Competition and rivalry**

Competition is closely associated with peer group pressure. In paragraph 3.5.2.2(i) the matric farewell function was mentioned as an occasion where peer group pressure plays a particularly important role. In his efforts to conform, the adolescent sometimes aspires to possessing better, bigger, more beautiful and expensive items/clothes than his peers. Inability to keep up financially in this competition can cause severe stress for the adolescent.

Similarly parental pressure on a child to achieve often results in strenuous competition with the peer group in a number of areas, such as academic, sports and extracurricular activities. The struggle to be forever the cleverest, fastest, most talented and so on takes its toll in terms of stress suffered by the adolescent.

Adolescents also tend at times to test each other’s courage or endurance by indulging in highly dangerous games such as Russian roulette, “chicken runs”\(^1\) or “death-runs”\(^2\).

(iv) **Loneliness**

Social loneliness acts as a stressor in the lives of many adolescents. It implies not being

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\(^1\) Chicken runs: During a chicken run two cars are driven at high speed on a collision course with each other. The one who swerves first to avoid the crash is the “chicken”.

\(^2\) Adolescent boys defy death by walking on trains moving at high speed, or they hang out of train doors.
connected to a group of people, not belonging, and it is different from depression which can be described as emanating from a sense of "you don't care", while the sentiment underlying loneliness can be encapsulated as "everyone else doesn't care" (Dawson 1989:27).

Lonely children and adolescents can be classified in two groups falling under the general rubric of "social isolates": those who are actively rejected, and those who are neglected or overlooked. Rejected youngsters are usually aggressive, disruptive, bothersome and defiant and they are seen in a categorically negative light as misfits in the social matrix of the peer group. A case in point is a petition with the following heading: "If you hate Graham, sign here" (Byrnes 1984:271). In contrast, the second group includes children whose isolation is not obvious. These children are forgotten or ignored and they have no friends.

Bauer (in Asher 1982:26) notes that the incidence of friendlessness is relatively low among secondary school children. She claims that the loose grouping of adolescents makes it easier for them to contract friendships. Throughout their lives, however, friendless children are heavily burdened by the load of social isolation borne in earlier years. They do not only report being less confident in their abilities to relate effectively to others, but Asher (1982:23) also maintains that dropping out of high school, juvenile delinquency and mental health problems cluster with social isolation.

(v) **Suicide**

Researchers agree that suicide among adolescents is on the increase (Hendren 1990:259; Celotta, Jacobs and Keys 1987:38; and Peck 1987:863). In South Africa 87 adolescents committed suicide in 1990 while many others attempt to end their lives each year (Central Statistical Service 1992). Hendren (1990:259) avers that part of the explanation for the recent rise in adolescent suicide is that stress upon adolescents has increased while environmental supports have decreased, leaving the adolescent more vulnerable. However that may be, suicidal thoughts and suicide attempts do cause severe stress for the victim, as well as his friends and relatives.

Recent studies have revealed that suicide among peer group members has a contagious effect leading to suicide clusters. Brent (1990:7) confirms this assertion and finds that the occurrence of a teen suicide can substantially increase the number of suicides or suicidal thoughts among peers. However, close friends of the victims were not the most likely candidates for suicidal behaviour. Students who were depressed or had had past episodes of depression or suicidality exhibit the highest degree of suicidal thoughts or plans. Various stressors cluster with suicide and are given by adolescents as predisposing factors in suicide...
attempts (cf. Table 3.4).

<table>
<thead>
<tr>
<th>TABLE 3.4</th>
<th>OBSERVATIONS OF AN ADOLESCENT SUICIDE SAMPLE STUDIED IN LOS ANGELES COUNTY by Joseph Teicher, M.D. and Jerry Jacobs, Ph.D. (Bensley and Bertsch 1987:19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• In almost every instance, the adolescents had multiple, unexpected separations from their parents during the first three years of their lives.</td>
<td>• In 88% of the families, one or both natural parents were absent (i.e. divorce, separation, or death).</td>
</tr>
<tr>
<td>• All felt that there was no real communication or there were no emotional ties in their families.</td>
<td>• More than 75% of the parents had been married more than once.</td>
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<td>• Only ten percent felt that they could talk to their parents when they were troubled.</td>
<td>• Many of the adolescents felt that they had to contend with an unwanted step-parent — a feeling that was often mutual.</td>
</tr>
<tr>
<td>• All thought about suicide, off and on, for the five years preceding their attempts.</td>
<td>• Nearly 65% of the youngsters were in families in which someone had suffered a serious illness, usually in the two-year period prior to the attempted suicide. That illness had put the teenager into somewhat of a maternal role.</td>
</tr>
<tr>
<td>• More than sixty percent had attempted suicide previously.</td>
<td>• About 85% of the adolescents had physical complaints, (e.g., headaches, stomach aches, and a general malaise).</td>
</tr>
<tr>
<td>• In 25% of the families involved, one of the parents had attempted suicide.</td>
<td>• A relative or a close friend of 45% of the suicidal young people had attempted suicide.</td>
</tr>
<tr>
<td>• A relative or a close friend of 45% of the suicidal young people had attempted suicide.</td>
<td></td>
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</table>

(vi) Violence

Violent acts are not only stressors in their own right in the lives of youngsters, but they also cluster with such other stressors as peer group pressure, loneliness, fear, symptoms of physical disorders and substance abuse. The adolescent receives, often through the popular press, anecdotal and at times alarming reports of violence. Indeed, even a cursory review of newspapers and TV news in South Africa would lead one to expect that violence in black townships has reached crisis proportions and therefore causes heightened stress for children. According to Christie and Toomey (1990:301) violence within the peer group, or perpetrated by the peer group, and the resultant violent school climate, merely reflect the increasing levels of violence in society as a whole. It seems that the victim as well as the perpetrator of violence are subject to severe stress on this account.
Substance abuse

The association between stressful life events and substance abuse has been investigated by a number of researchers. Carman (1979) found that frequent intoxication (from marijuana, amphetamines, hallucinogens or barbiturates) was significantly associated with motivations to enhance personal affects and reduce stress, while Newcomb found that a sum of life events experienced in the past six months was significantly correlated with the use of beer, wine, hard liquor, marijuana, psychedelics and cocaine (in Newcomb and Harlow 1986:564).

Thus there is a clear correlation between substance abuse and an attempt to cope with stress. The misuse of any substance, granted that it is sometimes done to reduce stress, inevitably leads to heightened stress and clusters with other stressors, such as clashes with the law, parents and teachers; perceived loss of control; powerlessness; inefficiency and helplessness (Newcomb and Harlow 1986:565). Hendren (1990:260) finds that etiologic factors that characterise adolescent substance abusers include genetic and biological markers, parental values, culture and individual characteristics such as low self-esteem and the peer/social context. Reference was made in earlier sections to the marked influence of peer group pressure on substance abuse. As in other cases, however, good family relations and high self-esteem can help the youngster to cope with stress and resist peer group pressure. In the absence of personal and social support, however, social pressures may lead the adolescent to drugs and alcohol.

3.5.2.3 School

Elkind (1983:30) notes that parents and teachers hurry children and adolescents through the growing-up process. He states that by treating youngsters as adults and by burdening them with worry and anxiety, expecting them to aid adults in carrying life's load, and by constantly pressuring them to perform, the natural stress imposed on them by life-events is exacerbated. Excessive stress presents a special problem for teachers and students (pupils) because it impedes the teaching-learning process (Swick 1987:22), harms academic achievement (Crowley 1981:98; Van Oteghen and Forrest 1988:7); can lead to large, and perhaps permanent, declines in pupil IQ scores; can cause children to grow out of childhood prematurely; and can result in a number of "wear and tear" stress manifestations (Fimian et al. 1989:139-140).

School and classroom stress emanates from within the school context, but also from sources outside the school, such as the family and the peer group. Pupils and teachers therefore bring a great deal of their personal stress into the school situation, thereby heightening the
stress already prevailing there. However, within the school and classroom settings there are
many potential stressors such as teacher behaviour, classroom organisation, discipline code
and so on. Schools have also become so product oriented that achievement and test scores
are overemphasised. It is therefore not strange that a considerable number of school
stressors have a determining influence on success or failure in school (cf. Table 3.5).

<table>
<thead>
<tr>
<th>TABLE 3.5: SOME COMMON SCHOOL STRESSORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adapted from Sears and Milburn (1990:225) and Omizo et al. (1988:269)</td>
</tr>
</tbody>
</table>

- School environment
- Time, not being able to complete homework assignments
- School tests, failing an exam, failing marks at school, not doing well academically
- Stress of certain school subjects
- School anxiety; school phobia
- Competitive culture; failing to win a place on an athletic team
- Loneliness
- Not seeing the relevance of school
- School changes; moves
- Iatrogenic stress of children
- Adjusting to the different teachers and pupils
- Violence, bullies
- Conflict with the teacher, difficulty with classmates
- Embarrassment about parental alcoholism, illness or unemployment
- Fads and dares (pressure to buy and act)
- Giving oral reports or speeches in front of the class
- Lack of parental interest in achievements
- Learning disorders
- Older siblings setting bad family reputation
- Older siblings setting school expectations too high
- Parental pressure to achieve
- Special recognition for outstanding performance (e.g. honour roll)
Some school stressors (moving, school changes, loneliness, violence, parental alcoholism, etc.) have already been discussed in the sections on family and peer group stress. The extensiveness of the school stress phenomenon obliges the researcher, as in earlier sections, to deal briefly with just a few of the principal school stressors. Note that individual persons experience, attribute meaning to, and become involved with particular stressors in uniquely different ways. It would therefore be wrong to generalise the influence of a particular school stressor for the entire school population.

(i) **School environment**

Various aspects of the school environment can cause stress for pupils, for example school size (Garbarino 1979:19); design of school buildings (Zimring 1981:145-159); seating position in classroom; classroom design and furniture arrangement; density and crowding; space; privacy and noise (Connors 1983:15-26 and Weinstein 1979:578-589). From these stressors it is clear that the designed environment of schools may stress users of the facility both directly and indirectly. Conners (1983:18) cites research done by Mintz which reveals a correlation between an "ugly" environment and feelings of discontent, the desire to escape, and fatigue. Accordingly it is particularly in the less affluent neighbourhoods of cities where the ugliness of the designed environment can be a substantial consideration owing to the intractable problem of a lack of funds. As a rule more is done in primary than in high schools to make the classroom an aesthetically appealing place.

In this regard Weinstein (1979:585) notes: "Nowhere else (but in schools) are large groups of individuals packed so closely together for so many hours, yet expected to perform at peak efficiency on difficult learning tasks and to interact harmoniously". Stress-related actions such as shoving, pushing, kicking and fighting, may of themselves affect pupils as stressors. Too little physical space can therefore create a potential for stress, and can exacerbate behaviour problems that might be more manageable in a functional setting. Allowance must be made, however, for cultural differences in attitudes to and perceptions of living space and the experience of crowding.

(ii) **Time**

Time can be a major source of school stress. The daily schedule of some children, especially those in the suburbs (Rhiner 1983:7), is fuller than that of the busiest executive (cf. also par. 6.11.1). They are not only hurried through school activities in the morning, but their time in the afternoon is over-organised and crammed with all kinds of extramural activities. Weekends seldom bring relief from the helter-skelter programme and are just as fragmented
as weekdays, with little time left for the child to assimilate the experiences and events of the
day and week.

Swick (1987:23) distinguishes between quantitative and qualitative time stressors. Common
quantitative time stressors include rigid schedules, poorly organised schedules, inadequate
time frames, and too little time for transition activities. He observes that when time is seen
as rigidly controlling one’s behaviour, it becomes a negative stressor and impedes human
functioning.

Qualitative time stressors include lack of input on what time is used for, too much time
wasted on meaningless rituals, school activities that often have little to do with real learning,
and too much time spent on testing. Moreover some stressors are inclined to cluster with
a lack of time (real or perceived), such as anxiety, accidents, unhealthy eating habits,
irritability, apprehension about tasks left undone, and so on.

(iii) School tests

A lot of the stress youngsters experience in school today is associated with the current
preoccupation with testing (Rhiner 1983:8). Test anxiety has a negative impact on
approximately 20% of all school children and is a special case of general anxiety of which
the stimulating/triggering experiences and responses seem to be just as varied as those of
general anxiety. Sears and Milburn (1990:232) define test anxiety as "a set of responses to
a class of stimuli that has been associated with the individual’s experience of evaluation or
testing".

Children and adolescents are constantly bombarded with tests in the school situation and,
nowadays, even in catechism classes in some instances. Consequently the curriculum often
consists of children "getting ready" to take tests rather than engaging in meaningful and
creative learning activities. As children grow older they deduce from the reactions of their
parents and teachers that their performance is important to the people who love them and
then the importance of tests, or rather the importance of achievements in tests, looms larger.
Parental pressure on the child to achieve further heightens his fear of failure and leads to test
anxiety, which acts as a stressor and clusters with feelings of helplessness and with poor
scholastic performance, lowered self-confidence and decreased feelings of intellectual
"worth".

Rhiner (1983:8) quotes Laughland in this connection: "(Testing) is not fun for the child who
freezes; it is not fun for the child who struggles for small successes only to be labelled a
"failure" time after time; and it is not fun for the child whose one bad day yields results that must be lived with until the next testing time.

(iv) Stress of certain school subjects

Almost any school subject can be stressful for the individual if he attributes a negative meaning to it, experiences it as negative or threatening, and engages with it in a negative or maladaptive way. It is particularly subjects in which the adolescent's performance is poor that act as stressors. Other factors, such as the intensity of competition, the discipline structure, the relationship with the teacher, and the person's own expectations or the expectations of others can also influence his attribution of meaning to, experience of and involvement with a particular subject.

Mathematics seems to be the subject that stresses the vast majority of students (Humphrey 1988:60) at all development levels from school entry to university. In recent years much prominence has been given to this problem and a new research field concerning the subject "Math Anxiety" has developed (Chetty 1992:1). Three main sources of anxiety are commonly found in the mathematics class (Humphrey 1988:60). The first one is the time factor. Pupils not only have to carry out timed tests but also take part in a variety of competitions in which the time taken to come up with the right answer is of the essence. The second source of math anxiety is humiliation. To perform in front of the class is already quite stressful for most pupils, but to be asked to go to the chalk-board to struggle over a problem until a solution is found, and to locate and correct errors in the work done, is intensely stressful. The stress can also be positive, however, if the pupil experiences the problem as a challenge, engages with it in a positive way and, perhaps, arrives at the right solution, but it is important to remember that children profit from demonstrating their competence and not their weaknesses. Finally, there is the emphasis on the right answer. If more attention is paid to the process involved in arriving at the correct answer, much of the stress can be removed since the emphasis is shifted away from criticism of a single wrong answer to recognition for every right step taken.

(v) School anxiety and school phobia

School anxiety is a stressor that occurs commonly among school children of all ages and it may be associated with other stressors that may take the form of the school environment, fear of tests, and an aversion to certain subjects, teachers and the like. It would seem that the causes of anxiety change with age, as do perceptions of stressful situations. It is obvious, too, that although school anxiety is manifested in the school environment, it may
be caused by unrelated factors outside the school.

School phobia is an exaggerated form of school anxiety. According to Sears and Milburn (1990:237) it may vary from a mild school anxiety to extreme panic, and it presents as agitation, physical symptoms, and physical resistance to the school situation. It is found in all age groups, but Johnson (in Sears and Milburn 1990:238) reports a peak around 11 years of age. Stressors that cluster with school phobia are self-consciousness, social withdrawal, crying, worrying, hypersensitivity and reclusiveness.

(vi) Competitive culture

Social researchers emphasise the deleterious effect of competition and the associated pressure exerted by parents, coaches and teachers on the child to perform, to win at any cost (Allen and Green 1988:2; Humphrey 1988:55 and Nash 1987:129). Many opportunities for competition arise both in the classroom and on the sports ground. Accordingly it used to be assumed that competition leads to peak performance, but recent research indicates that the opposite may be true and that in fact competition interferes with achievement (Humphrey 1988:56). Apart from the stress imposed on himself by the child’s aspiration to win, teachers and parents may increase this stress by emphasising academic competition and by only rewarding the winner with recognition.

Competition as a stressor is particularly rampant in sport. According to Nash (1987:129-133) pressure from parents and coaches is forcing many elite child-athletes to strive for perfection. He further maintains that this pressure may be responsible for a host of physical and psychological ailments such as sleep disturbances, fatigue, depression and lethargy. Stressors that cluster with exaggerated competition include the tendency to break up families temporarily so that the child can live near the best coach, or to move to another province for the same purpose; parental disagreements about performances; minor physical disorders; serious injuries; psychological problems; financial considerations involved in organising time to get as much practice as possible in the sport concerned; and many more.

(vii) Exceptional adulation and unrealistic expectations

Great emphasis is placed on stressors resulting in negative stress (distress), while positive stress (eustress) is frequently overlooked. Some events that appear to be positive often cause negative stress for the child and adolescent. The meaning attributed by the individual to such events as winning an award, being given the lead in the school play or being chosen for the provincial sports team determines whether he will experience such distinction as a
challenge or a threat. A closely related factor in this regard is the expectations of other people who are important to him.

Unrealistically low expectations can cause considerable stress for the individual since he may feel bored and unchallenged, but unrealistically high expectations are particularly prominent as a source of severe stress for the pupil. If he constantly feels that he has to stay "on top" to satisfy others, and if he feels that others love him conditionally, not for himself, but for his achievements, he experiences stress and suffers from a reduced sense of his own worth. Nash (1987:133) contends that many parents confuse their own egos with their child's ego. They say such things as "we must learn hard, tomorrow we write exams", or "our game starts in an hour, today we're going to win". In this way, the parent relives his own youth through his child who feels that he is letting his parent down if he fails to come up to expectations.

3.5.3 Stressors at macro-level: outside world

3.5.3.1 Catastrophic events (disasters)

Kreps (1984:312) defines disasters as "events, observable in time and space, in which societies or their larger subunits (e.g. communities, regions) incur physical damages and losses and/or disruption of their routine functioning". Disasters or catastrophic events cause intense stress for the victims.

Consider, for example, in the South African context:

- the cataclysmic floods at Laingsburg in 1981
- the Westdene bus disaster in 1985
- the Helderberg aeroplane disaster in 1987
- the tornado that ravaged Welkom in 1990
- the devastating hailstorm that laid Barberton in ruins in 1991.

A disaster is distinguished by, among other things, the suddenness of the occurrence, the physical harm caused to people and the environment, the heartache and sorrow caused by the event, and the need for a social response to ameliorate the effects.
Disaster victims not only suffer intense stress during the occurrence, but also experience an aftermath of distress and emotional problems for quite some time after the event as they try to cope with living in the disorder that follows (Honig 1986a:56 and Toomey and Christie 1990:443). Victims also experience considerable stress and strain and varying degrees of concern, worry and depression and anxiety, together with numerous problems of living and post-disaster adjustment. It appears, therefore, that numerous other stressors also cluster with a disaster and so enhance the stress impact.

3.5.3.2 Threat of violence

In paragraph 3.5.2.2(vi) reference was made to the stress occasioned by violence within the peer group. However, children and adolescents are also exposed to violence in the outside world. Radio and television have brought global terror as well as terrorism, war, political violence, aggression and crime into the lives of each and everyone. The South African Black child of the eighties and nineties is exposed to bloody tribal clashes while the White child lives with constant stress in the fear that political tension between right- and left-wing parties may lead to internecine violence as happened in Ventersdorp in 1991.

Foreign writers, such as Rhiner (1983:8) and Myers (1985:251), proclaim nuclear war and the destruction of the world to be the ultimate threat of violence against today's children and adolescents. The researcher feels, however, that children in the countries of the major powers are exposed to a great deal of nuclear stress, but that the violence inherent in South African political realities is a more severe stressor for the South African child than threats of nuclear war. Stressors that cluster with violence include general social and racial stress, discrimination, legal stress and television stress.

3.5.3.3 General social and racial stress and discrimination

Children and adolescents suffer stress caused by the stressful social environment in which they grow up. Poverty, socio-economic inequities, racism and discrimination affect the stress level of whole communities.

Discrimination as a stressor takes many forms: discrimination on the grounds of social status, socio-economic status, intellectual ability and so on are common in communities and schools. It is important to realise that the individual who experiences discrimination, regardless of what form it takes, or whether it is real or perceived, can be a victim of discrimination as a stressor in his life.
Racial and ethnic discrimination are probably the commonest forms of discrimination that act as stressors, not only in South Africa, but throughout the world. Toomey and Christie (1990:430) contend that old-fashioned racism, even in the United States, typically involves the triple creed of white supremacy, black inferiority and racial segregation. Although racism and associated forms of discrimination are declining throughout the world (Schuman, Steen and Bobo 1985:82) it is still widely prevalent in South Africa and particularly in the rural areas. Its influence on children and adolescents of all races as a stressor should therefore be investigated.

3.5.3.4 Political change

The stress caused by political change, as in South Africa at present, has yet to be investigated (to the researcher’s knowledge). Major changes have implications for each and every member of the society concerned. Whether the individual will experience stress owing to such changes as the abolition of apartheid, the Group Areas Act, the Mixed Marriages Act, the Immorality Act and so on will depend on a number of factors, such as his political persuasion, his society’s attitude to racial miscegenation, and so on. It goes without saying, therefore, that different groups will react differently to change, and that their reaction could cause either stress or a reduction of stress for the individual.

However, as a rule change causes some stress as a result of the uncertainty with which it confronts the individual. According to Toffler (1971:13) “the rate of change has implications quite apart from, and sometimes more important than, the directions of change”. Political change, albeit indispensable, such as that occurring in South Africa in recent years, combined with such stressors as political commotion, violence, socio-economic uncertainty and so on, entails considerable stress for the country’s citizens, but more particularly for the adolescent who is standing on the threshold of his future as an adult.

3.5.3.5 Technological stress and future shock

Arnold (1990:14) observes that the accelerating pace of technological revolution or post-industrial revolution is not as stressful for children and adolescents as it is for adults. The reason for this is that youngsters do not have the dual burden of unlearning the familiar while adjusting to the new.

The researcher feels, however, that the use of advanced technology, rather than the acquisition of skills, can be stressful for the child and adolescent. An example of this is computer and television games that require not only skill, but considerable powers of
concentration. Playing such games for short periods can be relaxing, but long hours in front of the computer without healthy social interaction can be a source of stress for the individual.

To continue on this theme, Burns and Arnold (1990:95) assert that availability of electricity is associated with earlier onset of menarche. Although rapid maturation is partly explained by better nutrition in electrified, industrialised cultures, controlled experiments with farm animals confirmed that supplementing daylight with artificial nocturnal light promotes more rapid growth, earlier onset of fertility and even increased reproductive vigour. The earlier onset of puberty, possibly before the youngster is cognitively and emotionally ready for it, can be caused in part through technological advances and can be a special stress factor in adolescence.

3.5.3.6 Occupational uncertainty

Today's adolescent is caught up in a rapidly changing and complex occupational world, mainly due to scientific and technological advancement, the large diversity of communication media, and urbanisation (Gouws 1990:1). In South Africa the adolescent is also confronted with daily media reports on unemployment, retrenchments, lack of proper training and the like. Together with constant flows of reporting on political insurrection these communications can cause uncertainty about the future for adolescents, which in turn may cause occupational uncertainty. Uncertainty about what he should do with his life and about the soundness of his future plans can cause considerable stress for the adolescent.

3.5.3.7 Television stress

Yet another pressure on children and adolescents is the bombardment of the media – especially television. De Waal (1985) found that standard eight pupils (N = 250) spend an average of 10.8 hours per week viewing television broadcasts while standard three pupils (N = 254) spend 21.73 hours on the same activity. In the course of their viewing time youngsters see things that they never would have been exposed to in pre-television days – violence in many forms, drug abuse, alcoholism, sex, the horrors of war. According to the SABC (1987) television viewers in South Africa are particularly upset by the following elements in their viewing: domestic violence, particularly where a weapon is involved; sexual violence; cruelty to children and animals; excessive or sustained violence; unrest situations in South Africa; violent car crashes; necklace murders; close-up shots of corpses; rape reports and details of suicide methods resorted to (in Botha, Van Ede and Piek 1990:307).

The advertisements on TV also exert considerable pressure on youngsters in that desires are
created that cannot always be satisfied. The adolescent begins to think that his acceptance into a group and his self-worth depend on his wearing designer jeans or a certain brand of jogging shoes. A perfect body as well as perfect skin and hair are often well beyond the reach of the typical adolescent. Hence the glamour-doll image created on TV highlights the average adolescent's bodily shortcomings, with the result that he sustains a negative and low self-concept. Postman (1983:9) blames our modern communication media for eroding the dividing line between childhood and adulthood. He asserts that "the electric media" place children and adults in the same symbolic world: "All of the secrets that a print culture kept from children - about sex, violence, death and human aberration - are revealed all at once by media that do not, and cannot, exclude any audience". Thus the media force "the entire culture out of the closet and out of the cradle". Television awakens in the child not only hankerings for material things, but also emotional and sexual desires.

3.5.3.8 Legal stress

The decline in parental supervision and the increase in personal independence and freedom of geographic movement increases the adolescent's chances of clashing with the law. It is in the adolescent years, as a rule, that a car licence is obtained; that car and motorcycle accidents are made and traffic rules violated. The adolescent experiments with different behaviours, such as alcohol and drug abuse, and moves beyond the limits of the family to test society's limits (Hendren 1990:255). In this way he makes contact, often for the first time in his life, with the law and, in some instances, even experiences imprisonment. When he is arrested in the course of the legal process, and while being subjected to the criticism and, frequently, rejection of his parents, the adolescent suffers a great deal of stress, increasing the likelihood of stress-related disorders such as increased substance abuse, depression and a suicidal frame of mind.

3.5.3.9 Satanism and occultism

The practices of satanism and occultism are on the increase in the RSA, and according to Van der Westhuizen (1992:4) they have reached frightening proportions on the Rand. The East Rand as well as the West Rand, where Krugersdorp is at the nub of these phenomena, are particularly fertile breeding grounds of satanism and occultism. Pretoria, Randfontein and Nelspruit are also mentioned, however, as places where satanism has flourished for a considerable period but is now coming out into the open whereas it used to be more covert.

According to Brits (in Van der Westhuizen 1992:4) different types and degrees of satanism are distinguishable, from orgies where sex, violence and drugs are always present, to ritual
"blood covenants", experiments with various forms of meditation, séances and fortune-telling. He also notes that a certain type of personality manifested in both adults and adolescents tends to become trapped in the toils of satanism. The people involved are usually among those who suffer from the destructive effects of major derailments in their lives, such as children who come from broken homes and frequently have negative encounters with figures of authority.

Many adolescents turn to satanism because they consider it to be a means of gaining power so that for the first time they will be able to impress others and make their voices heard by instilling fear. Stressors that cluster with satanism and occultism include sexual violence, drug abuse and, frequently, child abuse and molestation (Van der Westhuizen 1992:4). Fear of detection and arrest, or fear of the "leaders" of groups may also cause severe stress. Even adolescents, who are not directly involved with satanism but lack a soundly based religious faith, may experience serious stress owing to uncertainty or worry about the participation of members of their peer groups in these activities.

3.5.4 Summary

The individual is affected by a number of stressors emanating from himself, the family, the school, the peer group and the outside world in general. The influence of stressors is determined by the way in which the person attributes meaning to them, experiences them and engages with them. Every individual therefore attributes his own unique meaning to a stressor, has his own unique experience of it, and becomes uniquely involved with it. Various mediators influence his meaning attribution, experiencing and engagement, however, and therefore serve as buffers against the influence of stressors. Mediators include self-concept, personality, coping abilities, social structure and a sense of humour.

Stress is a phenomenon that cannot be readily split into compartments, and that which is a stressor for one person, for example the social structure and family ties, may very well serve the next person as a mediator or buffer against the effect of stressors. For one person his coping abilities (stress handling techniques) are an asset, a buffer against further stress, while for another it is these very abilities that occasion heightened stress. In studying such things as stressors, mediators, responses and consequences, therefore, the fluidity of these concepts must be taken into account at all times. The discussion of the different stressors, mediators, responses and consequences is by no means exhaustive and researchers may differ about the grouping and allocation of these factors, but it serves as a basis for scientific studies and as a frame of reference for stress identification. For this reason stressors are only divided into groups for research purposes, but in reality they are all of a piece. Let us
continue with a brief discussion of a few mediators.

3.6 MEDIATORS OF STRESS

In earlier sections emphasis was placed on the fact that every person attributes meaning to, experiences and engages with stressors in his or her own unique way. The researchers Coyne and Lazarus (1980) are foremost among those who pointed out the limitations of the life-events approach in this regard. Although two persons may have passed through exactly the same amount and kind of life-events, the meaning they attribute to such events, and their experience of and engagement with such events, may differ widely. Accordingly a differentiated approach to stress research and stress identification has become current. Dohrenwend and Dohrenwend (1974:316) put it this way:

"A major question, and for some investigators the central problem concerning the effects of stressful life events, grows out of the observation that one individual may become ill and another remain healthy after both experience the same life event. The most general formulation of the research question generated by these individual differences is: What are the factors that mediate the impact of stressful life events on the individual?"

The present section is therefore devoted to the mediators of stress, that is, to the factors that function as moderator variables and that heighten or lessen the impact of a stressor. Mediators in this sense can also be seen as resources, as the means that an individual can muster towards coping with the stress situation. A number of researchers and writers (Chandler 1985b:102) have tried to identify and classify the mediators that function in individuals. Although there is consensus about certain moderator variables, such as age, sex and social support, researchers differ considerably about which mediating factors are the most important.

For the present research purpose it is less important to know which factors act as buffers or mediating agencies than it is to realise that there are factors that influence the individual's attribution of meaning, experience and engagement. In identifying stress, therefore, the main object is to determine whether an individual experiences a stressor as threatening. The reason for such an experience is therefore not germane to the area of concern to the present research. The mediators of stress will therefore be discussed in less thorough detail than the stressors.

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A summary of the major factors identified by researchers and writers as mediators of childhood and adolescent stress is presented in Table 3.6. A description in merest outline of each factor will conduce to a better understanding of these factors’ influence on the attribution of meaning to, and on the experience of and engagement with stressors.

<table>
<thead>
<tr>
<th>Mediating factors</th>
<th>Relevant citations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. FACTORS INTRINSIC TO THE ADOLESCENT</strong></td>
<td></td>
</tr>
<tr>
<td>• Temperament; psychological adjustment; personality</td>
<td>Compernolle 1987:59; Cooper, Cooper &amp; Eaker 1988:46; Honig 1986a:54; Rabkin &amp; Strauening 1976:1013-1020.</td>
</tr>
<tr>
<td>• Sex</td>
<td>Cooper, Cooper &amp; Eaker 1988:68; Honig 1986a:54; Trad &amp; Greenblatt 1990:38.</td>
</tr>
<tr>
<td>• Problem-solving abilities; previous experience; sense of mastery and competence</td>
<td>Chandler 1985b:109; Rabkin &amp; Strauening 1976:1013-1020.</td>
</tr>
<tr>
<td>• Intellectual ability</td>
<td>Honig 1986a:54.</td>
</tr>
<tr>
<td><strong>B. EXTRINSIC FACTORS</strong></td>
<td></td>
</tr>
</tbody>
</table>
3.6.1 Factors intrinsic to the child

3.6.1.1 Appraisal: perception of event

Mediating factors influence meaning attribution to, experience of and involvement with events, but meaning attribution itself can act as a buffer that influences experience of and engagement with a stressor. Perception of a stressor may vary from person to person, depending on the individual’s perception of himself and his own competence to deal with the threat.

In order to identify stress experienced by the individual, therefore, it is essential to establish how that person attributes meaning to the stressors, which explains why stress suffered by adolescents cannot be identified by addressing enquiries about adolescents’ experience of stress to people who are intimately involved with them, such as parents or teachers. Although children and adolescents, as might be expected, classify events such as birth of a sibling, parental divorce and chronic family turmoil among the most stressful life-events of all, they often contradict the expectations of psychiatric professionals and other adults about the relative stress of an event. According to Yamamoto (1979:581) children regard parental quarrelling as more stressful than the birth of a sibling, while adolescents rank the stress that emanates from the chronic family turmoil created by parental alcoholism, unemployment or illness much higher than adult professionals would rank these factors.

A child or adolescent who tends to interpret stressors as threatening (i.e. attribute a threatening meaning to them) will have a concomitantly negative experience of them while the youngster who sees challenges in a variety of stressors will experience them more positively and engage with them in a more positive and productive way.

3.6.1.2 Temperament and personality

Meaning attribution, experience and involvement also depend on the person’s temperament and personality. Cooper, Cooper and Eaker (1988:47) note that researchers have identified certain personality types that appear to be more stress prone than other individuals. They distinguish between the Type A person as a coronary-prone personality, as opposed to the more relaxed Type B for whom the risk of coronary heart disease is low.

Type A persons are characterised by explosive speech patterns, tenseness of facial muscles and the appearance of being exposed to time pressure and the challenge of responsibility. In addition they tend to be extremely competitive, high-achieving, aggressive, hasty,
impatient and restless.

Type B persons have a more relaxed personality; they are more easy-going, casual and less ambitious than Type A persons. It stands to reason, therefore, that a child or adolescent with a Type A personality will experience competition and school tests, for example, as more severe stressors than such factors would represent for the Type B personality because the former rates the need to achieve higher than the latter does.

Although the classification of personalities as Types A and B is not above criticism, it seems clear, nevertheless, that personality and temperament can act as a buffer against the effect of certain stressors.

3.6.1.3 Age

Honig (1986a:54), Compernolle (1987:58) and Trad and Greenblatt (1990:36) find that different kinds of stressors affect children at different ages and stages of development. The adolescent phase in particular is marked by the presence of specific stressors (Hendren 1990:254). During adolescence the child advances along his path towards adulthood and he experiences the transition from childhood to maturity. This means that advancement to a higher level takes place in every sphere of becoming, which unlocks new possibilities and skills in the bodily, cognitive, affective, social, normative and conative areas alike. These possibilities and competencies can serve as buffers against the effect of stressors, but at the same time they can also be a significant source of stress for the adolescent (Compernolle 1987:58).

The mediating effect of age is illustrated by the following example: In early adolescence the influence of peer group pressure is enhanced but in late adolescence and early adulthood age will reduce the effect of peer group pressure as a stressor. In late adolescence the adolescent no longer attaches as much value to the ideas, expectations and demands of the peer group as he did in early adolescence.

3.6.1.4 Sex

There is some evidence that sex mediates the effect of certain stressors. Such researchers as Honig (1986a:54) and Trad and Greenblatt (1990:38) maintain that boys are, on the whole, more vulnerable to stress than girls. Although no scientific explanation for this gender vulnerability has been provided to date, the reasons could be sociological (parents may be less likely to support boys than girls during stressful times (Hetherington in Trad and
Furthermore boys and girls may adopt different approaches in attributing meaning to stressors. Where sexual activities act as a stressor a girl may suffer more severe stress than a boy owing to a fear of pregnancy.

### 3.6.1.5 Locus of control

The perception of personal control over life events is regarded by several writers and researchers as a powerful variable influencing the stressfulness of those events (cf. Table 3.6). Youngsters with a strong internal locus of control rate a stressor as manageable or controllable, and experience it as a challenge and engage productively with it. Those with an external locus of control tend to feel controlled, at the mercy of forces and powers outside themselves (Trad and Greenblatt 1990:39), and therefore experience a stressor as threatening.

Chandler (1985b:108) maintains that children with a strong internal locus of control when compared to those with an external locus of control have been found to attain higher academic achievement and to display higher self-esteem, less anxiety, less emotional maladjustment, greater tenacity of purpose and greater ability to evaluate and use new information. In turn these factors then serve as stress-buffering agents in their own right.

### 3.6.1.6 Resiliency and vulnerability

Resiliency and vulnerability are closely related to locus of control as mediating factors. Researchers such as Garmezy (in Chandler 1985b:113) note that some children are more vulnerable to stress than others. Children who are more resilient or invulnerable are also known as stress-resistant children and they display distinctive characteristics:

- they are personable, sensitive to the feelings and needs of others, empathic, well-liked by peers and adults, verbally fluent
- they think for themselves, have good attentional process, are problem solvers, are reflective and resourceful
- they have capacities for frustration tolerance and gratification delay, are optimistic and have a sense of humour
- they have a positive self-regard and self-esteem, they have an internal locus of control, and they accept responsibility (Blom et al. 1986:144).
Although it can be generally accepted that children differ in resilience and that certain resiliency factors as mentioned above can serve as buffers against the influence of stress, it must be borne in mind that the resources of even the most resilient child or adolescent may be overtaxed. There is no super-child or super-adolescent who is impervious to all the stressors in life (Honig 1986b:51).

3.6.1.7 Self-concept

Self-concept as mediator of stress is closely associated with an internal locus of control (cf. par. 3.6.1.5) and both are factors that help the youngster to cope adequately with external and internal stressors and increase his resistance to the effects of stress. Lee (1983:3) observes that people with low self-esteem are "unable to count on positive self feelings as a resource and feel trapped by their own ineffectual attempts to adapt, frequently responding with depression". Youngsters with a realistic, positive self-esteem, on the other hand, feel more in control of their lives, feel up to the challenges of life and expect to be successful in handling stressful life situations. Successful handling of stress events in turn leads to an increased self-esteem, a heightened sense of mastery and competence, and increased resistance to the effects of stress.

3.6.1.8 Problem-solving abilities

According to Chandler (1985b:109) problem-solving abilities depend on "general intelligence, the ability to think abstractly, reasoning skills, generalisation and discrimination abilities, memory and past experiences". All these factors help the youngster to cope more effectively with stress. Rabkin and Struening (1976:1014) asserts that the more experience these individuals may have had with a specific stressor, the greater the likelihood that their present coping responses will be effective. The youngster's ability to interpret stressful events, to generalise, reason and discriminate, therefore serve as buffers against the effect of certain stressors.

3.6.1.9 Intelligence

Honig (1986a:54) cites research by Garmezy, Masten and Tellegen (1984) and points out that research by this group indicates that IQ functions as a protective factor against stress. Chandler (1985b:109) endorses this and speculates that the reason for this may be that children with higher intelligence possess superior problem-solving abilities. The ability to think abstractly, reasoning skills, generalisation and discrimination abilities, and memory can also exert an influence on meaning attribution to, experience of and involvement with a
stressor. It should be emphasised once more, however, that a factor such as intelligence can be a buffer against the effect of certain stressors for one person but a negative stressor for another.

3.6.1.10 Humour

Although the earliest studies of Martin and Lefcourt (1983:1322) provided considerable support for the hypothesis that humour reduces the impact of stress, Porterfield (1987:814) found in his studies that there was no evidence that sense of humour moderated that relation. He contends that humour does not serve as a buffer against stress, but that it does have a direct influence on depression. In a more recent publication Martin (1989:139) asserts, however, that humour and laughter should rather be seen as a broad-spectrum coping strategy or buffering agent, and that a humorous response to a stressful situation may enable the individual to view the situation from a different perspective and to reappraise it as less threatening and, therefore, less stressful. Whatever the case may be: whether humour acts as a moderator of stress itself or as a moderator of meaning attribution and appraisal, a healthy sense of humour may be an important element in the youngster’s coping repertoire for dealing effectively with stressors in childhood and adolescence.

3.6.2 Factors extrinsic to the child

3.6.2.1 Attachment and family support

Honig (1986b:55) contends that family supports have frequently buffered children against the severe effects of stressors. Chandler (1985b:110) takes the same line and says that because of the generally recognised crucial role that parents play in interpreting life-events for children, providing models and giving them emotional support, they are important as mediators. Burt, Cohen and Bjorck (1988:101) refute these pronouncements, however, by noting that from their research it appears that the main effects of positive family climate do not necessarily prove that it operates as a life stress buffer. This again illustrates the uniqueness of every youngster’s situation and urges the conclusion that attachment and family support can be a stress mediator for one person, but not for another, and in fact that family relationships may be the very thing that acts as a stressor in the lives of some people. It seems, therefore, that causal relations between life stress and family climate are anything but straight-forward.
3.6.2.2 Social support

Locus of control and social support are probably the most often cited of all the factors listed in Table 3.6 as stress-protective. Cobb (1976:300) defined social support as "information leading the subject to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligations". He notes further that his research strongly suggests that social support is protective over a variety of transitions in the life cycle from birth to death. Yet it is also clear from the negative findings obtained in some instances that social support is not a panacea or universal remedy. As with family support, the influence of social support as a buffer against stress will differ from one individual to the next.

Family and social support may come from parents and siblings, from members of the extended family or extra-familial sources; from peers, teachers, teachers of extracurricular classes, trusted adults and school personnel, and from membership of a scout troop or church organisation, for instance.

Religious affiliations are not covered separately as a buffer against the effects of stressors, but it is the researcher's opinion that it can act as a sovereign mediator of stress and that the link between stress and strong religious convictions deserves closer investigation.

3.6.2.3 Socio-economic status

Very few writers refer to the effect of socio-economic status as a buffer against stress, though it stands to reason that well-off individuals have to contend with far fewer of the daily stressors forming part of financially straitened people's lives. The few investigations done in this field have revealed that people from the lower socio-economic strata possess a more limited repertoire of stress responses than people in more privileged circumstances (Compernolle 1987:65). They seem to be doubly disadvantaged, therefore, by the effect of stressors, while socio-economic privilege protects the individual against the effect of some stressors.

In conclusion it may be said that a number of factors -- some being intrinsic to the child while others are extrinsic -- act as mediators to alleviate or exacerbate the effect of stressors. These mediators determine how the person attributes meaning to a stressor and experiences and engages with it. As with stressors, the effect of mediators differs from one person to the next. The consequences or effects of stress are briefly discussed in the following section.
The consequences and attendant symptoms of stress are divisible into two categories, namely mental and physical. Implicit in the approach adopted in this study are the assumptions that stress is a subjective experience, that every individual therefore attributes meaning to it, experiences it and engages with it in his own unique way, and that accordingly the consequences and symptoms will differ likewise for individuals. Since the consequences, effects and symptoms of stress are such a wide-ranging field of study a tabulated summary (Table 3.7) of the different symptoms will have to suffice for this chapter.

### TABLE 3.7: SYMPTOMS OF STRESS


<table>
<thead>
<tr>
<th>Physical symptoms of stress</th>
<th>Mental (psychological) symptoms of stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headaches; tension headaches</td>
<td>Anxiety</td>
</tr>
<tr>
<td>Stomachaches</td>
<td>Depression</td>
</tr>
<tr>
<td>Tight muscles, cramps and muscle spasms</td>
<td>Lack of motivation</td>
</tr>
<tr>
<td>Dental problems</td>
<td>Withdrawal</td>
</tr>
<tr>
<td>Diarrhoea; constipation</td>
<td>Mood swings or changes</td>
</tr>
<tr>
<td>Hives</td>
<td>Difficulty in paying attention</td>
</tr>
<tr>
<td>Fatigue; constant tiredness</td>
<td>Being unhappy</td>
</tr>
<tr>
<td>Hypertension</td>
<td>Suicidal thoughts</td>
</tr>
<tr>
<td>Peptic ulcers</td>
<td>Lack of risk-taking behaviour</td>
</tr>
<tr>
<td>Wetting pants</td>
<td>Unrealistic goal-setting</td>
</tr>
<tr>
<td>Lack of appetite</td>
<td>Low self-efficacy</td>
</tr>
<tr>
<td>Craving for food when pressurised</td>
<td>Nightmares</td>
</tr>
<tr>
<td>Frequent indigestion or heartburn</td>
<td>Constant irritability with people</td>
</tr>
<tr>
<td>Insomnia</td>
<td>Restlessness</td>
</tr>
<tr>
<td>Tendency to sweat for no good reason</td>
<td>Interpersonal problems</td>
</tr>
<tr>
<td>Nervous twitches</td>
<td>Maladaptive and inappropriate behaviours</td>
</tr>
<tr>
<td>Nail biting</td>
<td>Use of denial and avoidance</td>
</tr>
<tr>
<td>Nausea</td>
<td>Acting out</td>
</tr>
<tr>
<td>Breathlessness without exertion</td>
<td>Poor eating or overeating</td>
</tr>
<tr>
<td>Fainting spells</td>
<td>Substance abuse</td>
</tr>
<tr>
<td>Frequent crying or desire to cry</td>
<td>Lower achievements</td>
</tr>
<tr>
<td>Impotency or frigidity</td>
<td>Running away; truancy</td>
</tr>
<tr>
<td>Inability to sit still without fidgeting</td>
<td>Regressed behaviour (tantrums, wetting pants)</td>
</tr>
<tr>
<td>High blood pressure</td>
<td>Verbal and physical aggression</td>
</tr>
<tr>
<td>Migraine</td>
<td>Daydreaming and retreats from reality</td>
</tr>
<tr>
<td>Asthma</td>
<td>Impulsive behaviour</td>
</tr>
<tr>
<td>Pruritus: intense itching</td>
<td>Loss of memory</td>
</tr>
<tr>
<td>Physical symptoms of stress</td>
<td>Mental (psychological) symptoms of stress</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Colitis</td>
<td>Self-destructive behaviour</td>
</tr>
<tr>
<td>Menstrual difficulties</td>
<td>Fear of failure and success</td>
</tr>
<tr>
<td>Nervous dyspepsia: flatulence and indigestion</td>
<td>Overreactions or inappropriate reactions or both</td>
</tr>
<tr>
<td>Skin disorders: dryness and rashes</td>
<td>Feeling unable to cope</td>
</tr>
<tr>
<td>Depression</td>
<td>Low self-esteem</td>
</tr>
<tr>
<td>Pounding of the heart</td>
<td>Insecurity</td>
</tr>
<tr>
<td>Enuresis</td>
<td>Feeling inferior</td>
</tr>
<tr>
<td>Anorexia Nervosa</td>
<td>Feeling guilty</td>
</tr>
<tr>
<td>Burnout</td>
<td>Lack of interest in life</td>
</tr>
<tr>
<td>Minor physical ailments</td>
<td>Constant or recurrent fear of disease</td>
</tr>
<tr>
<td>Reflex Sympathetic Dystrophy</td>
<td>A feeling of being a failure</td>
</tr>
<tr>
<td>Frequent urination</td>
<td>Difficulty in making decisions</td>
</tr>
<tr>
<td>Dry mouth, lump in throat</td>
<td>Awareness of suppressed anger</td>
</tr>
<tr>
<td>Speech problems, stammer, stuttering</td>
<td>Inability to show true feelings</td>
</tr>
<tr>
<td>Compulsive ear tugging, hair pulling or eyebrow plucking</td>
<td>A feeling of being the target of other people's animosity</td>
</tr>
<tr>
<td>Rapid breathing, hyperventilation</td>
<td>Loss of sense of humour</td>
</tr>
<tr>
<td>Complaints of neck and back pains</td>
<td>Dread of the future</td>
</tr>
<tr>
<td>Easily startled by unexpected sounds</td>
<td>Inability to finish one task before rushing on to the next</td>
</tr>
<tr>
<td>Hyperactivity</td>
<td>Lowered academic performance</td>
</tr>
<tr>
<td>Bruxism, or grinding of the teeth</td>
<td>Academic failure, underachievement</td>
</tr>
<tr>
<td>Thumb-sucking</td>
<td>Emotional deprivation, does not laugh or cry readily</td>
</tr>
<tr>
<td>Trembling</td>
<td>Socially inept</td>
</tr>
<tr>
<td>High-pitched, nervous laughter</td>
<td>Unusual shyness</td>
</tr>
<tr>
<td>Bulimia</td>
<td></td>
</tr>
<tr>
<td>Accident proneness</td>
<td></td>
</tr>
</tbody>
</table>

From the above table it is clear that there is interaction between stressors, mediators, consequences and symptoms. It was noted in paragraph 3.5 that what amounts to a stressor for one person turns out to be a mediator or buffer for the next person. Moreover problems such as substance abuse or suicidal tendencies can be a stressor as well as a symptom of stress at the same time. The question that arises here is, when does 'an effect' become the source of stress? This is a vexed question because the circumstances surrounding it are very complex and little is known about the temporal sequencing of the effects of stress and the relationships that exist between the variables involved (Sutherland and Cooper 1990:98). The complexity of this issue and the reason why exposure to stressors might lead indirectly to negative consequences, as well as the direct impact of stressors, are represented graphically in Figure 3.14.
Knowledge of stressors, mediators of stress, stress symptoms, stress response and coping styles is essential in order to identify stress in the individual. However, it is not always easy to determine when ordinary stress attains to an untenable level for the youngster. Kuczen (1984:27) maintains in this connection: "In watching for signs that stress is approaching the danger level, the word to remember is change. Any sudden changes in the child's behaviour in more than one area (see Table 3.7) can signal trouble if they continue beyond an isolated occurrence. The individual's response to stressors must also be noted.

3.8 RESPONSES TO STRESS

Although the individual's response falls largely outside the parameters of this study, the extensive knowledge of the stress phenomenon that must be obtained in order to construct an identification model can only come from a broad knowledge of a youngster's possible response to stress.

A stressor can elicit a wide range of responses from the individual. These responses depend on the meaning the individual attributes to the stressor and whether he experiences it as positive or negative, threatening or challenging. The individual's responses to a stressor can, in the context of psycho-education, be seen as his involvement with the stressor, which is influenced by mediating factors as discussed in paragraph 3.6, and by the person's innate ability to cope with the strain created by the event/stressor.
The behaviour that an individual manifests in response to stress should not be viewed as a series of isolated potential reactions, but rather as part of a continuum. Responses to stress can range from adaptive and relatively effective coping behaviours to the more extreme examples of ineffectual efforts or maladaptive responses, depending upon its context and sequelae (Trad and Greenblatt 1990:26).

Although it is therefore clear that no categorical division exists between adaptive and maladaptive stress responses, such a division is often made for the purposes of scientific study. The more successful efforts to cope have been seen as examples of adaptive behaviour, and they include instances of active goal-oriented effort combined with some perceptual cognitive element.

Inappropriate and inadequate attempts to respond to stress, also known as maladaptive stress responses, are ineffective and even counterproductive. Although in some instances these maladaptive stress-responses may be partially successful in meeting the demands of the primary stressor, they frequently also create a new set of secondary stressors with which the individual will have to cope further.

There is considerable variation in the ways individuals respond to stress. Although a good deal of research has been done on the coping responses commonly employed by adults, children’s coping responses have not been as systematically studied or organised (Chandler 1985b: 129). The research actually done on children’s stress and coping techniques to date has focused on developing competencies to cope more effectively (Brenner 1984; Allen and Green 1988; Band and Weisz 1988; Caudill and Carrington 1986; Compas 1987; Compas, Malcarne and Fondacaro 1988; and Hash and Vernon 1987).

As with the other determinants of the stress phenomenon (stressors, mediators, effects and symptoms), responses constitute a complex area of study. To facilitate its investigation a few researchers have tried to categorise children’s and adolescents’ coping responses. According to Turkel and Eth (1990:52) psychopathological responses to stress include Adjustment Disorder and Post-Traumatic Stress Disorder (PTSD), which are respectively the milder and more severe psychopathologic responses following stress.

Ryan-Wenger (1990:109) refers to psychosomatic responses to stress and differentiates primary and secondary responses. She contends that primary psychosomatic symptoms occur when symptoms of a pre-existing physiologic disorder such as diabetes or asthma are aggravated during a stress response. Secondary psychosomatic symptoms are the result of somatisation of emotional responses to stress with no obvious predisposing
condition, as in recurrent abdominal pain or headaches.

Schultz and Heuchert (1983:38) differentiates three types of stress responses typifying the school situation, which they term institutionalisation, flight and fight. Institutionalisation refers to responses in situations where the child experiences stress but passively remains a part of the school setting, while flight situations are those in which the child responds to school stress by leaving, unlike flight situations in which the child stays but displays reactive behaviour. Compernolle (1987:23-49) differentiates physiological, psychological and behavioural responses, while Blom et al. (1996:39) divides stress responses into four categories representing four behavioural domains: feeling, thinking, action and body response.

The researcher is in sympathy with Chandler (1985a) in this regard, who proceeds from the premise that stress responses are just one among a variety of types of human response to a stimulus. In order to conceptualise stress responses, therefore, a broader model of personality functioning is needed. Such a model would predict the major ways of responding to internal or external stimuli. Accordingly Chandler proposes a multidimensional, circumplex model that accommodates two widely recognised dimensions of personality - active-passive and introversion as opposed to extraversion (Figure 3.15) - that can be used in describing behavioural stress response.

**FIGURE 3.15: A STRESS RESPONSE MODEL: TWO DIMENSIONS OF PERSONALITY AND THE DEGREES OF RESPONSE**
(Chandler 1985a:34)
Chandler (1985a:34) observes that this model relates the two dimensions of personality and shows how the style that a person might normally adopt in responding to stress can be seen on a continuum with extreme behaviour at either end. Stress responses may therefore be rated from normal to extreme. A youngster may display extreme responses after a car accident, for example. Such extreme responses may well appear "normal" in certain situations. The extreme responses of youngsters can be wide-ranging and, as indicated, may be productive or unproductive, or even counterproductive. Unproductive and counterproductive responses influence not only the school performance of the child or adolescent, but may also affect relations with parents and other family members, friends and even in some cases himself. Chandler (1985a:36) notes that "the long-term consequences can be disastrous as the child becomes increasingly frustrated and develops a poor self-image, thus laying the groundwork for more serious emotional problems".

With the aid of the Stress Response Model (Figure 3.15) and observation in schools and clinics Chandler (1985a:37) came to the conclusion that four basic response patterns seem to predominate. From the literature and from a review of psychological reports of children, characteristics for each type were collated and composite descriptive statements developed. Figure 3.16 shows these four basic behaviour response patterns derived from the stress model.

**FIGURE 3.16: FOUR COMMON STRESS-RESPONSE PATTERNS**

(Chandler 1985a:37)
With the aid of his Stress Response Model Chandler developed an instrument, the Stress Response Scale (SRS), that identifies the behavioural patterns likely to be adopted by children attempting to respond to stress (Chandler and Shermis 1986:317). A factor analytic study of the SRS yielded a 5-factor cluster accounting for 64% of the variance. Three of the clusters (passive-aggressive, dependent and repressed) seemed consistent with the predicted categories of the Stress Response Model, but the two remaining clusters seemed to reflect a division of the fourth predicted behaviour pattern into two sub-types: Impulsive-overactive and Impulsive-Acting-out. These response patterns can be described as follows:

- **Passive-Aggressive**: Children who adopt a passive-aggressive response are most often described as underachievers who procrastinate; they are indifferent about their grades in school and tend not to complete their assignments. Some also tend to be uncooperative and stubborn, while others are overly compliant and agreeable.

- **Dependent**: Children who adopt a dependent response will seldom assert their will. They are characterised by a lack of self-confidence and independence, regressive habits and childish mannerisms. Some dependent children are less passive. Being more assertive they adopt a demanding manner to have their needs met. Accordingly they are described as headstrong, selfish and wilful.

- **Repressed**: Children who adopt a repressed response are described as quiet, reserved, shy, sensitive, withdrawn, easily hurt and upset, jumpy, sometimes moody and detached and afraid of new situations. They tend to have difficulty in making decisions, are unable to tolerate criticism and lack self-confidence.

- **Children who normally adopt an impulsive (overactive) response** are described as easily excited, mischievous, playful and talkative. Since they are not shy, passive or withdrawn, they frequently participate with abandon in activities.

- **Children who normally adopt an impulsive (acting-out) response** are described as demanding, selfish, impulsive, stubborn and uncooperative. They tend to be defiant with frequent temper outbursts, and have difficulty accepting criticism.

Chandler (1985a:38) emphasises that the response patterns outlined above are specifically meant to describe the behaviour of the child with mild to moderate emotional adjustment problems and cannot be seen as describing the reactions of the more severely disturbed or psychotic child. It also does not necessarily characterise children with physical problems, retarded children, or children with specific learning (dis-)abilities. He declares his own
proposed response patterns to be an over-simplification of a highly complex phenomenon and notes that most children adopt some idiosyncratic variation on these themes. Some children develop a variety of response patterns or change their responses according to the situation or gradually over time. He warns, therefore, that care must be taken in deciding whether the behaviour of an individual child corresponds with these response patterns because every child is unique and his response pattern must be assessed systematically.

3.9 COPING TECHNIQUES AND DEFENCE MECHANISMS

Very few researchers make a clear conceptual distinction between stress responses and coping techniques. At the most general level coping has been considered to include all responses to stressful events or episodes (Compas 1987:393). Silver and Wartman (1980:281), for example, define coping as "any and all responses made by an individual who encounters a potentially harmful outcome".

Lazarus and Folkman (1984:141), however, emphasise the importance of distinguishing coping as including effortful or purposeful reactions to stress but excluding reflexive or automatic responses. These authors therefore define coping as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person". They note that managing stress includes accepting, tolerating, avoiding or minimising the stressor, as well as the more traditional view of coping as mastery over the environment. Moreover coping must not be seen as successful efforts alone since it includes all purposeful attempts – regardless of their effectiveness – to manage stress. Riva and Chandler (1989:8) endorse this observation and distinguish between stress responses and coping categories commonly used by children. According to these authors coping categories are: Seeking information, direct action, seeking support, emotional discharge, distraction, faith, resigned acceptance and logical reasoning. They also maintain that the age and gender of the child as well as the time period of coping seem to influence the coping strategies that are utilised.

Patterson and McCubbin (1987:167) also endorse the idea that coping is a specific cognitive and/or behavioural response, utilised by an individual (e.g. an adolescent) or a group of individuals (e.g. the family) to reduce or manage demands. They maintain that in contrast to resources, which are what one has, coping is what one does. Coping, according to them, often involves using available resources to meet demands or it may involve developing or acquiring new resources (e.g. doing things together as a family to develop cohesion). By developing and testing an adolescent's self-report coping inventory they arrive at the conclusion that adolescents appear to acquire coping behaviours and styles from at least
four different sources:

- previous personal experience in handling similar situations
- vicarious experience associated with observing the success or failure of others, especially family members
- perceptions of their own physiology and inferences they make about their vulnerability; and
- social persuasion, particularly by parents, peers and significant others.

Hendren (1990:256) seems to express another conception of coping when he asserts: "Adolescents attempt to cope with stress through the use of psychological defence mechanisms. Defence mechanisms are automatic and unconscious, and they alter the perception of both internal and external reality" (own italics). The defence mechanisms commonly used by adolescents are reflected in Table 3.8 in an order proceeding from immature levels to mature levels of adaptive functioning.

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denial</td>
<td>An adolescent denies any feeling of abandonment or rejection by the noncustodial parent after a divorce.</td>
</tr>
<tr>
<td>Projection</td>
<td>An adolescent experiencing repeated trouble with the law claims all of the problems are due to law enforcement officers who have it in for him (projection of guilt).</td>
</tr>
<tr>
<td>Splitting</td>
<td>A hospitalised patient views each of the medical staff as being all &quot;good&quot; or all &quot;bad&quot;.</td>
</tr>
<tr>
<td>Acting out</td>
<td>An adolescent girl who is angry at her family after being grounded runs away from home without verbally expressing her anger.</td>
</tr>
<tr>
<td>Regression</td>
<td>An adolescent returns to childish and dependent behaviour following a family move to a new city.</td>
</tr>
<tr>
<td>Counter-phobia</td>
<td>An adolescent repeatedly engages in risk-taking behaviour.</td>
</tr>
</tbody>
</table>
**TABLE 3.8: PSYCHOLOGICAL DEFENCE MECHANISMS FROM IMMATURE TO MATURE (continued)**
(Hendren 1990:257-258)

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Identification</strong></td>
<td>An adolescent identifies with a rock star or an athletic coach whom he admires.</td>
</tr>
<tr>
<td></td>
<td>An adolescent mother feels resentment towards the demands that caring for her child make on her. However, she repeatedly tells herself and others how wonderful motherhood is. At times she worries unnecessarily that some harm will come to her child.</td>
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<tr>
<td></td>
<td>An adolescent ‘forgets’ to tell her parents of a failing grade in school.</td>
</tr>
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<td></td>
<td>An adolescent who is angry with a teacher berates a sibling for no apparent reason.</td>
</tr>
<tr>
<td></td>
<td>An adolescent, in a cool, unemotional manner, describes the circumstances of a serious automobile accident in which he received multiple injuries.</td>
</tr>
<tr>
<td></td>
<td>An adolescent explains her drug abuse by saying that ‘everyone’ does it.</td>
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<td></td>
<td>When asked about the automobile accident in which his father was killed, an adolescent begins discussing the mechanics of trauma, velocity of impact, safety rules, and changing trends in life expectancy.</td>
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<tr>
<td></td>
<td>An adolescent whose father recently died from a myocardial infarction begins a vigorous exercise program.</td>
</tr>
<tr>
<td></td>
<td>An adolescent laughs about an embarrassing encounter with her school teacher.</td>
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<td></td>
<td>An adolescent whose parents are divorcing volunteers to work as a hospital aid.</td>
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There seems to be very little consistency in the definition of concepts, and there are major differences in the literature about what stress responses and coping techniques are. For the purpose of this study, however, the only apposite consideration is that responses to and techniques for coping (engaging) with a particular stressor differ for different individuals. Another important consideration is how a person attributes meaning to, experiences and engages with a stressor and how these responses are influenced by factors emanating from within the individual and from his environment. Certain response patterns, coping
techniques and defence mechanisms cannot be summarily attributed to the individual, but are merely ordering principles, for example as involved in classifying stressors, symptoms and mediators for the scientific study of the stress phenomenon.

3.10 SUMMARY

Stress is a complex phenomenon that is studied from a variety of perspectives. A few of these approaches that particularly influenced the researcher's own theory formation were discussed in outline. The principal determinants (stressors, mediators, effects and symptoms, responses and coping) were also considered in the light of their importance for the study in hand. It is particularly important to realise that every person attributes his own unique meaning to a stressor and that every person's experience of and engagement with a stressor are affected by a variety of factors and mediators. Furthermore, it must be borne in mind at all times that any classification of stressors or responses, for example, is a subjective exercise and that every researcher's opinion about it may differ from that of every other researcher. A classification is no more than an ordering principle, however, for the scientific investigation of the stress phenomenon. It is clear that what is seen as a stressor in one instance may act as a mediator in another instance. Likewise a symptom or coping technique may change over time into a stressor for a particular individual. Although this chapter has dealt with stress in general terms, the emphasis was placed on the adolescent's modes of meaning attribution to, experience of and engagement with stressors.

Adolescence is a time of change and adaptation. While many adolescents appear to be happy and carefree they frequently have serious underlying anxieties. Both internal and external conflicts are created by the adolescent's struggle to cope with emerging sexual interests, hormonal changes, increased autonomy, needs for peer group acceptance and emotional fluctuations. This underlying stress finds expression in behaviour that is often seen as misconduct, such as aggression or truancy, and it is typically dealt with in a disciplinary fashion. The child's negative or maladaptive responses are rarely seen for what they are — indicators that something is wrong. Instead of determining the causes of such behaviour, educators often add to the adolescent's burden of stress by meting out punishment for his misbehaviour! It is therefore essential that all educators reframe their thinking in order to look upon untoward behaviours as symptoms of stress and to familiarise themselves with the causes of stress and its influence on the becoming, development and learning abilities of the child.

The purpose of this study is therefore to furnish the educator with an instrument for identifying stress in the adolescent, not as a means of labelling the child, but to obtain a
reference point from which assistance can be offered to the victim of stress. In the next chapter, reasons for treating the identification of stress in adolescents as imperative are explored; theoretical and methodological problems attending the identification process are considered; and requirements to which the identification process should conform are examined. A model for the identification of stress in adolescents is also proposed.
CHAPTER 4

PROPOSED MODEL FOR THE IDENTIFICATION AND HANDLING OF STRESS IN ADOLESCENTS

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4.1 INTRODUCTION

As indicated earlier, the primary purpose of this study is to complete a structured inventory for identifying stress in the adolescent by drawing on data obtained from the literature study and from a nomothetic investigation. This objective is pursued not merely so that the stressed pupil can be identified, but more particularly to enable the pupil's educators to intervene in his life and to assist him in situations that he cannot handle on his own. Here the researcher's chief object of attention is the teacher as educator and companion.

The teacher's involvement with the adolescent is the motivating principle behind the rationale for teacher intervention. As secondary educators teachers are more objectively involved with the adolescent than his parents. Teachers are often also the most significant adults (after the parents) in the adolescent's life. Furthermore there are educationally sound reasons for teachers' becoming involved in the identification of stress in adolescents (Blom et al. 1986:10).

The purpose of the present chapter is therefore to provide teachers who are not trained therapists with a framework or model for intervention in the lives of adolescents who are overburdened with stress. It is important that teachers realise that one need not be a therapist to be therapeutic. Although certain questionnaires or tests may only be administered by trained personnel, every teacher in the school should be involved in the identification and assistance of victims of excessive stress. Teachers have regular and extensive and intensive contact with the pupils in their classes over an extended period of time. This gives them the opportunity to observe and interact with the child and to observe and have an effect upon changes in behaviour over this extended period. The teacher is also very well informed about the pupils in his class and often knows things about them that even their parents are unaware of. According to Blom et al. (1986:11), if a positive pupil-teacher relationship exists the pupil can regard the teacher as a potential source of support and a pillar of strength.

Since this research is not aimed at providing a comprehensive programme for identifying and handling stress, a bare outline is given of a model that can be implemented by secondary schools, for example in the periods for educational guidance. The researcher recommends, however, that the model (cf. par. 4.5) proposed in this chapter be subjected to thorough research and that it be expanded into a comprehensive package forming part of a pupil welfare programme. The introduction of such a programme is in line with the proposal made by Jordaan (1992:14) that employee welfare programmes should be introduced in South Africa. Programmes such as these have already met with considerable success overseas (Jordaan 1992:14). Given that people are the main resource of an enterprise (including a school), and that this resource therefore has to be utilised optimally, such programmes can do much to improve workers' and pupils' stress-handling skills as well as their knowledge and understanding.
of stress-preventive procedures and techniques.

Accordingly the object of the present research is to compile a structured inventory for identifying stress in the adolescent with a view to improving mental health by making the adolescent aware of the amount and intensity of the stress he is experiencing and of the meaning he attributes to his stress. Another object is that of enhancing the teacher’s sensitivity to the child in his class who suffers from excessive stress or who feels incapable of handling the stress in his life.

4.2 REASONS FOR IDENTIFYING STRESS IN THE ADOLESCENT

In the problem analysis (par. 1.2) at the very outset of this study the question was asked: "Why does the identification of stress, more particularly as manifested in the adolescent, require attention?" The researcher postulates that any research on stress should begin with what lies at the root of the stress problem, that is to say, with the causes and effects of stress, but that this can only happen if there are psychometrically valid and reliable means of identifying stress, that is, means that are securely based on a comprehensive literature study.

Furthermore in the first chapter reasons are given for the researcher’s selection of the adolescent phase of life as the subject of this research project. Apart from the researcher’s firm conviction that stress should be identified as early as possible so that preventive measures can be taken, the large number of suicides among adolescents (Caudill and Carrington 1986:7) was the decisive reason for selecting stress in adolescence as a research topic. The researcher recommends, however, that thorough research on stress in the primary and preschool years be started as soon as possible. Some of the reasons for identifying stress in adolescents are dealt with in the next section.

4.2.1 Physical

Physical well-being or health is foremost among the various reasons for regarding stress-identification as an important research topic. It is evident from some of the critical stress symptoms given in Table 3.7 that excessive stress can lead to life-threatening complications such as abdominal ulcers, high blood pressure and asthma (Crowder 1983:37). Caudill and Carrington (1986:7) maintain that excessive stress can even cause heart disease and cancer. Other physical stress symptoms include diarrhoea, wetting pants, insomnia, intense itching, skin disorders, depression, anorexia nervosa, speech problems and the like, all of which affect the individual as stressors in their own right. Thus the person is caught in a vicious cycle from which he escapes with difficulty. The implications of such physical stress situations for the person’s health and for society in general are self-evident and they underline the necessity of
identifying stress and lending assistance to stress victims.

4.2.2 Cognitive

Stress symptoms such as anxiety, depression, lack of motivation, unrealistic goal-setting, daydreaming and retreats from reality, fear of failure and success, lowered academic achievements, underachievement, truancy, and low self-esteem (Table 3.7) confirm the surmise that stress affects cognitive development and functioning unfavourably. Although a moderate amount of stress is advantageous in that it can mobilise and motivate a student to perform well, excessive stress can have negative scholastic consequences. According to Caudill and Carrington (1986:7) too much stress results in high absenteeism, disinterest in class- and homework, and lower student satisfaction and self-esteem. These authors therefore hold that it is the teacher's responsibility "to identify those students with dangerously high stress levels". Chandler (1987:5) notes that children tend to equate academic competence with self-competence. Excessive stress is therefore not only harmful in the cognitive domain, but the harmful effects also spill over into the emotional domain of the child's becoming.

4.2.3 Affective

Shrier (in Allen and Green 1988:5) maintains that when children experience ongoing or overwhelming stress they begin to deviate from normal development and experience emotional or behavioural difficulties that can have far-reaching consequences. Some psychological and emotional problems arising from stress are fatigue, boredom, irritability, depression, unhappiness, suicidal thoughts, nightmares, resorting to denial and avoidance, poor eating or overeating, substance abuse, self-destructive behaviour, low self-esteem as mentioned above, and many, many more (cf. Table 3.7). Because the becoming and development of the adolescent is the chosen field of study of the psycho-educational researcher and excessive stress leads to inadequate self-actualisation, it is incumbent on him to assist the teacher in his efforts to identify stress in pupils and to help them to overcome this problem.

4.2.4 Social

The social effects of stress are often seen in a breakdown in interpersonal relations, isolation and withdrawal, an unwillingness to accept responsibility, and failure at ordinary daily tasks (Crowder 1983:37). Further negative influences exerted on the social development of the adolescent by excessive stress include the following: mood swings or changes, low self-efficacy, constant irritability with people, maladaptive and inappropriate behaviours, running away from home, verbal and physical aggression, a feeling of being the target of other people's
Thus it is clear that in a wide variety of areas a compelling need to identify stress in adolescents is evident from a whole range of factors. Teachers seem to be well-placed to intervene in the lives of adolescents. In South Africa, however, for a number of reasons no model of concomitant resources has yet been developed for this particular purpose.

4.3 PROBLEMS PERTAINING TO THE IDENTIFICATION OF STRESS IN ADOLESCENTS

Research on the identification of stress in adolescents confronts the researcher with a host of problems. The definition of stress is a problem in itself (cf. par. 3.4), while misconceptions may exist among the lay public and among adolescents themselves about the causes, symptoms and consequences of stress, and about appropriate ways of handling stress. The researcher is also confronted by many problems and difficulties associated with establishing suitable scientific identification methods that accommodate individual persons' unique meaning attribution to, experience of and involvement with stress-generating events.

Stress and its causes often touch the inner core of being human. Sensitive matters such as a person's sexuality, his experience of his own body, his relations with others, and particularly his family relations, become focal issues under stress. The researcher therefore has to win the trust of the adolescent so that he will be cooperative. Steenekamp (1991:53) notes, however, that his experience of the handling of sensitive questions indicates that the aversion a respondent displays at being asked certain questions is not elicited by the questions themselves, but is caused instead by the following factors:

- circumstances prevailing during the survey
- the interviewer's approach
- lack of motivation.

The researcher must be alert to these problems at all times. Theoretical and methodological problems attending the identification of stress will be discussed in more detail in the following paragraph.

4.4 METHODS AND RESOURCES USED IN THE IDENTIFICATION PROCESS

Stress research is characterised by methodological pluralism, which is particularly common in
interdisciplinary areas of research. Stress can be measured and identified by means of observation, subjective reporting, analysis of products, behaviour of the individual, or standardised identification media. Every method that can be employed to identify stress and every approach to stress is open to criticism, however, and has certain disadvantages (cf. par. 5.2). Objective assessment of an individual’s stress is obtained by questioning his near relatives, or his friends or teachers, about his experience of stress. This procedure is called the 'role-set' approach (Kahn in Kleber 1982:127). Since it is impossible for an outsider to determine how an individual attributes meaning to a stressor, how he experiences it and becomes involved with it, the results obtained with this method can hardly be regarded as a realistic indication of the individual’s experience of stress.

Mere statistical recording of stressful life events is also attended by certain problems (cf. par. 3.2.5.2), while measurement of physiological stress reactions (cf. par. 5.2.1) as reflected in pulse rate, blood pressure, adrenalin and hormone levels is anything but simple or cost-effective in terms of time or financial expenditure. Although physiological measuring techniques were initially considered objective and reliable, closer inspection reveals that they are fraught with problems (Kleber 1982:129).

Attempts at using standardised tests or questionnaires to determine a person's unique attribution of meaning to a stressor are increasingly becoming established practice among researchers. The researcher feels, however, that a true picture of the adolescent's experience of stress cannot be obtained by this means alone, since the data obtained are influenced by such factors as

- the intellectual abilities and insight of the adolescent
- the attitude of the person conducting the test
- the atmosphere in which the test is conducted
- how cooperative the adolescent is
- the experience the adolescent has had of life in the round
- the time of life at which the adolescent is subjected to the test.

The researcher (as well as the educator) who sets himself the task of determining the needs of the child who is overburdened by stress should not be so preoccupied with the problems
attending identification methods that he loses sight of the advantages of early identification for
the physical, cognitive, affective and social areas of the adolescent's becoming and
development.

Many of the disadvantages inherent in the various methods can be eliminated if the methods
are used to complement each other. The use of a multidimensional approach to construct a
comprehensive personal profile therefore seems to hold the solution to most of the problems
attending stress identification. A personal profile can be compiled, for example, from

- information obtained from parents
- information obtained from teachers
- cumulative observation reports
- data derived from non-standardised identification material
- data derived from individual standardised tests

In this chapter an effort is made to construct a model for the identification and handling of stress
in adolescents according to a multidimensional approach. After refining the model teachers can
apply it in secondary schools.

4.5 PROPOSED MODEL FOR THE IDENTIFICATION OF STRESS IN ADOLESCENTS

The proposed model is based on information gained from the preceding literature study. It also
proceeds from the definition of stress as given in paragraph 3.4 of this research. It is taken as
the central criterion to be applied by teachers towards identifying stress in adolescents who
attend secondary schools, and towards intervening in the lives of such adolescents. The model
comprises a programme for identifying and handling stress. The programme is divided into four
phases (cf. Figure 4.1) providing for the application of checklists as well as standardised
questionnaires. It must be emphasised, however, that the stress-identification-and-handling
programme can never be complete since continuous evaluation of stress is recommended. The
uniqueness of every child and his particular circumstances can necessitate repeated
identification. As suggested in the introduction to this chapter, the stress-identification
programme can be subsumed under a pupil-welfare programme.

Since no standardised questionnaire for the identification of stress exists in South Africa at present, such a
questionnaire is compiled and standardised in chapter 5.
FIGURE 4.1: PROPOSED PROGRAMME FOR THE IDENTIFICATION AND HANDLING OF STRESS IN ADOLESCENTS

INFORMING OF ALL CONCERNED AND INTRODUCING THE IDENTIFICATION PROGRAMME

- Forming of committee
- Planning of project
- Distributing information to all concerned

INITIAL TEACHER APPRAISAL

- Observation undertaken by teachers
- Filling in checklists
- Filling in of questionnaires supervised by a professionally qualified person

INTERVENTION AND ASSISTANCE

no overt intervention

- giving information
- learning stress-handling techniques
- continuous evaluation

reactive intervention

- teaching stress-handling techniques
- encouraging discussion
- interviews with pupil
- interviews with parents
- parent support groups
- lectures
- pupil support groups

school-bound services

- therapist
- medical doctor
- psychiatrist
- counselling psychologist
- educational psychologist
- pastoral psychologist

school-related services

MONITORING

- evaluating each adolescent's stress experience and the making of recommendations concerning intervention
  - continue
  - discontinue
  - revise intervention
- evaluating stress programme
- informing those concerned and introducing special projects

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4.5.1 Phase 1: Informing those concerned and introducing the identification programme

4.5.1.1 Forming a committee

The first step in the programme is the forming of a planning committee. Although it is recommended that all the persons mentioned in Table 4.1 be drawn into the planning committee, this will probably not be possible in all practical instances. It is impossible for educational planners, school psychologists, remedial teachers and representatives of the psychological and educational ancillary services to serve on the planning committee of every school. It is suggested, therefore, that these persons be consulted as frequently as possible in the planning of the stress-identification-and-handling programme without requiring their actual presence at meetings. An initial plenary meeting should be held, however, if at all possible. In Model C schools as many members as possible of the parent community who possess appropriate skills and expertise should be persuaded to become members of the committee.

<table>
<thead>
<tr>
<th>Members</th>
<th>Reason for membership</th>
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<tbody>
<tr>
<td>School principal/Vice-principal</td>
<td>Coordination of the programme and serving as chairman of the planning committee</td>
</tr>
<tr>
<td>Educational planners</td>
<td>Collaboration on and support for the project</td>
</tr>
<tr>
<td></td>
<td>Keeping the proposed programme in line with departmental policy</td>
</tr>
<tr>
<td></td>
<td>Ascertaining the usefulness and practicability of the programme</td>
</tr>
<tr>
<td>School psychologist</td>
<td>Collaboration on and support for the project</td>
</tr>
<tr>
<td>Representatives of the psychological/educational ancillary services</td>
<td>Exploitation of the expertise of this group in connection with measuring instruments, test procedures, psychometric media and the like.</td>
</tr>
<tr>
<td>Educational guidance teachers</td>
<td>Gaining their assistance with the collection and documentation of data</td>
</tr>
<tr>
<td>Teachers</td>
<td></td>
</tr>
<tr>
<td>Members of the parent community who possess appropriate experience</td>
<td>Collaboration on and support for the project.</td>
</tr>
<tr>
<td></td>
<td>Exploitation of their expertise in numerous areas.</td>
</tr>
<tr>
<td>Others</td>
<td>As required</td>
</tr>
</tbody>
</table>

4.5.1.2 Planning the project

An investigation undertaken by Zucker and Snoddy (in Blom et al. 1986:9) has revealed that teachers are well aware that children suffer acute and chronic stress in situations prevailing at school and at home. Teachers interviewed in the course of the investigation indicated their
willingness to assist and support children suffering from undue stress. However, the teachers report that "the educational system does not provide them with curriculum, materials, facts or skills with which to implement beneficial interventions" (Blom et al. 1986:10).

The object and task of the planning committee will therefore be to devise and initiate a stress-identification-and-handling programme so that the need indicated above can be met. It will also be incumbent on the planning committee to engender a positive attitude towards the programme among all concerned.

4.5.1.3 Dissemination of information to all concerned

Disseminating information is a function that essentially belongs in the first phase of the identification process, but it should continue throughout the process as a sequel to each of the various phases. Information on stress should be conveyed to the following groups in particular:

- teachers
- parents
- pupils
- other concerned parties.

Information can be disseminated among those concerned by way of information sheets, lectures, informal discussions and reading lists. The information given to concerned parties should include the following:

- definition of stress
- enumeration of stressors (causes of stress)
- enumeration of symptoms (consequences of stress)
- enumeration of mediators
- explanation of stress-handling techniques.
4.5.2 Phase 2: Initial appraisal (assessment)

The purpose of assessing stress in the lives of adolescents is to provide the teacher and such other parties as the psychologist with a description of the problem and with an identification and analysis of the cause or conditions antecedent to the problem. It further aims at synthesising all the relevant data into a complete, coherent picture of the problem. According to Van Greunen (1990:11) assessment is also a useful aid to providing parents, teachers and the adolescent himself with a psycho-educational picture of the problem. In this phase the duration and severity of the problem are determined in addition to the frequency of its recurrence. Moreover, the adolescent's behaviour is compared with that of his peer group. Assessment also aids decisions concerning possible modes of intervention.

Initial appraisal is accomplished by a wide range of techniques and methods, such as:

- observation
- biographic questionnaires
- screening with the aid of checklists
- interviewing
- psychometric testing by means of standardised and non-standardised tests.

During this phase teachers can also make use of life-events scales to gain information about the adolescent's circumstances; but this information must be interpreted with due reference to results obtained with other standardised measuring instruments. Since there is no suitable measuring instrument for South Africa, a questionnaire is compiled for this purpose and subjected to empirical investigation in chapter 5 of this research.

4.5.3 Phase 3: Intervention and assistance

According to Rhodes (in Van Greunen 1990:10) educational intervention can be described as "an act of arbitration between the child and his environment". The decision whether to intervene or not is taken in phase 3.

Even if it is decided that intervention in the life of a particular child is unnecessary, the child must still be equipped with the life skills he requires for his self-actualisation. He must still
receive information about the stress phenomenon and must be encouraged to maintain a healthy lifestyle and to cultivate stress-handling techniques.

The assessment process reveals, however, that some adolescents are overburdened by stress and urgently need intervention undertaken by an adult. In some cases stress responses become so extreme, so maladaptive, that the adolescents concerned may have to be referred for professional help. In other instances it may be possible to assist a child who is suffering severe stress without resorting to the services of a professional person such as a doctor, a psychiatrist or a psychologist. This is where the teacher’s assistance is at a premium.

It is evident, then, that a decision to intervene reactively in the life of an adolescent can be implemented at two levels, that is, by resorting to either school-bound or school related services. School-bound services are intervention services provided by the school (teachers, educational system, etc.), while school-related services are provided by extraneous agencies (e.g. psychologists, doctors, social workers, etc.) (Van Greunen 1990:11).

4.5.3.1 School-bound services

Teachers should help children to structure and order their world and thus gain some control over stressful situations. They should also help the parents of children in their classes to understand the adolescent, his unique problems and his experience of stress. The teacher cannot do this successfully, however, unless his own knowledge of the stress phenomenon is sufficient for the purpose and he is capable of acting as a mediator, filtering the experience and cushioning the impact of stress (Chandler 1987:11).

In his efforts to help the adolescent to identify and handle his own stress the teacher can resort to such strategies as the following:

- fostering acquisition of stress-handling techniques
- encouraging discussion
- conducting conversations with pupils and their parents
- forming parent support groups
- forming pupil support groups
• lectures
• holding informal talks
• conducting workshops
• establishing and maintaining a strong support network
• concentrating on positive spiritual development.

Finally, the teacher can comfort, support and empathise with those adolescents who are going through exceptionally stressful periods in their lives, such as during and immediately after the failure of a love relationship, a parental divorce, a death in the family, economic hardship owing to unemployment of either or both of the parents, an accident, or an illness. At such times adolescents often feel helpless and emotionally drained. “Teachers who know something of their students’ lives outside the classroom are better equipped to supply extra support when children need it most” (Chandler 1981b:276).

4.5.3.2 School-related services

Although teachers are capable of exerting a considerable influence on the lives of adolescents they must also realise that some cases are beyond their sphere of competence. They should therefore not attempt to handle such cases on their own, but should immediately refer the adolescents and parents concerned to a professional person for therapy. The following professional practitioners, among others, can offer appropriate assistance in this regard:

• physicians
• psychiatrists
• counselling psychologists
• pastoral psychologists
• clinical psychologists
• social workers
• child- and family-care associations

• ministers of religion.

The purpose of developing a standardised questionnaire is to provide teachers with a criterion in the form of a quantified score according to which they can judge whether a child should be referred to a professional person (school-related services) or whether they should try to help the child on their own (school-bound services).

4.5.4 Phase 4: Monitoring

In the last phase of the programme the stress experience of individuals must be assessed with reference to information derived from phases 2 and 3. In addition recommendations must be made as to whether intervention should continue or not. Intervention methods should be reviewed and methods should be adapted and changed where necessary.

Furthermore the planning committee must assess the value of the stress programme for parents, teachers, pupils and society at large. The workload and responsibility which the programme imposes on teachers should also be carefully considered.

Finally all concerned should receive feedback and decisions should be taken about special projects or the upgrading of the programme to the status of a pupil welfare programme.

4.6 SUMMARY

In this chapter a multidimensional model/programme is proposed for the identification and handling of stress in secondary schools. Although the construction of such a model was not an explicit object of the present research, the researcher is convinced that it will conduce to completeness and clarity. Without this model the reader might conclude that stress can be adequately identified by a single application of one questionnaire. The purpose of this model is therefore to emphasise the complexity of the stress phenomenon and the imperative need to involve an interdisciplinary team in the identification of stress in the adolescent. The model also emphasises the fact that a variety of methods should be employed in the identification process.

In addition the role of the teacher is emphasised in this connection without de-emphasising the need for reference to and intervention by other professional persons. Moreover an attempt is made to impress upon teachers once more that their tasks entail more than mere
academic schooling of their pupils. In the words of Hash and Vernon (1987:23): "The young person's strength to cope with problems at home and school can be enhanced when teachers are receptive and supportive".

Measuring instruments for the identification of stress, such as the Life-events Scale and other questionnaires, are unsuitable for use in this investigation since these instruments do not take account of the uniqueness of the individual subject's meaning attribution to, experience of, and involvement with stress. To add significantly to existing knowledge concerning stress a measuring instrument will have to be developed that proceeds from the definition of stress (cf. par. 3.4) on which this research is based. In the next chapter the method employed in developing this measuring instrument, as well as that exemplified in the empirical research, will be discussed.
CHAPTER 5

DEVELOPING A STRESS QUESTIONNAIRE

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5.1 INTRODUCTION

The questionnaire was invented by Horace Mann when he used it as a research instrument for the first time in 1847 (Mouly 1978:189). Since that date the questionnaire has developed into what is probably the most widely used data gathering medium in the human sciences. Unfortunately, however, it is probably also the most abused of social research instruments. In this chapter attention is particularly focused on the steps involved in the compilation of a questionnaire, and some guidelines and criteria pertaining to both such compilation and the administration of questionnaires are discussed.

It is also important at this juncture to note the different approaches that can be adopted in measuring stress. As indicated in par. 4.5, the researcher finds that stress is such a widely ramified phenomenon and is experienced in so many different ways by different persons, that the measurement or identification of stress by means of a single questionnaire is scientifically unjustifiable. Accordingly a programme for the identification of stress in adolescence is proposed in chapter 4. A brief discussion of the different approaches to stress measurement follows.

5.2 DIFFERENT APPROACHES TO STRESS MEASUREMENT

5.2.1 Physiological measurement

Some researchers believe that a person’s physiological reactions to stress can be monitored as an indication of his experience of stress (Van Graan 1981:98 and Quick and Quick 1984:126). For instance, secretion of perspiration, breathing rate, pulse rate and blood pressure can be measured; and with special electronic equipment even muscle tension, skin responses, blood flow and brain waves can be analysed to gain an indication of an individual’s stress level (Quick and Quick 1984:126). Van Graan (1981:98) notes that stress causes a change in the individual’s vocal frequency modulation, which also serves as an indication of a change in his stress level.

Many disadvantages adhere to the use of physiological measurement to determine stress:

- Taking physiological measurements is usually an expensive process requiring special expertise.

- Physiological change, such as a change in muscle tone, is not necessarily stress-related (Van Graan 1981:97).
5.2.2 Observation

Observation of behaviour and medical observation can also be used to determine whether a person is undergoing stress, or what situations give rise to stress (Quick and Quick 1984:103). The researcher considers, however, that observation on its own is not a reliable means of obtaining an indication of stress. Quick and Quick (1984:103) contend that an indication of a person's stress is not always an accurate reflection of his feelings, while White (1982:163) maintains that observation errors are possible and that the observer may form an incorrect subjective impression of what he observes. Observation can contribute considerably towards the identification of stress, however, if it is used to complement an interview or a questionnaire.

5.2.3 Behavioural indicators

There are behavioural indicators or symptoms (cf. Table 3.7) that can be considered as an indication of the amount of stress experienced by a subject. As in the case of observation, behavioural indicators can be used to good effect in conjunction with other methods of measurement and identification. Van Rheede van Oudtshoorn (in Van Zyl 1991:103) notes, however, that since these behavioural indicators are not invariably present (even in cases where the subject experiences a high level of stress), it is not an adequate means of stress measurement on its own.

5.2.4 Interviews

According to Van Zyl (1991:103) an unstructured interview is particularly well-adapted as a means of determining or identifying stress. In such an interview the subject gains the opportunity to give full expression to his observations and feelings concerning events impinging on his life. The interviewer must guide the interviewee by resorting to open questions, by which means he can obtain sound information about important aspects of the subject's life.

The main problem with the interview is that it is time-consuming and that the interviewer is not always capable of interpreting interview data accurately and effectively. Moreover interviewing calls for thorough preparation and considerable practice. This method is therefore not suitable for all researchers.
5.2.5 Self-assessment questionnaires

A large variety of self-assessment questionnaires can be resorted to for the identification of stress, for example:

- The Source of Stress Inventory (Chandler 1981a)
- The Stress Response Scale (Chandler, 1983:260-265)
- The Hassles Scale (Kanner, Coyne, Schaefer and Lazarus 1981)
- The Stress Scale for Children (cf. Table 3.2)
- The State-Trait Anxiety Inventory (Spielberger, Gorsuch and Lushene 1970)
- The IPAT Anxiety Scale (Cattell, Scheier and Madge 1989).

Unfortunately most of these questionnaires are not standardised for specific use in South Africa. Van Graan (in Van Zyl 1991:105) also points out that most of the self-assessment questionnaires used to identify or measure stress are calculated to measure the experience of anxiety and/or depression. He contends, however, that stress is a subjective experience comprising a variety of reactions, and not just anxiety or depression. The disadvantages of life-events type questionnaires are described in more detail in par. 3.2.5.2. The risk attached to the use of self-assessment questionnaires is that subjects may deny the symptoms or causes of their stress or may slant their answers to represent themselves in a favourable or unfavourable light (Van Zyl 1991:105). Smit (1981:241) also notes that the validity of self-assessment questionnaires may vary with circumstances. In many instances, too, the items are ambiguously worded so that the subject feels that two answers are possible, or he feels inclined to say: "Yes, but ...".

Nevertheless self-assessment questionnaires are in common use. Smit (1981:241) notes the following advantages of self-assessment questionnaires:

- They generally meet a number of criteria of test objectivity.
- The administering, scoring and interpretation of these questionnaires require less schooling than is the case with, for example, projection techniques.
Goldberger and Breznits (1982:270) corroborate this observation:

- Self-assessment questionnaires are cost-effective because they can be administered to a large group of people simultaneously.

- The questionnaires also conduce to objective measurement/identification of stress because the subject evaluates himself and the interpretation of data is not dependent on the subjective judgement of another person (e.g. the interviewer).

- Since these questionnaires are quantified as a matter of course it is easy to compare the scores obtained for different individuals.

5.2.6 Conclusion

A variety of methods can be used to identify stress. Specific advantages and disadvantages adhere to all these methods. The researcher concludes that the questionnaire method is the most suitable means of identifying stress, with the proviso that identification with a questionnaire is not the alpha and omega, and that therapy or assistance depends on information gained by other means, such as interviews and observation. The said problems and disadvantages of the questionnaire method (cf. par. 5.2.5) can be largely overcome if they are discounted in the design of the questionnaires and rapport can be established with the interviewees. Consequently in this investigation the questionnaire method will be adopted for the purposes of identifying stress.

5.3 STEPS IN THE CONSTRUCTION OF A QUESTIONNAIRE

According to Schnetler, Stoker, Dixon, Herbst and Geldenhuys (1989:43) the greatest objection to research involving the use of questionnaires is the poor design of the questionnaires rather than the fact that they are used at all. One of the reasons for this problem could be that in some instances the compilers of questionnaires do not realise that certain principles should be observed and certain steps followed in the construction of questionnaires. The steps followed must be primarily directed at the creation of an accurate, reliable and valid instrument for the evaluation of a particular aspect of human behaviour (Smit 1981:120).

A number of researchers have proposed specific methods involving specific steps for the construction of questionnaires (Smit 1981:120; Van den Berg and Vorster 1982:68 and Van Niewenhuizen 1984:9). The present investigator finds that with slight supplementation and amendment the steps proposed by Smit (1981:120) are the best adapted to the purpose in
hand. Table 5.1 gives a schematic representation of the steps referred to.

### Table 5.1: Exposition of the Steps in the Construction of a Measuring Instrument (Smit 1981:120)

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Specify the object of the questionnaire</td>
</tr>
<tr>
<td>Step 2</td>
<td>Define the object in operational terms</td>
</tr>
<tr>
<td>Step 3</td>
<td>Design the questionnaire</td>
</tr>
<tr>
<td>Step 4</td>
<td>Test questionnaire</td>
</tr>
<tr>
<td>Step 5</td>
<td>Apply for item and factor analysis</td>
</tr>
<tr>
<td>Step 6</td>
<td>Item analysis</td>
</tr>
<tr>
<td>Step 7</td>
<td>Factor analysis</td>
</tr>
<tr>
<td>Step 8</td>
<td>Reliability</td>
</tr>
<tr>
<td>Step 9</td>
<td>Validity</td>
</tr>
<tr>
<td>Step 10</td>
<td>Determine norms</td>
</tr>
<tr>
<td>Step 11</td>
<td>Standardise</td>
</tr>
<tr>
<td></td>
<td>- Content</td>
</tr>
<tr>
<td></td>
<td>- Application procedures</td>
</tr>
<tr>
<td></td>
<td>- Scoring</td>
</tr>
<tr>
<td>Step 12</td>
<td>Revision</td>
</tr>
</tbody>
</table>

*Step 4, 6, 7, 8, 9, 10, 11, 12: Amendments/additions made by researcher to the work of Smit (1981:120).

**Step 1:** Specifying the object of the questionnaire

#### 5.3.1 Description of important aspects

Steenekamp (1984:1) notes that the first issue on which clarity must be obtained before a questionnaire can be compiled is the purpose of the questionnaire. After all, it would be pointless to compile a questionnaire and plan an investigation if there is no question or problem to which a solution is required or about which the researcher at least requires more information. Smit (1981:122) also notes that the implicit and the explicit objects, as well as the potential applications of a questionnaire must be carefully formulated. Oppenheim (1966:3) states the case as follows: "We cannot judge a questionnaire as good or bad, efficient or inefficient unless..."

*) Amendments/additions made by researcher to the work of Smit (1981:120).
we know what job it was meant to do".

Smit (1981:123) notes further that the population to which the questionnaire is to be administered must be specified in formulating the object of the questionnaire, and that the description of the population should include such particulars as age, level of intellectual development, academic qualifications, socio-economic background and reading ability.

5.3.1.2 Application of abovementioned aspects with a view to developing the ASII

The primary and secondary objects of the research under review here have been explained in par. 1.5. The purpose of the questionnaire can be stated as follows:

The Adolescent Stress Identification Inventory (ASII) is a self-assessment questionnaire compiled to identify stress in the adolescent. The results obtained with the ASII can enable the investigator to decide whether an adolescent should be referred to a psychologist for therapy or whether the problem can be handled by school-bound services (cf. Figure 4.1). The questionnaire also has diagnostic value because it can enable the investigator to determine the seat of the problem in the adolescent's life (for example self-concept or relationships) and what stressors are causing it.

Once this information is available appropriate stress-handling strategies and techniques can be suggested and implemented. The application of the questionnaire should be repeated at regular intervals since the causes of stress and the experience of it vary over time and according to circumstances.

The ASII has a wide range of possible applications. It can be used in a variety of problematic situations, such as where a pupil's performance drops below par, or where he experiences social, emotional or normative problems; or it can be used for the exclusive purpose of determining whether the adolescent's experience of stress in his/her life is excessive.

The ASII is also created for application in the case of mid-adolescents, who are pupils in standards 8-10 (± 15-18 years of age) (cf. par. 2.3.2.1). The questionnaire is grammatically designed to enable persons, who can read and write at a level not lower than that required to be promoted beyond standard 8 at school, to respond successfully to it. The respondent adolescents are in good health and free from obvious deficiencies, and their parents' socio-economic status ranges from below average to excellent.
5.3.2 Step 2: Operational definition of the object of the questionnaire

5.3.2.1 Description

Gericke (1987:51) notes that the quality of measurement largely depends upon the clarity and precision with which the researcher defines and analyses the abstract meaning of the key variables with reference to a theoretical framework, and then translates these analytic descriptions into operational definitions or practical, pragmatic and clear, quantifiable descriptions. It is no easy task, however, to measure human characteristics direct by means of a questionnaire. For example, it is impossible to take account of all intelligent behaviour in a single intelligence test. An inferential leap must therefore be made in the interpretation of an abstract characteristic (construct) (Van den Berg and Vorster 1982:24), to which end the construct has to be defined as accurately as possible. According to Van den Berg and Vorster (1982:24) an operational definition is designed to suggest a specific measuring technique.

The construct can be divided into relevant components once it has been defined in operational terms. In some instances components are deduced from the construct, or one component is inferred from another, or components are inferred from empirically observed correlations between components (Gericke 1987:51).

The three basic approaches to the development of a questionnaire are the analytic, the empirical and the sequential-system approach.

5.3.2.2 Application

In paragraph 3.4 the concept of stress was defined from a psycho-educational perspective. Since stress is such a widely ramified phenomenon just a few of the cardinal features of stress were singled out for description. Here the researcher will attempt to formulate an operational definition of stress:

Stress is a phenomenon that manifests in the individual person under the influence of various stressors that arise from the self and the environment. The way in which the individual person assigns meaning to these stressors, his experience of them and his involvement with them are manifested in observable and non-observable ways in his behaviour, thinking and conversations. The manifestation of his experience of stress and the meaning he attributes to it can be measured by means of a variety of techniques, but for the purpose of
In this research an effort will be made to identify it by means of the questionnaire.

In the literature the different stressors are divided into three main categories/components:

- those at microlevel: the self (cf. par. 3.5.1)
- those at mesolevel: immediate and other family members (cf. par. 3.5.2.1)
  peer group (cf. par. 3.5.2.2)
  school (cf. par. 3.5.2.3)
- those at macrolevel: the outside world (cf. par. 3.5.3).

The researcher has decided not to attempt a more detailed categorisation based on information gleaned from the literature study. Instead a factor analysis will be undertaken in Step 7 (cf. par. 6.5), which will result in the determination of a number of factors that are common to some of the variables used in the research.

The questionnaire was developed according to the analytical method, which means that the questionnaire items were derived from the literature study. The empirical approach was also used, however, in that the questionnaire was developed, finalised and standardised according to statistical methods (cf. chapter 6).

5.3.3 Step 3: Devising the questionnaire

Many pitfalls await the inexperienced and rash researcher where the design of the questionnaire is concerned. To avoid these, consistent account must be taken of certain considerations, and certain guidelines must be followed in the formulation of questions, which must comply with certain criteria. It is also useful to evaluate every question with reference to a checklist.

5.3.3.1 Considerations to bear in mind in compiling a questionnaire

According to Steenekamp (1984:4) the following considerations must be taken into account in the compilation of a questionnaire:

- The purpose of the questionnaire: Requirements to which a questionnaire must conform will depend on the object it is intended to achieve as well as the method of its application.
The experiential world of the respondent: The theme, concepts and conceptual framework reflected by the questions must be familiar to the respondents included in the sample.

The means of data collection: The construction of the questionnaire will depend greatly on whether it is to be filled in by the respondent himself or by the researcher.

5.3.3.2 Guidelines for a good questionnaire

A questionnaire is designed to meet particular research objectives. It is therefore important that every question be formulated with due care. The questionnaire must not only be judged for general appropriateness, but every question must be shrewdly appraised to determine whether the answer to it will conduce to arrival at the best solution to the problem forming the subject of the research concerned. The following requirements must be met (Olivier 1989:101):

- The questionnaire must be neat, attractively presented and concise. No question should be included unless it conduces to achievement of the researcher’s purpose. The layout and duplication must be neat and well-finished.

- Every item must be clear and unambiguous. Question terminology must be consistent with the respondent’s vocabulary.

- The questionnaire must be as comprehensive as possible to maximise the amount of information the researcher can extract from it.

- Instructions must be couched as clearly as possible and should appear on the front of the questionnaire.

- Every item must deal with a single idea.

- The questions must be objective. Leading questions must be avoided.

- Questions must proceed inductively, that is, they must guide the respondent’s thoughts from the general to the particular. The first few questions must win the respondent’s confidence - delicate or sensitive questions must be left till later.

- Questions may be grouped into categories. This will guide the respondent and concentrate his mind on specific issues.
Qualifiers in the wording of questions, such as "often", "sometimes", "seldom" and so on, should be avoided.

Provision must be made for appropriate code numbers.

Where necessary a stamped, self-addressed envelope should be included to facilitate the respondent's cooperation.

5.3.3.3 Criteria to apply in compiling questionnaires

In addition to guidelines, a good questionnaire should conform to certain criteria. Tuckman (1978:197) mentions the following three criteria that should be applied without fail:

- To what extent does a question induce the respondent to create a favourable impression of himself?

- To what extent does a question induce the respondent to tailor his response to comply with what he thinks the investigator wants from him?

- To what extent does the respondent feel uncertain about the information solicited from him?

McCallon and McCray (1975:11) note in this regard that the questionnaire must secure the respondent's willingness to participate and must instill a degree of self-confidence that will enable him to make an uninhibited response to each question.

5.3.3.4 Checklist for evaluation of items

Olivier (1989:106) proposes a checklist that can serve as a yardstick for the assessment of questionnaires to determine whether they comply with all the relevant guidelines and criteria:

- Is the question necessary?

- Is the question clear and unambiguous?

- Will the respondent be able to answer the question?

- Will the respondent be willing to answer the question?
- Have ambiguous questions been eliminated or revised?
- Is the item as short as possible and yet clearly stated?
- Could the answer be readily influenced by social predispositions? If so, can the question be reformulated to eliminate prejudice or partiality?
- Have negative words such as "no" and "not" been eliminated as far as possible?
- Are the questions balanced so that the number of favourable/positive items will equal the number of unfavourable/negative items?
- In the case of a multiple-choice questionnaire, are sufficient options given?

5.3.3.5 Question format

Two basic question formats can be used in questionnaires, namely the open question (also called the unstructured question) and the categorical question (also referred to as the structured question). Various combinations of these two formats may also be used.

(i) Unstructured questions (open questions)

Schnetler et al. (1989:43) defines an open question as one in which the respondent is encouraged to formulate and give his own unconstrained response since this type of question does not call for a categorical response. The principal advantages attending open questions are that they can aid the detection of inarticulate or underlying motives, expectations or feelings on the part of the respondent. The main disadvantage adhering to this question format is that it is time consuming and uneconomical to administer questionnaires comprising such questions. It also limits the number of questions that can be asked before respondent "fatigue" or staleness sets in. According to Van Zyl (1991:122) open questions are often easy to ask, difficult to answer and the answers to such questions even more difficult to analyse.

(ii) Structured questions (closed questions)

Structured questions are formulated to accommodate a fixed range of specific categories of responses from which the respondent has to select the category that suits him best (Schnetler et al. 1989:45). The advantages to be gained from structured questions are that it is easier, as well as more economical and less time consuming, to administer questionnaires consisting of
precodified questions. Structured questions can cause a loss of rapport between the person administering the test and the respondent. It can also frustrate the respondent who may feel that the given response categories do not make adequate provision for the expression of his personal feelings or opinions. Structured questions are often also less subtle than open questions.

(iii) **Initial considerations**

As indicated in paragraph 5.2, there are a number of optional approaches to stress identification and measurement. The researcher has weighed up the merits and demerits of all the approaches and has concluded that self-assessment questionnaires are probably the best means of identifying stress in the adolescent. The researcher also has the option of several types of questionnaires, however, two of which are those respectively containing structured and unstructured questions. In view of the disadvantages attached to the use of unstructured questions (cf. par. 5.3.3.5 (i)) it has been decided that structured questions will be used, with the result that the researcher then had to weigh the merits and demerits of a life-events approach against those of a structured inventory. The disadvantages inherent in the adoption of a life-events approach as set out in par. 3.2.5.2, and more particularly the incapacity of this type of questionnaire to elicit responses reflecting the experience of the respondent, turned the scales in favour of a stress inventory.

Although a variety of instruments have been evolved to ascertain the sources of stress in adults, only a few isolated instruments have been developed abroad for the identification of stress in children and adolescents. The most significant work in this field has been done by Lazarus and Cohen (cf. par. 3.3.2), Schultz (cf. par. 3.3.3) and Chandler (cf. par. 3.3.4).

The questionnaires developed overseas are unsuitable for application under the conditions prevailing in the RSA, however, and Marais (1992:42) contends outright that an instrument that would be appropriate for South African conditions has not been developed yet. This is why the work done by Marais (1989) has been regarded as highly significant and has been followed with considerable interest. He measured the incidence of stress among standard 5 pupils with a stress inventory comprising 49 items evaluated on a 4-point Likert type scale. The inventory was administered to 322 subjects. Marais lists stress factors in order of significance according to response frequencies (cf. Table 5.2).
<table>
<thead>
<tr>
<th>Item No.</th>
<th>Rating Order</th>
<th>Factors</th>
<th>Response frequency</th>
<th>%*</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>1</td>
<td>Death of a parent</td>
<td>317</td>
<td>99</td>
</tr>
<tr>
<td>39</td>
<td>2</td>
<td>Death of a brother or sister</td>
<td>313</td>
<td>97</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>Marks on school report lower than desired</td>
<td>313</td>
<td>97</td>
</tr>
<tr>
<td>40</td>
<td>4</td>
<td>The prospect of death</td>
<td>307</td>
<td>95</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>Sitting an examination</td>
<td>305</td>
<td>94</td>
</tr>
<tr>
<td>31</td>
<td>6</td>
<td>War: terrorism, bomb explosion</td>
<td>302</td>
<td>94</td>
</tr>
<tr>
<td>19</td>
<td>7</td>
<td>Poor academic performance</td>
<td>300</td>
<td>93</td>
</tr>
<tr>
<td>46</td>
<td>8</td>
<td>Hospitalisation of parent</td>
<td>297</td>
<td>92</td>
</tr>
<tr>
<td>36</td>
<td>8</td>
<td>The prospect of being paralysed</td>
<td>297</td>
<td>92</td>
</tr>
<tr>
<td>44</td>
<td>10</td>
<td>Illness in the home</td>
<td>295</td>
<td>91</td>
</tr>
<tr>
<td>35</td>
<td>11</td>
<td>The prospect of becoming blind</td>
<td>291</td>
<td>90</td>
</tr>
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<td>43</td>
<td>12</td>
<td>Possibility of parents being divorced</td>
<td>285</td>
<td>89</td>
</tr>
<tr>
<td>17</td>
<td>13</td>
<td>The subjects for standard 6</td>
<td>282</td>
<td>88</td>
</tr>
<tr>
<td>32</td>
<td>13</td>
<td>Fear of failure</td>
<td>282</td>
<td>88</td>
</tr>
<tr>
<td>23</td>
<td>15</td>
<td>Inability to keep up with learning tasks at school</td>
<td>280</td>
<td>87</td>
</tr>
<tr>
<td>8</td>
<td>15</td>
<td>Possibility of failing standard</td>
<td>280</td>
<td>87</td>
</tr>
<tr>
<td>41</td>
<td>17</td>
<td>Disagreement between parents</td>
<td>272</td>
<td>85</td>
</tr>
<tr>
<td>7</td>
<td>17</td>
<td>Failing a test or examination</td>
<td>272</td>
<td>85</td>
</tr>
<tr>
<td>45</td>
<td>19</td>
<td>Financial straits</td>
<td>270</td>
<td>84</td>
</tr>
<tr>
<td>30</td>
<td>20</td>
<td>At a loss to know what to do</td>
<td>269</td>
<td>83</td>
</tr>
<tr>
<td>29</td>
<td>21</td>
<td>Fear of the unknown (night, future)</td>
<td>263</td>
<td>81</td>
</tr>
<tr>
<td>41</td>
<td>22</td>
<td>Parental punishment</td>
<td>258</td>
<td>80</td>
</tr>
<tr>
<td>13</td>
<td>22</td>
<td>Teacher shouts</td>
<td>258</td>
<td>80</td>
</tr>
<tr>
<td>5</td>
<td>24</td>
<td>Thinking about a particular teacher</td>
<td>253</td>
<td>78</td>
</tr>
<tr>
<td>24</td>
<td>24</td>
<td>Inadequate verbal articulacy</td>
<td>253</td>
<td>78</td>
</tr>
<tr>
<td>16</td>
<td>24</td>
<td>Beginning at a new school</td>
<td>253</td>
<td>78</td>
</tr>
<tr>
<td>28</td>
<td>24</td>
<td>Personal appearance</td>
<td>253</td>
<td>78</td>
</tr>
<tr>
<td>37</td>
<td>24</td>
<td>Parents choose for me</td>
<td>253</td>
<td>78</td>
</tr>
<tr>
<td>12</td>
<td>29</td>
<td>Remarks passed by the teacher</td>
<td>251</td>
<td>77</td>
</tr>
<tr>
<td>10</td>
<td>29</td>
<td>Teacher punishes me</td>
<td>248</td>
<td>77</td>
</tr>
<tr>
<td>49</td>
<td>31</td>
<td>Bodily changes are not discussed</td>
<td>243</td>
<td>76</td>
</tr>
<tr>
<td>22</td>
<td>32</td>
<td>Cannot get enough reading done</td>
<td>230</td>
<td>71</td>
</tr>
<tr>
<td>14</td>
<td>32</td>
<td>The laughing-stock of the class</td>
<td>230</td>
<td>71</td>
</tr>
<tr>
<td>33</td>
<td>34</td>
<td>Loneliness</td>
<td>228</td>
<td>70</td>
</tr>
<tr>
<td>34</td>
<td>35</td>
<td>Not accepted by peers</td>
<td>226</td>
<td>70</td>
</tr>
<tr>
<td>48</td>
<td>36</td>
<td>Father or mother remarries</td>
<td>220</td>
<td>69</td>
</tr>
<tr>
<td>11</td>
<td>37</td>
<td>Homework</td>
<td>219</td>
<td>68</td>
</tr>
<tr>
<td>25</td>
<td>38</td>
<td>Not chosen for a team</td>
<td>216</td>
<td>67</td>
</tr>
<tr>
<td>26</td>
<td>39</td>
<td>Does not excel at sports</td>
<td>207</td>
<td>64</td>
</tr>
<tr>
<td>18</td>
<td>39</td>
<td>Choosing a high school</td>
<td>207</td>
<td>64</td>
</tr>
<tr>
<td>27</td>
<td>41</td>
<td>Losing</td>
<td>182</td>
<td>57</td>
</tr>
<tr>
<td>20</td>
<td>41</td>
<td>A new teacher</td>
<td>182</td>
<td>57</td>
</tr>
<tr>
<td>21</td>
<td>43</td>
<td>Favouritism shown towards other children</td>
<td>172</td>
<td>54</td>
</tr>
<tr>
<td>47</td>
<td>44</td>
<td>No pocket money</td>
<td>161</td>
<td>50</td>
</tr>
</tbody>
</table>

* Response frequencies divided by the number of respondents who answered the question
Marais (1992:43) maintains that findings reported in the literature led to the expectation that issues concerning sexual maturation, bodily changes that set in, socialisation, choices of directions of study, and a new school would earn a high priority rating on the stress inventory. Against this expectation, application of the inventory to the group serving as the subjects of the investigation revealed that the deaths of either a parent or of brothers and sisters are the two principal sources of stress. Marais also found that his research findings were borne out by those of Chandler (1985a:24).

The researcher feels, however, that Marais made several erroneous assumptions in conducting his research projects, the most critical of these being exemplified in his assignment of places in the order of priority for some of the stressors contained in the stress inventory as if the child had actually experienced the effects of these stressors. In this type of research a clear distinction should be made between stressors actually experienced by subjects and those which the child merely conceives of as containing the potential to be very stressful if he were exposed to them. The following are among the items (stressors) in this category:

- death of a parent
- death of a brother or sister
- war: terrorism, bomb explosion
- becoming a paraplegic
- becoming blind
- the possibility of parents being divorced.

It would seem that in most of the children's estimation it would be highly stressful for them if one of their parents were to die. Marais (1992:43) contends, however, that the fathers of 320 of the subjects (N = 322) were either employed or unemployed, while the mothers of all the subjects were either employed or unemployed. This indicates that only two of the subjects could have suffered the loss of their fathers by death. Thus, since the vast majority of the children included as subjects in the investigation had never been subjected to the stress of this event, it follows that there is no justification for the inference that the death of a parent is the greatest source of stress for the child.
Chandler (1981a: 164) assigns values to stressors in accordance with the life-events approach. The aggregate value assigned to a subject as the result of adding the values associated with the stressors that influence him serves as an index of the amount of stress experienced by the person concerned. Although this method is more correct from a scientific point of view than that used by Marais (1992: 43), it is marred by the disadvantage that the index number conveys no information about the actual meaning attributed to the stressor by the subject, or of his experience of and involvement with the stressor. For example, where a child is very fond of his father the experience of the father's death may be more stressful for such a child than it would be in the case of a child who does not live with his father owing to a divorce, or for a child who has been abused by his father. Stress measurement that is effected according to the life-events approach can therefore only be used to gain a very superficial indication of the stress suffered by a subject, and it can never be used for diagnostic purposes.

(iv) Application: Final structure

In undertaking the project under review the researcher realised afresh how difficult it is to gain a clearly defined conception of the stress phenomenon by using a questionnaire to that end. In the present study a different type of question formulation is used in a modest effort to resolve some of the problems and difficulties hampering other research. The researcher shies away from the direct use of such stressors as death, divorce and the like in the ASII and tries to determine the subject’s attribution of meaning to, experience of and involvement with the stressor by dint of question formulation. It must be borne in mind that the subject may resort to deliberate evasive tactics to avoid disclosure of the stress he is experiencing. More sophisticated techniques - for example projection techniques, which are beyond the scope of this inquiry - would therefore have to be used.

As regards the question format it was decided to make use of the structured format. The ASII consists of structured questions in response to which the subject is required to rate a statement according to a given scale, that is, he has to indicate whether the feelings described in the statement are experienced by him at all times, sometimes, never, and so on.

5.3.3.6 Choice of items

(i) Description

It is important that in developing a questionnaire consideration be given to the length of the final questionnaire, that is, to the initial and ultimate size of the item pool. Steenekamp
(1984:4) warns against succumbing to the temptation to gain too much information from one questionnaire. His warning is endorsed by Moser and Kalton (1981:309) who declare that a long questionnaire is demoralising for both respondents and interviewers. The final length of the questionnaire (number of items) determines its reliability and validity, however (Van den Berg and Vorster 1982:29). It can therefore be said that a questionnaire should be as short as possible, provided that it serves its purpose satisfactorily, in other words it must not be curtailed to a point where it cannot serve its purpose to the extent required.

It is essential for item analysis that the item pool be larger than the number of items that have to be incorporated in the final questionnaire. By this means the items that do not pass the non-statistical and statistical validation tests can be eliminated. Thorndike (1982:53) notes that there is no universal standard that governs the number of surplus items that should be incorporated in the test construction. He notes, too, that an acceptable minimum would be 50% more than the number of items to be included in the final questionnaire. The surplus percentage is dependent on a variety of factors, however.

(ii) Application

The items included in the preliminary item pool of the ASII were chosen with due reference to information gained from a literature study undertaken to ascertain the causes at micro-, meso- and macrolevel, as well as the symptoms of stress in adolescence (cf. also par. 6.7.2.2). Some items were derived from existing questionnaires, but the vast majority are new items that were formulated with reference to information obtained by means of the literature study. The preliminary pool comprised 150 items. After an item and factor analysis the items in the item pool were reduced to 100 (cf also par. 6.4.2).

5.3.3.7 Personal and sensitive questions

(i) Description

Steenekamp (1991:53) contends that rather than the substance of particular questions, it is the circumstances prevailing during an interview, the approach adopted by the interviewer, and a conspicuous lack of motivational thrust in the questionnaire concerned, that provoke the respondent's aversion to certain questions and, ultimately, to the questionnaire as a whole. He finds that by and large the public are willing to cooperate in the interest of scientific research, provided that

- there is sufficient inherent motivation in the questionnaire
• the merits of the case are apprehended
• the questionnaire is administered without encroaching on the respondent's right to privacy.

Moser and Kalton (in Steenekamp 1991:53) hypothesise that researchers themselves may be too sensitive to sensitive questions, and that the tolerance of the public for sensitive and personal questions may be greater than expected. In recent decades the vicissitudes of life have predisposed people towards speaking more freely about matters that used to be hardly mentionable in earlier times. According to Steenekamp (1991:53) the South African public are still relatively unaccustomed to surveys and therefore relatively unsuspecting in their response to questions, with the result that they tend to be reasonably cooperative on the whole.

(ii) Application

The researcher initially encountered some resistance to items concerning sex, religion or politics but this resistance was mainly encountered among the more conservative Afrikaans speaking communities. However, after a detailed discussion of the purpose of the relevant questions the merits of their inclusion in the questionnaire were understood. In the course of the discussion the researcher strongly emphasised that for the purposes of standardisation strict anonymity was maintained in the application of the questionnaire. The inclusion of the controversial items was then approved by all concerned after minor linguistic changes.

5.3.3.8 Length of items

(i) Description

One of the requirements that items are usually expected to meet is that their purpose must be stated succinctly, that is, with optimal verbal economy (Olivier 1989:101 and Van Zyl 1991:151)

(ii) Application

With very few exceptions items were formulated as concisely as possible in the compilation of the ASII. Like Molenaar (1982:53), the researcher questions the belief that a question/item that is briefly stated and to the point is inevitably good. To support his contention about the brevity of questions Molenaar refers to the research done by Laurent (1972) in which factual
information about respondents' state of health was solicited in questions of both longer and shorter format. The questionnaires comprising questions couched in a more circumscribed format than those contained in the questionnaires used as controls, elicited the best and most valid responses of the two types. Two reasons are given for this outcome:

- The respondent has more time to think while reading the longer questions.
- The respondent's serious attention is engaged by the longer questions because they create the impression in his mind that the information asked for must be important and that significant outcomes therefore depend on his responses.

The researcher also feels that the inclusion of a moderate number of questions of a somewhat longer format than the rest alternates the rhythm of the questionnaire, which conduces to maintenance of the respondent's concentration.

5.3.3.9 Evaluation and amendment of items

(i) Description

Once the researcher is satisfied that sufficient items have been formulated and selected, the items have to be submitted to a panel of subject specialists for appraisal and evaluation. The following criteria are critical in judging the items:

- the clarity of the questions
- possibility of ambiguous answers
- overlapping and repetition of items (Smit 1981:125).

Van den Berg and Vorster (1982:66) point out that the panel of subject specialists may comprise researchers working in the relevant field of investigation. Such researchers can render a valuable contribution towards the effectiveness of the questionnaire by helping with the accurate adjustment of the questions and by giving expert advice.

(ii) Application

A committee of subject specialists comprising educationists, psychologists and educational psychologists was formed to appraise every item for objectivity, congenial formulation and
logical validity. The commentary received from the panel was taken into consideration in the reworking of the items. In deference to the committee's recommendation some items were dispensed with while others were added. The committee expressed the view that the questionnaire covered the construct of stress quite effectively, and that it was therefore well-suited to the purpose of identifying stress in the adolescent.

5.3.3.10 Choice of response alternatives

(i) Description

The application of questionnaires is often done with the aid of different scales. The scales most commonly used are the following:

- dichotomous scales (yes - no)
- four- to eight-point Likert type scales
- diagram scales
- semantic differential scales.

Steenekamp (1991:46) maintains that in the use of attitude items the unconscious assumption is usually made that the "distances" or interval values between the different response alternatives on five- or seven-point scales are identical, but that this is not strictly true. He further contends that five-point Likert type scales are often used unnecessarily because the results are ultimately presented in only two or three combined categories.

(ii) Application

Molenaar (in Steenekamp 1991:46) reports research from which it was found that five to seven scale points are required and optimal to serve as an accurate measure of individual behaviour. The researcher therefore decided to use a 6-point Likert type scale that offers the respondent the opportunity of indicating whether he finds that an item is applicable to himself. The alternatives from which the respondent can choose are:

- always
- almost always
5.4 SUMMARY

It appears that the development of a questionnaire is a difficult and time consuming process. To develop a well-designed and scientific questionnaire, certain steps have to be followed in constructing it. Although an attempt was made to enunciate guidelines, requirements and criteria, there are no fixed rules for the development of a questionnaire. According to Schnetler et al. (1989:88) there is actually only one golden rule for questionnaire design, namely that the questionnaire must be practical and practicable.

The further steps in the development of a questionnaire (steps 4-12) are discussed in the next chapter. Since these steps involve the actual implementation of the questionnaire, they also reflect the results of the investigation, along with other findings, such as the reliability and validity of the questionnaire.
CHAPTER 6

ADMINISTERING THE ASII AND RESULTS OF THE INVESTIGATION

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6.1 INTRODUCTION

The first three steps in the construction of a questionnaire were discussed in chapter 5. These steps mainly entail specification of the object of the questionnaire, definition of the object in operational terms, and compilation of the questionnaire. After a preliminary pilot study the questionnaire was administered at two rural and two urban schools in order to determine certain statistical features of the Adolescent Stress Identification Inventory. The students involved numbered 1285 in all. Every pupil's sex, school standard (progression level attained at school), home language and school performance rating were also ascertained.

The following steps in the development of a questionnaire are discussed in this chapter (cf. Fig. 5.1). Matters such as item analysis, factor analysis, reliability and validity of the questionnaire are dealt with. The various steps and the results of the statistical operations are consistently discussed with reference to preceding theoretical argumentation. Finally some of the findings arrived at from applying the questionnaire are briefly considered.

6.2 STEP 4: EXPERIMENTAL APPLICATION

6.2.1 Description

The provisional questionnaire should be applied experimentally after the preliminary item selection has been done with reference to the assessments of a panel of specialists (cf. par. 5.3.3.9). The purpose of an experimental application is to determine whether the construct researched is actually covered by the questions contained in the questionnaire so that the general intelligibility of the items and the amount of time required to administer the questionnaire can be determined (Van Zyl 1991:156).

6.2.2 Application

A preliminary form of the ASII was administered to a group of Afrikaans speaking (N=15) and a group of English speaking (N=9) Standard 8 pupils. Both groups felt that their feelings concerning the experience of stress were covered by the questionnaire.

The intelligibility and vocabulary of the questionnaire caused no problems. It appears, therefore, that the intellectual demands of the questionnaire are probably not beyond the reading ability of the youngest testees, which implies that a statistical correlation between the results obtained with the questionnaire and the experience of the testees is essentially feasible, and that the possibility that the intelligibility of the questionnaire may have had a significantly negative effect
on the results can probably be dismissed.

Finally it transpired that the testees take about 40 minutes to complete the preliminary ASII. This period will probably diminish to about 25-30 minutes after item selection.

6.3 **STEP 5: APPLICATION FOR ITEM AND FACTOR ANALYSIS**

6.3.1 Determining the sample

6.3.1.1 Description

The purpose of administering the questionnaire to a representative sample is to obtain statistical data about each item and about the questionnaire as a whole (Van Zyl 1991:131) for the purposes of item selection (cf. step 6, par.6.4), factor analysis (cf. step 7, par.6.5), reliability (cf. step 8, par. 6.6) and validity (cf. step 9, par. 6.7).

Thorndike (1982:54) points out that in research on item statistics the sample must be large enough to ensure standard descriptions of the item parameters. Helmstadter (in Smit 1981:126) recommends that instead of the 200 testees recommended by Thorndike (1982:550) and the 350 recommended by Van den Berg and Vorster (1982:69), the sample should comprise 400 testees. Kerlinger (1986:593) notes that some writers recommend 10 respondents per item while others recommend three to five as being sufficient under certain circumstances (Gericke 1987:61).

6.3.1.2 Application

The researcher has decided to use mid-adolescents (standards 8-10) as subjects since certain questions in the questionnaire may seem too sensitive or intellectually advanced (sophisticated) for the early adolescent, and more particularly to the more conservative parent. Another cogent reason for this choice is that in many instances the late adolescent (18-22 years) is no longer at school while the research under review is particularly aimed at the school-going adolescent.

Afrikaans as well as English speakers were involved in the research so that the questionnaire could be standardised in both Afrikaans and English at the same time. Owing to language and cultural differences, however, the respondents were drawn exclusively from the white population. Nevertheless it is advisable that the questionnaire be standardised for the other population groups as well.

Boys as well as girls are included among the respondents.
It was decided that schools in the Transvaal should be involved. For a variety of reasons certain schools chosen at random could not participate in the research project, with the result that available schools had to suffice.

Four schools agreed to participate in the investigation. All the pupils in standards 8 to 10 were involved in the investigation. The number of pupils in each school is given in Table 6.1 below.

<table>
<thead>
<tr>
<th>School</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>School A</td>
<td>357</td>
</tr>
<tr>
<td>School B</td>
<td>343</td>
</tr>
<tr>
<td>School C</td>
<td>287</td>
</tr>
<tr>
<td>School D</td>
<td>298</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1 285</strong></td>
</tr>
</tbody>
</table>

6.3.2 Administering the questionnaire

6.3.2.1 Description

According to Mulder (1989:191) care must be taken to ensure that testees from different groups answer the questionnaire under identical conditions. He recommends that responsible persons be requested to assist where the researcher cannot administer the tests.

6.3.2.2 Application

With the exception of one school, the researcher has personally explained the test procedures to all the testees. At the school where this was not done the researcher explained the procedures to the school’s principal who then administered the test with the assistance of a few teachers. The pupils tested were given the assurance that their answers would be treated as strictly confidential, and that they could even dispense with the formality of writing their names on the answer sheets. They were then encouraged to raise their hands if anything at all was unclear to them. The administering of the test proceeded without any difficulty at all four of the participating schools.
6.4  STEP 6: ITEM ANALYSIS

6.4.1 Description

Mulder (1989:192) observes that every item included in the test contributes its own share (whether negative or positive) to the grand total of the score achieved by each testee. The purpose of item analysis is to determine exactly what each item's contribution is. Gericke (1987:62) asserts in turn that the purpose of analysing items by using appropriate statistical procedures is to improve the reliability and/or validity of the total score. Item analysis conduces to better score distributions and item sequences. Smit (1981:126) noted some time ago that item formulation and questionnaire construction can be approved with the aid of item analysis.

6.4.2 Application

For the purpose of the present inquiry item analysis was undertaken in accordance with Item Analysis with Gulliksen's Index: (Old NPSO): HALL, NIPR. On successive iterations the programme prints the following: The mean and standard deviation with 95% confidence limits of the test score and criterion scores. The test criterion correlations are printed next, followed by the range and distribution of test scores. The next table depends on whether dichotomised (right/wrong) or multiple-choice items are involved.

If multiple-choice items are involved, as is the case in the research at hand, the mean and standard deviation of responses and the three correlations are printed. The means and standard deviations of these statistics are printed for items included in the test score.

The programme iterates dropping all those items whose item-test correlations are below the criterion correlation. The item-test correlations used for rejecting or selecting items may be any one of RX, RXSJ or RX/SJ\(^1\), or the corresponding indices for any single criterion. Iterations terminate if the specified number has been done, or optionally, when the reliability has failed to improve in two successive iterations.

The preliminary questionnaire (cf. Appendix A) comprised 150 items. Statistical criteria were applied to determine which items contribute negatively or negligibly to the questionnaire as a whole, as well as the degree to which omission of the items thus identified would influence the reliability coefficient of the questionnaire. The researcher decided independently to retain certain

\[\begin{align*}
RX & = \text{Biserial R} \\
RXSJ & = \text{Biserial R item standard deviation} \\
RX/SJ & = \text{Biserial R/item standard deviation}
\end{align*}\]
items, even though their inclusion in the questionnaire did not contribute appreciably to the sum total of the questionnaire. Item analysis was repeated after the items to be omitted were identified on objective as well as subjective grounds. This process was repeated until almost all the items made a significantly positive contribution to the total and at the same time conduced to a high degree of reliability. After 50 items had been omitted from the original item pool the KR-20 amounted to 0.923. The remaining items (N = 100) constitute the final measuring instrument.

<table>
<thead>
<tr>
<th>TABLE 6.2: ITEM ANALYSIS APPLIED TO THE ASII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of respondents</td>
</tr>
<tr>
<td>Number of items (preliminary)</td>
</tr>
<tr>
<td>Number of items (final)</td>
</tr>
<tr>
<td>Reliability KR-20</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Standard deviation</td>
</tr>
</tbody>
</table>

6.4.3 Selection and ordering of items

As indicated in par. 6.4.2, the researcher used the data obtained from the item analysis to select the items that contributed positively to the total, but retained some of the items rejected by the analysis and decided to use the factor analysis (cf. par. 6.5) as a guideline for the ordering of items in the final questionnaire.

6.5 STEP 7: FACTOR ANALYSIS

6.5.1 Description

As Mulder (1989:132) observes, factor analysis identifies factors that are common to some of the variables used in the research. De Wet, Monteith, Venter and Steyn (1981:224) notes further that factor analyses are used to determine the underlying structure of the inter-correlations given in a correlation matrix. The smallest number of discrete variables or factors required to explain the information contained in a correlation matrix is identified by this means. Because the process is invariably time consuming it is usually done with the aid of a computer.

Some researchers allocate the items in questionnaires to factors from the outset and formulate the wording of the items accordingly. The different factors can only be designated after the
The researcher has performed a factor analysis, however.

### 6.5.2 Application

The researcher formulated items from the literature study without actually taking account of any variables. The allocation of stressors at micro-, meso- and macro-level served as a guideline for the design of the questionnaire.

The 100 items remaining in the items pool after the item analysis, were subjected to a factor analysis. The Statistical Analysis System (SAS) used for this purpose is a computer programme that was developed in 1972 by A.J. Barr, J.H. Goodnight, J.P. Sall and J.T. Helwig of the SAS Institute in Raleigh, North Carolina (De Wet et al. 1981:263).

The first step in factor analysis is to obtain an inter-correlation matrix. Eigenvalues in the inter-correlation matrix are then applied to determine how many factors will be isolated. According to the Kaiser criterion only the factors with an eigenvalue greater than 1 are regarded as common factors (Child 1976:43). Initially 24 factors were isolated by this means, in other words 24 factors had an eigenvalue greater than 1. Since so many factors cannot produce useful information, however, it was decided to retain 8, 7, 6 and 5 factors by means of the N-FACTOR CRITERION.

After thorough study of the different item combinations the 5-factor combinations were retained since they proved to be the most useful kind. After orthogonal and oblique rotation by means of the PROMAX method the items as displayed in Table 6.3 were assigned to the different factors.
<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>56</td>
<td>0.837</td>
<td>0.019</td>
<td>0.000</td>
<td>0.027</td>
<td>-0.000</td>
<td>0.435</td>
</tr>
<tr>
<td>119</td>
<td>0.909</td>
<td>0.017</td>
<td>0.003</td>
<td>0.003</td>
<td>0.000</td>
<td>0.371</td>
</tr>
<tr>
<td>25</td>
<td>0.847</td>
<td>0.010</td>
<td>0.009</td>
<td>0.015</td>
<td>0.000</td>
<td>0.377</td>
</tr>
<tr>
<td>109</td>
<td>0.832</td>
<td>0.051</td>
<td>0.000</td>
<td>0.005</td>
<td>0.000</td>
<td>0.369</td>
</tr>
<tr>
<td>104</td>
<td>0.937</td>
<td>0.019</td>
<td>0.000</td>
<td>0.003</td>
<td>0.000</td>
<td>0.310</td>
</tr>
<tr>
<td>52</td>
<td>1.000</td>
<td>-0.000</td>
<td>0.000</td>
<td>-0.000</td>
<td>-0.008</td>
<td>0.288</td>
</tr>
<tr>
<td>22</td>
<td>0.873</td>
<td>0.000</td>
<td>-0.000</td>
<td>0.030</td>
<td>0.006</td>
<td>0.311</td>
</tr>
<tr>
<td>90</td>
<td>0.871</td>
<td>0.001</td>
<td>0.002</td>
<td>0.033</td>
<td>-0.000</td>
<td>0.310</td>
</tr>
<tr>
<td>28</td>
<td>0.611</td>
<td>0.003</td>
<td>-0.000</td>
<td>0.170</td>
<td>-0.000</td>
<td>0.390</td>
</tr>
<tr>
<td>11</td>
<td>0.632</td>
<td>0.158</td>
<td>0.002</td>
<td>0.000</td>
<td>0.000</td>
<td>0.362</td>
</tr>
<tr>
<td>5</td>
<td>0.771</td>
<td>-0.003</td>
<td>-0.029</td>
<td>0.024</td>
<td>-0.000</td>
<td>0.316</td>
</tr>
<tr>
<td>6</td>
<td>0.811</td>
<td>-0.000</td>
<td>0.065</td>
<td>-0.000</td>
<td>0.000</td>
<td>0.292</td>
</tr>
<tr>
<td>134</td>
<td>0.677</td>
<td>0.001</td>
<td>0.112</td>
<td>-0.000</td>
<td>-0.005</td>
<td>0.323</td>
</tr>
<tr>
<td>50</td>
<td>0.450</td>
<td>0.170</td>
<td>-0.000</td>
<td>0.063</td>
<td>0.000</td>
<td>0.372</td>
</tr>
<tr>
<td>18</td>
<td>0.702</td>
<td>0.086</td>
<td>0.000</td>
<td>-0.000</td>
<td>0.017</td>
<td>0.275</td>
</tr>
<tr>
<td>139</td>
<td>0.423</td>
<td>0.073</td>
<td>-0.000</td>
<td>0.141</td>
<td>-0.010</td>
<td>0.355</td>
</tr>
<tr>
<td>13</td>
<td>0.859</td>
<td>-0.000</td>
<td>0.000</td>
<td>0.018</td>
<td>0.020</td>
<td>0.214</td>
</tr>
<tr>
<td>78</td>
<td>0.337</td>
<td>0.273</td>
<td>0.001</td>
<td>0.045</td>
<td>0.004</td>
<td>0.378</td>
</tr>
<tr>
<td>20</td>
<td>0.335</td>
<td>0.358</td>
<td>0.001</td>
<td>0.019</td>
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<td>0.031</td>
<td>0.009</td>
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### TABLE 6.3: FACTOR MATRIX WITH 5 FACTORS - OBLIQUE ROTATION

<table>
<thead>
<tr>
<th>Item Factor</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
<th>Communality</th>
</tr>
</thead>
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<td>0.201</td>
</tr>
<tr>
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<td>0.001</td>
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<td>0.186</td>
</tr>
<tr>
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<td>-0.000</td>
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</tr>
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<td>0.000</td>
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### TABLE 6.3: FACTOR MATRIX WITH 5 FACTORS - OBLIQUE ROTATION

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<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
<th>Communality</th>
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<td>-0.000</td>
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<td>-0.000</td>
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<tr>
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<td>0.011</td>
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<tr>
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<td>0.355</td>
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<tr>
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<td>-0.003</td>
<td>0.951</td>
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<td>0.015</td>
<td>-0.000</td>
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<td>0.167</td>
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<td>0.000</td>
<td>-0.000</td>
<td>0.261</td>
<td>0.449</td>
<td>0.155</td>
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</tbody>
</table>

Factors are interpreted by concentrating on items that yield significant loadings for a particular factor. This is why it is necessary to decide on a criterion for significance. Generally speaking the arbitrary value of +0.3 or -0.3 is used provided the sample is not too small (at least 50 persons) (Child 1976:45). Since the sample in question is much larger (N = 1285) than the minimum size, however, the criterion can be fixed at +0.2 or -0.2 with reasonable safety. Any value greater than or equal to +0.2 or smaller than or equal to -0.2 was therefore taken to be a significant loading for the purpose of the study concerned here.

The items highlighted from the five factors by the factor analysis were studied in detail with a view to finding a common description for them. Judging by content, however, there were a few items that did not belong to the factors where they showed the highest loading. These items showed significant loadings in association with other factors, however, and they were therefore transferred to those factors in the interests of better description. As a result

- Items 48, 73 and 107 were allocated to factor 4.
Item 148 was added to factor 3.

The factors are designated and interpreted with reference to the factor matrix with five factors, rotated according to the oblique method (cf. Table 6.3) and adapted by the researcher so that all the items in the factor fit into its description.

In Table 6.4 a summary is given of the final items (\(N = 100\)) in the different factors.

<table>
<thead>
<tr>
<th>TABLE 6.4: FINAL ALLOCATION OF ITEMS TO FIVE FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor</td>
</tr>
<tr>
<td>Factor 1 (27 items)</td>
</tr>
<tr>
<td>Factor 2 (20 items)</td>
</tr>
<tr>
<td>Factor 3 (14 items)</td>
</tr>
<tr>
<td>Factor 4 (18 items)</td>
</tr>
<tr>
<td>Factor 5 (21 items)</td>
</tr>
</tbody>
</table>

A brief motivation for the designation and interpretation of factors is given in the next section.

6.5.3 Designation of factors

6.5.3.1 Factor 1

The 27 items that showed significant loadings for this factor are given in Table 6.5.

<table>
<thead>
<tr>
<th>TABLE 6.5: ITEMS WITH SIGNIFICANT LOADINGS FOR FACTOR 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
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<tr>
<td>52</td>
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<tr>
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</tr>
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<tr>
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</tr>
<tr>
<td>56</td>
</tr>
<tr>
<td>109</td>
</tr>
</tbody>
</table>
Items in this factor mainly concern demands imposed on the person by the peer group, the school and the parental home. They also indicate the respondent's experience of the expectations others have of him and the pressure they exert on him to perform. The parental discipline imposed on the person and his experience of that discipline are also involved here.

Items 28, 11, 50, 78, 20, 139, 133 and 142 are specifically capable of giving an indication of symptoms that manifest in the adolescent as a result of the demands imposed on him by his environment. These items address his emotions and his experience of stressors at the meso-level. Feelings of discouragement and despair are evinced by his answers to them.

Factor 1 is therefore designated SOCIETAL DEMANDS.

6.5.3.2 Factor 2

The 20 items that showed significant loadings for this factor are reflected in Table 6.6.

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Item</th>
<th>Loading</th>
<th>Item</th>
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</tr>
<tr>
<td>36</td>
<td>1,00</td>
<td>53</td>
<td>0,53</td>
<td>93</td>
<td>0,39</td>
</tr>
<tr>
<td>106</td>
<td>0,83</td>
<td>91</td>
<td>0,51</td>
<td>128</td>
<td>0,37</td>
</tr>
<tr>
<td>41</td>
<td>0,73</td>
<td>65</td>
<td>0,47</td>
<td>108</td>
<td>0,34</td>
</tr>
<tr>
<td>7</td>
<td>0,57</td>
<td>19</td>
<td>0,47</td>
<td>100</td>
<td>0,33</td>
</tr>
<tr>
<td>24</td>
<td>0,56</td>
<td>10</td>
<td>0,43</td>
<td>117</td>
<td>0,32</td>
</tr>
<tr>
<td>66</td>
<td>0,55</td>
<td>138</td>
<td>0,42</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The items showing significant loadings for factor 2 are focused on the adolescent's self-concept and self-confidence. These items give an indication of his relationship with himself and they mainly concern stressors that affect him from the micro-level (internal stressors). At issue here is his acceptance of and satisfaction with himself, and his responses indicate possible feelings of uncertainty and a sense of inferiority.

Factor 2 is therefore designated SELF-CONCEPT.
6.5.3.3 Factor 3

The 14 items that showed significant loadings for factor 3 are reflected in Table 6.7.

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Item</th>
<th>Loading</th>
<th>Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>141</td>
<td>1,00</td>
<td>149</td>
<td>0,78</td>
<td>129</td>
<td>0,42</td>
</tr>
<tr>
<td>74</td>
<td>0,96</td>
<td>2</td>
<td>0,71</td>
<td>95</td>
<td>0,41</td>
</tr>
<tr>
<td>145</td>
<td>0,91</td>
<td>61</td>
<td>0,62</td>
<td>113</td>
<td>0,38</td>
</tr>
<tr>
<td>132</td>
<td>0,88</td>
<td>68</td>
<td>0,49</td>
<td>148</td>
<td>0,21</td>
</tr>
<tr>
<td>127</td>
<td>0,83</td>
<td>114</td>
<td>0,48</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Items subsumed under this factor are mainly concerned with the adolescent's future expectations and his experience of the influence on himself of events in the environment and in society at large. Stressors taken up as items under this factor largely emanate from the macro-level (external stressors).

Factor 3 is therefore designated FUTURE EXPECTATIONS.

6.5.3.4 Factor 4

The 18 items showing significant loadings for this factor are reflected in Table 6.8.

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Item</th>
<th>Loading</th>
<th>Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>77</td>
<td>1,00</td>
<td>143</td>
<td>0,59</td>
<td>94</td>
<td>0,29</td>
</tr>
<tr>
<td>83</td>
<td>0,96</td>
<td>27</td>
<td>0,57</td>
<td>29</td>
<td>0,28</td>
</tr>
<tr>
<td>59</td>
<td>0,90</td>
<td>116</td>
<td>0,54</td>
<td>118</td>
<td>0,24</td>
</tr>
<tr>
<td>57</td>
<td>0,83</td>
<td>60</td>
<td>0,52</td>
<td>48</td>
<td>0,23</td>
</tr>
<tr>
<td>120</td>
<td>0,67</td>
<td>121</td>
<td>0,50</td>
<td>73</td>
<td>0,23</td>
</tr>
<tr>
<td>147</td>
<td>0,66</td>
<td>107</td>
<td>0,32</td>
<td>146</td>
<td>0,21</td>
</tr>
</tbody>
</table>

Items 57, 116, and 94 are calculated to give an indication of marital discord, substance abuse (alcohol and drugs) or financial problems, while the adolescent's sexual needs and practices...
are also brought into prominence. Thus the items associated with factor 4 are mainly concerned with relations at the meso-level.

Factor 4 is therefore designated RELATIONS.

6.5.3.5 Factor 5

The 21 items that showed significant loadings for factor 5 are reflected in Table 6.9.

<table>
<thead>
<tr>
<th>Item</th>
<th>Loading</th>
<th>Item</th>
<th>Loading</th>
<th>Item</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>126</td>
<td>1.00</td>
<td>80</td>
<td>0.83</td>
<td>51</td>
<td>0.64</td>
</tr>
<tr>
<td>111</td>
<td>0.98</td>
<td>136</td>
<td>0.77</td>
<td>150</td>
<td>0.61</td>
</tr>
<tr>
<td>8</td>
<td>0.97</td>
<td>112</td>
<td>0.73</td>
<td>140</td>
<td>0.59</td>
</tr>
<tr>
<td>135</td>
<td>0.96</td>
<td>85</td>
<td>0.72</td>
<td>30</td>
<td>0.59</td>
</tr>
<tr>
<td>67</td>
<td>0.95</td>
<td>35</td>
<td>0.68</td>
<td>54</td>
<td>0.54</td>
</tr>
<tr>
<td>130</td>
<td>0.94</td>
<td>84</td>
<td>0.65</td>
<td>49</td>
<td>0.45</td>
</tr>
<tr>
<td>58</td>
<td>0.90</td>
<td>26</td>
<td>0.65</td>
<td>137</td>
<td>0.42</td>
</tr>
</tbody>
</table>

This factor reflects the adolescent's positive perception of himself, his family and the community. It indicates a positive outlook on life, the adolescent's sense of his own worth, and a relative lack of excessive stress. The items are representative of the adolescent's relations at the micro-, meso- and macro-level.

Factor 5 is therefore designated POSITIVE EXPERIENCE.

<table>
<thead>
<tr>
<th>TABLE 6.10: DESIGNATION OF FACTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1 : Societal demands</td>
</tr>
<tr>
<td>Factor 2 : Self-concept</td>
</tr>
<tr>
<td>Factor 3 : Future expectations</td>
</tr>
<tr>
<td>Factor 4 : Relations</td>
</tr>
<tr>
<td>Factor 5 : Positive experience</td>
</tr>
</tbody>
</table>
6.5.4 Selection and ordering of items

In paragraph 6.4.3 it was mentioned that the final selection and ordering of items would take place after factor analysis. On the grounds of item analysis 50 items were eliminated. These items are marked with an asterisk in the provisional form of the ASII (Appendix A). After the factor analysis the items were arranged so that the items associated with the various factors were evenly spread over the questionnaire. Although item numbers in the final form of the ASII differ from those in the preliminary ASII, the item numbers are kept constant for the purpose of this study in order to avoid confusion.

Unfortunately the final form of the ASII cannot be published in the present work since the researcher intends to obtain the copyright on the questionnaire and to make it available for general use.

6.6 STEP 8: RELIABILITY

6.6.1 Description

The reliability of a questionnaire can be seen as the consistency with which it measures from one occasion to the next (Van den Berg and Vorster 1982:121). Reliability can be determined by such means as the test-retest and consistency methods (eg Kuder-Richardson formulae and alpha coefficients).

No questionnaire is completely reliable, however. Test reliability also does not depend on the all-or-nothing principle, but is a matter of degree (Smit 1981:41). It is taken for granted that when a construct such as stress is measured, a measurement error will be present as with all measurements of human characteristics. This error component can be attributed to incidental, non-essential factors that influence the measurement of a construct (Anastasi 1976:193). The error component can cause differences in measurements taken on different occasions.

The score a person achieves in a test can be described as the observed score:

\[ \text{The observed score} = \text{the actual score} + \text{the error component} \] (De Wet et al 1981:132).

The smaller the error component, the smaller the difference between the actual score and the observed score, and the greater the reliability of the measuring instrument will be. Reliability can therefore also be described as the ratio of the variance of the actual score to the variance of the observed score. If the observed variance is the same as the actual variance, that is, if there is
no error variance present, then the ratio of the observed variance to the actual variance has a value of 1 (De Wet et al. 1981:133).

The closer to 1 the reliability of a measuring instrument, the smaller the difference between the variance of the actual score and that of the observed score. When a measuring instrument is developed, therefore, an effort is made to get the reliability of the instrument as close to 1 as possible.

According to Mulder (1989:215) most standardised tests that are worthwhile have reliability coefficients that exceed 0.9. The author also asserts that if the coefficient is lower than 0.8, then thorough reflection is required about the usability of the test.

6.6.2 Application

Both for practical reasons and because the reaction of subjects to certain items could be influenced by a repetition of the ASII, the questionnaire was applied only once to determine its reliability. Consequently the test-retest method of calculating reliability could not be used, nor could the equivalent-test method, since a suitable equivalent of the ASII could not be found.

The reliability of the ASII was calculated in two ways:

- First by calculating the Kuder-Richardson formula 20 (KR-20) for the ASII as a whole
- Secondly, by resorting to the split half method.

After this the reliability of the ASII was calculated according to the KR-20 formula 0.92 and the split half method 0.93.

It can be assumed that the reliability of the ASII is relatively high and that the difference between the actual score achieved in the ASII and the observed score is relatively insignificant. The error component involved in using the ASII is therefore small.

The reliability coefficient of each factor is given in Table 6.11.
TABLE 6.11: ITEM ANALYSIS - FIVE FACTORS OF THE ASII

<table>
<thead>
<tr>
<th>Factor</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of items</td>
<td>27</td>
<td>20</td>
<td>14</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>KR-20</td>
<td>0,88</td>
<td>0,82</td>
<td>0,79</td>
<td>0,78</td>
<td>0,81</td>
</tr>
<tr>
<td>Mean $\bar{x}$</td>
<td>52,28</td>
<td>38,72</td>
<td>36,79</td>
<td>23,06</td>
<td>25,14</td>
</tr>
<tr>
<td>Standard deviation (SD)</td>
<td>17,14</td>
<td>12,51</td>
<td>10,10</td>
<td>11,63</td>
<td>7,30</td>
</tr>
</tbody>
</table>

It is clear from Table 6.11 that the Kuder-Richardson formula 20 varies from 0,78 to 0,88 for the five factors/fields of the ASII. Owing to the length of the various questionnaires these coefficients are considerably lower than the correlation coefficient for the test as a whole. And yet they compare very favourably with reliability coefficients reported by Cattell et al. (1970:36) for the 16PF questionnaire, which varies from 0,35 to 0,92.

6.7 STEP 9: VALIDITY

6.7.1 Description

Mulder (1989:215) maintains that validity refers to the extent to which the test/questionnaire succeeds in measuring what it purports to measure. The validity of a test can be expressed as a correlation coefficient. To calculate a correlation coefficient two sets of points are required for the same group, however, and the researcher cannot always meet this condition. There are different forms of validity, however, and some of them are not expressed as a correlation coefficient.

6.7.1.1 Criterion related validity

Criterion related validity is usually determined statistically by calculating the correlation between the test performances of the subjects and their performance in terms of another criterion (Mulder 1989:216).

6.7.1.2 Construct validity

According to Mulder (1989:216) the construct validity of a test relates to the psychological characteristics, qualities and factors determined by the test. This is an important requirement when the test user/administrator wants to estimate the extent to which some construct or other that is assumed to be reflected in the test behaviour is present. Quick and Quick (1984:105) note that it is difficult to determine construct validity for the stress construct because there is...
no generally acceptable definition of stress.

6.7.1.3 Content validity

Content validity, which refers to the extent to which the test/questionnaire succeeds in covering the area to which the test relates, is not determined statistically but by consulting competent persons. These persons, usually a panel of specialists, go through the test item by item and decide for themselves

- whether items contribute to achievement of the object of the test
- whether items do not measure what another item has already measured
- whether the number of items dealing with a particular matter is too large or too small
- whether all aspects are covered by the items

and so on (Mulder 1989:217).

6.7.2 Application

6.7.2.1 Criterion validity

Criterion validity cannot be calculated since no suitable measuring instrument that has been developed specifically for adolescents, and that can be correlated with the ASII, exists in South Africa at present. The validity of the ASII will therefore be based on construct validity.

6.7.2.2 Construct validity

Construct validity can be determined in different ways. Although the different definitions found in the literature make the measurement of construct validity more difficult (cf. par. 6.7.1.2), the researcher has studied the literature on stress with reference to a particular definition of stress (cf. par. 3.4). This ensures that the researcher keeps a particular conception of the stress phenomenon in mind at all times. Construct validity was further enhanced in that the researcher formulated all the items contained in the ASII on the basis of information gained from the literature study. The following items are examples:

- Item 10: I find it difficult to accept the changes in my body (cf. par. 3.5.1.1).
- Item 7: I worry about what other people think of me (cf. par. 3.5.1.2).

- Item 147: I am afraid of contracting AIDS (cf. par. 3.5.1.6).

- Item 116: I am concerned about my parents' relationship with each other (cf. par. 3.5.2.1 (ii)).

- Item 84: My parents have time for me and my problems (cf. par. 3.5.2.1 (vi)).

- Item 22: My parents' discipline frustrates me (cf. par. 3.5.2.1 (xiv)).

- Item 77: I am concerned about my alcohol intake (cf. par. 3.5.2.2 (vii)).

- Item 6: My daily programme is so busy - I become exhausted (cf. par. 3.5.2.3 (ii)).

- Item 33: Achievements are over-emphasised at my school (cf. par. 3.5.2.3 (vi)).

- Item 141: I am worried about the political situation in the country (cf. par. 3.5.3.4).

6.7.2.3 Content validity

The efforts made to ensure the content validity of the ASII have already been explained in par. 5.3.3.9 (ii). The panel of specialists have found that the items of the ASII are a representative sample of all items that could possibly be included in the test. They also found that the ASII has frequency and logical validity. It can therefore be assumed that the ASII satisfies the criteria for content validity sufficiently.

6.8 STEP 10: DETERMINING NORMS

6.8.1 Description

After all the statistical operations have been done the questionnaire has to be furnished with norms so that a researcher who administers the test/questionnaire to a group of testees at a later stage will be able to interpret the points scored by each testee in terms of the results achieved by the standardising group (Mulder 1989:201). A norm is therefore an objective standard according to which the scores achieved in the application of a measuring instrument are interpreted. Thus the inferiority or superiority of every testee with respect to a particular ability or trait can be determined in view of the norm scores. Gericke (1987:47) contends,
therefore, that a test score has no practical value in itself and only acquires significance when it is interpreted with reference to norms. Different norm scales are in common use, such as the percentile-rank scale, the age scale and the standard scale. A variety of scales are also based on the normal distribution (cf. Table 6.12).

<table>
<thead>
<tr>
<th>Scale</th>
<th>Magnitude</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanine scale</td>
<td>1 to 9</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Sten scale</td>
<td>1 to 10</td>
<td>5.5</td>
<td>2</td>
</tr>
<tr>
<td>T scale</td>
<td>±20 to ±80</td>
<td>50</td>
<td>10</td>
</tr>
<tr>
<td>IQ scale</td>
<td>±55 to ±145</td>
<td>100</td>
<td>15</td>
</tr>
<tr>
<td>Stafive scale</td>
<td>1 to 5</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Lately stanines are increasingly used to determine norms. The term stanine is a composite of two words, "standard" and "nine", and it indicates that standard points are divided into nine categories (Mulder 1989:205). The nine categories are indicated in Table 6.13.

<table>
<thead>
<tr>
<th>Stanine</th>
<th>Limits</th>
<th>% of area</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>+∞ to +1,75z</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>+1,75z to 1,25z</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>+1,25z to +0,75z</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>+0,75z to +0,25z</td>
<td>17</td>
</tr>
<tr>
<td>5</td>
<td>+0,25z to -0,25z</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>-0,25z to -0,75z</td>
<td>17</td>
</tr>
<tr>
<td>3</td>
<td>-0,75z to -1,25z</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>-1,25z to -1,75z</td>
<td>7</td>
</tr>
<tr>
<td>1</td>
<td>-1,75z to -∞</td>
<td>4</td>
</tr>
</tbody>
</table>

Stanines 7, 8 and 9 are considered to be above average, while 4, 5 and 6 are average and 1, 2 and 3 are below average by this reckoning.

6.8.2 Application

The cumulative percentage for each of the divisions and for the ASII as a whole were obtained to calculate stanines for each of the divisions of the ASII as well as for the ASII as a whole. These particulars appear in Table 6.14.
TABLE 6.14: CONVERSION OF RAW SCORES TO STANINES

<table>
<thead>
<tr>
<th>Stanine</th>
<th>Factor 1 (N=27)</th>
<th>Factor 2 (N=20)</th>
<th>Factor 3 (N=14)</th>
<th>Factor 4 (N=15)</th>
<th>Factor 5 (N=21)</th>
<th>Total (N=100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>83 to 135</td>
<td>61 to 100</td>
<td>55 to 70</td>
<td>44 to 90</td>
<td>65 to 105</td>
<td>278 to 500</td>
</tr>
<tr>
<td>8</td>
<td>74 to 82</td>
<td>55 to 60</td>
<td>50 to 54</td>
<td>38 to 43</td>
<td>58 to 64</td>
<td>253 to 277</td>
</tr>
<tr>
<td>7</td>
<td>66 to 73</td>
<td>49 to 54</td>
<td>45 to 49</td>
<td>32 to 37</td>
<td>51 to 57</td>
<td>229 to 252</td>
</tr>
<tr>
<td>6</td>
<td>57 to 65</td>
<td>42 to 48</td>
<td>40 to 44</td>
<td>27 to 31</td>
<td>44 to 50</td>
<td>204 to 228</td>
</tr>
<tr>
<td>5</td>
<td>49 to 56</td>
<td>36 to 41</td>
<td>35 to 39</td>
<td>21 to 26</td>
<td>36 to 43</td>
<td>179 to 203</td>
</tr>
<tr>
<td>4</td>
<td>40 to 48</td>
<td>30 to 35</td>
<td>30 to 34</td>
<td>15 to 20</td>
<td>31 to 37</td>
<td>155 to 178</td>
</tr>
<tr>
<td>3</td>
<td>31 to 39</td>
<td>24 to 29</td>
<td>25 to 29</td>
<td>10 to 14</td>
<td>24 to 30</td>
<td>130 to 154</td>
</tr>
<tr>
<td>2</td>
<td>23 to 30</td>
<td>17 to 23</td>
<td>20 to 24</td>
<td>4 to 9</td>
<td>17 to 23</td>
<td>106 to 129</td>
</tr>
<tr>
<td>1</td>
<td>0 to 22</td>
<td>0 to 16</td>
<td>0 to 19</td>
<td>0 to 3</td>
<td>0 to 16</td>
<td>0 to 105</td>
</tr>
<tr>
<td>MEAN</td>
<td>52.38</td>
<td>38.72</td>
<td>36.80</td>
<td>23.36</td>
<td>41.48</td>
<td>191.74</td>
</tr>
<tr>
<td>STD</td>
<td>17.16</td>
<td>12.50</td>
<td>10.10</td>
<td>11.48</td>
<td>13.84</td>
<td>49.09</td>
</tr>
</tbody>
</table>

6.9  STEP 11: STANDARDISING THE QUESTIONNAIRE PROCEDURE

6.9.1 Standardising the contents

6.9.1.1 Description

The standardising of content entails the establishment of a general set of items that can be referred to as a questionnaire and that apply to the total population concerned (Smit 1981:137). These items can also be divided into two or more sets, for example in alternative forms of the questionnaire (Gericke 1987:75).

6.9.1.2 Application

Development of the ASII resulted in a general set of items that are appropriate for the identification of stress in adolescents. This appropriateness was ensured by

- studying stress from a particular perspective (psycho-educational) and in relation to an operational definition (cf. par. 3.4 and 5.3.2.2)
- developing items in consonance with the above-mentioned definition and with the aid of an extensive literature study (cf. par. 6.7.2.2)
- submitting items to a panel of specialists for evaluation and improvement (cf. par. 5.3.3.9)
performing an experimental application in the light of which further improvements can be made to the items (cf. par. 6.2)

- selecting items in accordance with acceptable discrimination values and the distribution of responses (cf. par. 6.5.4).

Although the ASII is divided into five separate divisions/fields with the aid of a factor analysis, these fields are not indicated in the layout of the questionnaire, that is, the items relating to the different factors are not divided into groups in the questionnaire.

6.9.2 Standardising the application procedures

6.9.2.1 Description

In order to obtain absolutely comparable results the questionnaire must be accompanied by extensive and precise instructions that must be applied with rigorous consistency (Van Zyl 1991:142). Two sets of test instructions can be differentiated, namely those directed at the testee and those pertaining to the test user. In the first set of instructions, which usually appear at the beginning of the questionnaire, the procedure to be followed in responding to the items is explained in elaborate detail.

The instructions to the test user concern the test administrator’s behaviour while the test is in progress, the time limit (if applicable), and the marking and interpretation of responses. These instructions, together with the instructions to the testees, are usually contained in the manual (Gericke 1987:76).

6.9.2.2 Application

In the instructions to the testee he is reassured that there is no right or wrong answer to the statements. He is encouraged to express his feelings sincerely and honestly. It is emphasised that his answers will be treated as highly confidential.

The instructions to the test administrator include information about an introductory talk aimed at putting the testee(s) at ease, giving directions during the administration of the questionnaire, and requirements to be met as regards maintaining confidentiality in administering the test.

Full instructions cannot be published since the researcher intends to acquire the copyright to the ASII and then to make the questionnaire available for general use.
6.9.3 Standardising the marking procedure

6.9.3.1 Description

According to Smit (1981:137) and Gericke (1987:76) the procedure to be followed in marking and scoring questionnaires must be objective. Objectivity in this instance entails correspondence in the evaluation of the same test protocol by different assessors. A variety of marking and evaluation techniques can be used, but they should all meet at least the following criteria:

- Unambiguous response by the testees to the test must be assured.
- An objective method/mask for the marking of the test responses must be available.
- A procedure for the comparison of the testee’s responses with those of the objective marking key must be supplied (Smit 1981:137).

6.9.3.2 Application

Pains were taken to ensure that the procedure followed in marking the ASII meets the above requirements. The scores associated with the different factors are calculated separately and then all the scores are taken into account with a view to obtaining an overall impression.

Further information about the marking procedure cannot be disclosed since, as indicated earlier, the researcher intends to obtain the copyright to the ASII and then to make the questionnaire available for general use.

6.10 STEP 12: REVISION

6.10.1 Description

No questionnaire can resist change. It is therefore essential that all questionnaires be revised in due course, particularly as regards their validity and reliability, and as regards applicability of normative particulars (Smit 1981:139).

6.10.2 Application

Revision of the questionnaire is not intrinsic to the present investigation. Before the ASII can
be finalised for general use, however, it should be applied once more and data concerning validity, reliability and norms should be checked.

6.11 STATISTICAL FINDINGS

The chi-squared test was applied to determine whether there are significant differences between the responses of different groups of adolescents. Vigilance was especially exercised to detect differences between the responses of adolescents in rural and urban schools; between Afrikaans and English speaking adolescents; between boys and girls; and between pupils in standards eight, nine and ten respectively. Here are some of the cardinal findings in brief.

6.11.1 Significant differences: rural/urban

One of the principal differences concerning the experience of stress by urban adolescents in South Africa and in large cities elsewhere resides in the way in which meaning is assigned to societal demands and the experience of such demands. It appears that, much more than the rural adolescent, the urban adolescent

- feels that his life is hurried and that it exhausts him - item 6 (on the 0.1% significance level)
- feels that his life is ruled by the clock - item 31 (on the 1% significance level)
- feels that he has too much to do and too little time to do it in - item 134 (on the 1% significance level).

In addition, much more than the rural adolescent’s, the urban adolescent’s life is characterised by feelings of

- frustration, in school (item 109) and with parental discipline (item 22) (both on the 1% significance level)
- lack of control (item 78) and emotional exhaustion (item 20) (both on the 1% significance level).

The urban adolescent experiences the demands imposed on him by the school as more taxing than his rural counterpart does. This is apparent from the responses to the following items:
I find it difficult to adapt to all the different teachers - item 64 (on the 1% significance level).

The rules of the school are too strict for me - item 5 (on the 1% significance level).

Achievements are overemphasised at my school - item 33 (on the 0.1% significance level).

I have to write too many tests - item 52 (on the 0.1% significance level).

A further important difference between the experience of stress by urban and rural adolescents concerns their respective future expectations. The rural adolescent is much more concerned than his urban counterpart about

- what will happen to him after he dies - item 148 (on the 5% significance level)
- the political situation in the country - item 141 (on the 1% significance level)
- the future - item 2 (on the 0.1% significance level)
- the violence in his environment - item 61 (on the 0.1% significance level).
- the future of the earth - item 145 (on the 1% significance level)
- the violence in the country - item 74 (on the 1% significance level).

It appears that the urban adolescent feels less threatened by changes in the country (item 132) than his rural counterpart (on the 1% significance level), and that he is less afraid than the rural adolescent of natural disasters such as hailstorms and floods (item 127) (on the 0.1% significance level).

6.11.2 Significant differences: Afrikaans/English speaking adolescents

A significant number of differences pertaining to the assignment of meaning to, and the experience of, societal demands are apparent between Afrikaans and English speaking adolescents. In comparison with his English speaking counterpart, the Afrikaans speaking adolescent is much more inclined to feel that
- he has to write too many tests - item 52 (on the 1% significance level)
- his whole life is controlled by the clock - item 31 (on the 0.1% significance level)
- his parents are too strict - item 13 (on the 1% significance level)
- people impose excessive demands on him - item 119 (on the 0.1% significance level)
- achievements are overemphasised at his school - item 33 (on the 0.1% significance level).

The English speaking adolescent experiences more stress than the Afrikaans speaking adolescent where future expectations are concerned. He is much more concerned about

- the future of the earth - item 145 (on the 0.1% significance level)
- the violence in his environment - item 61 (on the 0.1% significance level)
- what will happen to him after he dies - item 148 (on the 0.1% significance level)
- the violence in the country - item 74 (on the 0.1% significance level)
- the future - item 2 (on the 0.1% significance level).

The following factors also cause more stress among English- than among Afrikaans-speaking adolescents:

- feelings of rejection - item 121 (on the 0.1% significance level)
- concern about his alcohol and drug abuse - items 77 and 83 (both on the 0.1% significance level)
- fear of contracting AIDS - item 147 (on the 0.1% significance level)
- dissatisfaction with appearance - item 58 (on the 1% significance level)
- dissatisfaction with intellectual abilities - item 8 (on the 0.1% significance level).
Where the relationship between him and his parents is concerned the English speaking adolescent is more inclined than his Afrikaans speaking counterpart to feel that

- his parents do not share in his life - item 35 (on the 0,1% significance level)
- his parents do not understand him - item 126 (on the 1% significance level)
- his parents do not have time for him and his problems - item 84 (on the 0,1% significance level).

The English speaking adolescent also finds less comfort in his religious practice than his Afrikaans speaking counterpart does.

6.11.3 Significant differences: sex

There are marked differences between boys and girls as regards their assignment of meaning to, and their experience of, stressors. Differences of the order of 0,1% are recorded for a large number of items. It appears that adolescent girls are much more inclined to experience stress, and that they, in comparison with boys, assign a more negative meaning to certain events.

Nevertheless boys suffer more stress than girls on account of some societal demands, relationship problems and other stressors, namely:

- the rules of the school are too strict for him - item 5 (on the 0,1% significance level)
- he finds it difficult to adapt to all the different teachers - item 64 (on the 0,1% significance level)
- he feels that people impose excessive demands on him - item 119 (on the 0,1% significance level)
- he feels that his friends persuade him to do things he doesn't want to do - item 29 (on the 0,1% significance level)
- his parents do not share in his life - item 35 (on the 1% significance level)
- he doesn't speak to his parents about his problems - item 67 (on the 0,1% significance level).
Boys are much more concerned (on the 1% significance level) about their alcohol consumption than girls are about theirs, but there are no significant differences between boys and girls as regards their drug abuse. It also appears that approximately the same proportion of girls as of boys take drugs, but that more boys than girls consume alcohol.

Furthermore boys are more afraid (on the 1% significance level) of contracting AIDS (item 147), and their religion offers them less (on the 1% significance level) comfort than girls derive from theirs (item 49).

On the other hand girls are much more concerned about their appearance and behaviour than boys are about theirs, as appears from the responses to the following items:

- I am afraid of making a fool of myself - item 66 (on the 1% significance level)
- I eat too much - item 65 (on the 0.1% significance level)
- I worry about what other people think of me - item 7 (on the 1% significance level)
- I am satisfied with my body - item 130 (on the 0.1% significance level)
- I am satisfied with my intellectual abilities - item 8 (on the 0.1% significance level)
- I feel good about myself - item 51 (on the 0.1% significance level)
- I find it difficult to accept the changes in my body - item 10 (on the 0.1% significance level).

It further appears that adolescent girls are more concerned than boys about the future, and that they are more uncertain and feel less secure than boys about the political situation in the country. The following matters are particularly inclined to be a greater source of concern, and therefore of stress, for girls than for boys:

- She is concerned about the violence in her environment - item 61 (on the 0.1% significance level)
- She is worried about her choice of a career - item 129 (on the 1% significance level)
She is worried about the violence in the country - item 74 (on the 0,1% significance level)

She is worried about the future of the earth - item 145 (on the 0,1% significance level)

She is worried about the political situation in the country - item 141 (on the 0,1% significance level)

She feels threatened by changes in the country - item 132 (on the 0,1% significance level).

Finally girls also find it more difficult than boys (on the 0,1% significance level) to be interested in the things that people of their own sex are interested in (item 19).

6.11.4 Significant differences: standards

There are few really significant differences between pupils in the different standards as regards the levels of stress they experience. It does appear, however, that pupils in standard eight are more concerned than pupils in standards nine and ten

- about their alcohol consumption - item 77 (on the 1% significance level)
- about their drug abuse - item 83 (on the 0,1% significance level)
- that they may contract AIDS - item 147 (on the 0,1% significance level).

The pupil in standard eight finds the rules of the school too strict (item 5) and finds it difficult to adapt to all the different teachers (item 64 - both on the 0,1% significance level).

The only factor that is clearly a greater source of stress for the pupil in standard nine than for pupils in other standards, is that itemised as a sense of being required to write too many tests (item 52 - on the 0,1% significance level).

Pupils in standard ten are more inclined than pupils in standards eight and nine (on the 1,0% significance level) to feel that their whole life is ruled by the clock (item 31) and that they have too much to do and too little time to do it in (item 134).
6.12 CONCLUSION

The final steps in the development of a questionnaire are covered in this chapter (Steps 4-12). These steps mainly concern administering the questionnaire and the execution of statistical operations. The different steps can be summed up as follows:

- The questionnaire was administered to 1285 pupils. These pupils are in standards eight, nine and ten. Adolescents from both Afrikaans and English schools were involved in the investigation.

- The preliminary ASII consisted of 150 items. Fifty items were omitted on account of an item analysis. The final ASII therefore consists of 100 items.

- A factor analysis was done on the remaining 100 items. Five factors were identified and respectively designated as relating to societal demands, self-concept, future expectations, relationships and positive experience.

- The reliability of the ASII was calculated by applying the Kuder-Richardson 20 formula and the split half method. The overall reliability of the ASII was established at 0,92 and 0,93 respectively.

- The validity of the ASII is based on content and construct validity. The overall validity was determined by formulating the items of the ASII in accordance with information gained from the literature study and in accordance with an operational definition.

- Norms for the ASII were determined by converting the raw scores obtained in the investigation to stanines.

- Some of the statistical findings obtained from the investigation were disclosed.

In the next chapter the findings gained from the literature study and the empirical investigation are discussed, inferences are drawn and some recommendations are made. The implications of the investigation for the adolescent, the parent, the teacher, the education system and teacher training are also briefly considered.
CHAPTER 7

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7.6.5 Successful application of the proposed model and the new inventory (ASII) is possible
7.6.6 Further research is essential

7.7 RECOMMENDATIONS

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7.7.4 Institution of a pupil welfare programme
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7.11 CONCLUSION
7.1 INTRODUCTION

Stress is a pervasive phenomenon that has been investigated from a variety of perspectives by a widely divergent group of researchers. Hardly any research has been done from a psycho-educational perspective, however, and an inventory or questionnaire that has been specifically standardised for South African use to identify stress in adolescents is not available as yet.

In conducting the present research, therefore, the researcher has attempted to give prominence to the adolescent with his special becoming and developmental problems, needs and requirements. An extensive literature study was undertaken to determine the nature, essence and manifestation of stress in adolescence. Finally a modest effort was made to fill the need for a stress-identification instrument.

This chapter contains a brief recapitulation of the initial problem statement as well as the delineation of the matter at issue and the enunciation of the appurtenant research objectives. Some of the crucial findings resulting from the literature study and the empirical investigation are discussed, and conclusions are drawn from the said findings. In conclusion some recommendations are made, issues requiring further research are considered, and the deficiencies of the present investigation are identified. The implications of this investigation for the adolescent, the parent, the teacher and teacher training are also briefly addressed.

7.2 STATEMENT OF THE PROBLEM

It appears from the literature study that adolescence is a period in the human life-cycle during which individual persons are subjected to dramatic physical, cognitive, affective, social, normative and conative changes. These changes can lead to excessive stress in the life of the adolescent and can impede his optimal self-actualisation. With a view to preventing these negative consequences of stress teachers should be able to identify excessive stress and inability to cope with it.

No standardised stress-identification instrument exists in the RSA, however, hence the researcher's efforts to prepare a scientifically standardised inventory for identifying stress in adolescents by drawing on information obtained from an extensive literature study, in addition to conducting wide-ranging nomothetic research (cf. par. 1.3).
7.3 **DELINERATION OF THE MATTER AT ISSUE**

The research is confined to the identification of stress in white adolescent boys and girls between the ages of 15 and 18 years. Afrikaans as well as English speaking adolescents from all socioeconomic strata were involved in the research. In particular the becoming and development of the adolescent and the reasons for identifying stress in adolescents were addressed. Different approaches to stress research, the classification of stressors, the symptoms and the consequences of stress were also thoroughly examined.

In conducting the nomothetic research the researcher concentrated exclusively on developing and standardising a structured inventory for identifying stress in adolescents. Rendering assistance to the adolescent burdened by excessive stress is not strictly within the bounds of the research, but a model for identifying stress and rendering assistance was discussed synoptically for the sake of completeness and clarity.

7.4 **OBJECTIVES OF THE STUDY**

The primary purpose of the research is to investigate the causes, symptoms, consequences and mediators of stress as manifested in the life of the adolescent. An extensive literature study on the becoming and development of the adolescent and on the nature and essence of the stress phenomenon was therefore undertaken in view of the primary goal. The researcher also endeavoured to indicate in passing how the use of a structured inventory dovetails with a model for identifying and coping with stress in pupils at secondary schools. Finally the researcher endeavoured to use information gained from the extensive literature study to develop an inventory for identifying stress in adolescents. This inventory had to be standardised with the aid of statistical methods.

The secondary purpose of this research is to indicate that there is a need for early identification of stress in adolescents, and that teachers are well-placed to address this need. In addition to identifying stress in the lives of adolescents, they can also take active steps to support the adolescent in his struggle to cope with excessive stress. Teachers at secondary schools can render a major contribution towards promoting the mental health of the country's future adults by introducing a programme for identifying and handling stress.
7.5 FINDINGS

7.5.1 Findings emanating from the literature

7.5.1.1 Psycho-educational theory

Psycho-educational theory as explained by Jacobs (1987:2-7) can be used as a basic frame of reference for studying and identifying stress in adolescents (cf. par. 2.2). If research is to be premised on this theory, then specific attention must be paid to the following:

- the adolescent as a person (cf. par. 2.2.1)
- the areas of becoming (cf. par. 2.2.1.5)
- the activities required for maturation (cf. par. 2.2.2)
- the interaction between activities required for maturation (cf. par. 2.2.2.5).

7.5.1.2 The role of the educator

The relationship between the educator (in this case the parent and the teacher) and the educand (adolescent) is critical for the child's becoming, development, self-concept forming and self-actualisation (cf. par. 2.2.3). If this relationship is disturbed, however, the consequences could cause considerable stress for both parties and the result may be a disharmonious educational dynamic (cf. Fig. 2.3).

7.5.1.3 The period of adolescence

It is generally accepted that adolescence starts with puberty (cf. par. 2.3.2.3), but researchers differ about the age at which adolescence ends (cf. par. 2.3.1). Although it used to be commonly believed that adolescence is a period of storm and stress, this perception is not borne out by recent literature (cf. par. 2.3.2.2). Nevertheless researchers are agreed that the many changes an adolescent has to cope with give rise to heightened emotionality, and that adolescence can be attended by considerable stress and conflict (cf. par. 2.3.3.3).

7.5.1.4 Becoming and development of the adolescent

The adolescent is prone to many changes that affect his becoming and development (cf. par.
2.3.3.1 to 2.3.3.5). In addition to the rapid growth and change of his body, his thinking assumes new and more rational patterns (cf. par. 2.3.3.2). This cognitive development gives rise to his critical and analytical evaluation of events and circumstances, himself, his parents and other people. He is also inclined to egocentrism that manifests in the creation of an imaginary audience and a personal fable (cf. par. 2.3.3.2(ii)). He also engages in idealistic rebellion (cf. par. 2.3.3.2(iii)) and his compelling need for independent thought and investigations leads to conflict with his educators (cf. par. 2.3.3.2(iv)).

The emotional life of the adolescent also undergoes profound changes (cf. par. 2.3.3.3). Although a large proportion of adolescents come to terms with these changes with relative ease, a variety of problems nevertheless tend to emerge during this phase. Many of these problems emanate from the adolescent’s heightened emotionality, his imperative need for independence, his emerging sexuality, his curiosity, his interest in new and unfamiliar experience, his daring and tendency to take risks, or his tendency not to consider the point of view of others or the consequences of his actions.

The adolescent’s relationships with his parents are characterised by increased independence. At this stage intimate friendships are contracted and the adolescent begins to venture into heterosexual relationships.

Conatively, the adolescent becomes increasingly independent in his choices and decisions. He also has to take increasing responsibility for his choices. This implies that he has to judge whether his decisions are right or wrong. Achieving moral maturity and establishing an internal system of values are therefore issues that the adolescent still has to address (cf. par. 2.3.3.5).

7.5.1.5 Forming an identity and a self-concept

Adolescence is the period in the human life cycle when the individual’s identity development takes its greatest leap forward because of the bodily maturation and the drastic sexual, cognitive, social, conative and moral changes he undergoes at this stage (cf. par. 2.3.3.6). There is also an increase to be seen in the dynamics of the self-concept due to his sensitivity, the changes in his body, his capacity for formal-operational thinking, his egocentrism, his heightened emotional experience, his sexuality and his changed social relationships and moral development (cf. par. 2.3.3.7).
7.5.1.6 Approaches to stress research

A rich diversity of research methods and approaches is evident in the literature. The approaches can be divided into three main groups, namely those treating stress as a dependent variable, those treating it as an independent variable, and those proposing an interactive model for stress research (cf. par. 3.2.6.1 to 3.2.6.3).

For the purpose of the present research the only distinction made is between general theoretical models and definitional models.

7.5.1.7 General theoretical models

This research has been influenced by the work of Selye and Lazarus, the approach of the Michigan Group, the Person-Environment fit approach and the stressful life-events approach.

Selye’s main contribution is his perception that stress is an inevitable part of living, and not necessarily harmful in itself. His distinction between eustress and distress also rendered an important contribution to stress research (cf. par. 3.2.1).

Probably the most important contribution to theory construction in this research was rendered by the work of Lazarus whose transactional and cognitive-phenomenological approach to stress research endorses the psycho-educational theory. Lazarus contends that every person attributes his own unique meaning to every event or stimulus that affects him (appraisal). Accordingly, he distinguishes between primary appraisal, secondary appraisal and reappraisal (cf. par. 3.2.2). This categorisation corresponds with the psycho-educational categories of meaning attribution, involvement and experience.

Although the Michigan Group particularly undertook research on stress in the workplace, it appears that the work station could have features in common with the school situation. Consider such stressors as work load, role conflict, lack of support, uncertainty about the future and such stress reactions or symptoms as dissatisfaction with work, absence from work/school, anxiety, irritability and depression (cf. par. 3.2.3).

The PE-fit approach emphasises stress caused by the discrepancy between perceived demands of the environment and the desires, potentialities and needs of the person (cf. par. 3.2.4).

Finally, it appears from the literature that although the stressful life-events approach enjoys
wide application and popularity, it nevertheless has many faults and deficiencies, the most important of these being the fact that it makes no concessions to the uniqueness of each individual person's attribution of meaning to, experience of and involvement with a stressor. Researchers who espouse this approach must guard against indulging in generalisations and erroneous inferences derived from an application of it (cf. par. 5.3.3.5 (iii)).

Nevertheless, the stressful life-events approach can be put to good use to build up a fully detailed profile of a person since the research guided by this approach does lend prominence to events that are commonly found to be stressful.

7.5.1.8 Definitional models

A number of researchers have proposed definitional models that are specifically directed at stress in children and adolescents. Special attention has been paid to the work of Moore, Lazarus and Cohen, and to that of Schultz and Chandler (cf. par. 3.3.1 to 3.3.4).

The principal findings emanating from their research are the following:

- Stress has two faces, psychological and biological
- Stress is caused by internal as well as external factors
- Stress experience depends on appraisal of the situation.

7.5.1.9 Defining stress

It is difficult to define stress accurately since numerous divergent and often confusing definitions of the concept of stress occur in the literature and the phenomenon is studied from a variety of angles and by a considerable number of sciences. For a scientific study of stress, however, the researcher has to formulate an operational definition that can serve as a basic premise for his research, since the researcher's conceptualisation of stress etiology and the effects of stress strongly influences how he attempts to study and measure it (cf. par. 3.4.2).

7.5.1.10 Nature of the stress phenomenon

Since stress is such a pervasive phenomenon as to virtually defy definition it is better to present the characteristics indicating the nature and essence of the stress phenomenon as it crystallises from the literature:
Stress is integral to the life of every human being, including that of the adolescent.

A limited and manageable degree of stress motivates a person to perform and engenders a zest for living, but an unmanageable stress load may overwhelm the individual and cause serious illness.

All life-events, albeit potentially stressful, are neutral in themselves. It is the way in which the person attributes meaning to such events, how he experiences them and comes to grips with them, that determines the effect they will have on him.

Two forms, physical and psychological stress, are distinguishable. These two forms tend to interact with one another.

A person becomes involved in situations in ways that proved successful in the past. Such reactions, however, may not always be consciously available or fully comprehended.

Long-term stress and chronically inadequate reactions to life-events will generally lead to organic dysfunctioning, and ultimately to organic debilitation.

The ability to handle stress can be acquired. This ability can emanate from various sources, such as a belief by a person in his own abilities, a religious orientation, supportive social structures, knowledge of stress handling techniques and the like.

7.5.1.11 Cyclical pattern of the stress phenomenon

A person's attribution of meaning to a stressor and his experience of and involvement with it influence the forming of his self-concept and self-actualisation. The reverse is also true in that a person's self-concept and self-actualisation influence his attribution of meaning to a stressor and his experience of and involvement with it. It is clear, therefore, that the stress phenomenon conforms to a cyclical pattern and that earlier experiences with stress influence the way in which a person will attribute meaning to a stressor, experience it and come to terms with it in later life (cf. fig. 3.11).
7.5.1.12 Adolescent stressors

The large number of stressors to which the adolescent is exposed can be divided into stressors at micro-level (the self), at meso-level (family, peer group and school), and at macro-level (the outside world) (cf. par. 3.5.1 to 3.5.3). Some of the principal stressors that affect adolescents according to the literature are indicated in Table 7.1.

<table>
<thead>
<tr>
<th>TABLE 7.1: STRESSORS AT MICRO-LEVEL, MESO-LEVEL AND MACRO-LEVEL</th>
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<tbody>
<tr>
<td><strong>Micro-level</strong></td>
</tr>
<tr>
<td>Biological changes</td>
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<tr>
<td>- Death of a parent/sibling</td>
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<tr>
<td>- Divorce</td>
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<tr>
<td>Identity and the emerging self</td>
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<tr>
<td>Personality traits</td>
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<tr>
<td>Sexual behaviour</td>
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<tr>
<td>- Alcoholism/substance abuse</td>
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<td>Bodily appearance</td>
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<tr>
<td>Emerging sexual identity</td>
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<td>Physical illness</td>
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<td>Disability</td>
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<tr>
<td>School</td>
</tr>
<tr>
<td>- Loneliness</td>
</tr>
<tr>
<td>- Violence</td>
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<tr>
<td>- Stress of certain school subjects</td>
</tr>
</tbody>
</table>

7.5.1.13 Correlation between stressors, mediators and consequences

Every person attributes his own unique meaning to a stressor, experiences it uniquely and comes to terms with it uniquely. However, various mediators influence the attribution of meaning to, experience of and involvement with stressors (cf. par. 3.6). What amounts to a stressor for one person, for example family relationships or personality, can be a mediator or buffer against the effect of exposure to stressors for another. Likewise, what constitutes a consequence of stress for one person, for example substance abuse, depression or unusual shyness, can be the source or original cause of stress for another (cf. par. 3.7).
7.5.1.14 Mediators of stress

It appears from the literature that the following factors can act as mediators of stress and thus relieve/lessen or exacerbate/increase the impact of stressors:

- Factors intrinsic to the adolescent: appraisal, temperament, personality, age, sex, locus of control, perceived control, resiliency, vulnerability, self-esteem, problem-solving abilities, previous experience, sense of mastery and competence, intellectual ability and humour (cf. par. 3.6.1).

- Factors extrinsic to the adolescent: attachment and family support; role of parents; social support; socioeconomic status (cf. par. 3.6.2).

7.5.1.15 Consequences of stress

The consequences and attendant symptoms of stress can be divided into two categories, namely physical and psychological symptoms. It should be noted here that every adolescent’s stress symptoms will be just as unique as every individual person’s meaning attribution to, experience of and involvement with stress (cf. par. 3.7).

7.5.1.16 Reasons for identifying stress in the adolescent

Findings reported in the literature indicate that there are sound physical, cognitive, affective and social reasons why stress in adolescents should be identified (cf. par. 4.2.1 to 4.2.4). The purpose of identifying stress in adolescents is not to label the adolescents concerned, however, but to enable the pupil’s educators to intervene in his life and to assist him in situations that he cannot handle on his own.

7.5.1.17 Problems attending the identification of stress in adolescents

The researcher who endeavours to identify stress in adolescents faces a variety of problems. Chief among these, however, is the lack of suitable identification methods that accommodate the individual person’s unique meaning attribution to, experience of and involvement with stressors (cf. par. 4.3). There is no instrument for the identification of stress in adolescents that has been developed for specific use in the South African context (cf. par. 5.3.3.5(iii)).
7.5.1.16 Methods and aids for the identification process

It appears from the literature that a multidimensional approach is the most suitable method of identifying stress in adolescents (cf. par. 4.4), since by this means a comprehensive profile of the adolescent can be compiled. A variety of aids and methods are utilised in the identification process, namely:

- information obtained from parents
- information obtained from teachers
- cumulative observation reports
- data derived from non-standardised identification material
- data derived from individual standardised tests.

7.5.1.19 Role of the teacher as mediator

It appears that the teacher has a particularly potent role to play in the identification of stress in adolescents and in rendering assistance to persons who are exposed to excessive stress or who are unable to cope with the stress in their lives. The teacher's behaviour and empathy can influence the experience of stress and lessen or soften the impact of the stress event. He can also take active steps to create a low-stress environment in the classroom (cf. par. 2.2.3.2).

It also appears from the literature study that teachers are willing and eager to support adolescents in their struggle against stress, but that the education system does not provide them with the necessary assistance in the form of curriculum, material, factual information or skills required to render such assistance (cf. par. 4.5.1.2).

7.5.1.20 Assistance

In virtue of his office it is incumbent on the educator to render assistance to pupils who cannot cope with stress. Information on stress and stressors, as well as on the consequences, symptoms and the like of stress, should also be extended to children who manage to control and handle their stress. Assistance can be divided into two categories, namely school-bound services (cf. par. 4.5.3.1) and school-related services (cf. par. 4.5.3.2).
7.5.1.21 Different approaches to stress measurement

There are different approaches to stress measurement, namely:

- physiological measurement (cf. par. 5.2.1)
- observation (cf. par. 5.2.2)
- behavioural indicators (cf. par. 5.2.3)
- interviews (cf. par. 5.2.4)
- self-assessment questionnaires (cf. par. 5.2.5).

Each of these methods has advantages and disadvantages. Self-assessment questionnaires are in common use, however.

7.5.1.22 Construction of a questionnaire

A good questionnaire design is the culmination of a long preparatory process of planning centred on the research objective, problem formulation, development of items and the like. For this reason there are specific steps that should be followed in the construction of a questionnaire (cf. par. 5.3). Moreover certain considerations have to be taken into account in the compilation of a questionnaire (cf. par. 5.3.3.1), and specific guidelines should be followed to ensure that a usable and scientific questionnaire is constructed (cf. par. 5.3.3.2).

7.5.2 Findings derived from the empirical investigation

7.5.2.1 It is essential to identify stress in adolescents

It appears from the empirical study that adolescents are subject to a heavy stress burden, and that excessive stress and inability to cope with it jeopardises the adolescent's self-actualisation and the forming of his self-concept. It also has a negative impact on his performance at school and his social relations. The teacher must be equipped to assist the adolescent by familiarising him with the causes, symptoms and consequences of exposure to stress.
7.5.2.2 It is possible to identify stress in adolescents

It appears from the empirical investigation that despite the problems encountered in seeking to identify stress in adolescents (cf. par. 4.3) and the advantages and disadvantages of the different approaches to the identification and measurement of stress (cf. par. 5.2), it is possible to identify stress in adolescents by administering a self-assessment questionnaire or inventory to that end. It is also possible to determine how a person attributes meaning to and experiences a particular stressor by ensuring that questions put to a respondent are appropriately formulated to that end (cf. par. 5.3.3.5(iv)).

7.5.2.3 Current identification methods are inadequate

Although a considerable number of questionnaires aimed at identifying stress in adolescents are available overseas, no such instrument has been developed for specific application under South African conditions. The pioneering work produced by Marais (1992) in the form of his inventory contains certain pitfalls that endanger its users (cf. par. 5.3.3.5(iii)). It appears from the empirical investigation that use of the above types of questionnaire conduces to erroneous assumptions and unscientific conclusions and pronouncements.

7.5.2.4 Some adolescents are reticent about their stress

In the course of administering the questionnaire, and on briefly inspecting the answer sheets, the researcher came to the conclusion that very few adolescents cannot or will not be frank about their stress in this way (cf. par. 5.2.5). This again emphasises that administering a single inventory without supportive observation, interviewing and the like cannot be a successful means of identifying stress. A multidimensional approach as proposed in paragraph 4.5 appears to offer a solution to the problem.

7.5.2.5 Inadequate teacher training

Conversations conducted with teachers before the questionnaire was administered and while it was being administered have convinced the researcher that teachers are relatively ignorant about the stress phenomenon and are not familiar with the harmful effects that stress may inflict on the adolescent, particularly where his academic progress is concerned. Teachers also seem to underestimate the significance of such stressors as alcohol and substance abuse, performance pressure, a restless existence and unrealistic expectations.
7.5.2.6 Sensitive questions

From administering the ASII it appears that adolescents respond quite readily and comfortably to highly sensitive questions and statements about such matters as sexual practices, substance abuse and death. A few testees (4) did pass such remarks as "that's none of your business" in response to questions relating to their family's socioeconomic/financial instability.

7.5.2.7 The value of the ASII

It would seem that the ASII can be administered to good effect, either in a group context or individually, to identify stress in adolescents. It may also have diagnostic value if the scores in the subgroups (factors) are taken into account (cf. par. 6.5.3). Thus an educator or therapist can determine, for example, whether an adolescent is suffering from stress caused by problems with his self-concept or by his relations with others.

7.5.2.8 Factors of the ASII

A factor analysis revealed that stressors can be classified into four main groups, namely societal demands, self-concept, relationships and future expectations (cf. par. 6.5.3.1 to 6.5.3.4). The fifth group reflects how positively the adolescent experiences himself, his family and society, and it serves as a control for the first four factors.

7.5.2.9 Reliability of the ASII

Application of the Kuder-Richardson formula 20 revealed that the ASII has a reliability coefficient of 0.92. It can therefore be accepted that the reliability of the ASII is relatively high and that its application is attended by a relatively minor error component (cf. par. 6.6.2).

7.5.2.10 Validity of the ASII

Since the items included in the ASII were formulated with reference to a particular definition and on the strength of information gleaned from the literature study, the construct validity of the ASII can be regarded as adequate. Furthermore a panel of specialists have found that since both its face-value and logical validity are adequate, the content validity of the ASII is also adequate (cf. par. 6.7.2.2 and 6.7.2.3).
7.5.2.11 Statistical findings

The empirical research reveals a considerable number of significant differences between urban and rural adolescents (cf. par. 6.11.1), Afrikaans and English speaking adolescents (cf. par. 6.11.2) and boys and girls (cf. par. 6.11.3). Fewer differences are evident, however, between pupils in the different standards (cf. par. 6.11.4).

7.5.2.12 Gender as a mediating factor

The conclusion arrived at by Honig (1986a:54) as well as Trad and Greenblatt (1990:35) to the effect that on the whole boys are more vulnerable to stress than girls, is not borne out by the present research. The contrary was found, namely that girls experience more stress than boys and attribute a more stressful meaning to events than boys do (cf. par 6.11.3).

7.6 CONCLUSIONS

The following conclusions can be drawn from the findings that emerged from the literature and the empirical investigation:

7.6.1 It is essential to identify stress in adolescents

The following are among the reasons why it is essential to identify stress in adolescents:

- Stress related illnesses can be prevented and general mental health can be promoted.
- Underachievement, deterioration in academic performance, and concentration and learning problems can be prevented.
- Emotional or behavioural difficulties can be warded off.
- The forming of positive and constructive interpersonal relationships can be promoted (cf. also par. 4.2).

7.6.2 Methodological and definitional problems and question formulation are obstacles to stress identification

Difficulties encountered in seeking to define stress, a lack of aids to stress identification and the delicate problem of formulating items so that every person's unique meaning attribution
and experience can be determined are an obstacle to stress identification. The researcher concludes, however, that this task cannot be left undone simply because the problems involved in performing it are regarded as sufficient reason to abandon it. It is imperative that these problems be addressed in further research.

7.6.3 Teachers can exert a greater influence on the adolescent's mental health

The first obligation of teachers is to impart knowledge about certain subjects to their pupils. Their secondary task, which is incumbent on them from a psycho-educational viewpoint, is to accompany the adolescent to responsible adulthood and to nurture his mental welfare. This task is frequently neglected because it is not realised that it is just as important as the first, and consequently the adolescents concerned contribute in their later life to the low productivity, high absenteeism from work, poor economic conditions and the like that plague this country.

It seems, therefore, that it is not only desirable that teachers exert a greater influence on the mental health of adolescents, but that the need to perform this task is bound to assume increasing urgency in the future.

7.6.4 A disharmonious educational climate must be prevented

A disharmonious educational climate between parents and adolescents, as well as between teachers and adolescents, is often the cause of stress in both adolescents and their educators. Both parties, but more particularly the educators since they are responsible for education, should endeavour to keep relations as congenial as possible. Unrealistic expectations, lovelessness, overprotection, mistrust, lack of self-control, rejection, inconsistency, authoritarianism, permissiveness, a morbid desire for achievement, and so on, must therefore be avoided wherever possible (cf. par. 2.2.4.2).

7.6.5 Successful application of the proposed model and the new inventory (ASII) is possible

The researcher concludes that successful application in schools of the proposed model for the identification and handling of stress in adolescents (cf. par. 4.5) would be possible, and that the ASII can be a useful aid to the identification of stress within this model.

7.6.6 Further research is essential

The identification of stress in adolescents is essential, as is further research with a view to
providing improved aids to stress identification. Various aspects of the stress phenomenon should also be subjected to thorough scientific investigation.

7.7 RECOMMENDATIONS

7.7.1 Improved identification material

It is recommended that application of the ASII be repeated and that all the procedures involved in its application be standardised so that the inventory can be made available for general use.

It is also recommended that the ASII be improved by establishing different norm scales for the sexes and possibly also for rural and urban as well as Afrikaans and English speaking adolescents. This recommendation is made in view of the considerable number of significant differences between these groups as shown by their answers to items.

The inventory can also be adapted and standardised for all cultural groups. The researcher recommends further that thorough research on stress in the primary and pre-school years be started as soon as possible.

7.7.2 Teachers should be informed about the stress phenomenon in the course of their training

Since the need for stress education at school is gaining importance for the general mental health of the public, it is recommended that teachers be equipped with at least basic knowledge of the stress phenomenon in the course of their training. Further courses can be made available to teachers in the form of in-service training. Teachers can also be sensitised to the problem by exposing them to circulars and articles in periodicals published for teachers.

7.7.3 Proposed model

It is recommended that the model, as proposed in paragraph 4.5 be applied towards successful identification of stress in adolescents, and that a holistic and multidimensional approach be adopted to that end. Other aspects of the adolescent's becoming and development, such as his home environment, his health, the socioeconomic status of his parents and his family relationships should be subjected to continuous investigation by means of questionnaires, interviews and observation. The proposed model can be implemented during the periods reserved for educational guidance.
7.7.4 Institution of a pupil welfare programme

It is recommended that the proposed model and the appurtenant programme for the identification and handling of stress be incorporated into a general pupil welfare programme. A pupil welfare or life-skills programme should be designed to foster at least the following accomplishments:

- a healthy lifestyle
- self-knowledge
- communication
- self-assertion
- time management
- identification and handling of stress.

7.7.5 Documentation

The adolescent's problems, behaviour and fears, as well as data obtained from standardised and unstandardised tests, should be documented scientifically and systematically since the information thus recorded can be a valuable resource when adolescents are referred for therapy to a professional person in the school-related services. It could be valuable, for example, for a therapist to know from the outset if an adolescent has been threatening suicide for some time, or if he has already made several suicide attempts.

Information in files kept on adolescents must be treated with strict confidentiality and must include information about such matters as

- their state of health
- their emotional welfare and stability
- their abilities, potential and other characteristics
- their social adaptability
- the marital state and socioeconomic status of their parents
- any serious offences they have committed, or about other problems of that kind
- data pertaining to standardised and unstandardised tests.

### 7.7.6 Better rapport between parents and teachers

As a result of the introduction of Model C schools there is an increasingly urgent need for teachers and parents to communicate with each other more frequently, and better, about the welfare of pupils. Parents should have the opportunity to conduct regular interviews with those in whose educational charge their children are. Such conversations must not be allowed to remain within the realm of vague generalities; instead they must be guided with reference to a fixed framework within which specific issues are considered, namely the child’s

- emotional development
- social development
- conative and normative development.

### 7.7.7 Better contact between school-bound and school-related services

Since teachers, besides parents, are the first to detect that children are experiencing emotional and social problems, they should be equipped with knowledge concerning the functions of related occupations, such as those of

- psychiatrists
- counselling psychologists
- pastoral psychologists.

Teachers should be furnished with guidelines on how and when a pupil should be referred to one of the said related occupations.
7.7.8 Parent support groups

Organised forming of adult support groups for parents of adolescents is strongly recommended. It appears from the literature study that no phase of the family life cycle is more stressful than the adolescent years (cf. par. 3.5.2.1(xiv)). Support groups should therefore pursue such goals as

- providing information about the becoming and development of the adolescent by means of discussions, lectures and reading aloud from books
- providing information about the main problems and stressors attending adolescence
- offering support to groups of parents whose adolescent children suffer from the same problem, for example stress, depression, eating disorders, substance abuse, et cetera.

7.7.9 Adolescent discussion groups (discussion groups for teenagers)

Discussion groups for teenagers are a new phenomenon or trend that is cropping up everywhere in South Africa, particularly in a church context. In these discussions any conceivable topic is broached and dealt with in a group context by teenagers under the guidance of a specialist. It is recommended that steps be taken to ensure that discussion group leaders are thoroughly familiar with the stress phenomenon so that the subject can be discussed informally and in depth.

7.7.10 Identifying stress

Since the main concern of this research is the identification of stress in adolescents, some recommendations towards achieving this end are enunciated:

- It is preferable that excessive stress be identified before the adolescent’s physical, cognitive, affective and social becoming has been irreversibly impaired.
- A multidimensional approach is required for this purpose.
- The unique nature of the individual adolescent and of his attribution of meaning to, experience of and involvement with stress must be investigated.
- Identification of stress must lead to assistance.
7.8 IMPLICATIONS OF THIS INVESTIGATION

7.8.1 Implications for the adolescent

The lack of research on stress in children and adolescents has given rise to the impression that children are less prone to stress than adults. Consequently, rather than being studied in accordance with scientific principles, the subject has mainly been explored haphazardly in laymen's publications. The present investigation lends prominence to the phenomenon of stress in adolescents, and a realisation of the deleterious effects of stress in all domains of the adolescent's development is inculcated. Sensitivity among parents, teachers and adolescents alike to the dangers of stress can indemnify many adolescents against the depredations of frustration, underachievement, dangerous diseases and practices occasioned by stress. And perhaps it can also indemnify many adolescents against unrealistically high expectations and pressure imposed on them by their parents.

7.8.2 Implications for the parent

The parent as the primary educator must realise his obligation to serve as a model exemplifying good habits for the benefit of his child. Parents will have to become increasingly sensitive to the mental welfare and emotional stability of their adolescent children. Henceforward they will have to ensure that from an early age their children acquire habits that conduce to a healthy lifestyle where diet, exercise, work, rest and recreation are concerned. Parents will also have to ensure that their discipline is appropriate to the development level of the adolescent, that the home and the family offer the adolescent a haven of security, and that the child is not unnecessarily burdened with stress owing to the unrealistic expectations, status consciousness or ambitions of his parents.

7.8.3 Implications for the teacher

The teacher will have to shoulder the responsibility of accompanying the adolescent to mentally healthy maturity. For as long as teachers are not informed about the stress phenomenon in the course of their training, therefore, they will have to familiarise themselves with stressors and the symptoms, consequences and methods of handling stress. In particular the teacher as the mentor of the adolescent will have to improve the educational guidance they offer the pupils in their classes and will have to display an active interest in the personality, abilities, interests, apprehensions and expectations of each of their pupils.
7.8.4 Implications for teacher training

This research holds important implications for the training of teachers. In view of the demands imposed on society by the technological and electronic revolution of the present age and the resultant incredible rate at which knowledge is multiplied, physical and mental health, quality of life, productivity, the ability to adapt and come to terms with circumstances, and so on, have become burning issues. If the teacher is to cope with the demands imposed on him by the learner, science and society, then he will have to be adequately equipped in the course of his training so that he will be able to impart the basic life-skills to pupils.

7.9 MATTERS REQUIRING FURTHER RESEARCH

Various aspects of the stress phenomenon still have to be subjected to thorough research. The following should be emphasised:

- identifying and handling stress in the preschool and primary school years
- rendering assistance in the school context to children who are exposed to excessive stress or who cannot deal with the stress in their lives
- the correlation between stressors, stress symptoms and stress mediators
- the mediating effect of teacher support, social support and attachment, and family support
- the effects of excessive stress on the process whereby the adolescent’s identity and self-concept are formed
- the connection between stress-handling techniques and self-actualisation
- the effects of excessive stress on academic achievement
- the influence of unrealistic expectations, pressure and a life of constant hurry on the stress experienced by the adolescent
- the influence of religious affiliations as a buffer against the effects of stressors.
7.10 SHORTCOMINGS OF THIS INVESTIGATION

The fact that stress manifests itself uniquely in every person who suffers from it precludes the formulation of statements about it that express generalisations or regularities.

The researcher's efforts to compile a questionnaire for the identification of stress in adolescents are a modest endeavour to meet the need for the means towards such identification. Whereas life-events scales are used by many researchers, the formulation of questionnaire items that allow the adolescent to express his unique attribution of meaning to and experience of a stressor constitutes a relatively new area of scientific inquiry. The ASII can therefore be regarded as only the first step in this new direction, which is why it does not solve the problems of the approach it exemplifies.

A further deficiency of the ASII is that it has been developed specifically for the white Afrikaans and English speaking adolescents of South Africa and therefore makes no provision for the identification of stress in adolescents of other cultural and racial groups.

In addition the ASII was administered exclusively to adolescents in urban and larger rural towns. The statistical data of the inventory should be expanded to include information about the stress experience of adolescents in villages and hamlets. Further idiographic investigations are therefore required so that the questionnaire can have overall diagnostic value on a nomothetic level.

7.11 CONCLUSION

It is astonishing that a society that is subject to so much stress has paid so little attention to the negative effects of stress on its future policy-makers and workforce to date. While the popular and professional media have been abuzz over the past decade about the stress experienced by executive managers, teachers, housewives, policemen, government employees and so on, it is only recently that stress in adolescents and children has begun to receive the attention it deserves.

In this research an effort was made to lend prominence to stress in school-going children. Particular emphasis was placed on the urgent need to identify stress before it assumes unhealthy proportions. The ASII was developed to meet the need for a suitable stress-identification instrument, and the researcher is hopeful that the present research will render a contribution to the benefit of its area of inquiry and will create an awareness among parents, teachers, educational planners and educationists of the negative effects of stress.
Mere awareness and identification of stress in adolescents will be meaningless activities, however, unless they lead to prevention and assistance. It is suitable, therefore, to end this work with the words of Winston Churchill:

"This is not the end, this is not even the beginning of the end. This is just the end of the beginning".
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APPENDIX A

ADOLESCENT STRESS IDENTIFICATION INVENTORY
<table>
<thead>
<tr>
<th>1. I feel worthwhile</th>
<th>0</th>
<th>Never</th>
<th>1</th>
<th>Almost never</th>
<th>2</th>
<th>Sometimes</th>
<th>3</th>
<th>Often</th>
<th>4</th>
<th>Almost always</th>
<th>5</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. I worry about the future</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>3. I think about my problems</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>4. People pick on me</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>5. The rules of the school are too strict for me</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>6. My daily programme is so busy - I become exhausted</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>7. I worry about what other people think of me</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>8. I am satisfied with my intellectual abilities</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>9. I feel in control of my life</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>10. I find it difficult to accept the changes in my body</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>11. I feel I can’t go on any more</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>12. My family is supportive</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>13. My parents are too strict</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>14. Delays and hitches make me tense</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>15. Other people like me</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
<td>Always</td>
</tr>
<tr>
<td>16. I am wasting my time at school</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
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</tr>
<tr>
<td>17. I am sincere</td>
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<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
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</tr>
<tr>
<td>18. My responsibilities are too much for me</td>
<td>0</td>
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<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
<td>5</td>
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</tr>
<tr>
<td>19. I find it difficult to be interested in the things that people of my own sex are interested in</td>
<td>0</td>
<td>Never</td>
<td>1</td>
<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
<td>Almost always</td>
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<tr>
<td>20. I feel emotionally drained</td>
<td>0</td>
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<td>1</td>
<td>Almost never</td>
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<td>Sometimes</td>
<td>3</td>
<td>Often</td>
<td>4</td>
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<tr>
<td>21. My friends support me</td>
<td>0</td>
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<td>Almost never</td>
<td>2</td>
<td>Sometimes</td>
<td>3</td>
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<td>5</td>
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</tbody>
</table>

* Items which were not included in the final form of the ASII
|   | Description                                                                 | 0 | 1   | 2   | 3   | 4   | 5  |
|---|-----------------------------------------------------------------------------|---|--|---|---|---|---|---|
| 22 | My parents' discipline frustrates me                                          |   |    |    |    |    |    |    |
| 23 | I waste a lot of time on unimportant activities                              |   |    |    |    |    |    |    |
| 24 | Changes make me feel insecure                                               |   |    |    |    |    |    |    |
| 25 | There is too much pressure on me to do well at school                       |   |    |    |    |    |    |    |
| 26 | I know what is expected of me                                               |   |    |    |    |    |    |    |
| 27 | I am worried about my health                                                |   |    |    |    |    |    |    |
| 28 | I get the blame for everything that goes wrong                              |   |    |    |    |    |    |    |
| 29 | My friends persuade me to do things that I don't want to do                 |   |    |    |    |    |    |    |
| 30 | I am equal to the standards set for me                                       |   |    |    |    |    |    |    |
| 31 | My whole life is controlled by the clock                                    |   |    |    |    |    |    |    |
| 32 | I have a pleasant personality                                               |   |    |    |    |    |    |    |
| 33 | Achievements are over-emphasised at my school                               |   |    |    |    |    |    |    |
| 34 | I often change my mind                                                      |   |    |    |    |    |    |    |
| 35 | My parents share in my life                                                 |   |    |    |    |    |    |    |
| 36 | I feel uncomfortable when I have to perform in front of a group of people   |   |    |    |    |    |    |    |
| 37 | I experience my life as meaningful                                           |   |    |    |    |    |    |    |
| 38 | I am exposed to a lot of violence                                            |   |    |    |    |    |    |    |
| 39 | I am shy and withdrawn                                                       |   |    |    |    |    |    |    |
| 40 | I feel at ease in the school situation                                      |   |    |    |    |    |    |    |
| 41 | I feel insecure about my decisions                                          |   |    |    |    |    |    |    |
| 42 | I feel helpless                                                              |   |    |    |    |    |    |    |
| 43 | I feel happy with my choice of friends                                       |   |    |    |    |    |    |    |

* Items which were not included in the final form of the ASII
<table>
<thead>
<tr>
<th>Item</th>
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</thead>
<tbody>
<tr>
<td>44. I am honest</td>
<td></td>
</tr>
<tr>
<td>45. I get too much homework</td>
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<tr>
<td>46. I neglect my body</td>
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<tr>
<td>47. Other people make fun of me</td>
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<tr>
<td>48. My friends run me down</td>
<td></td>
</tr>
<tr>
<td>49. My religion comforts me</td>
<td></td>
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<tr>
<td>50. I feel as though I am in trouble</td>
<td></td>
</tr>
<tr>
<td>51. I feel good about myself</td>
<td></td>
</tr>
<tr>
<td>52. I have to write too many tests</td>
<td></td>
</tr>
<tr>
<td>53. I eat even though I am not hungry</td>
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<tr>
<td>54. I can solve my problems on my own</td>
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<tr>
<td>55. I am unhappy</td>
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<tr>
<td>56. People make too many demands on me</td>
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<tr>
<td>57. The substance abuse of my family members upsets me</td>
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<tr>
<td>58. I am satisfied with my appearance</td>
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<tr>
<td>59. I feel guilty about my sexual practices</td>
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<tr>
<td>60. I am detrimentally affected by the pressure exerted on me by my friends</td>
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<tr>
<td>61. I am concerned about the violence in my environment</td>
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<tr>
<td>62. I concentrate well</td>
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<td>63. I am very domineering</td>
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<tr>
<td>64. I find it difficult to adapt to all the different teachers</td>
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<tr>
<td>65. I eat too much</td>
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<tr>
<th></th>
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<tr>
<td>66</td>
<td>I am afraid of making a fool of myself</td>
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<td>67</td>
<td>I speak to my parents about my problems</td>
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<tr>
<td>68</td>
<td>The media bombard me with negative images and thoughts</td>
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<tr>
<td>69</td>
<td>I feel like running away</td>
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<tr>
<td>70</td>
<td>I have learning problems</td>
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<td>71</td>
<td>I lose my appetite</td>
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<td>4</td>
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<tr>
<td>72</td>
<td>I am aggressive</td>
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<tr>
<td>73</td>
<td>I am ostracised from my circle of friends</td>
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<tr>
<td>74</td>
<td>I am concerned about the violence in the country</td>
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<tr>
<td>75</td>
<td>I tend to vent my rage in an aggressive or destructive act</td>
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<td>76</td>
<td>I feel overwhelmed by the school</td>
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<td>77</td>
<td>I am concerned about my alcohol intake</td>
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<tr>
<td>78</td>
<td>I feel as if my life is unhinged</td>
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<td>79</td>
<td>My parents' status consciousness upsets me</td>
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<td>80</td>
<td>I am confident about the future</td>
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<td>81</td>
<td>I feel tense for no identifiable reason</td>
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<td>82</td>
<td>I feel anxious before I write a test</td>
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<tr>
<td>83</td>
<td>I am concerned about my use of drugs</td>
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<td>2</td>
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<tr>
<td>84</td>
<td>My parents have time for me and my problems</td>
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<tr>
<td>85</td>
<td>My parents are interested in my school work</td>
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<td>86</td>
<td>I like school</td>
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<td>87</td>
<td>My body feels tense</td>
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</tbody>
</table>

* Items which were not included in the final form of the ASI
<table>
<thead>
<tr>
<th>Item</th>
<th>Never</th>
<th>Almost never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost always</th>
</tr>
</thead>
<tbody>
<tr>
<td>*88. My relationship with my family members is good</td>
<td></td>
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<tr>
<td>*89. I am concerned about how my parents spend their money</td>
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<td>90. My parents' expectations of me are too high</td>
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<tr>
<td>*91. I am humiliated at school</td>
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<td>*92. I am bullied</td>
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<td>93. Keeping something secret makes me tense</td>
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<tr>
<td>94. Our family is going through a time of socio-economic (financial) instability</td>
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<tr>
<td>95. I am afraid of failure</td>
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<tr>
<td>*96. I perform according to what is expected of me</td>
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</tr>
<tr>
<td>*97. I itch a lot</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>*98. My behaviour is approved by others</td>
<td></td>
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</tr>
<tr>
<td>*99. I play truant (stay away from school for no good reason)</td>
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<tr>
<td>100. I am concerned in class as to whether I will be able to answer the questions</td>
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<tr>
<td>*101. I am tired and listless</td>
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<tr>
<td>102. I am afraid to express my opinion in class</td>
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</tr>
<tr>
<td>103. I feel that people underrate my abilities</td>
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<tr>
<td>104. School work is too difficult</td>
<td></td>
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</tr>
<tr>
<td>*105. I have a lot of energy</td>
<td></td>
<td></td>
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<tr>
<td>106. I am afraid of getting involved in arguments</td>
<td></td>
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<tr>
<td>107. I am subjected to discrimination on the grounds of class/socio-economic status</td>
<td></td>
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</tr>
<tr>
<td>108. I suppress my emotions</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>109. I feel frustrated in school</td>
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</tbody>
</table>

* Items which were not included in the final form of the ASI

ADOLESCENT STRESS IDENTIFICATION INVENTORY
<table>
<thead>
<tr>
<th>Item</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>110. I am very compliant</td>
<td>0 Never</td>
</tr>
<tr>
<td>111. I have time to do what I like</td>
<td>0 Never</td>
</tr>
<tr>
<td>112. I am satisfied with my relationship with members of the opposite sex</td>
<td>0 Never</td>
</tr>
<tr>
<td>113. I want to win</td>
<td>0 Never</td>
</tr>
<tr>
<td>114. I work very hard</td>
<td>0 Never</td>
</tr>
<tr>
<td>115. I cry a lot</td>
<td>0 Never</td>
</tr>
<tr>
<td>116. I am concerned about my parents' relationships with each other</td>
<td>0 Never</td>
</tr>
<tr>
<td>117. Competition makes me tense</td>
<td>0 Never</td>
</tr>
<tr>
<td>118. I worry whether I am going to pass the examination</td>
<td>0 Never</td>
</tr>
<tr>
<td>119. People impose excessive demands on me</td>
<td>0 Never</td>
</tr>
<tr>
<td>120. My behaviour is approved by others</td>
<td>0 Never</td>
</tr>
<tr>
<td>121. I feel rejected</td>
<td>0 Never</td>
</tr>
<tr>
<td>122. The drought in the country upsets me</td>
<td>0 Never</td>
</tr>
<tr>
<td>123. I feel inadequate</td>
<td>0 Never</td>
</tr>
<tr>
<td>124. I struggle to concentrate on my work</td>
<td>0 Never</td>
</tr>
<tr>
<td>125. I grind my teeth</td>
<td>0 Never</td>
</tr>
<tr>
<td>126. My parents understand me</td>
<td>0 Never</td>
</tr>
<tr>
<td>127. I am afraid of natural disasters such as hailstorms and floods</td>
<td>0 Never</td>
</tr>
<tr>
<td>128. I am critical about myself</td>
<td>0 Never</td>
</tr>
<tr>
<td>129. I am worried about my choice of a career</td>
<td>0 Never</td>
</tr>
<tr>
<td>130. I am satisfied with my body</td>
<td>0 Never</td>
</tr>
<tr>
<td>131. I am lonely</td>
<td>0 Never</td>
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</tbody>
</table>

* Items which were not included in the final form of the ASII

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ADOLESCENT STRESS IDENTIFICATION INVENTORY
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<thead>
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<th>Item</th>
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<th>2</th>
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<tbody>
<tr>
<td>132. I feel threatened by changes in the country</td>
<td></td>
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<tr>
<td>133. I think about death</td>
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<tr>
<td>134. I have too much to do and too little time to do it</td>
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<tr>
<td>135. Teachers like me</td>
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<tr>
<td>136. I am satisfied with my academic performance</td>
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<tr>
<td>137. I feel that I am part of a circle of friends</td>
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<tr>
<td>138. A noisy environment makes me tense</td>
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<tr>
<td>139. I think about suicide</td>
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<tr>
<td>140. I am accepted by members of the opposite sex</td>
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<tr>
<td>141. I am worried about the political situation in the country</td>
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<tr>
<td>142. I am very impatient</td>
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<tr>
<td>143. I am worried about my relationship with members of my own sex</td>
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<td>144. I participate in political activities</td>
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<tr>
<td>145. I am worried about the future of the earth</td>
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<td>146. I am sexually abused</td>
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<td>147. I am afraid of contracting AIDS</td>
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<td>148. I am worried about what will happen to me after I die</td>
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<tr>
<td>149. I want to satisfy everybody</td>
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<td>150. I have enough money</td>
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</tbody>
</table>

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