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LITERATURE REVIEW

From extraordinary invulnerability to ordinary magic: A literature review of resilience

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Resilience was once considered extraordinary invincibility in the face of adversity but is now deemed a basic human adaptive system. This paper reviews the development and utility of resilience as a concept in the field of child and adolescent mental health. In addition, the primary risk and protective factors associated with resilience are evaluated. The implications of resilience research for the implementation of effective interventions in improving outcomes for children and adolescents will also be discussed.

Keywords: Resilience; clinical psychology; children; mental health

Research on resilience in childhood and adolescence examines why some individuals fall to pieces under life's major stresses while others appear to respond adaptively to traumatic life events, such as abuse, having a parent with mental illness, death of a loved one, extreme poverty and more global phenomena, such as natural disasters and war (Werner, 2000). Resilience has been researched by diverse disciplines: psychology, psychiatry, sociology, psychotherapy and neuroscience, with all attempting to place a definition on this commonly used term. This article will discuss (1) the development of the concept of resilience; (2) the risks and protective factors correlated with resilience; and (3) illustrate how a framework of resilience might inform the development and implementation of interventions that promote child and adolescent mental health.

Evidence for the Concept of Resilience

Resilience research flourished through examination of the development of psychopathology and research on epidemiology and risk. For example, research highlighted that many children, who were considered to be of high risk status due to their parent(s) having a mental illness, were able to adapt positively and maintain positive mental health despite adversity (Anthony, 1974; Glantz & Rolf, 1999; Luthar, 2006; Luthar & Cicchetti, 2000). Researchers attempted to understand what caused this heterogeneity in outcomes (Luthar & Cicchetti, 2000; Masten, 2001). Prior to this, negative assumptions had prevailed regarding the development of children and adolescents growing up in disadvantage. This "pathology" model was used by retrospective studies investigating the backgrounds of those people who had developed schizophrenia or alcoholism for example. This led to problems differentiating whether abnormalities in the people were *causes* or *consequences* of their illness (Werner, 1990) and this research implied the inevitability of poor outcomes.

However, longitudinal research highlighted that a high percentage of children and adolescents growing up in "high risk" settings had excellent long-term outcomes and did not develop any mental disorders. Garmezy (1991) details research of children living in poverty and less than half of the children repeated the patterns of their caregivers in adult life. Similar patterns were observed in a large longitudinal study of 500 children born in 1955 and assessed over 30 years (Werner, 2000) on the island of Kauia in Hawaii. In spite of the poverty and adversity faced by the children, a significant proportion were doing well. These children were identified as having better intellectual skills and reading ability and they were found to be more positive about themselves with a greater sense of internal locus of control when revisited again as adolescents.A similar study was conducted in Sweden (started in 1947) with children thought to be exposed to three or more factors associated with the onset of mental illness. More than half achieved successful independent lives in adulthood despite their earlier adversity (Cederblad, Dahlin, Hagnell, & Hansson, 1994). Herrman et al. (2011) emphasize such heterogeneity in the long-term sequelae of early experience and the role resilience plays in creating it.

These early studies on resilience emphasised what was then seen as the extraordinary qualities of resilience, describing the children as incredible and invincible, and publicising an idea of remarkable individuals possessing extraordinary mental strength. One of the earliest articles on this area of research at the time was called "*In praise of "invulnerables"* by Pines (1975). This was discarded, however, for the modern concept of resilience as positive adaptation or the ability to maintain or regain mental health, despite experiencing serious challenges or threatening

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circumstances (Masten, Best, & Garmezy, 1990). Research moved from the idea that adversity and stress invariably has a negative impact, to the current stance that resilience is a basic human adaptive system (Masten, 2001).

Risk and Protective Factors for Resilience

Resilient adaptation is necessary when children are exposed to threatening risk factors. Durlak (1998) defines risk factors as variables that increase the probability or likelihood of a negative outcome; these variables can be demographic or social indicators and some are more adaptable and amenable to change than others. Low socioeconomic status is one of the most predominantly researched variables highlighted as a major risk factor (Luthar & Zigler, 1991) as this is often combined with low-status parental occupation, low maternal education, large families, lone parenthood and ethnic minority. For example, children living in poverty are more likely to become ill and miss school, have poor school performance, developmental delays and develop a mental illness (Sapolsky, 2005). Other risk factors for negative long-term outcomes include abuse (emotional, physical and sexual; Margolin & Vickerman, 2007), neglect, communication difficulties, intellectual or physical disability, negative peer group, lack of parental support, a parent with mental health illness, divorce/separation of parents and wars or natural disasters (Desjarlais, Eisenberg, Good, & Kleinman, 1996; Durlak, 1998; Luthar, 2006). These risk factors, when occurring in combination, have multiplicative effects (Rutter, 1979). For instance, research indicates that the number of risks present in a child's life correlated significantly with the number of behavioral problems exhibited by the child (Garbarino & Kostelny, 1996; Rennie & Dolan, 2010).

As has been reported in the literature, studies have indicated that many children and adolescents exposed to multiple risks do not experience problems in later life (Werner, 1990). If the risk factors are not a *life sentence* for all children and adolescents exposed to them, and adversity in childhood did not lead to negative outcomes, then the variables that are capable of promoting resilience should be investigated.

Several protective variables have been associated with the promotion of resilience in children and adolescents (Luthar & Cicchetti, 2000; Martinez-Torteya, Bogat, von Eye, & Levendosky, 2009; Sapienza & Masten, 2011). Protective factors may be both intrinsic and extrinsic in nature; for instance they may come both from within the child and from the environment the child is growing up in (Benard, 1991). Traditionally, models of resilience portray resilience as a personality trait that is stable over time (Block, 1995). However, contemporary perspectives of resilience emphasise a transactional-ecological model of human development where the individual is constantly interacting with the environment and adapting to its demands (Betancourt & Khan, 2008). One example of exciting new research in this field investigates the neurobiology of stress and adaption, which attempts to map the impact of trauma on brain development and functioning (Derryberry, Reed, & Pilkenton-Taylor, 2003). Growing evidence indicates individual differences in biological sensitivity to negative and positive experiences, and highlights the importance of early intervention (Sapienza & Masten, 2011). This research provides a useful model for understanding crucial periods for both risk avoidance and resilience building, and may inform the configuration and timing of interventions (McGorry, Bates, & Birchwood, 2013).

Much research supports the transactional-ecological model indicating that the individuals' outcomes are transactional between themselves and the environment (Felner & DeVries, 2013). In general, researchers (Benard, 1991; Masten & Coatsworth, 1998) appear to identify three broad categories of protective factors in promoting resilience: (i) individual personality attributes or temperament (within the child); (ii) family characteristics or resources; and (iii) environmental influence or assets outside of the family (and this is the order in which they will be discussed below).

Intrinsic Protective Factors

In research on protective factors *within the child*, positive qualities which were reported regularly in resilient children have now been generalized into four specific attributes: social competence, problem solving skills, internal locus of control or autonomy and a sense of purpose and future. Social competence refers to children who are more responsive, active, empathetic, and have good communication skills (Luthar & Cicchetti, 2000; Masten, 2001). They are more capable of eliciting positive responses from others (Werner, 2000) and can establish positive relationships with peers. Masten (1986) shows that a sense of humor is another invaluable protective factor for the resilient child, allowing the child to look at a situation alternatively and giving them a release from the tension of the situation. Benard (1991) highlights that individuals with mental illness, disorders or addiction generally lack these qualities.

Problem-solving skills in the resilient child refer to the child's ability to think abstractly, flexibly and reflectively so they can find a solution for a problem, whether cognitive or social; and are able to change frustrating situations (Sapienza & Masten, 2011). This was highlighted as present in resilient children in a study of environments involved in armed conflict (Betancourt & Khan, 2008).

An internal locus of control is a regularly mentioned protective factor in the literature on resilient children. Internal locus of control refers to an individual's belief that they have control over their decisions and efforts and that they have the ability to change things, exert control over their own environment and shape their own life (Rotter, 1966). As a protective factor, it is connected with autonomy and a strong sense of independence (Garmezy & Masten, 1986) and self-esteem, self-efficacy (Benzies & Mychasiuk, 2009) and self-discipline (Rutter, 1985). This is illustrated in a study of adolescents with parents who have mental disorders (Fraser & Pakenham, 2009); the resilient teens possessed a strong internal locus of control and a strong consciousness of what was within their control and what they could not help or blame themselves for.

Similar studies with younger children have matched these results (Walsh, 2009), and particularly when the child is able to separate their internal image or concept of the parent from mental illness itself, as opposed to children who see the mental-health problem as part of, and embedded within, their representation of that parent.

Another intrinsic protective factor within the child is their sense of purpose and future; Benard (1991) refers to this as the most powerful predictor of positive outcomes in the face of adversity. Academic achievement has been highlighted as a protective factor across all socio-economic levels and appears to be linked with positive outlook, a strong sense of purpose and a motivation or desire to succeed, regardless of level of intelligence (Benzies & Mychasiuk, 2009; Radke-Yarrow & Brown, 1993; Sapienza & Masten, 2011).

Family-related Protective Factors

Family-related protective factors include a secure attachment relationship, high expectations and encouraging support. An attachment relationship refers to positive relationships or a close bond with a caring adult, not necessarily a parent. Rutter (1987) found that a good relationship with one parent was invaluable as the support and affection allow the child to form a trusting relationship. This is highlighted as particularly important after the death of a parent, where provision of warmth from the surviving caregiver was seen to directly affect resiliency (Lin, Sandler, Ayers, Wolchik, & Luecken, 2004). Attachment research highlights the primacy of a securely attached relationship within the first year as a protective factor in making the infant more resilient to stress (Pianta, Egeland, & Sroufe, 1990; Sroufe, Egeland, & Kreutzer, 1990; Werner & Smith, 1992).

Growing up in a family that has high expectations for the child also helps them to deal positively with adversity. The establishment of high expectations, accompanied by encouragement, fosters maturity, moral development, fulfillment of potential, and feelings of worth and capability (Benard, 1991; Durlak, 1998). Werner (2000) states that a productive role within the family can also encourage the child's independence and help the child feel wanted, needed and bonded to the family. Similarly associated with high expectations is the family's structure and discipline; if there is order and there are expectations for each individual, then a positive outcome is more likely.

Lastly, religion or spirituality within the family unit has also been identified as a protective factor, as it gives people meaning in life when faced with adversity. After traumatic events it can provide a hope or belief that it will *work out in the end* and a way of making sense of the events. For instance, research on countries in armed conflict highlight spirituality as protective (Betancourt & Khan, 2008).

Meso-level Protective Factors

Protective factors external to the child and the family also influence the development of resilience. For instance, teachers can be "adopted" by children as role models that they may not have at home and can be potent influences on children's lives (Werner, 2000). Research suggests that the most successful role models or mentors are those who invest time and energy and have regular and prolonged interaction with the children (Southwick, Morgan, Vythilingam, & Charney, 2006). In addition, a school's high expectations for children may foster high self-esteem, clear expectations, regulations, boundaries and encouragement and motivation to participate (Durlak, 1998; Rutter, 1979). In contrast, Benard (1991) emphasizes alienation from school activities as a major risk factor for involvement in drugs and alcohol, teenage pregnancy, school dropout and self-harm. Engagement and participation in school activities, academic or extracurricular, can act as a protective factor providing social support and participation in valued activities.

A caring and supportive community environment, which also encourages participation and fulfillment of potential, can also promote resilience within children (Benard, 1991). Indeed, a rich social network, involving intergenerational relationships, can be as instrumental as the family unit in developing resilience competencies (Yates, 2006). One of the most important community supports involves the provision of easily accessible public health resources, including, for example, childcare, education, healthcare, healthy recreation facilities and employment opportunities (Garmezy, 1991).

The importance of the community can be observed in the Native American population. Once a very cohesive and protected group with traditional tribal structure, clear role definitions and support, and strong intergenerational relationships, this population now has a significantly high level of suicide and alcohol dependence (Range et al. 1999). The breakdown of their communities has removed their protective structures; many Native Americans are now impoverished, alienated and without a sense of identity and research indicates that they are a high risk group for a range of physical and mental health outcomes (Range et al., 1999).

Since resilience is a dynamic multidimensional concept (Windle, 2011), it is difficult to predict the relative importance of each protective factor alone as the interaction between them is so subjective, and may even change throughout the life-span (Benzies & Mychasiuk, 2009). The resilient child is supported by their own formula of subjective protective factors coming from within themselves, the family and the wider social environment. Nevertheless, the evidence suggests that some protective factors may be more successful or efficacious than others; for example, Afifi and MacMillan (2011) highlight a stable family environment and supportive relationships as consistently the most effective for predicting good outcomes. In addition, some research indicates that external protective factors are inadequate without the initial base of a resilient personality (Rennie & Dolan, 2010). Thus, more extrinsic protective factors appear to act as a supplementary, and secondary, buffer. This finding is interesting as some traditional models portray resilience as a characteristic of the individual, influencing their perception, and responses to stress and adversity (Block, 1995; Block & Kremen, 1996). The research by Rennie and Dolan

(2010) depicts resilience as dynamic yet stable over time, and appears to support the traditional view of resilience as intrinsic to the individual. However, it is important to note that most of the evidence indicates that a multiplicity of risk factors can lead to increased problems for the individual and correspondingly, interventions can increase resilience and improve outcomes (Burton, Pakenham, & Brown, 2010).

Implications for Interventions

The research on resilience has implications for the development and implementation of effective interventions for children and adolescents. For example, interventions should focus on maximizing the availability of protective factors in the lives of vulnerable children where decreasing exposure to risk factors and stressful life events is not possible. Some of the individual protective factors (those considered genetically based, e.g. intelligence) cannot be completely altered but on a more global scale, a change could be affected by planning "environmental strategies" to increase protective factors for families and communities (Benard, 1991). Most of the research on interventions to promote resilience has focused on cognitive, social and emotional learning (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011), to enhance the individuals skills for causal reasoning, emotion understanding, and language ability (Luther & Cicchetti, 2007). Interventions that focus on enhancing the home or school environment, such as parent-training and school-based interventions (e.g. Perry pre-school study) have demonstrated particular effectiveness in improving outcomes for disadvantaged, 'at-risk' populations (e.g. Furlong et al. 2012; Schweinhart et al. 1993). As Masten (2001) stated, resiliency can be described as "ordinary magic"; it is common and can be promoted, it is not the *invincibility* once thought. Bonanno (2004) highlights that although it is not *invincibility* it is closer to *immunity* than *recovery*; that resilience is the ability to maintain equilibrium and is not a break from normal functioning. This is evidenced by the focus on optimal development in interventions (e.g. cognitive, social and emotional) to support this equilibrium.

The evidence from resilience research indicates that it is important that interventions recognise the mutual, transactional interactions between the individual and different aspects of their contextual surrounds, as endeavors to improve singular protective factors are likely to be ineffective (Luther & Cicchetti, 2007). In parallel to risk factors, research has revealed the positive cumulative effect of protective factors (Luthar, 2000) and so an intervention that approaches the situation holistically is likely to have greater success. The most effective interventions are thought to utilize the structures already set in place, such as community and teachers to ensure that a support structure is in place not merely for a short intervention period (Luther & Cicchetti, 2007).

Williams and Hazell (2011) raise the issue that given the many catastrophic natural disasters of recent times and the global economic crisis, there is an even greater need for already stretched mental health services. Given the scarcity of health care resources, research focused on predicting outcomes and utilisation of health care services is of great importance (Anda, Brown, Felitti, Dube, & Giles, 2008). Compared to typical child-based interventions, which are often crisis-oriented and deficits-focussed, research has suggested that the approaches aimed at sustaining resilience and promoting protective factors should be applied in those agencies and bodies responsible for funding and designing mental health services (Williams & Hazell, 2011). Masten (2011) underlines the need for a synthesis of theoretical and applied resilience frameworks to formulate the most effective evidence-based interventions. Recent research is focused on implementing this type of youth specific care, with a particular concentration on the developmental and cultural needs of young people living in 'high risk' situations (McGorry, Bates, & Birchwood, 2013).

Research has shown that preventative interventions, which boost protective factors, are more cost-effective than the aid for families already in crisis (Patterson, 2002). Effective intervention is more cost effective, due to reduced special education, reduced incarceration, increased wages, and less need for the welfare system (Aos, Lieb, Mayfield, & Pennucci, 2004; Furlong et al., 2012; Luther & Cicchetti, 2007). Focus should move to prevent disorders by anticipating the risks, and supporting the community, family and individual in promoting resilience. Several population-based interventions are likely to support resilience: social policies, school-based programmes and parent support (Sanders, Cann, & Markie-Dadds, 2003; Schweinhart, Barnes, Weikart, Barnett, & Epstein,1993; Williams & Hazell, 2011). For the clinician hoping to promote resilience and work toward prevention of mental health problems, the first steps have been emphasized as: (i) taking a detailed history to illustrate how the child has dealt with stresses in the past, and (ii) identifying and promoting protective factors in the child's life which optimise their response to adversity (Williams & Hazell, 2011).

The utility of resilience as a concept has been questioned by some researchers as it is not considered entirely necessary when discussing at-risk groups or in developing preventative interventions (Luther & Cicchetti, 2007). For instance, many effective preventative interventions have been developed without recourse to the framework of resilience. Nevertheless, the application of the resilience framework encapsulates the possibility of positive outcomes in the presence of adversity, and explores what is at the foundation of the existence of protective mechanisms and risk conditions (Daniel, 2003). Moreover, the field of resilience also provides a strong evidence base, thus enabling staff to draw from a body of research and incorporate the resilience building approaches. In addition, interventions that promote resilience encourage clinicians to focus on the individuals' strengths and competencies rather than on maladaptation and deficits.

The modern concept of resilience is one of "ordinary magic", whereby good outcomes can be achieved in the face of adversity. It is likely that future research will concentrate, firstly, on the multidimensional nature of

the concept (Yates, 2006) and, secondly, on the interplay between risks and protective factors. Mental health services should aim to promote the protective factors through the implementation of effective preventive interventions (Luther & Cicchetti, 2007), while attempting to narrow the risks where possible. The primary concern of those working with children and adolescents at risk is the prevention of maltreatment and abuse, but given that this is not always possible, the promotion of resilience is even more valuable (Williams & Hazell, 2011).

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