

The role of personal protective factors in anchoring psychological resilience in adolescents with learning difficulties

L.C. Theron

School of Educational Sciences, North West University, Vaal Triangle Campus, P O Box 1174, Vanderbijlpark, 1900 South Africa
opwlct@puknet.puk.ac.za

In this article I report on a study that focused on the concept of resilience, in order to determine the nature of personal attributes in adolescents with learning difficulties, who were able to rebound from life's onslaughts, and to continue determinedly along the path of self actualisation. The personal attributes impacting on the ability to surmount life's challenges were delineated by an empirical study focusing on 20 adolescents with learning difficulties, half of which had demonstrated resilience, whilst the other half appeared to have reneged on self actualisation. The aim was to provide an in depth understanding of the phenomenon of resilience, so that vulnerable adolescents might ultimately be therapeutically assisted to choose a more resilient attitude and behaviour. The results of the study delineated nine key personal attributes which anchored resilience and promoted self actualisation, despite obstacle ridden circumstances.

Introduction

Resilience is a cryptic concept which, if possible to simplify it literally, would refer to elasticity. Emotional or psychological resilience is, quintessentially, the same. It could be defined as the ability to triumphantly negotiate life's adversities and continue along the path of self actualisation. This article reports on a study conducted to establish whether adolescents with learning difficulties could show resilience, despite the restraints engendered by their learning difficulty, and if so, which innate factors were responsible for anchoring resilience.

The necessity for this study arose from daily interaction with adolescents who have learning difficulties, and the observation that despite similar setbacks, some coped whilst others floundered. An inherent propensity to rebound from life's setbacks and continue, positively, along paths of self actualisation regardless of adversity seemed a feasible hypothesis for the noted discrepancy in coping skills. There is a need to understand precisely which inherent qualities allow certain adolescents with learning difficulties to fare better in the face of adversity, in order that vulnerable adolescents with learning difficulties may ultimately be taught coping skills.

Understanding resilience

Resilience is defined by Vaillant (1993:284) as "... the capacity to be bent without breaking, and the capacity, once bent, to spring back." It is that quality which allows individuals to cope, despite hardships or setbacks. It results in a durability rather than an invincibility. In other words, resilient individuals experience pain and are aware that hardships cause personal suffering, but this does not prevent them from trying or from continuing along life's path. It can ultimately be summarised as "... a characteristic of individuals which makes them less likely to develop problems when they have experienced difficult circumstances ..." (Emspon & Nabuzoka, 2004:42).

In psychological terms, this capacity is anchored by a triad of protective factors. The triad is divided into personal protective factors (innate factors including such factors as temperament, goal orientation, flexibility), familial protective factors (derived from the family and including nurturing parents, consistency, positive support network and advantageous socio economic aspects) and extra familial protective factors (derived from the environment and including involvement in prosocial organisations, a good school, supportive educators and attachment to prosocial adults) (Ross & Deverell, 2004:18). Protective factors are thought to ameliorate stressful experiences by providing a fortifying buffer which strengthens patterns of adaptation.

If resilience is to be seen as the ability to "spring back" under adverse psychological conditions, then risk factors are what the resilient individual needs to "spring back" from. Risk factors are any factors which augment the chances of developmental difficulties or disturbance. Therefore they have the potential to sabotage resilience, and result in vulnerability. The genesis of risk factors is either personal, familial or environmental and includes genetic conditions, deve-

lopmental risk, familial circumstances, socio economic conditions and cultural experiences (Emspon & Nabuzoka, 2004:40). Risk factors are also thought to be cumulative and interactive (Carson, Swanson, Cooney, Gillum & Cunningham, 1992:275).

There is a lack of consensus in current literature concerning the role of protective factors in anchoring resilience (Carbonell, Reihartz & Giaconia, 1998:252). Some schools of thought hold that resilience is merely an absence of risk factors and a surplus of protective factors (Werner & Smith, 1982; Loesel & Bliesener, 1994) whilst others are of the opinion that resilience is greater than the mere addition and subtraction of protective and risk factors (Rutter, 1985; Vaillant, 1993).

The following models are proposed to explain the role of protective factors:

- The **balance model**, as proposed by Werner and Smith (1982) and Loesel and Bliesener (1994), suggests that as long as the balance between protective and risk factors is manageable, the individual will cope. In other words, there is a process of interaction between protective and risk factors (O'Leary, 1998:427).
- The **compensatory model** views protective factors as neutralising risk factors, by either initially lowering the risk or ameliorating risk throughout the individual's development (O'Leary, 1998:427). In other words, there is no interdependence between risk and protective factors in this model.
- The **CAPS model** (cognitive affective personality system) as proposed by Freitas and Downey (1998:263 185) integrates the context in which the individual finds him/herself, the psychological mediating units (which appear to be synonymous with protective factors) and the interrelationship between the psychological mediating units, and between these units and the given context.

Personal protective factors highlighted

Because this research focused on personal protective factors, it is necessary to elucidate personal protective factors in greater depth.

Personal protective factors are factors intrinsic to the resilient individual, either by virtue of biological predisposition or by virtue of dispositional attributes. Personal protective factors do not originate from either the individual's family or from the extra familial milieu. They are what the individual personally introduces to the situation as opposed to that which is integral to the situation (Gore & Eckenrode in Haggerty, Sherrod, Gamezy & Rutter, 1994:34 38).

Personal protective factors include the following attributes (MacFarlane, 1998:24 33):

- Birth order which refers to the propensity of firstborns to be resilient.
- Age appropriate skills, including mastery of sensory motor and perceptual skills, which foster empowerment.
- Cognitive competence, which suggests that resilient individuals appear to be intelligent.

- A desire to improve, which means that second chances will be relished and tenacity evidenced.
- Advanced self help skills including the ability to function autonomously and to ask for help when needed.
- Being free from distressing habits which, in turn, facilitates positive social interaction.
- A sense of curiosity which promotes enthusiasm and problem solving and a consequent repertoire of problem solving skills.
- A good natured disposition which suggests an ability to relate positively to others along with reduced emotional reactivity.
- A high activity level which encourages active participation across a spectrum of activities which leads to greater variety of experience.
- Representational competence which refers to an ability to make meaning out of adversity.
- An internal locus of control which discourages a sense of helplessness and encourages a survivor mentality.
- A positive self concept which prompts a sense of personal power.
- Special interests or hobbies, which allow the individual to experience competence and a sense of accomplishment.
- An ability to focus and to control impulses which fosters positive social interaction and attests to self discipline.
- Effective communication skills which lessen emotional frustration and improve social interaction.
- Autonomy, or the ability to assert the right to safe boundaries, which fosters a sense of empowerment.
- Positive social orientation, which fuels the ability to develop intimate relationships that provide emotional support.

Understanding the impact of a specific learning difficulty on resilience

A specific learning difficulty may be defined as that phenomenon which hampers a child's learning and growth towards adulthood from progressing as desired. It includes difficulty in using spoken or written language and may manifest as difficulty with listening, speaking, reading, writing, spelling or mathematical calculations (Bauer, Keefe & Shea, 2001:44; Donald, Lazarus & Lolwana, 2002:282). Physical, visual, auditory and other handicaps are absent, and cannot therefore explain the specific learning difficulty (Donald *et al.*, 2002:282). By definition, learners who manifest with a specific learning difficulty, fail to achieve according to their potential in school (Bauer *et al.*, 2001:9). In other words the learner with learning difficulties would present with a discrepancy between ability and achievement (Empson & Nabuzoka, 2004:155).

A learning difficulty in itself is often enough to hamper resilient behaviour. Having a learning difficulty is thought to be a risk factor, in that it equals a stressful life situation with many problems which frequently persist into adulthood and limit the potential for adult success on intellectual, social and emotional fronts (Cordoni, 1990:4, Bauer *et al.*, 2001:4). In reality, a learning difficulty does not only impact on academic achievement, but may also sabotage social interaction, emotional functioning and self image. The interaction of this stressful life situation with other common life stresses often leads to non resilient outcomes (Keogh & Weisner, 1993:4; Spekman, Goldberg & Herman, 1993:11; Empson & Nabuzoka, 2004). Nevertheless, within the population of individuals with learning difficulties, researchers have found successful, well adjusted individuals (Miller, 1996: 265-267).

Aims of the research project

The research project aimed primarily at determining the nature of personal attributes contributing towards resilience in adolescents with learning difficulties. The secondary aim was to provide an in depth understanding of the personal attributes contributing towards resilience in adolescents with learning difficulties in the hope that such an understanding may ultimately be used at a later date to design effective therapeutic intervention in order to bolster or inculcate resilience.

Research design

A qualitative research design was followed: an empirical investigation was used to compile a group profile of resilient adolescents with learning difficulties. The findings were aimed at augmenting an understanding of the phenomenon of resilience among adolescents with learning difficulties, rather than a generalisation to any particular group.

The research group

The research group was drawn from a population of secondary school learners attending a government school for learners with special educational needs. All learners attending the school from which the research group was drawn were learners with specific learning difficulties: these learners had all been formally diagnosed as having specific learning difficulties. Furthermore, the group was culturally similar, in that all the members of the research group were English mother tongue speakers. The research group consisted of 20 learners ranging from Grades 8 to 12. The group was predominantly male (15 boys as compared to 5 girls) as the population of the school is skewed in favour of the male gender.

Selection of the research group was purposive: on the basis of a preliminary literature study of personal protective factors anchoring resilience, a questionnaire aimed at identifying adolescents who present as vulnerable and resilient was designed. The questionnaires consisted of three open ended questions concerning learner resilience/vulnerability levels and 22 closed items relating directly to personal attributes associated with resilience/vulnerability, as taken from the literature. The questionnaire was distributed to the school's guidance teachers and psychology department for completion (six adults in total) the psychologists and guidance teachers were approached because of their close relationship to, and consequent in depth knowledge of, the school's learners. They were asked to identify any 10 vulnerable and any 10 resilient learners according to the attributes delineated in the questionnaires. Educator rating (guided by a delineation of resilience and vulnerability as documented in literature) formed the identification procedure as there was no other instrument to rate resilience among adolescents at the time this research was undertaken.

The researcher used the first 10 questionnaires returned in each category to compile the research groups. Background history and behaviour reports were gathered in order that proposed group members could first be discussed inter subjectively regarding their identified resilience/vulnerability. This was done in discussion with the school's psychology department and with an independent, practising psychologist: each adolescent's profile was compared to the profile of resilient/vulnerable adolescents as gleaned from literature in order to verify the adolescent's inclusion in the research project. Once verified, the nature of the study was explained to these learners and they were given the option to participate or withdraw before data collection took place.

The two groups identified shared a central risk factor: all group members had learning difficulties. There were also additional comparable risk factors impacting on the research group. The additional risk factors impacting on the resilient group were as given in Table 1.

Table 1 Resilient group's additional risk factors

Additional risk factor	Number affected
Death/unexplained long term absence of a parent	2
Severe marital discord/divorce	5
Adoption/Foster home	1
Financial difficulties	2
Rejection by a parent	3
Chronically ill/depressed parent(s)	1

The additional risk factors impacting on the vulnerable group were as given in Table 2.

The above data suggest that the research group characterised as resilient and the research group characterised as vulnerable, share

similar additional risk factors. It must, however, be noted that the vulnerable group's risk factors appear to be greater.

Table 2 Resilient group's additional risk factors

Additional risk factor	Number affected
Death/unexplained long term absence of a parent	2
Severe marital discord/divorce	7
Adoption/Foster home	2
Financial difficulties	1
Rejection by a parent	4
Chronically ill/depressed parent(s)	1

Data collection

The data collection instruments were varied and included:

- Structured questionnaires, namely, the Adolescent Self Concept Scale (Vrey & Venter, 1983), the Emotional Profile Index (Roets, 1997) and the High School Personality Questionnaire (Madge & Du Toit, 1989).
- An incomplete sentences questionnaire designed specifically for use in this study and targeting personal attributes as possible factors in resilience.
- Projection techniques, namely the Draw a Person in the Rain (Brink, 1997) and Kritzberg's Three Animal Technique (Brink, 1997), as well as the Three Wishes Technique (Brink, 1997), and The Forest Adventure metaphor. The Forest Adventure metaphor was specifically designed for the purposes of this study and entailed the telling of a story which was then embellished at various stages by the participants in the study. The embellishments could then be symbolically interpreted in terms of levels of resilience. This metaphor was chosen and adapted by the researcher from a popular quiz, because it was enjoyed by the adolescents at the school from which the research group was drawn.

The Adolescent Self Concept Scale was used to evaluate the individual's self concept. The High School Personality Questionnaire was used to determine the level of ego strength (factor C specifically) and the traits contributing to, or detracting from, resilience. The Emotions Profile Index was used to determine the basic emotional dimensions operating in the resilient individual as opposed to the vulnerable individual.

The Incomplete Sentences Questionnaire was used to evaluate the degree to which traditional personal protective factors, not measured by the above tests, operated in adolescents' ability to demonstrate resilience.

The data were collected during two three hour sessions which occurred during normal school hours. A psychologist from the school's psychology department was present throughout both sessions to ascertain that the data were gathered in an unbiased manner. Because participation was voluntary, the participants were generally cooperative.

Data analysis

The data obtained from the projective techniques were assessed interpretatively in terms of factors pointing towards resilience. For example, the level of protection indicated against the rain provided some clue towards the individual's need for protection against life's obstacles and hence the individual's level of resilience. The animals chosen were assessed as metaphorical clues in terms of the levels of resilience, and the same applied to the wishes made. The metaphor of an adventure in a forest served to symbolically represent levels of resilience.

The structured questionnaires were marked according to test specifications, and a norm related quantitative profile for each participant was obtained. The profiles of the resilient adolescents were then grouped to obtain a mean profile. The same was done with the profiles of the vulnerable adolescents. The mean profiles of the groups were compared in order to comment qualitatively on the attributes anchoring resilience.

The individual scores were not computed to obtain individual profiles. They were used to generate a group profile, so that a deeper understanding of resilience compared to vulnerability may be obtained. The group profile did not qualify for purposes of generalisation, as the sample group was not big enough. It primarily served the purpose of providing a preliminary, descriptive understanding of the phenomenon of resilience as manifested by the adolescents with learning difficulties in this sample.

Findings of the study

The data that were obtained by means of the structured and projective responses generated by the resilience group were considered qualitatively and inter subjectively. By means of qualitative analysis, followed by inter subjective discussion with the psychologists at the school where the study took place, and with the mentor of this research, the phenomenon of resilience, as it presented in the profiles of the resilient adolescents with learning difficulties, could be divided into the following distinguishing attributes:

- **Moderately positive self-concept**, suggesting a good relationship to the self, and positive self talk.
- **Positive attitude**, suggesting the ability to remain cheerful and optimistic.
- **Positive future orientation**, suggesting tenacity, orientation to achieve, and optimism.
- **Assertiveness**, suggesting autonomous functioning, independent mindedness and the ability to fight for deserved personal rights in a socially appropriate manner.
- **Enthusiasm**, suggesting a tendency towards excitability and spontaneity.
- **Drive**, suggesting a curiosity about life, as well as tenacity and creative problem solving ability. Drive is also associated with tension to achieve goals.
- **Good interpersonal relationships**, suggesting positive social orientation and the ability to derive optimal benefit from social interaction. Empathy and a desire for love are associated with this attribute.
- **Internal locus of control**, suggesting a sense of authorship or choice over one's destiny, even if such choice only pertains to attitude.
- **Anxiety**, suggesting sensitivity and a sense of obligation, which translates into increased drive and a sense of responsibility.

The vulnerable group manifested different attributes:

- **Negative self-concept**, suggesting a poor relationship to the self, and negative self talk.
- **Negative attitude**, suggesting a tendency towards pervasive sadness, insecurity and debilitating self pity.
- **Negative future orientation**, suggesting an inclination to quit, poor orientation to achieve, and pessimism.
- **Extreme assertiveness**, suggesting low frustration tolerance and hostility.
- **Extreme enthusiasm**, suggesting a tendency towards impulsivity and demanding behaviour.
- **Evasiveness**, suggesting an irresponsible behaviour and avoidance tactics.
- **Poor interpersonal relationships**, suggesting negative social orientation, a distinct distrust of others and emotional cautiousness.
- **External locus of control**, suggesting a sense of helplessness, a lack of autonomy and a victim mentality.
- **Sense of inadequacy**, suggesting personal dissatisfaction and a lack of willingness to try or persevere.

A graphic summary of the discrepancy between the resilient and the vulnerable groups in personal attributes which anchor resilience is shown in Figure 1.

Discussion of the findings

The resilient group evidence personal traits which empower them. In the face of hardships, they are socially oriented and so they can ask for

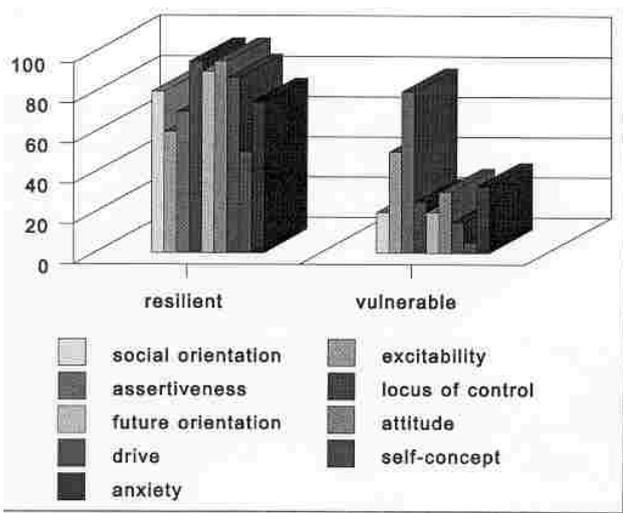


Figure 1 Comparative summary of core personal protective factors

help or garner support. Their positive attitude makes social interaction with them easier. They are able to assert themselves and remain positive about the future. Whilst they are sensitive to others' opinion, this galvanises them and fosters a greater drive. They believe that despite current hardships, they remain in control of their ultimate fate. The nature of the resilient group's personal attributes is therefore interactive and reciprocal: the protective factors seem to reinforce one another. The interaction of these personal attributes mediates against risk factors encountered, thereby facilitating an avoidance of extreme behaviours or traits which would necessarily sap the potential for resilience (as seen in the vulnerable group).

The personal attributes of the vulnerable adolescents provide no moderating effects. The result is a continuous cycle of spiralling negativity, because there are no empowering attributes to temper stressors encountered, or to moderate other negative attributes. In the face of hardships, the vulnerable group displays a demanding and negative attitude. They are unable to assert themselves and are hostile instead. It is hard for them to view the future in a positive light. They perceive themselves as inadequate and quit rather than persevere.

The results of this study overlap current literature findings: resilient adolescents with learning difficulties who participated in this study generally exhibited the same personal protective factors as adolescents generally reported on in literature. This suggests that despite the inherent risk imposed by a learning difficulty, it is possible to anticipate that some adolescents with learning difficulties can demonstrate resilience. This finding is in line with the assertions of Miller (1996:265-267) concerning the belief that adolescents with learning difficulties can halt the chain reaction of risk typically associated with their difficulty.

The overlap between the resilient adolescents with learning difficulties in this study and those reported on in literature are given in Table 3.

Resilient adolescents with learning difficulties in the sample utilised for this research showed only a low average self concept. This may be due to the generally negative nature of the learning disabled adolescent's academic and social experiences (Cordoni, 1990:4, Bauer *et al.*, 2001:4). The assertion could be made that despite the latent negative effects of a poorer self concept, the compensatory effects of the greater balance of protective factors underscore resilient behaviour.

This study introduced two new protective factors not previously documented by literature. In the sample of resilient adolescents with learning difficulties, anxiety and a future orientation were evidenced as protective factors:

- Anxiety is generally considered to be negative, but it can function as a protective factor. Firstly, the adolescents in this sample faced

Table 3 Overlap between personal attributes in this study and those in the literature

Personal attribute according to literature	Overlapping personal attribute documented in this study
Good natured disposition	Positive social orientation
Autonomy and advanced self help skills	Assertiveness
A sense of curiosity and high activity levels	Enthusiasm/excitability
Positive attitude	Positive attitude (cheerful/appreciative)
A desire to improve	Strive/tenacity
Positive self concept	Moderately positive self concept
Internal locus of control	Internal locus of control

multiple risk factors for them anxiety is not inappropriate: Conflict, anxiety, frustration, sadness, hurt and guilt can all be found in healthy human beings ... To be untroubled when one should be troubled can be a sign of sickness. (Maslow, 1962:210)

Secondly, their anxiety should be understood in terms of a sense of obligation with an ensuing sense of responsibility which motivates growth and fuels resilience.

- Future orientation suggests an optimistic view of what is still to come and implies the ability to believe that current hardships are temporary.

When surveying the personal factors inherent to the resilient and vulnerable research groups, it can be suggested that the characteristics delineated function on a continuum: a continuum suggests that for each of the above personal attributes there are two poles. Typically the vulnerable group's scores clustered around the pole suggesting low incidence of the attribute. Table 4 summarises the continuum.

Table 4 Summary of the continuum

Personal attribute	High	Low
Social orientation	Positive orientation	Poor or negative orientation
Excitability	Enthusiastic	Demanding
Assertiveness	Assertive	Hostile
Future orientation	Positive orientation	Negative orientation
Attitude	Positive/cheerful/appreciative	Negative/sad
Drive	Driven/tenacious	Evasive/quitting
Self concept	Medium	Very poor
Anxiety	Anxious/sensitive to others' opinions	Self perception of inadequacy/dissatisfied
Locus of control	Internal/optimistic	External/pessimistic

It is tempting to speculate on the reason for the differences between the two groups, although this is beyond the aims of the research being reported on. The vulnerable group is exposed to moderately more risk factors: more members in the vulnerable group had to deal with marital discord, parental rejection and adoption/fostering. Literature endorses the notion that resilience is sabotaged by multiple risk factors (Rutter, 1983:308; Masten, Best & Garmezzy, 1990:426; Carson *et al.*, 1992:275). The cumulation of risk factors may have been impacting negatively on levels of resilience and the personal factors involved in resilience at the time that this research was undertaken.

Furthermore, it can be argued that individual characteristics are influenced or at least determined in part by factors outside the adolescent (Engle, Castle & Menon, 1996). Such factors would include familial and extra familial factors. It must therefore be suggested that the differing profiles of the two research groups need to be viewed in part as a product of their surroundings.

Recommendations

What is encouraging is that some adolescents with learning difficulties (as evidenced by the resilient research group in this study) are capable of evidencing resilience. Further research into resilience skills of youth with learning difficulties should be undertaken. Although the research sample being reported on defies generalisation, it does suggest that the traditional view of the adolescent with learning difficulties as typically vulnerable can, and should, be challenged and adapted.

Research on protective factors should be incorporated into intervention programmes in order that adolescents with learning difficulties may be empowered. The protective factors revealed by this research, as well as in general literature, should be used to design an appropriate intervention program for adolescents with learning difficulties in order to augment resilience skills.

The current move in health sciences is toward preventative action (Cowen, Wyman, Work & Iker, 1995:248). If vulnerability is to be prevented, resilience must be comprehensively understood. Further research into resilience skills of youth with learning difficulties should also take familial and extra familial factors into account, specifically so that planning for intervention at family and community level can also be undertaken.

Conclusion

This study provided hope. It indicated that there are adolescents with learning difficulties who can display personal protective factors compatible with those documented in current literature. More importantly, the study illustrated that some adolescents encumbered by an innate risk factor (in this instance, a learning difficulty), compounded by additional risks, can rise above their circumstances and continue along their path of self actualisation. Their example is inspiring: their journey is not without pain or anxiety, but it continues nevertheless, lending credence to McGinnis' (1990:93) understanding of resilience:

Our lives are a continuing journey and we must learn and grow at every bend as we make our way, sometimes stumbling, but always moving toward the finest within us.

References

- Bauer AM, Keefe CH & Shea TM 2001. *Students with learning disabilities or emotional / behavioural disorders*. New Jersey: Merrill Prentice Hall.
- Brink M 1997. Projective Techniques. Unpublished workshop notes.
- Carbonell DM, Reinharz HZ & Giaconia RM 1998. Risk and Resilience in Late Adolescence. *Child and Adolescent Social Work Journal*, 15:251-271.
- Carson DK, Swanson DM, Cooney MH, Gillum BJ & Cunningham D 1992. Stress and coping as predictors of young children's development and psychosocial adjustment. *Child Study Journal*, 22:273-298.
- Cordoni B 1990. *Living with a learning difficulty*. Revised edn. Carbondale: Southern Illinois University Press.
- Cowen EL, Wyman PA, Work WC & Iker MR 1995. A preventative intervention for enhancing resilience among highly stressed urban children. *The Journal of primary prevention*, 15:247-259.
- Donald D, Lazarus S & Lolwana P 2002. *Educational Psychology in Social Context*. Cape Town: Oxford University Press.
- Engle PL, Castle S & Menon P 1996. Child development: vulnerability and resilience. *Social Science & Medicine*, 43:621-635. In: *Science Direct: Full display*. [Online] Available url: <http://www.sciencedirect.com>
- Empson JM & Nazuboka D 2004. *Atypical child development in context*. New York: Palgrave MacMillan
- Freitas AL & Downey G 1998. Resilience: a dynamic perspective. *International Journal of Behavioural Development*, 22:263-285.
- Haggerty RJ, Sherrod LR, Garmezy N & Rutter M 1994. *Stress, risk, and resilience in children and adolescents. Processes, mechanisms, and interventions*. New York: Cambridge University Press.
- Keogh BK & Weisner T 1993. An ecocultural perspective on risk and protective factors in children's development: Implications for learning disabilities. *Learning Disabilities Research and Practice*, 8:3-10.
- Loesel F & Bliesener T 1994. Some high risk adolescents do not develop conduct problems: A study of protective factors. *International Journal of Behavioral Development*, 17:753-777.
- Madge EM & Du Toit L 1989. *Manual for the JR-SR High School Personality Questionnaire*. Pretoria: Human Sciences Research Council.
- MacFarlane LC 1998. An Educational Psychological Perspective of the Personal Attributes which serve to Anchor Resilience. Unpublished Masters Thesis.
- Masten AS, Best KM & Garmezy N 1990. Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*, 2:425-444.
- McGinnis AL 1990. *The power of optimism*. New York: Harper Paperbacks.
- Miller M 1996. Relevance of Resilience to Individuals with Learning Disabilities. *International Journal of Difficulty, Development and Education*, 43:255-269.
- Morrison GM & Cosden MA 1997. Risk, resilience and adjustment of individuals with learning disabilities. *Learning-Difficulty Quarterly*, 20:43-60.
- O'Leary VE 1998. Strength in the face of adversity: individual and social thriving. *Journal of Social Issues*, 54:425-446.
- Ross E & Deverell A 2004. *Psychosocial approaches to health, illness and disability*. Pretoria: Van Schaik Publishers.
- Roets HE 1997. EPI. Unpublished lecture notes.
- Rutter M 1985. Resilience in the face of adversity. *British journal of psychiatry*, 147:598-611.
- Spekman NJ, Goldberg RJ & Herman KL 1993. An exploration of risk and resilience in the lives of individuals with learning disabilities. *Learning Disabilities Research and Practice*, 8:11-18.
- Vaillant GE 1993. *The Wisdom of the Ego*. Cambridge: Harvard University Press.
- Vrey JD & Venter ME 1983. *Manual to the Adolescent Self-Concept Scale*. Pretoria: University of south Africa.
- Werner EE & Smith RS 1982. *Vulnerable but Invincible. A longitudinal study of resilient children and youth*. New York: McGraw Hill.

