Resilience– a literature review

There is an immense wealth of information regarding resilience – both in terms of its theoretical definitions, proposed mechanisms and variables, and the *in praxis* influences it has had across a multitude of disciplines and spheres. This literature review provides a simplified snapshot of the resilience discourse. It is not meant to provide an in-depth exploration of the complex nature of resilience and its application within social and community development. Rather, this paper provides something of a narrative for those who wish to understand the core motivations informing the mechanisms of resilience, and explore how resilience may apply to the planning, implementation and monitoring/evaluation of community engagement programs.

To fully grasp the fundamental principles of resilience theory, and its possible application across service planning and delivery, it is useful to examine the origins of the concept, and to track its evolution over time and across disciplines. We will begin with an examination of child development and an overview of attachment theory, and follow the progress of this cornerstone of social development theory towards the inception of resilience. Using established ecological models we can then place resilience firmly within the community as central to a complex systems-based model. We will then explore some contemporary community programs that have incorporated resilience theory in strategic development and on-the-ground delivery, and note the impact resilience is having at a wider level on policy.
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a) Early Beginnings
– attachment theory, security and the role of family

Early discussions surrounding child development and the effect of external environments on personality were a result of the extensive and seminal work of British psychologist John Bowlby. His observations and theoretical work examining delinquent children and the effects of hospitalisation and institutionalized care in post-war Britain led to the principles of ‘attachment theory’.

The importance of his work on social development theory as a whole and the later conceptualization of resilience, necessitates a fairly in-depth analysis of the principles of attachment theory.

The core principle of Attachment Theory, as described by Bowlby (1977), is the “universal need to form close affectionate bonds between human beings.”

Bowlby argues that the quality of parental care, and specifically maternal relationship (in terms of the level of warmth, intimacy and continuous duration) in early life is directly related to the characteristics of mental health in later life. Any ‘deprivation’ of this maternal care (principally defined as separation of the child from the mother), results in feelings of anxiety, excessive need for love, revenge and anger, guilt and depression and so forth (Bowlby, 1951).

This necessity for a long-term supportive relationship with the mother (or another adult), is the basic principle behind ‘attachment theory’ and has a direct correlation with later dialogue surrounding the basic mechanisms of resilience (M Rutter, 1985).

Corroborating the premises of attachment theory, a number of retrospective supporting studies have found that children who committed numerous criminal and delinquent behaviors, frequently had disturbed relationships with their mothers. Concentrating on foster/adopted children and those in institutionalized care, such case studies found that upbringing had a profound effect on development of personality, and life outcomes. (Bowlby, 1951)

A study by Goldfarb, which followed a sample of 15 children who either spent part of their early life in institutions and were later fostered, or were given up by their parents to foster homes directly (no institutionalization). These institutions, although ‘hygienic’, were notable for their significant lack of interaction between children and adults. Significant differences between the two cohorts were found – in intelligence, ability to conceptualise, reading, writing, arithmetic, social maturity, ability to keep to rules and feel guilt when breaking rules, capacity for relationships, etc. In all categories, the ‘socially isolated’ institutionalised group performed significantly below their counterparts.

Attachment theory therefore examines the nature of stress (for Bowlby this is specifically the degree of separation of child from mother that is the catalyst for this stress), and the observable effects this has on the child – from bedwetting, regression, anger, inability to reform positive relationships etc to delinquent behavior later in life).

Of note, in addition to identifying the nature of outcomes from this adverse causal factor, Bowlby focused on those additional factors that influence the extent to which these effects are realized – for example the age of the child and the length of deprivation (the younger the child, and longer the duration, generally the greater the effect). The ability of the child to ‘cope’ with this adverse
situation therefore varies from child to child – reliant on contributing factors such as the better the overall relationship with the mother (Ainsworth & Bowlby, 1991).

Again this foreshadows later theoretical constructs that are the basis for resilience. Although attachment theory focused principally on the negative effects of stressors on personality, reference is made to the positive role of other factors (including the family, and developmental stage or ‘timing’) in the realization and prevention of deprivation (Bowlby 1951).

Bowlby (1951) states of attachment theory - “There are, however, important features of the situation about which little is known. For instance it is by no means clear why some children succumb and some do not.” He argues that the case solely for hereditary/biological factors is flawed and does not provide a comprehensive answer for this variance, and states, “… it is important to review what is known of the effects of such factors as the child’s age, and the length, and especially, the degree of his deprivation, each of which there is reason to think is vital.”

Stress is treated as a ‘transactional concept’ describing adaptive behaviors between persons and their environments, involving appraisals of demands and opportunities. Interventions are aimed at reducing levels of stress, and they seek the best adaptation for a particular individual in a particular environment. Thus, adaptive challenges are viewed contextually, similar to the notion of the ecological niche (Walsh 1996).

Such questions open the principle theory of attachment to the wider influences of environment, in what is later encapsulated within resilience theory.

Although emphasising the impact of family upbringing on later development – for example the individual’s own capacity for parenthood (“neglected children grow up to be neglectful parents”) – Bowlby refers to the many other factors that lead to a child being neglected. He categorizes these as medical, social and economic in nature. Regarding the social aspects, he specifically questions the various patterns of “family life and association” which govern the family unit’s position within the wider social fabric “to become parts of larger social groupings from which they get, and to which they give, support.” The nature and relative influence of these ‘forces’, attachment theory argued, require greater understanding in order to gain a full picture of those elements of personal development and social dynamics, that combine to influence the child’s upbringing.

(Ainsworth & Bowlby, 1991) observes that to a degree the overwhelming focus on the child-mother dyad in early attachment theory was principally due to the availability (or lack) of recorded empirical data and information. It is also noted that although Bowlby’s fixation on the family relationship as vital to positive outcomes later in life was correct – if somewhat overzealous – it overestimated the irreversibility of its effects (M Rutter, 1985).

The influence and evolution of attachment theory was greatly impacted upon by the work of Mary Ainsworth – who was heavily involved in later practical applications of the theory. Ainsworth was able to bring a degree of structure to earlier theoretical discussions surrounding attachment theory – placing it securely in a workable framework that allowed the examination of separate elements and interactions. Of note, theoretical developments elaborated upon the relationships within the
nuclear family, and widened the frame of reference to include concurrent ethological theories of behavior and the principles of a ‘secure base’ (Ainsworth & Bowlby, 1991; M Rutter, 1985).

The Secure Base – a definition of ‘space’

Ainsworth’s emphasis on the role of ‘secure base’ was strongly influenced by Blatz (1966) and his theory of security as an approach to understanding personality development. ‘Security’ is defined as the Latin *sine cura* = without care or without anxiety. According to Blatz there are three kinds of security:

‘Immature dependent security’ – infants and to some extent young children rely on parent figures for security, from which they slowly distance themselves due to curiosity of the world around them. As the child develops the knowledge and skills to cope with the world and environment, they acquire an increasing basis for ‘independent security’. Once fully mature, the individual should have fully emancipated themselves from the parents. And finally, to be fully secure, an individual needs to supplement their independent security with ‘mature dependent security’. This is a mutually beneficial relationship with a peer/partner, in which each individual can provide a secure base to another, on the basis of their knowledge and skills.

Ainsworth assessed the degree to which a person was ‘secure’ by using a sliding scale for evaluating parental relationships, and another assessing relations with friends (Salter 1940).

Note: See Page 13 for a more detailed explanation of the Secure Base Model and its relevance to resilience rhetoric. The demarcation of these ‘spheres’ or sources of security are analogous to later ecological frameworks that attempt to define resilient variables acting upon the individual within multiple environments/spaces, including Bronfenbrenner’s Ecological Systems Model.

Working together, both Ainsworth and Bowlby were concerned specifically with the multiplicity of variables that influence the effects of separation, and the need for their consideration in planning strategies with in the field. The work of Konrad Lorenz on animal ‘imprinting’ (that is the young animal ‘imprints’ relationships and behavior from parents/peers during time-critical periods of development) became available at this time, and Bowlby began to delve into ethological research, noting the strong similarities between human development and imprinting in animals, and the value of observation practices as the basis for ethological research.

The realisation that such complementary fields of research had much to benefit social theory, led to the incorporation of aspects of evolutionary biology, ethological research and systems theory to the developing theoretical canon surrounding the concept of resilience. Here we see a theoretical paradigm shift from the earlier passive, somewhat negative view of attachment theory, in which the individual child is a passive product of external family stimulus, to an ongoing active interaction between subject and the wider environment.

“(Bowlby) ... emphasized the active nature of attachment behavior, contrasting it with the passive conception of dependence. Whereas in traditional theory, dependence is considered inevitable in infancy, regressive and undesirable in later years, and having no biological value, he conceived of attachment behavior as a major component of human behavioral equipment, on a par with eating
and sexual behavior, and as having protection as its biological function, not only in childhood but throughout life. Its presence in humans, as in many other species, could be understood in terms of evolution theory.” (Ainsworth & Bowlby, 1991)

“Ainsworth’s key focus in more recent years has been to extend ethologically oriented attachment theory to cover attachments and affectional bonds other than those between parents and their offspring, in the hope that this can be a theoretical guideline for future research into other interpersonal aspects important in personality development.” (see Ainsworth, 1989).

b) The ‘invulnerable’ child and the emergence of ‘resilience’

With the growth of attachment theory, the realization that environment has a direct and profound effect on development, and that the extent to which these factors influenced a child were varied, during the 1970s the concept of ‘invulnerable children’ came into fashion (Anthony 1974, 1978). The term was misleading however, as people came to consider that there were specific ‘invulnerable’ children so inherently tough that they could not falter under the pressure of stress and adversity (M Rutter, 1985).

The similar concept of ‘hardiness’ grew out of research on stress and coping. Examining the influence of stressful life events in precipitating a range of mental and physical illnesses, a number of investigators sought to identify personality traits that mediate physiological processes and enable some highly stressed individuals to cope adaptively and remain healthy (Antonovsky, 1979; Dohrenwend & Dohrenwend, 1981; Holmes & Masuda, 1974; Lazarus, 1991; Lazarus & Folkman, 1984). Building on earlier theories of competence, Kobasa and her colleagues (Kobasa, 1985; Kobasa, Maddi, & Kahn, 1982) proposed that persons who experience high degrees of stress without becoming ill have a personality structure characterized by hardiness (Walsh 1996).

(Kim-Cohen, 2007) highlights that these concept of ‘invincible’ or ‘invulnerable’ children is erroneous, arguing that rather the quality described is a “super-ordinate construct” that is not static, and cannot be directly measured. Rutter (1987) also challenged the determinist view that traumatic experiences, especially in childhood, where inevitably damaging, when he noted that no combination of risk factors, irrespective of severity, gave rise to disorder in more than half of the children exposed.

The dominant cultural ethos of personal traits that set apart the ‘rugged’ individual or the ‘invulnerable child’ was incorrect in three key aspects, Rutter argues – resistance to stress is relative, not absolute; the bases of resistance are both environmental and ‘constitutional’; and the degree of resistance is not a fixed quality - it varies over time and circumstances (Walsh 2002).

The failure of the term ‘invulnerable’ led to the birth of the relative concept of ‘resilience’ (M Rutter, 1985); (Masten & Garmezy, 1985).
The definition of resilience has been defined by a number of researchers (including (Crawford, 2006) Luthar, Cicchetti, & Becker, 2000; Luthar et al., 2000; Masten, 1999; Rutter, 1999, 2000; Klimes-Dougan & Kendziora, 2002; Hollister-Wagner, Foshee, and Jackson, 2001).

Rutter (1987) describes resilience as "individual variation in response to risk", with the assumption that the same stressors will be experienced differently by different people. He also maintains that individuals will also differ in their ability to respond to stressful circumstances throughout the life course, as "continuities and discontinuities are to be expected" (Hawley, 1996).

Several definitions of resilience have placed emphasis on an individual's ability not only to cope with stress, but to prosper because of it, such as Werner's (1989) definition of "successful adaptation following exposure to stressful life events", and Garvey's (1993) focus on the "power of recovery" and "functioning following adversity". (Burger, 1994) describes resilient children as those who can "endure and thrive in the harshest of circumstances" with an emphasis on "long-term patterns of mastery and competence".

At its most basic, resilient individuals must a) have been exposed to substantial adversity now or at some point in their life, and b) be functioning adequately despite this (Crawford, 2006).

The mechanisms of resilience – Protective and Risk Factors

"Resilience is a dynamic process wherein individuals display positive adaptation despite experiences of significant adversity or trauma. This term does not represent a personality trait or an attribute of the individual" (Luthar & Cichetti, 2000).

Crawford breaks the evolution of the contemporary concept of resilience into three ‘eras’:

- **First ‘era’** – examining negative life experience (specifically upbringing in the home) and its effects on mental health in later life, including Attachment Theory (Spitz, 1946; Bowlby, 1951).
- **Second era** – identifying the multiple factors (including biological, behavioural and environmental factors) that differentially influence an individual’s development pathway – be it positive or negative (including Rutter, 1971; Patterson, 1982). These two eras have the inherent belief that a person’s life outcomes are a result of the individual influences they have experienced in their upbringing and life.
- **We then move on to the third era, where there is a re-conceptualisation of the mechanisms that define resilience. There is a realisation that these influences are not isolated, but rather a complex and dynamic system, that in combination (both negative and positive factors) result in a person’s life outcomes (Rutter, 1985).**

The two pivotal constructs of resilience theory can be defined as **Adversary** (or risk) exposure and **Positive Adaptation** that serves to mediate the effects thereof, and protect the individual against adverse life outcomes (Kim-Cohen, 2007; Luthar & Cichetti, 2000).
This division of variables into positive factors that operate in the face of negative stressors or adverse situations led to resilience being described as the interplay of (positive) Protective Factors, (negative) Risk and Vulnerability Factors, and Interactive Processes (M Rutter, 1985), (Michael Rutter, 1987). The characterization of the diverse variables into these three broad groupings is useful in mapping their interaction and influence.

**Protective Factors** refer to those influences that modify, ameliorate, or positively alter a person’s response to some environmental hazard (M Rutter, 1985).

(Johnson & Howard, 2007) reiterates that resilience identifies both *internal* individual resources and *external* strengths in the ‘systems’ within which the individual exists. Both are defined as protective factors (Garmezy, 1985; 1994; Rutter, 1987; Gore & Eckenrode, 1994) or protective mechanisms (Rutter, 1987; Masten et al., 1990). Garmezy describes three sets of variables operating as Protective Factors – personality features (such as self esteem); family cohesion; and the availability of external support systems that encourage and enforce a child’s coping mechanisms.

However, Garmezy’s demarcation is perhaps too literal, as the concept of a ‘Protective’ factors should not be viewed as necessarily a positive or beneficial experience – the factor should be assessed not in itself but rather as a process or mechanism that within the system serves to decrease the risk (Michael Rutter, 1987).

**Risk Factors** are described as specific factors or variables that within the ‘system’ act as direct sources of stress or adversity, while associated vulnerability mechanisms act in a more indirect manner, predisposing the system to certain (negative) reactions.

But again, to label variables as an inherently negative ‘risk’ or a ‘vulnerable’ mechanism is to misinterpret the complexity of the system. Rather, it *is the process* or mechanism, seen in context, that determines the function (Rutter, 1987). As such, apparently negative variables can, in fact, impart a protective influence over the individual within certain environments (rather like an immunisation that delivers a dose of the agent, acts to convey ultimate protection against disease).

**Interactive Processes** are the multiplicative, synergistic behaviour of all the influences and factors that act within and upon the individual, within the environment or system (M Rutter, 1985). These variables alter over time – a product of a complex and ever changing environment. An individual may be considered resilient in one situation, but in another this resilience is absent.

Crawford (2006) outlines a number of early influential studies of resilience –

- The **Kauai Longitudinal Study** conducted by Werner and colleagues between 1955 and 1989 – who studied 700 multicultural children of plantation workers on Hawaii island Kauai. Of the cohort, a third grew up to be “competent, caring and confident young adults…” (Werner, 1989; Werner, 1993; Werner & Smith, 1992).
- The **Newcastle Thousand Family Survey**, which was a longitudinal study spanning 31 years that examined the effects of risk factors on later outcomes.
- The **1940 Boston Underclass Study** of inner-city delinquency (conducted by Glueck and Gleuck), which Long and Vaillant (1984) contacted for a follow-up inquiry.
**Resilience – conceptual issues**

When considering resilience as a complex system of variables, what looks in statistical terms as similar set of individuals with shared upbringing, can in fact contain a hugely varied set of individual life experiences (Luthar et al., 2000; Richters & Weintraub, 1990).

**Risk Factors** are defined as variables that increase the probability of bad outcomes. However, Bender (1997) describes how a purely statistical / static concept of risk, provides no information about the underlying processes. What we often interpret to be escape from risk may merely indicate that children had not really experienced major stressors and strains as defined by the study (Rutter, 1996). Frequently, it is not single risk factors but their accumulation that is particularly relevant for maladaptation (Rutter, 1979; Stattin et al., 1997).

In addition, **Protective Factors** are often interpreted only as the opposite of risks (Masten and Garmezy, 1985). Variables may be described as either uniquely protective or uniquely risk-related or as simultaneously protective and risky depending on which side of the pole of a variable is considered. However, as Rutter (1987, 1990) has emphasized, protective factors should only be defined as moderators of outcome in relation to a specific risk ‘constellation’. Methodologically, one has to test for interaction effects, and these show a great need for further explication in developmental psychopathology (Farrington, 1997).

Indeed, (Crawford, 2006) argues that resilience itself remains a confused and ill-defined concept open to global differences in analysis (Doll & Lyon, 1998; Pianta & Walsh, 1998; Davis, 1999).

For example, the core definition of a positive (resilient) outcome varies substantially. It is conceived as a more or less general state of well-being, as the absence of specific illnesses and forms of psychopathology, or as positive categories of social competence (Bender, 1997). However it is viewed, there is a lack of comparable, precise, and widely accepted criteria (Cicchetti and Garmezy, 1993; Masten and Coatsworth, 1995).

Such inability to agree the definition and measure of resilience continue to disrupt the development of resilience as an operational mechanism within contemporary dialogue and practice. Davis (1999) and others (Masten & Coatsworth, 1998) agree that trans-disciplinary agreement on the operational definition of resilience is required. For example, Crawford (2006) notes a study by Kaufman, Cook, Arny, Jones, and Pittinsky (1994), in which two thirds of children with histories of maltreatment demonstrated educational resilience, but only 21% manifested resilience in the area of social competence. It is suggested by Luthar et al. (2000), that the specific domains in which resilience is measured should be clearly identified (Crawford, 2006).

Zimmerman and Arunkumar (1994), argue that the definition of resiliency should be refined in light of results suggesting that resilient youth simply may be identified incorrectly because their maladaptive responses are not overt behavioral problems (Dumont, 1999). Luthar, Cicchetti, and Becker (2000) also identify a number of issues that need to be resolved before a durable definition of resilience is agreed, thereby allowing its integration in practice within programs and policies. Rutter (1987) provides varied conceptual definitions and identification of variables that can be found...
in a number of case studies examining life outcomes, including premarital pregnancy (Brown et al, 1986), and decisions whether to stay on at school (Maughan B and Rutter M, 1986).

(Crawford, 2006) notes that traditional measures of resilient outcomes focused on the external manifestations of behaviour (Luthar and Ziglar, 1991). However, others have recognised the relevance of internal measures of coping behaviour, such as incidence of depression and anxiety, which have more long-term implications (Vaillant, 1994; Wolff, 1995).

Tiet and Huizinga (2002) found that measurable outcomes of the construct of resilience include cognitive competence, academic achievement, school-based competence, self-esteem, social resources, education, vocation, marriage and life satisfaction, psychological disorders, delinquency and behavioral disturbances. Academic resilience as defined by Finn and Rock (1997) involved students 1) earning passing grades throughout high school, 2) achieving “reasonable” scores on standardized achievement tests, and 3) graduating from high school on time.

Early definitions and studies examining the incidence of resilience traditionally looked at those who grew up in negative situations, were deprived or underwent negative experiences – and examined the incidence of negative or positive life outcomes. Rather, we need to move forward to identifying the resources, the processes and conditions that build the positive aspects of our development, rather than looking at those that place individuals or groups under stress and adversity (Walsh 1996).

NOTE: These and other issues surrounding the definitions of both the variables and outcomes of resilience is of particular relevance to BSL practice. Our classification of CVCAL students as ‘resilient youth’, for example, is highly contextual. Indeed, we could also define these youth as non-resilient as they are, in fact, unable to function competently in another context, namely school. That is, they are resilient only in so far as how you define the adverse conditions – e.g. home situation, disadvantage, socio-economic etc.)

**c) Resilience in situ – Systemic Models of Social Development**

Attempts at defining resilience as a distinct and inflexible ‘set’ of risk factors with clearly defined rules and variables, that mediate or affectively remove risk and allow an individual to experience ‘resilience’ are inherently flawed (see Kim-Cohen’s 2007 explanation of the variable incidence of resilience as homogenous with the clinical definition of ‘neural plasticity’ – the ability to maintain homeostasis). Rather, concepts of resilience sought to emphasize what is a more dynamic, interrelated and multi-faceted processes and interactions that together create the circumstances surrounding the individual, and result in a resilient, or un-resilient paradigm (Bender, 1997).

Rather, protective or risk functions of a variable are seen as depending on the individual ‘constellation’ of other variables and the specific outcome under investigation. These functions may be limited to specific transitions or sensitive periods in development (Cicchetti and Richters, 1993).
Different constellations and pathways can lead to similar outcomes, particularly when the two sexes are compared (Basic Behavioral Science Task Force, 1996; Cicchetti and Rogosch, 1996). Instead of emphasizing general protective factors, researchers now try to understand the specific protective mechanisms that underlie successful adaptation to specific risks for specific behavioural problems (Rutter, 1990).

As Rutter (1987) states, “Resilience cannot be seen as the fixed attribute of the individual. Those people who cope successfully with difficulties at one point in their life may react adversely to other stressors when their situation is different. If circumstances change, their resilience alters.” Pianta and Walsh (1998) go so far as to note that due to the complex systems regulating risk and resilience development in children, it is particularly difficult to identify and investigate separate factors within these systems (Crawford, 2006).

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As such, the characterization of resilience as a systemic mechanism, that attempts to map a set of multiple interactive processes and variables over time, and which provides a robust framework to identify and address specific variables has been very successful in furthering understanding of the complex mechanisms of resilience.

Rutter (1987) reflects that to understand and encourage psychosocial resilience and protective mechanisms, we must “attend to the interplay between what occurs within families and what occurs in the political, economic, social, and racial climates in which individuals perish or thrive.”

“An ecological, developmental view of resilience is necessary to attend to mediating processes in social context and over time” (Walsh 1996).

Garmezy’s (1987) influential longitudinal-developmental research on high-risk groups sought to understand three sets of interrelated factors in the formulation of adaptiveness under stress: those related to (1) vulnerability, or predisposition; (2) triggering events, or ‘potentiators’ of stress; and (3) protective, stress-resistant resilience. Findings highlighted the systemic view that multiple, ongoing processes involving each individual, family, and larger social environment interact to influence whether vulnerabilities give way to resilience and a successful life course or whether they intensify, resulting in dysfunction and despair.

Rarely will there be a fixed consequence of any single event, or particular set of family conditions, no matter how traumatic. At each developmental stage there is a shifting balance between stressful events that heighten vulnerability and protective mechanisms that enhance resilience. The relative influence of the family, peers, and larger social forces also shifts with each stage (Walsh 1996).

Resilience – a variable in terms of time and space

Rutter (1989) argues that risk and protective factors must be examined within the context of a person’s life, because risk and protective factors are embedded in an individual’s context. For example, intelligence, often considered a protective factor, has been found to place some inner-city children at risk for loneliness or depression (Luthar, 1991).
The concept of a dynamic resilient system that is made up of multiple interrelated contexts or ‘environments’, provides a robust framework in which to address the multiple variables and processes that influence resilience. Rather than considering each variable within the system as isolated variables, Doll and Lyon (1998) categorised (negative) factors into “constellations of interrelated social hazards” – with childhood poverty high on the causative list. They asserted that these constellations are geometrically cumulative rather than additive – the incidence of multiple variables has an increasingly significant impact on outcomes and risk over time (Garmezy, 1987).

Kim-Cohen (2007) supports this premise of the ‘multiplicative effects’ of cumulative risks on child adjustment – i.e. that factors are not additive but rather geometrically cumulative (see also Crawford 2006). She references a study (Rutter M, Yule B, Quinton D, et al. 1975) in the Isle of Wight that “examined six significant predictors of child psychopathology: severe marital discord, low socio-economic status, large family size, parental criminality, maternal mental illness, and out-of-home placement. They found that children who had only one of these risks were at no greater disadvantage than children who had none. By contrast, the presence of two risk factors quadrupled negative effects on adjustment, and four or more risk factors increased maladjustment 10 fold.”

Rutter (1989) argues that risk and protective factors are largely inert on their own, but often serve as catalysts and buffers for stressful events. Therefore, it is impossible to make assumptions or predictions based on the knowledge of certain events, without understanding how that event interacts with other life circumstances, over time. Rutter calls for examining the interplay between development and a given environment, as well as identifying connections between past experiences and current adaptation.

(Johnson & Howard, 2007) explores these cumulative variables in terms of ‘chain effects’. Rutter (1999: 129) notes that experiences tend to cluster and be interrelated – they are not independent of one another (Rutter and Rutter, 1993; Rutter, 1989). This means there are significant individual differences in people’s exposure to risk factors, partly due to an individual’s particular behavior over time (Rutter et al., 1995).

These causal chains, however, can be disrupted and influenced by so called ‘turning points’ – e.g. the existence of opportunities, environmental change, shifts in personal perceptions etc. (Rutter, 1994). Kim-Cohen (2007) argues that “investigating the developmental timing of exposure can yield important insights into ‘sensitive periods’ during which the effect of a risk factor is especially strong” – or, alternatively, weakened.

Such temporal differences in resilience to negative factors are seen in the ability of individuals to successfully cope with divorce throughout childhood and adolescence, but who then later experience difficulties in developing romantic relationships (Hetherington, Cox, & Cox, 1985). True resilience therefore encompasses both short- and long-term variance, with a focus on continued adaptability and flexibility in the long term (Hawley, 1996).

“Risk and protective effects that occur over the lifespan are best addressed through longitudinal data.” (Denny, 2004)
The goal, therefore, is not to uncover static traits or experiences that produce risk or provide comfort, but to develop possible trajectories or "developmental pathways" of how life circumstances may interact with development in positive or negative ways (Rutter, 1990). These pathways, or chain effects describe typical patterns of behavior that often lead to problematic outcomes.

For example, Patterson, DeBaryshe, and Ramsey (1989) document a commonly followed path for juvenile delinquents, beginning with conflict-ridden and inconsistent parenting in early childhood, followed by rejection by peers and academic failure in middle childhood. This leads to commitment to a deviant peer group and actual delinquent behavior during adolescence. It is argued that identifying precursors to actual problem behaviors can set up earlier and more effective points for intervention.

Adaptive, positive (protective) factors to one risk factor is likely to be fairly common – however adaptation against multiple variables indicates a more scarce, and more durable resilience. Such arguments confirms the premise of a complex system of interrelated risk and protective factors within the resilience mechanism, and asserts against programs that tackle these factors as discrete variables (Crawford, 2006).

Wolff (1995) emphasises that resilience is not uniform - it can be dependent on the type of adversity, the time and space, and one can be resilient in relation to one kind of outcome but not another. Much has been said about the difference between boys and girls (Dodge, Bates, Petti , 1990; Milgram, Palti, 1993). For example, boys have been found to be more vulnerable than girls in the first ten years of life, and girls to be more vulnerable than boys in the second decade; this gender difference is reversed again after the age of 30 (Werner, 1989).

Note: Evidence of chain effects, timing and ‘sensitive periods’, and the cumulative nature of the multiple variables and factors that create resilience (or act against it) is of great relevance when discussing programs and services that target particular groups and contextual issues within the community.

This cumulative and interrelated nature of causal variables leads to the suggestion that resiliency can be described as a system that operates at the individual, family, and community levels, each of which is unique yet interdependent (Silliman, 1994). Resilience is therefore seen as contextual, suggesting that each level’s capacity to be resilient (for example the family unit) depends on the interplay between its particular strengths and weaknesses, and those surrounding it.

“The family, peer group, school or work settings, and larger social systems can be seen as nested contexts for social competence” (Bronfenbrenner, 1979).

(Johnson & Howard, 2007) state, “External assets or protective factors have been described in relation to three primary systems in the child’s world: family, school and community.” Examples of community-level influences include exposure to violence in the neighborhood (vulnerability) and
supportive relationships with adults in the school (protective). At the level of the family, relevant examples include inconsistent or harsh parental discipline, as opposed to emotionally responsive care-giving. Individual attributes that can exacerbate vulnerability to stressors include poor impulse control or low intelligence, whereas protective attributes include a high sense of self-efficacy or an easy going temperament (Luthar & Cichetti, 2000).

A robust model of resilience therefore necessitates agreement on the complex relationships that surround the individual, family and environment factors, that result in an individual’s specific resilience and life outcomes (Klimes-Dougan & Kendziora, 2002; Cowen & Work, 1988; Engle, Castle, & Menon, 1996; Garmezy, 1985; Masten & Garmezy, 1985; Rutter, 1987).

Such models that define individual, family and environmental or community factors are supported in models of resilience like Cowen and Work’s (1988) Social Learning Theory (SLT) Transactional Model, and also Bandura’s (1977) theory of reciprocal determinism (Crawford 2006).

‘Resilient Space’ – the Secure Base Model

The theoretical definition of Secure Base is an example of an established social development framework that can be applied to the complex working of the resilient system, and offers much for the conceptualization of resilience as it acts in ‘space’.

As discussed earlier in this report, development of the initial concepts of attachment and resilience noted the theoretical mechanics of the ‘Secure Base’, influenced heavily by Blatz and his theory of security as an approach to understanding personality development. Let us examine the concept of the Secure Base more thoroughly, particularly in relation to its definition of distinct spaces (or spheres) that are integral to personal development.

Security is defined as the latin sine cura = without care or without anxiety. Blatz spoke of security as a “willingness to accept the consequences of one’s own behaviour, or being able to rely upon someone else to accept them on one’s own behalf.” Security is a feeling of being safe, distinguishable from safety which is defined as being free from harm or danger (Ainsworth 2010).

Security as defined by Blatz (and Chant) implies two things: (1) feelings of adequacy in any given situation; (2) a feeling of adequacy to meet future consequences. Thus security has an immediate and a future reference (Salter, 1940; Ainsworth 2010).

Note: Such a definition of security correlates very closely with the concept of Protective Factors acting within resilience rhetoric.

In addition, According to Blatz, security rested on several sources or ‘bases’: which he named immature dependence, independence, mature dependence and, to some extent, defensive manoeuvres that he called “deputy agents” or “compensations.”

‘Immature dependent security’ – infants and to some extent young children rely on parent figures for security, from which they slowly distance themselves due to curiosity of the world around them.
As the child develops the knowledge and skills to cope with the world and environment, they acquire an increasing basis for 'independent security'. Once fully mature, the individual should have fully emancipated themselves from the parents. And finally, to be fully secure, an individual needs to supplement their independent security with 'mature dependent security'. This is a mutually beneficial relationship with a peer/partner, in which each individual on the basis of their knowledge and skills, can provide a secure base to another.

Finally, defensive processes or ‘deputy agents’, operate when the individual cannot accept the consequences of their own behavior nor rely on other secure base. The individual then has to resort to other substitute or deputy agents. Blatz likens these processes to analgesic drugs that reduce pain without coping with the cause of the pain. The more that people rely on deputy agents as a source of security, and the less they rely on other more robust sources, especially within the independent and mature dependent security bases, the more fragile is their adjustment. (Note: Such a definition corresponds to a short-term or ‘survival’ form of resilience, rather than longer term ‘flourishing’. See Page 39.)

Of note, although secure base theory implies reliance on close interpersonal relationships, Blatz conceived of secure bases as pertaining to other areas of life as well. Specifically, he emphasized the importance of not only familial intimacies (children and their parents) and extra-familial intimacies (peer intimacies in friendships and partnerships), and also vocations (jobs and money), avocations (hobbies and interests, with boredom implying insecurity) and philosophies of life (Ainsworth 2010).

“The concept of a secure base, developed in attachment theory... (describes) the balance between dependency and autonomy, closeness and exploration that lies behind secure attachment relationships” (Bowlby 1988; Howe et al. 1999; Schofield & Beek 2006). Indeed, Schofield & Beek (2009) describes the basis of the secure base model as an attachment – resilience based model.

The similarity between secure base and resilience rhetoric is considerable. We can go so far as to explain the two theories as systems of dynamic Protective Variables that collectively give rise to ‘security’ or ‘resilience’ in the face of adversity or Risk Variables. Both these systems operate within specific contexts or ‘spheres’, that evolve over time and space.

The established mechanics of the secure base model can be useful in exploring the resilience system at the micro-level, and identifying possible impacts on wider resilience theory. For example, Ainsworth et al (1971) defined four dimensions within the Secure Base model. Schofield identifies a fifth dimension – family membership – as being necessary for successful long-term, resilient outcomes (Schofield & Beek 2009).

The five dimensions of the Secure Base Model are therefore defined as:
• Availability – helping young people to trust.
• Sensitivity – helping young people to manage feelings and behaviour.
• Acceptance – building young people’s self-esteem.
• Co-operation – helping young people to feel effective.
• Family membership – helping young people to belong.
These dimensions are developed further in Care Matters: Time for Change (Department for Children, Schools and Families 2007, pp. 44–45; and in work by Osterling & Hines 2006 examining supporting fostered adolescents), and could be useful in the understanding and development of resilient strategies and methodologies in community programs.

The Resilience Ecological Systems Model of Social Development

Any Resilient Systems Model should provide a working framework or ‘lens’ through which to view the multiple inter-connected variables that surround each individual.

The use of macro-level, holistic devices to ascertain the extent and mechanics of various systems have been of great benefit to the conceptualization of resilience within the family, schools and wider community contexts. Falicov's (1995) multidimensional framework for assessing cultural diversity, for example, provides an interesting lens with which to view the family as does the frameworks described by Dahlgren and Whitehead, and Bronfenbrenner (Walsh 2003).

Bronfenbrenner’s highly influential Bioecological Model of Human Development views social development as influenced by five environmental systems, ranging from proximal contexts of direct interaction with people, to broad-based contexts of culture, all occurring over time.

The five systems are the microsystem, mesosystem, exosystem, macrosystem and chronosystem (Bronfenbrenner, 1979, 1994; Bronfenbrenner & Morris, 2006). Any relationship between an individual and their immediate environment is called a microsystem. This includes the child's family, peers, school, and neighbourhood.

The mesosystem refers to the interrelationships among two or more microsystems in which an individual actively participates, for example the relation of family experiences (a microsystem) to their school (another microsystem).

A social setting that affects a child but does not directly impinge on them is referred to as an exosystem. Exosystems include parents’ place of employment, parents’ social networks, and government and social policy. The macrosystem refers to the attitudes, beliefs and ideologies of the individual’s culture (e.g. a culture’s values concerning child-rearing). The chronosystem refers to the pattern of the environmental events and transitions over time.

Such a framework fits very well with the theoretical view of resilience as an interplay of risk and protective processes that act within and across different contexts or areas of focus – including individual, family, and larger socio-cultural influences and systems (Walsh 2003). Such influences are also dependent on time and space (Wolff, 1995). That is, resilience can be viewed through just such
an ecological model, as a product of the interaction of Bronfenbrenner’s five systems. Within each system are ‘spheres of resilience’ – or groups of variables that act collectively to produce a level of resilience, and that together create the holistic resilient system.

The Resilient Ecological Systems model therefore provides a robust framework with which to explore the mechanics of resilience – as a system of interconnected resilient ‘spheres’, associated across space and time by the dynamics of the wider ecological system. Such a model redefines the contexts within which we live, work and play – by asserting that each particular sphere is a possible source of resilience, and that these spheres cumulatively fit together within a resilient ecological system that can serve to influence the positive or negative resilient outcomes across space and time.

“The model defines child development as a result of interactions between a child and family, schools, communities and the wider society, over time. In the model the historical time and place of an individual, the timing of transitions and events occurring during their lives, and historical events are all important in determining a person's life course.” (LSAC website)

NOTE: Resilience within an individual- or group-specific context can be readily gauged when the particular Protective and Risk Factors operating within each sphere are identified. The mechanics and influences within the system can therefore be clearly defined and manipulated.

As such, the Resilient Ecological System model can be highly beneficial in the planning and practical implementation of supportive community services and programs – systems theory postulates that influencing variables within one sphere will affect variables in other spheres, and have cumulative effects across the entire system.

As Bronfenbrenners states, while changes in the ecological system will have an effect on the development of the child, those implemented at the microsystem level will be the easiest to initiate and have the most immediate affect (Bronfenbrenner 1979).

School is one such microsystem that affords significant opportunities for changes in resilience, as is the family, and elements of the wider community. One study revealed how low rates of teenage pregnancy and dependency on welfare services – followed increased school success brought about by pre-school nursery schemes for socio-economically deprived children in the US Headstart Program (Bermeta-Clement JR, Schweinhart LJ, Barnett WS, Epstein AS, Weikhart DP, 1984; Farrington D, 1985). What might seem a relatively minor positive input had cumulative and long lasting beneficial effects.

d) ‘Resilience Resources’  
– identifying Protective and Risk Variables within ‘resilient spheres’

“As Coie and colleagues (1993) note, in many situations where risk factors are difficult to eliminate altogether (or to identify in advance), intervention strategies of choice often lie in concerted efforts to understand and bolster protective processes.” (Luthar & Cichetti, 2000)
Initial attempts at identifying resilient variables were general assessments of the characteristics of resilient (or non-resilient) individuals. Amongst those variables that infer risk, Rutter (1987) includes:

- Gender
- Parent-child relationship
- Marital support
- Planning
- School Experience
- Early parental loss
- Life turning points.

While mechanisms that may act as predictors in protective mechanisms include:

- Reduction of Risk Impact (including Alteration of the Risk; and Alteration of Exposure)
- Reduction of Negative Chain Reactions
- Self Esteem and Self Efficacy
- Personal Relationships
- Task Accomplishment
- Opportunities.

Crawford (2006) also defines a set of definitive risk and protective factors, as among those most commonly agreed as having an impact on resilient outcomes (Doll & Lyon, 1998; Masten & Coatsworth, 1998).

Risk Factors:

- Low socio-economic status and single motherhood (D’Imperio, Dubow & Ippolito, 2000; Jeynes, 2002; McLeod & Nonnemaker, 2000; Carlson, 1995).
- Antisocial behavior and delinquency. (Sprague et al., 2001; Tiet and Huizinga, 2002).
- Limited parental supervision and structure (Duncan, Duncan, & Strycker, 2000; Steinberg, Mounts, Lamborn, & Dornbusch, 1999; Morrison, Robertson, and Harding, 1998).

Protective Factors:

- Family Attachment/Cohesion (Cashwell and Vacc, 1996; Patterson, 1982, 1986).
- School belongingness (Goodenow, 1993; Wehlage, 1989).
- Extracurricular involvement (Masten and Coatsworth, 1998; Braddock, Royster, Winfield and Hawkins, 1991)

(Kim-Cohen, 2007), approaching the concept from a more clinical psycho-social / biological viewpoint, notes that in addition to the accepted factors including poverty, family and trauma, the
influence of pre- and post-natal development, pathogens and infectious agents are influential in the development of resilience. She also proposes Gene-Environment (GxE) interactions as an additional factor in the overarching resilience system. (Caspi, Sugden, Moffitt, et al., 2003; Caspi, Moffitt, Cannon, et al., 2005; Caspi, McClay, Moffitt, et al., 2002).

Useful as it is to consider resilience at the macro-level, it is more useful when identifying positive (protective) and negative (Risk) variables to examine those variables that act at each particular ‘sphere’ within the Resilient Ecological Systems model. That is, to examine the interaction of multiple synergistic elements at a more contextual level – namely the individual, family and community.

Crawford (2006) defines the following 12 individual, family and external risk and protective factors in her study of resilience in 142 at-risk 6th through 11th grade students.

<table>
<thead>
<tr>
<th>Table 1 - Identified risk and protective factors included in study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Risk Factors</strong></td>
</tr>
<tr>
<td>Individual:</td>
</tr>
<tr>
<td>Type of sending offense</td>
</tr>
<tr>
<td>Juvenile Record</td>
</tr>
<tr>
<td>Retention</td>
</tr>
<tr>
<td><strong>Protective Factors</strong></td>
</tr>
<tr>
<td>Individual:</td>
</tr>
<tr>
<td>Attributions</td>
</tr>
<tr>
<td>Self-perceptions of physical appearance</td>
</tr>
</tbody>
</table>

In addition, indicators of risk or adversity include medical problems at birth, conditions of physical handicap, parents with mental illness, alcoholism or criminal involvements, absence or loss of a parent, low parental education and vocational skill, neglect and maltreatment, institutional upbringing, family instability and/or conflict, minority status, and urban living, among others (Crawford 2006).

However, it must be reiterated that although we can demarcate discrete variables that exist within each sphere, the resilience ecological systems model stresses that none of these variables act alone – each variable, and each sphere, is connected to ever other variable and sphere, in a web of relatedness across the whole system.
(Howard & Johnson, 2000) provide an interesting breakdown of the Positive Variables of consideration spanning the individual’s resilient system:

<table>
<thead>
<tr>
<th>LIFE EVENTS</th>
<th>SELF</th>
<th>FAMILY</th>
<th>SCHOOL</th>
<th>COMMUNITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Full-term birth</td>
<td>- Personal attributes</td>
<td>- Love &amp; attachment</td>
<td>- Good teachers</td>
<td>+ Adults</td>
</tr>
<tr>
<td>- Stillbirths of weight</td>
<td>- Easy temperament</td>
<td>- Positive relationships</td>
<td>- Supportive</td>
<td>- Supportive</td>
</tr>
<tr>
<td>- Intrauterine birth</td>
<td>- Academic ability</td>
<td>- Knowledge of children &amp; adolescents</td>
<td>- Protective</td>
<td>- Protective</td>
</tr>
<tr>
<td>+ Maternal health</td>
<td>- Emotional strength</td>
<td>+ Supportive</td>
<td>- Culturally sound</td>
<td>-</td>
</tr>
<tr>
<td>+ Opportunities at earlier transitions</td>
<td>- Sense of autonomy</td>
<td>- Extended Family</td>
<td>- Potential fees</td>
<td>-</td>
</tr>
<tr>
<td>- Incarcerated</td>
<td>- Sense of belonging</td>
<td>- Material</td>
<td>- Supportive</td>
<td>-</td>
</tr>
<tr>
<td>+ Physical competence</td>
<td>- Social competence</td>
<td>- Emotional</td>
<td>- Supportive</td>
<td>-</td>
</tr>
<tr>
<td>- Coping behaviors</td>
<td>- Consistency</td>
<td>- Management skills</td>
<td>- Common interests</td>
<td>-</td>
</tr>
<tr>
<td>- Problem-solving strategies</td>
<td>- Active engagement</td>
<td>- High expectations</td>
<td>- Common experiences</td>
<td>-</td>
</tr>
<tr>
<td>- Positive</td>
<td>- Optimism</td>
<td>- Support</td>
<td>- Sharing</td>
<td>-</td>
</tr>
<tr>
<td>- Resilience</td>
<td>- Resilience</td>
<td>- Relational</td>
<td>- Helpful</td>
<td>-</td>
</tr>
<tr>
<td>- Positive self-esteem</td>
<td>- Intellect</td>
<td>- Child-focused</td>
<td>- Jail-officer</td>
<td>-</td>
</tr>
<tr>
<td>- High self-esteem</td>
<td>- Intellectual</td>
<td>- Collaborative</td>
<td>- -</td>
<td>-</td>
</tr>
<tr>
<td>- Positive ability</td>
<td>- Open-minded</td>
<td>- Caring</td>
<td>- -</td>
<td>-</td>
</tr>
<tr>
<td>- Sense of purpose</td>
<td>- Positive attitudes</td>
<td>- Safe/Terror</td>
<td>- -</td>
<td>-</td>
</tr>
<tr>
<td>- Positive attitude</td>
<td>- Self-confidence</td>
<td>- Empowering</td>
<td>- -</td>
<td>-</td>
</tr>
</tbody>
</table>

Qualitative data that corroborates these groupings of factors in the realisation of resilience is provided in studies in South Australia by Howard and Johnson, (1999, 2000, 2000); Dryden, Johnson and Howard (1998).

**INDIVIDUAL Resilience Resources**

Several studies have found such traits as a happy, easy-going temperament, and a higher intelligence to be useful in building resilience (Walsh 1996).

More significant is a high level of self-esteem characterized by a realistic sense of hope and personal control. Rutter (1985) noted that a sense of self-esteem and self-efficacy makes successful coping more likely, while a sense of helplessness increases the probability that one adversity will lead to another. Research has shown that individuals with high self-esteem or a high feeling of control will adopt active coping strategies focused on problems, whereas individuals with a low self-esteem will adopt passive-avoidant coping styles focused on emotions (Thoits, 1995).

Similarly, Kobasa and colleagues reported three general characteristics of ‘hardiness’: (a) the belief that they can control or influence events in their experience; (b) an ability to feel deeply involved in or committed to the activities in their lives; and (c) anticipation of change as an exciting challenge to
further development (Kobasa, 1985). ‘Courage’ has also been identified, whether due to spiritual or moral sources (Dugan & Coles, 1989) or confidence that the odds can be surmounted Werner (1993).

Murphy (1987) described the "optimistic bias" of resilient children (“... any excuse for hope and faith in recovery,”); otherwise described as "positive illusions" (Taylor, 1989). Seligman (1990) introduced the concept of "learned optimism" (a counter to his earlier work on "learned helplessness") in which people come to believe that their efforts and actions can work and have positive outcomes.

Dumont (1999) noted that having developed a positive personal perception and a strong perception of control would guard against negative perceptions of daily stressful situations, possibly by building in the individual a solid impression that he or she has the capacities to cope with these aspects of daily life.

Dumont argues that adolescents with high self-esteem seldom use avoidance strategies and prefer problem-solving strategies, and that adolescents with good self-esteem perceive themselves with the capacity to react to the environment and therefore are confident in using strategies that challenge the problem and help to modify the situation. These adolescents appear to be less bothered by stress because they perceive that they have control and are able to react positively and actively to their environment.

Furthermore, self-esteem is positively correlated with involvement in community, family, neighborhood, but negatively correlated with antisocial activities with peers. In other words, adolescents who do not have a high self-esteem are more likely to choose avoidant coping strategies (e.g., drug consumption) than adolescents who have a high self-esteem and are involved in their community.

Self-esteem is the prominent protective resource that youth can use against daily negative life events (Dumont, 1999).

The Resilient Adolescent

Further to the discussion earlier regarding the temporal nature of influences on resilience, it has long been accepted that the transitional life stage of adolescence can be a significantly difficult period for young people, both in Australia (Eyers, Cormack & Barratt 1992; Cumming 1998) and overseas (Galton, Rudduck & Gray 1999; Hargreaves, Earl & Ryan 1996). This state of turmoil can be observed through both externalized symptoms such as juvenile delinquency, teenage pregnancy, drug and alcohol abuse and violence, as well as the internalized symptoms of anxiety and depression.

However, as Howard, Dryden & Johnson (1999) assert, rather than adopting a deficit perspective on youth issues, the application of a strengths-based, resilience model allow the identification of those positive factors in adolescents’ lives that help them cope with the “new developmental tasks required of them by society”. From the resilience ecological systems perspective, problems with adolescence are not located principally within the individual but rather across the spheres in which they are embedded.
Such dialogue furthers the assertion that resilient variables are time dependent – i.e. have critical periods (see Ainsworth & Bowlby, 1991; Johnson & Howard, 2007; Kim-Cohen, 2007; Wolff, 1995). (Howard & Johnson, 2000) defines the characteristics of resilience in adolescents as:

- social competence
- problem-solving skills
- mastery
- autonomy
- a sense of purpose and future.

The resilient ecological systems model emphasizes that the family provides an ongoing resilient sphere for support and values (and therefore resilience), that adolescents continue to heavily rely upon despite increasing signs of peer-related relationships and support. As such, the approach to adulthood is a time of increased stress and adversity (with a reassessment and relocation of the individual from parents and family, to the independent self, peer group, partner etc.).

It can therefore be argued that the multiple variables that inform resilience during adolescence increase in significance (Granic et al. 2006; Osterling and Hines, 2006; Cashmore and Paxman, 2006).

(Howard & Johnson, 2000) describes protective factors in the adolescent realm as relating to three primary systems – family, school and community.

- Many studies have shown the significance of the school as a source of protective factors. (Rutter, Maughan, Mortimore, Ouston, 1979). The positive influences of schools with good academic records, and particularly supportive relationships with individual attentive, caring teacher(s) has also been emphasized (Geary, 1988; Werner and Smith, 1987; Coburn and Nelson, 1989). School characteristics that reflected strong resilience included personal achievement and accomplishment; a sense of belonging and connectedness; autonomy / personal agency; and positive future orientation.

Wolff (1995) discusses a study by Quinton and Rutter (1988), that looks at the marriages of young women who have spent much of their lives in institutions – those that sought marriage later to more stable partners led more positive lives, and raised families in positive homes. This was explained as being synonymous with a successful school career – with not academic success but positive social interactions and achievements in activities. Such factors led to increased self-esteem and self-efficacy.

- Communities that are disadvantaged are known to pose more ‘risk’ to children than more affluent areas, while Pence (1988) identified several community characteristics that act as protective factors – including strong social support networks provided by kin and social services agencies.
FAMILY Resilience Resources

“Family resilience describes the path a family follows as it adapts and prospers in the face of stress, both in the present and over time. Resilient families respond positively to these conditions in unique ways, depending on the context, developmental level, the interactive combination of risk and protective factors, and the family’s shared outlook.” (Hawley, 1996)

As such, family resilience should itself be viewed through an ecological systems ‘lens’, recognizing that multiple spheres, time and dynamic development are contributing factors. **Resilience in families is affected by their unique context, including internal processes, risk and protective factors, and world-view considerations, as well as their connections and evolving position within the wider community and environment.** The goal, therefore, is not to gauge resiliency on a scale, but to bring a more longitudinal and contextual focus to any consideration of family stresses and strengths in order to maximize intervention effectiveness and resilience.

Both the family stress (Hanson & Johnson, 1979; McCubbin & Patterson, 1983) and the family strengths (Otto, 1962, 1963; Stinnett, 1979) literatures have provided a rich history focusing on resources a family brings to bear when it faces significant difficulties.

**Family as a Protective Factor**

Family serves as an important protective factor for resilience. Barnard (1994) cites several familial factors that relate to resilience, including a ‘good fit’ between parent and child, a productive relationship between a child and mother, family rituals, proactive resolution of issues, minimal conflict in the home during infancy, and the absence of divorce during adolescence.

Families exhibiting warmth, cohesion, and stability appear to be correlated with resilient children (Garmezy, 1993; Wyman, Cowen, Work, et al., 1992) while strong parent-child relationships marked by positive interactions, nurturing, affection, and consistent discipline are also related to resilience in children (Rutter, 1979; Werner, 1989; Werner & Smith, 1982; Wyman et al., 1992).

(Johnson & Howard 2007) notes that for the family, many of the protective factors uncovered by research are clearly associated with the consistency and quality of care and support the individual experiences during infancy, childhood and adolescence. Again, this fits with the temporal nature of resilience.

Family resources including warmth, affection, emotional support, and clear-cut, reasonable structure and limits are emphasised. Studies have also found that if parents are unable to provide this climate, relationships with other family members, such as older siblings, grandparents, and extended kin can serve this function (Walsh 1996). Drawing primarily on family strengths literature, Silliman identifies several resiliency factors including commitment, communication, cohesion, adaptability, spirituality, connectedness, time together, and efficacy (Hawley, 1996).
A Shared Family Belief System

Family schema describe a family’s shared values, goals, priorities, expectations, and world view. Families with a strong schema stress their investment in the family unit, exhibiting a shared orientation that emphasizes a collective ‘we’ more than ‘I’ and they also tend to adopt a relativistic view of life - showing a willingness to accept less than perfect solutions to life's demands (McCubbin, McCubbin, & Thompson, 1993).

Such a shared family belief system appears to have a central role in the family resilience model – as a stable component that allows families to assign meaning to stressful events in their lives and to develop congruency between those meanings and their patterns of functioning (McCubbin & McCubbin, 1993). Patterson and Garwick (1994) have developed a similar concept they call family world view, which focuses on the family’s interpretation of reality, its assumptions about its environment, and its existential beliefs about its place in the world.

A related concept to schema and world view is sense of coherence, developed by Antonovsky (1979, 1987). Primarily a construct within Antonovsky’s ‘salutogenic’ approach (a focus on factors that support human health and wellbeing, rather than on factors that cause disease), a sense of coherence is the extent to which individuals feel confident that the outcome of a situation will turn out favourably. There are three components to sense of coherence: comprehensibility, or the degree to which events surrounding a situation make sense; manageability, or the degree to which one perceives she or he has adequate resources to meet their demands; and meaningfulness, or the degree to which one feels that life makes sense emotionally. A high sense of coherence is viewed as a salient factor influencing one's ability to adapt to life's demands.

Wamboldt and Wolin (1989) expand upon these concepts in their work surrounding family realities and family myths.

Finally, family resilience can vary according to cultural contexts. Of interest, Kim-Cohen (2007) notes that few studies have examined the processes by which cultural influences might affect resilience. Studies on Latino children have concluded that, by and large, patterns of resilience and vulnerability do not differ substantially from those of European American children (Flores E, Cicchetti D, Rogosch FA., 2005; BarreraM Jr, Hageman DN, Gonzales NA, 2004).

“However, certain cultural influences, such as ethnic pride and biculturalism, are potential sources of protection, whereas other aspects of culture, such as clashes between two cultural value systems, are potential sources of vulnerability. As such, resilience has been identified as a fruitful area in which to incorporate the study of culture and developmental psychopathology.” (Kim-Cohen, 2007).

For example, McCubbin, McCubbin, Thompson, & Thompson (1995) suggest that family schema in many Native American Indian and Hawaiian families is strongly influenced by several factors less prominent in Anglo families, including an emphasis on the group over the individual, a present-time orientation, and a heightened focus on spiritual beliefs and on the land. Zimmerman, Ramirez, Washienko, et al. (1995) found a close connection to one’s cultural roots to be an important protective factor for Native American youth. Genero (1995) and Dalla and Gamble (1995) found informal support networks to be an vital resource for African American and Navajo mothers,
respectively. Thus, outcome criteria for evaluating the resilience of families may depend to some degree on their cultural background.

**Family as a Risk Factor**

Families may also serve as a risk factor in the development of resilience. Severe marital discord, maternal mental illness, overcrowded housing, and limited parenting abilities have all been identified as factors associated with the development of psychiatric disorders and criminality in children (Kolvin, Miller, Fleeting, & Kolvin, 1988; Rutter, 1979).

However, such negative familial factors can indirectly lead to the development of positive coping mechanisms in later life. Research by Valentine and Feinauer (1993), for example, found that a negative family experience (abuse) led to an ability to find alternative emotional support outside the family, a strong sense of self-esteem and efficacy, a dependence on religion or spirituality, and the external attribution of negative experiences – all important factors in developing resilience. Based on his work with children of alcoholics, Wolin has developed the **Challenge Model**, in which some children ‘buffer’ themselves from family-based ‘damage’ by developing at least one of seven resiliencies: insight, independence, relationships, initiative, humor, creativity, and morality (Wolin & Wolin, 1993).

The application of family resilience theory in other alternative concepts of the family ‘unit’ is becoming increasingly pertinent. Not only as the traditional definition of the ‘family’ evolves, but as new definitions and instances of social groupings come into existence that replace or offer more positive alternatives. In addition, such alternative classifications of ‘family’ resilience can be successfully embraced by community support programs (for example the CVCAL program student group).

For example, many families are themselves inventing new models of human connectedness. In **Brave New Families**, an ethnographic study of working-class families, Stacy (1990) found a reworking of family life in a variety forms and arrangements – including recreating the experience of divorce from what is essentially a severe loss of resources into a viable support network involving partners, multiple sets of children, and friends into households collaborating in order to not only survive, but to flourish. These ‘**non-traditional families**’ reveal the extent to which a dynamic sense of connectedness can foster resiliencies found in the more ‘traditional’ household.

“It is not the family form, but rather family processes and the quality of relationships that matter most for evolutionary hardiness.” (Walsh 1996)

**The Family Resilience Framework**

“Although individual resilience has increasingly come to be seen in terms of an interaction between nature and nurture, few have considered the family as a potential source of resilience: that is, as a resource” (Karpel, 1986).
“A resiliency-based approach aims to identify and fortify key interactional processes that enable families to withstand and rebound from the disruptive challenges they face. **A resiliency lens shifts perspective from viewing families as damaged to seeing them as challenged, and it affirms their reparative potential.** This approach is founded on the conviction that both individual and family growth can be forged through collaborative efforts in the face of adversity.” (Walsh 1996)

In addition, Walsh highlights the erroneous traditional focus on individual resilience – rather than the crucial influence of multiple relationships and social support. A systemic view of resilience within the family is required that shifts focus from individual traits to interactional processes that must be understood in ecological and developmental context.

This systemic viewpoint is relevant for any ‘level’ of resilience, from the individual, to the family and community. We must acknowledge the vital importance of all processes that foster relational resilience within a functional system (that is, across each ‘sphere’ of the resilience ecological systems model).

Resilience requires identification and comprehension of the multiple variables within the resilience paradigm – not as distinct and defined variables that operate only within any given sphere, but rather as processes themselves, each with specific criteria such as short or long-term timeframe/duration, urgency and within the context of all other variables. Walsh addresses risk factors (within the family unit) as challenges that range from expectable strains of normative life-cycle transitions, such as retirement, divorce, or remarriage, to a sudden job loss or untimely death of a key family member, or to the prolonged strains of migration or inner-city violence. They are not definitive but rather dynamic processes that are heavily influenced by time and space.

**Dialogue around the development of the individual within the family moved from focusing on the ‘resilient individual’, to an emphasis on the ‘resilient family unit’ (Walsh, 2002).**

The main premise of the ‘family resilience framework’ is that **adversity affects the whole family, and the mechanisms and processes inherent within that family mediate the resilience of individual members as well as the unit as a whole** (Walsh 1996, 1998). Strategies and interventions can strengthen these processes and resources, thereby reducing risk and vulnerability - increasing resilience.

The family resilience framework combines ecological and developmental perspectives that view the family as an ‘open system’ that functions and evolves in relation to its socio-cultural context (Carter & McGoldrick, 1998; Falicov, 1995). Synonymous with wider resilience theory, this multi-system diagnosis and approach to intervention/program development must recognize this system and the multifarious factors that create the wider context – and requires a temporal contextualization for assessment and implementation of strategies – i.e. creating a timeline of relationships and events, to track system patterns and guide interventions and planning (Walsh, 2002).

This paradigm shift saw a move from identifying family weaknesses to a strengths-based approach, as with the dialogue surrounding individual life outcomes (Nichols and Schwartz, 2000) – recognizing the potential of utilizing family resources. Research into the family unit moved from concentrating on the negative family situation (abuse, parental mental illness etc) to a realization that resilience was a product of the complex interplay of adverse conditions and factors, with an equally complex
set of protective factors and processes (Garmezy, 1991; Masten, Best and Garmezy, 1990; Rutter, 1987; Werner 1993). Studies by Kaufman & Ziegler (1997) for example, show that the majority of abused children do not become abusive parents – high risk conditions do not necessarily result in similar negative development.

This reflects the broader relevance of the family resilience perspective – not as potential resources for individual resilience but rather the family as a ‘functional unit’, with a systemic view of adversity and resilience (Hill, 1958; McCubbin & Patterson, 1983; Patterson, 1988, 2002; Boss, 2001).

The Family Resilience Framework provides a conceptual map to identify family (or any synonymous social group or functional ‘unit’) processes that reduce risk, buffer stress and encourage healing and growth (protective factors). The table below outlines a family resilience framework that examines key Protective Factors (Walsh, 2002).

<table>
<thead>
<tr>
<th>Table 1 Key Processes in Family Resilience</th>
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<tr>
<td>Belief Systems</td>
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<tr>
<td>1. Making meaning of adversity</td>
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<tr>
<td>• Affirmative value; resilience as relational/interpersonal beliefs</td>
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<tr>
<td>• Family life cycle orientation; normalizing adversity and distress</td>
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<tr>
<td>• Sense of coherence: crisis as meaningful, comprehensible, manageable challenges</td>
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<tr>
<td>• Appraisal of risks, stress, and recovery: Facilitative vs. constraining beliefs</td>
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<tr>
<td>2. Positive outlook</td>
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<tr>
<td>• Hope, optimism; view; confidence in overcoming odds</td>
</tr>
<tr>
<td>• Courage and encouragement; focus on strengths and potential</td>
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<tr>
<td>• Active initiative and perseverance (can-do spirit)</td>
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<tr>
<td>• Master the possible; accept what cannot be changed</td>
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<tr>
<td>3. Transcendence and spirituality</td>
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<tr>
<td>• Larger values, purpose; future goals and dreams</td>
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<tr>
<td>• Spirituality: faith, communion, rituals</td>
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<tr>
<td>• Inspiration: envision new possibilities; creativity</td>
</tr>
<tr>
<td>• Transformation: learning and growth from adversity</td>
</tr>
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</table>

Organizational Patterns

6. Flexibility
• Capacity to change: rebound, reorganize, adapt to fit challenges over time
• Counterbalanced by stability: continuity, dependability through disruption

5. Connectedness
• Mutual support, collaboration, and commitment
• Respect individual needs, differences, and boundaries
• Strong leadership: nurture, protect, guide children and vulnerable family members
• Vary family forms: cooperative parenting/caregiving teams
• Double-parent/parental relationships: equal partners
• Seek reconciliation, reconstitution of troubled relationships

4. Social and Economic Resources
• Mobilize extended kin and social support; models and mentors
• Build community networks
• Build financial security; balance work-family strain

Communication Processes

7. Clarity
• Clear, consistent messages (word and actions)
• Clarify ambiguous information: truth seeking and truth speaking

6. Open emotional sharing
• Share range of feelings (joy and pain; hope and fears)
• Mutual empathy: tolerance for differences
• Responsibility for own feelings, behavior; avoid blaming
• Pleasurable interactions; humor

5. Collaborative problem solving
• Creative brainstorming; resourcefulness
• Shared decision making and conflict resolution: negotiation, fairness, reciprocity
• Focus on goals; take concrete steps; build on success; learn from failure
• Prepare for failure; prevent problems; avoid crises; prepare for future challenges

The Family Resilience Framework can be applied to a variety of models of social intervention – not only within the family but any supportive ‘unit’. Resilience can be fostered through flexible structure, shared leadership, mutual support, and teamwork in facing life challenges. Of value are strategies that emphasize strong leadership, security, continuity, and dependability, and also stresses the need for collaborative, open and positive communication. (Walsh, 2002; Werner and Johnson, 1999).
Research has revealed the crucial influence that significant relationships with kin, intimate partners or caring adults (teachers, mentors), who provide vital support and positive aspiration for at risk youth (Walsh, 1996, 2003).

**Note:** As such, the Family Resilience Framework can be applied to any supportive ‘unit’ / program / space or agency, including the CVCAL program. It can be considered as a ‘family’ – and interestingly participants have actually referred to the program as their ‘family’.

**COMMUNITY Resilience Resources**

Thus far we have looked at the individual and family characteristics (positive and negative) that influence the resilience system. But each factor identified within a distinct sphere has been shown to act not in isolation, but at all times as an interconnected dependent variable across multiple spheres and the entire system as a whole.

For example, resilience ‘resources’, both internal like self-esteem and external like social support, and coping strategies (actions used to deal with problems or resources available within the individual; Plancherel et al., 1994), are considered to be key protective factors. Herman-Stahl and Petersen (1996) also reported that the resilient group within their study was distinguished from the vulnerable group by characteristics such as optimism, positive relationships with parents and peers, and active coping skills.

In addition, study results suggest that (positive) interactions with members of the family and neighbors may be beneficial to youth social adjustment in helping them to avoid stressful experiences or in making these experiences less stressful (Dumont, 1999).

According to Holland and Andre (1987), social activities help to foster personality development and socialization. They argue that involvement in such activities offers young adolescents a channel to express their energy in socially acceptable ways. Their results show clearly that social participation is highly correlated with self-esteem and control of perception. Rae-Grant et al. (1989) have shown in a sample of 3,294 children aged between 4 to 16 years that participation in different social activities is related to a low incidence of behavioral problems.

As such, ‘social resources’ seem to be as important as academic programs for youth development and resilience (Dumont, 1999).

However, this also holds for the relation between social resources, such as peer relations and social support, and negative life outcomes (Bender, 1997). Research has repeatedly shown that juvenile delinquency often takes place within groups and is reinforced by deviant peers (Elliott et al., 1985; Emler et al., 1987; Reiss and Farrington, 1991; Patterson et al., 1992).

Involvement in negative social or even illegal activities (stealing, bullying, illegal use of alcohol or drugs) have been found to be positively correlated with depression and stress. This is congruent with findings by Patterson et al. (1983), who reported a negative correlation between substance use (cigarette, alcohol, drugs) and problem solving within the family (Dumont, 1999).
However, from a developmental perspective it requires clarification whether association with deviant friends is a necessary precursor of delinquency (Keenan et al., 1995), or whether earlier antisocial behaviour leads to delinquent friends (Tremblay et al., 1995).

Although delinquency, drug use and aggressive behaviour can be considered part of a peer group’s activities, the group’s social relations simultaneously provide support, reinforcement, and role models that are relevant for a successful mastering of the transition to adulthood (Silbereisen and Noack, 1990; Jessor et al., 1991; Caspi and Moffitt, 1995). Particularly for milder forms of deviant behaviour, the support function of such peer relations seems to be as important as their risk function.

Research into the relation between social resources and adolescent problem behaviour vary greatly, in part because the constructs are very complex, and differing aspects are studied in research contexts and with different methods (Cicchetti and Bukowski, 1995; Parker et al., 1995; Robinson and Garber, 1995). Relations seem to depend on the respective age period, the kind and severity of behavioural problems, research methods, sex, and other moderators.

For example, Bender (1997) examined adolescents from residential foster care institutions (such youngsters frequently come from very deprived multi-problem milieux and are particularly at-risk of developing long-term behavioural problems). The influence of peer relations and social support were assessed – definitions of support were derived from Barrera’s (1986) four dimensions of emotional, material, informational and evaluative support. Results show complex interactions between variables (for example, peer relations and social support may have different protective or risk effects depending on the degree of antisocial behavior, the age and the sex of the individual).

However, in more general terms, because peers tend to share the same behaviour characteristics, they are more likely to foster behavioural continuity than change (Tremblay et al., 1995; Bender 1997). Thus, in the highly antisocial subgroup, social resources stabilize deviance. Perceptions of being socially accepted and supported may weaken motivation to change. In the group of more well adapted girls, a large social network may also provide social relations that help to cope with transitions during adolescence.

Quality vs Quantity

The finding that social ‘net-size’ is relative to the number of ‘good friends’ develops upon the concept of social resources: reporting many ‘good friends’ correlates with low satisfaction as well as less frequent support (Bender 1997). Furthermore, the number of ‘good friends’ primarily has effect on externalizing behaviour. As various studies suggest, discrepancies between the perceptions of peer relations by self and others can be indicative of social disintegration and maladaptation (Patterson et al., 1990; Boivin et al., 1994; Hughes et al., 1997).

(Note: Compare this with the concept of resilient spheres – a large sphere/ multiple spheres are not conducive to resilience in of themselves. Rather, it is the ‘quality’ of the spheres that is important.)
Schofield & Beek (2009) describes “A valuable complementary concept to resilience in adolescence ... is ‘social capital’. Pinkerton and Dolan (2007) make useful links between social capital, resilience and adolescent coping, suggesting that ‘membership of social networks is the connection between the external conditions of young people’s lives, their “social capital” and their internal emotional worlds, their “resilience”’.

Social capital, therefore, reflects the importance of social support and ‘belonging’, in relation to the family (or alternative) sphere, as well as a connection with community spheres such as a sports team, a peer group, a community ‘collective’ and so forth. The location of social capital is therefore highly varied. Indeed, fostering social capital can take place within all spheres across the microsystems level, and has significant practical application in program delivery.

The importance of social networks for support in crisis and adversity has been well documented (Pearlin & Schooler, 1978; Rutter, 1987). Resources for resilience can in fact be provided by friends, neighbors, teachers, coaches, clergy, or mentors (Brooks, 1994; Rutter, 1987; Werner, 1993). The value of group interventions for individuals facing similar challenges has also been shown. Spiegel (1993), for instance, found that women diagnosed with cancer show a better adjustment, and often live longer, when they participate in a support group (Walsh 1996).

Similarly, ‘relational resilience’ describes a set of organizational patterns, communication and problem-solving processes, resources, and belief systems that are embedded within a particular context or sphere. Of particular importance is a ‘narrative coherence’ that assists members in making meaning of their experiences and builds collaboration, competence, and confidence in surmounting challenges. (Walsh 1996)

Cohler (1991) emphasizes the importance of this narrative coherence in making sense of disruptive experiences – this affirms the premise that resilience should be viewed as a cumulative ‘chain’ or dynamic process. David Reiss’s (1981; Reiss & Oliveri, 1980) work on family paradigms has particular relevance for understanding family resilience. Shared beliefs (i.e. a narrative coherence) reinforce interactional and response patterns, governing how a family (for example) approaches and responds to a new situation.

Spiritual values and a cultural heritage also provide a narrative, instilling meaning and purpose not only within but also beyond the family unit (Beavers & Hampson, 1990). The shared ideology that seeks to make sense of a crisis is crucial for family resilience (Antonovsky & Sourani, 1988; Rolland, 1994).

The construction of narrative coherence is related to those spheres within which we operate – which provide us with social capital that fosters self esteem and efficacy, as well as bestow upon us a set of shared beliefs that provides the basis for positive framing and coping mechanisms that allow us to understand and process the world around us. Discussions around a ‘cohesive narrative’ that binds us together and seeks to understand risks or adverse situations and life events corresponds with the theories of ‘chains effects’, clusters and cumulative effect of variables as accepted within resilience discourse.
Social connectedness directly increases resources including self-esteem and confidence, and also indirectly allows the growth and perpetuation of a shared belief system that leads to narrative cohesion – supporting resilience particularly if the group provides narratives that emphasize Positive (coping) Factors (Walsh, 1996).

The availability of community resources and a family's ability to access them are also essential for family resilience - providing financial security, practical assistance, social support and a basic sense of connectedness (Walsh 1996). Children in disadvantaged communities are generally considered more at risk than those in more affluent areas. The strength of social support networks provided by kin and social service agencies, for example, is one such factor (Pence, 1988).

Aponte (1995) states that “… in poor communities, the family challenge is not only about bread or basic resources, but as much about spirit: building a sense of dignity, purpose, and future in families that have surrendered hope, meaning, and self-worth to a sense of despair. Here, optimism and hope – core elements in resilience – require a social responsiveness to improve actual family conditions and prospects.” (Walsh 1996)

NOTE: This is interesting when looking at just how supportive and involved parents of the CVCAL students become – they are accessing and connecting with a sphere of resilience for themselves a source of positive resources, that bolsters not only individuals but the family unit and wider community itself.

The work of Rutter et al. (1979) reveals that dialogue surrounding social resources is also evident within the school. Children in discordant and disadvantaged homes are more likely to demonstrate resilient characteristics if they attend schools that have good academic records and attentive, caring teachers. Other studies have also shown the important role that teachers can play in resilient children's lives (Geary, 1988; Werner & Smith, 1988; Coburn & Nelson, 1989).

The Resilient School
Resilience systems theory is perhaps most evident (in terms of visibility) within the confines of the school sphere. With a multitude of highly significant influences, risk factors and protective mechanisms working within the school resilience sphere, it is a ‘playground’ for observation, theory and practice.

More traditional modes of education program assessment have focused on academic achievement. However, concomitant personal and social development is becoming increasingly favorable, within a resilient ecological systems framework (Zins, Elias, Greenberg, & Weissberg, 2000).

(Morrison, 2006) argues for the need of a structured methodology for conceptualizing and organizing information about the strengths of students, that emphasizes understanding risk and protective factors in not only students, but also their critical school and family contexts. In addition to emphasizing the importance of an ecological view of competence, Masten and Coatsworth (1998) noted that historical perspectives are important as well.
Academic achievement is best fostered in an environment that supports the child across multiple contexts (Morrison, 2006). Further, Zins et al. (2000) argues for expanding beyond an academic focus to recognize the importance of educating knowledgeable, responsible, and caring citizens, which requires systematic attention to children’s social and emotional learning. Protective factors, as a basis of intervention for children at risk, may enhance the chance that they will “experience ‘turning points’ or make a change in their developmental trajectory”.

**Creating the Rubric**
Morrison (2006) emphasizes the need for ‘rubrics’ to assess the variables and factors influencing the resilience system – particularly within the education sphere.

For example, Masten and Coatsworth (1998) identified domains of competence for school-age children including academic, social behavior/peer acceptance, and conduct (rule following behavior). Knoff (2002) provides a useful model for conceptualizing varied influences on learning – including behavior, social skills, adaptive behavior, and student characteristics as well as academic characteristics and outcomes. Benard (1991) and Waxman, Gray, and Padron (2003) suggested that four personal characteristics of resilient children include social competence, problem solving skills, autonomy, and a sense of purpose.

However, such measures of resilience (or rather ‘competence’) remain limited within a prescribed number of narrow outcomes. These outcomes, although useful for gaining ‘glimpses’ of overall functioning and performance within certain spheres, remain ignorant of the wider ecological system within which the individual operates. Rather, the ‘causal’ variables identified within each sphere, and the externalized (and internalized) outcomes should be assessed with regard to their circumstances within the ecological system as a whole.

**Masten and Coatsworth (1998)** noted that individual competence as defined within an ecological context, is not static but rather a product of situation as it varies across time. Morrison (2006) describes student development is a complex interweaving of student and educational variables. Sameroff, Seifer, Baldwin, and Baldwin (1993) referred to these patterns and interactions as ‘transactional’ – that is, student characteristics and educational interventions influence each other bi-directionally, across time.

Waxman et al. (2003) emphasized that educational resilience should not be viewed as a fixed, individual attribute but as “something that can be promoted by focusing on ‘alterable’ factors that may impact an individual’s success in school”. Similarly, Knoff (2002) challenged schools to look at students from an ecological perspective. School psychologists were encouraged to extend the assessment process beyond the educational context (e.g., teachers and classrooms) to broader ecological systems that influence student learning (e.g., family, neighborhood, and community conditions).

Wang, Haertel, and Walberg (1999) provide comprehensive lists of risk and protective factors related to educational resilience in the family, school, peer, and community areas. McMillan and Reed (1994) also reference motivation and time management as factors in educational resilience, but add that variables within the family (such as support and expectation) as well as school and classroom learning environments are important protective factors as well.
Of note, Morrison (2006) provides a framework that goes some way to assessing the resilience system that surrounds the student – he sets out a number of categories (or spheres) for integrating and organizing student variables:

- Individual assets
- Family assets
- Peer assets
- Classroom assets
- School assets.

As well as a detailed set of Risk and Protective Factors, behaviors and variables that operate across these particular spheres.

These systemic ‘tools’, he argues, allow the collection and presentation of information that will identify risks and protective factors and recognize the role of important school, peer, and family relationships and contexts. However, he warns that this method of charting data does not garner a complete picture of the complexities that exists between a student’s individual characteristics and the ecologies of the school and home (i.e the resilient system as a whole). Supplementary and corroborating evidence is required to understand the student in context.

**e) Resilience in praxis**

- **Applying the Resilience Ecological Systems Model**

Over the past two decades, the Resilience Ecological Systems Model has become a useful framework or ‘lens’ through which to examine the multiple interconnected variables related to a variety of life spheres and contexts. According to this approach, human behavior and life outcomes results from a process of interactions between an individual, his or her immediate environmental settings, and larger social and cultural contexts in which he or she is embedded (Bronfenbrenner, 1979; 1986).

A number of notable studies have followed the lives of children and young adults – tracking individual, social and environmental factors that determine risk and resilience, including work by (Johnson & Howard, 2007), and the longitudinal studies by the Dunedin Multidisciplinary Health and Developmental Study, and Canada’s National Longitudinal Survey of Children and Youth (which although focusing on principally the health outcomes, have also been correlated with other negative life outcomes such as school dropout and criminal activities) (Dryfoos, 1990; Hawkins et al., 1992; Rutter, 1980).

**Resilience in the School**

Howard and Johnson’s (2000) highly influential study examined five state high schools across South Australia, and identified a sample of students ‘at risk’ aged 13 to 16 years who were displaying resilient and non-resilient behavior. A set of questions were designed to assess the availability and/or use of protective factors and processes in the young people’s lives. Those characteristics
exhibited by ‘resilient’ and non-resilient youth are grouped under Bronfenbrenner’s microsystem sites – home, school and community (Howard, 2000).

This study is an excellent investigation into how protective factors and processes operate within the multiple spheres that exist in the lives of young people, using Bronfenbrenner’s Ecological Systems Model to categorize and map interactions and mechanisms. Specifically, these protective factors and processes may be located within the young person (learned attitudes, beliefs) or they may be found in the family sphere (for example the incidence of caring adults). The school and the community can also be sources of protective factors and processes (for example, schools that teach confidence and self-efficacy, and local councils that provide facilities and opportunities for young people to socialise) (Howard, 2000).

As Howard and Johnson emphasize, there is, however, no single combination of protective factors and processes that can be identified as being better than any other—resilient young people will draw on what is available. **What is certain is that ‘the more the better’** — the more protective factors and processes that the young person can mobilise, the more likely they are to display resilient behaviour.

**Resilience in the Community**

Another relevant study examined the work of the Cooperative Extension Service. The Cooperative Extension Service is a non-formal educational program in the United States designed to help people access and use research-based knowledge to improve their lives. Cooperative Extension specialists, agents, and educators within the family, life and youth development program areas have used research grounded in the risk/protective factor framework to guide the development, implementation, and evaluation of policies and programs designed to reduce common youth problems such as delinquency, drug use, and academic failure (e.g., Astroth & Vogel, 2008; Bogenschneider, 1995; Hill & Parker, 2005; Mincemoyer et al., 2008; Perkins, Mincemoyer, & Lillehoj, 2006).

Olson (2010) undertook a study using an ecological multiple risk/protective resilience model to examine factors that influenced incidence of depression in adolescents. This approach differs from traditional studies into resilience, in that it looks specifically at *internalized* negative outcomes (depression) rather than the more commonly addressed *externalized* and observable incidences of negative behavior (such as drug and alcohol abuse, violence etc), as a means of demarcating resilient/ non-resilient systems.

Participants were made up of 39,740 adolescents who self-reported risk factors, protective factors, and depressive symptoms on a school-based survey. Early studies have revealed a variety of risk and protective factors associated with depression among adolescents. Risks include poor family processes, negative parent-child relationships, and high levels of stress, whereas protective factors such as intelligence and self-efficacy have been found to buffer the effects of some risk factors. However, later research based on a more ecological model has focused on the complex interrelationships among depressive symptoms, risk and protective factors from a variety of
ecological contexts (Bond, Toumbourou, Lyndal, Catalano, & Patton, 2005; Costello, Swendsen, Rose, & Dierker, 2008; Denny, Clark, Fleming, & Wall, 2004).

Protective Factors include:
- Community Rewards for Pro-social Behavior
- Family Attachment
- Family Opportunities for Pro-social Behavior
- Family Rewards for Pro-social Behavior
- Religiosity
- School Rewards for Pro-social Behavior

Risk Factors include:
- Sensation Seeking (Rebelliousness; Early initiation of problem behaviour; Low perceived risk of drug use; Favorable attitudes towards drugs; Favorable attitudes towards antisocial behaviour; Poor family supervision; Poor family discipline; Family conflict; Parental attitudes favorable toward antisocial behavior)
- Family History of Antisocial Behavior (Perceived availability of drugs; Poor academic performance; Low school commitment; Community disorganization; Low neighbourhood attachment; Personal transitions and mobility; Laws and norms favourable to drug use; Parental attitudes favourable toward drug use).

As fits with the wider dialogue and accepted mechanisms within the resilience ecological model of social development, the study findings suggest that positive and negative factors that influence the level of resilience span multiple spheres across the ecological system. **Programs that target these variables within a holistic framework are effective in fostering resilience – not only in terms of external negative behaviors and life outcomes (delinquency and substance use for example), but also in depressive symptoms among adolescents.**

**Resilience within an Alternative Education Program**

Approximately 11% of American students do not complete high school and are at high risk for a range of poor health and developmental outcomes – including emotional distress, substance use, delinquency, and early pregnancy (Grunbaum, Kann, Kinchen, Ross and Gowda, 2000; Kaufman, Kwon, Klein and Chapman, 2000).

In the USA, approximately 2.0% of high school students are enrolled in an alternative education program (Grunbaum et al 2000) – this rate is similar in New Zealand with 1.5%. These students have been found to be at high-risk of negative life outcomes (Denny, Clark and Watson, 2003; Grunbaum, Lowry and Kann, 2001).

Denny’s (2004) study of alternative education students in New Zealand found that over 25% of students had levels of depressive symptoms, and a similar proportion had made one or more suicide attempts within the last 12 months.
(Note: One could conclude that these individuals are as such, anything but resilient. Or alternatively, they are significantly resilient – when consideration is made of the major risk factors that are present within their lives. Such false dichotomy is indicative of the wider resilience theoretical narrative.)

Research has emphasized the impact of childhood, familial and environmental factors on the risk of such negative outcomes, and it is the “accumulation of adversity across different domains of risk that distinguishes individuals with the worst outcomes” (Fergusson, Horwood and Lynskey 1994; Rutter and Quinton 1977; Sameroff, Bartko, Baldwin, Baldwin and Seifer 1998). Protective factors that promote resilience despite adverse situations include characteristics inherent within the individual, the family, as well as those within the community – such as external interests and / or identification with a non-related adult (Garmezy 1991; Jenkins and Smith 1990; Resnick et al, 1997).

Denny’s study was based on an ecological youth development model, which “emphasizes the contextual nature of youth development, and recognizes that for healthy development, young people need connections and support across different social environments” (Bronfenbrenner, 1979; Garmezy 1985).

The study examined a number of variables including student depression, family relationship (for example ‘witnessing family violence’, ‘family connectedness’, ‘peer support’) and school environment. Although reflecting the influence of variables on levels of depression, findings revealed that the most significant factors were found within the family, school environment as well as peer support.

The high levels of socio-economic hardship among alternative education cohorts (with associated significant incidence of family violence, and stress - over 70% reported not having enough money to buy food), emphasized the need for programs that bolster resilience resources across a number of spheres, in order to successfully mitigate negative mental health and life outcomes (Denny, 2004).

“The most effective strategies ... should include interventions that address the social environments of young people, particularly the family.... It is increasingly being recognized that effective prevention strategies need to look at the broader environments that young people live in and incorporate elements of positive youth development” (New Zealand Ministry of Youth Affairs, 2002; Pitman et al, 2000).
f) Resilience in Theory
– Impacts on Policy

The Resilience Ecological Systems model is a useful ‘lens’ with which to view the multiple variables and processes that foster resilience within the varied environments within which we operate – and which can be applied to the effective development of ‘agency’, ‘units’ and ‘spaces’ that act as spheres of resilience, and bolster ecological system mechanisms that engender a holistic view of individual development, resilience and support.

There is also ongoing affirmation as to the importance of the resilience knowledge base for informing practice and the wide scope of its application – and this agreement highlights the value of building collaboration between theory and praxis, combining researchers, clinicians, and policy makers (Werner and Johnson, 1999).

For interventions that are developed specifically within the resilience paradigm, (Luthar & Cichetti, 2000) provide a series of guiding principles:

1: Interventions must have a strong base in theory
2: Interventions must have a strong basis in theory and research on the particular group being targeted
3: Efforts should be directed not only toward the reduction of negative outcomes or maladjustment among targeted groups but also toward the promotion of dimensions of positive adaptation or competence
4: Interventions must be designed not only to reduce negative influences (vulnerability factors) but also to capitalize on specific resources within particular populations
5: Interventions should target salient vulnerability and protective processes that operate across multiple levels of influence (eg Bronfenbrenner)
6: Interventions must have a strong developmental focus
7: Similarly, the contextual relevance of the overall intervention aims, as well as of the specific intervention strategies, must be ensured
8: Intervention efforts should aim at fostering services that eventually can become self sustaining
9: Wherever possible, data from intervention groups should be compared with those of appropriate comparison groups
10: There must be careful documentation and evaluation.

As awareness and understanding of the holistic nature of human development grows, resilience systems theory increases in relevance across service delivery programs, and within wider policy and strategy dialogue.

Growing Up in Australia: The Longitudinal Study of Australian Children

The LSAC is an interesting and highly relevant government study initiated and funded by the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA), in
partnership with the Australian Institute of Family Studies (AIFS), Australian Bureau of Statistics (ABS) and a consortium of leading researchers.

The study of 10,000 families utilised Bronfenbrenner’s Ecological Model of Social Development, in order to examine the impact of Australia’s social, cultural and economic environment on the development of Australia’s “next generation”. It was hoped that a deeper understanding of child development could inform wider social policy debate, identify opportunities for improving support to children and their families, and aide new policy proposals for intervention and prevention strategies (Rogers and Webb, 2010).

Of note, the key research focus centred on:

- What are the childhood experiences and conditions (from pre-natal, infancy, childhood, adolescence and adulthood) that impact on child, adolescent and adult outcomes and on trajectories of development?
- What are the mechanisms underlying linkages and interactions and how do these change over time?
- What factors and processes protect children from events or contexts that increase the risk of poor outcomes?

Findings:

- Outcomes are interrelated
- Child development is the result of a complex dynamic interplay between biological, social and behavioural factors
- Environment often effects multiple outcomes
- Any outcome is influenced by multiple factors
- Some outcomes are immediate, others develop slowly over time

The study emphasised the need for a better understanding of the wider environment, and specifically the ability to identify those most ‘at risk’ within the community. This would enable initiatives that focus on (more effective, and also cheaper) prevention rather than treatment options.
Studies such as the LSAC, that examines the wider community influences that can place a family at risk, or conversely support positive and resilient child development, are an excellent example of how resilience ecological systems theory can inform debate and lead to more effective policy and practice.

**Resilience within concepts of Wellbeing and Welfare**

Although a little off the main resilience dialogue, Taylor (2011) has some interesting points to make regarding the evolution of the concept of resilience, and its burgeoning relevance in contemporary social policy discourse – in relevance with the notion of ‘wellbeing’.

Taylor examines the inter-relatedness of individual and external/ social environment, or what he terms a “… a trans-disciplinary ‘psychosocial’ approach (see Stenner and Taylor, 2008) to understand the relationship between the individual and the social…”

He also discusses the ‘relational’ views of wellbeing, as an ‘inter-subjective’ relation of time, space and location. These concepts are synonymous with the concepts of resilience, and support the view of wellbeing as a dynamic process rather than an outcome (see Gough, McGregor and Camfield (2007).

Taylor also broaches the notion of ‘thick’ and ‘thin’ needs – the former allows the individual to ‘flourish’ vs the latter which is just ‘survival’ (See also Deci and Ryan, 2006).

This is interesting in its correlation with the possible definition of two ‘degrees of resilience’. Although not referenced in the major discourse surrounding resilience, the idea that resilience can be broken into two levels – namely ‘negative’ and ‘positive’ resilience – is an interesting concept and worth further examination. Negative resilience would reference those instances of resilience that operate when mere short-term ‘survival’ is the objective. Positive Resilience, by contrast, would reference the long-term definition of ‘flourishing’ – that is being robustly resilient.

The definition of wellbeing lends itself to additional correlations with the dialogue surrounding resilience:

- The development of the concept of wellbeing moved over time from a simple positive and desirable outcome that is quantifiable (or measurable), to a complex interplay of factors that is objectively understood in terms of ‘social determinants of wellbeing’.
- The conceptualization of wellbeing as ‘self-efficacy’ (Johann Seigrist, 2003) with emphasis on the need for “interventions which seek to engage individuals, or create conditions for them to pursue ways of living which promote wellbeing”
- Ryan and Sapp (2007) argue that “wellbeing concerns a person’s capacity for optimal functioning and encompasses not only the issue of physical health, but also a sense of interest in one’s surroundings, a confidence in being able to formulate and act to fulfill important goals and the motivation and energy to persist in the face of obstacles.”

Wellbeing is being able to maintain vitality and to thrive within the everyday ecological environment.
These two studies highlight the evolution of contemporary social discourse, as traditional concepts of welfare, wellbeing and the role of agency in fostering positive life outcomes become increasingly synonymous with the concept of resilience. That is – resilience is coming of age – after 50 years of dialogue, the mechanisms and processes of resilience are entering the socio-political sphere, and have significant implication for both contemporary rhetoric and service delivery, as we continue to seek more robust welfare, wellbeing and community development outcomes.
g) References


The resilience framework serves to direct interventionists to empirical knowledge regarding the salience of particular vulnerability and protective processes within the context of specific adversities. This framework helps to organize the scientific evidence concerning factors that may differentially alter the effects of various high-risk conditions and adversities, thus yielding specific directions for intervention efforts.

...the term “resilience” represents a parsimonious label for a scientific approach that has multiple distinguishing features. Applying the resilience framework implies attention
(a) to positive outcomes in the presence of adversity rather than positive adaptation in general and, more specifically,
(b) to empirically derived knowledge about vulnerability and protective mechanisms that are salient within, and possibly unique to, particular risk conditions. From an intervention perspective, the implication is
(c) a shift away from maladjustment to consider competence as well (thus implicitly emphasizing prevention),
(d) attention to at-risk individuals’ strengths in addition to their “deficits”, and
(e) systematic exploration of processes that might explain or underlie links involving empirically identified vulnerability and protective factors.

...the benefits of applying the resilience paradigm can be seriously jeopardized without careful attention to several critical precautions. Documentation in both science and practice must include explicit clarifications that resilience represents competent adaptation in the face of adversity, preempting misconceptions that this is a proxy for some individuals’ innate imperviousness to life stresses. Interventions based on resilience research must have a compelling basis in both theory and prior empirical findings on the recipient groups, should target protective and vulnerability forces at multiple levels of influence, and must reflect careful consideration of the ways in which goals and techniques “fit” with the life circumstances and everyday ecologies of the individuals served. Furthermore, integrative, community-based approaches in service delivery are critical.

Luthar and Cicchetti 2007