PSYCHOLOGICAL RESILIENCE:
THE DIFFERENCES THAT MAKE A DIFFERENCE IN ADULT RESILIENCE

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Abstract

Trauma, loss, and adverse experiences are events that can have profoundly negative impacts on an individual, social, and economic scale. However, these events occur for most people at some point within the human experience and the majority of those who are subjected to them recover. Broadly, this recovery, or successful adaptation to adversity, has been defined as psychological resilience. In examining possible trajectories of risk and resilience, many emerge. This fact raises questions regarding whether the factors and processes that influence and differentiate these divergent trajectories can be defined. It is hypothesized that, for adults, psychosocial factors of resilience can be categorized into 1) intrapersonal factors, 2) interpersonal factors, and 3) factors that transcend the personal. Through an examination of existing literature this hypothesis is supported. A discussion of implications for clinicians and interventions is provided as well as a summary of areas for further research.
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In memory of my partner Phil Glaister
1957-2013

Resounding echoes
Of our dazzling symphony
Play on in my heart
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CHAPTER 1: Introduction - History and Hypothesis

“Man never made any material as resilient as the human spirit.”
— Bern Williams

Introduction

Trauma, loss, and adverse experiences are events that can have profoundly negative impacts on an individual, social, and economic scale. However, these events occur for most people at some point within the human experience. The World Health Organization (WHO) states that these experiences are common across the lifespan (2013); a study conducted by the organization in 21 countries found a large number of respondents reported witnessing violence (21.8%), experiencing interpersonal violence (18.8%), accidents (17.7%), exposure to war (16.2%) or trauma to a loved one (12.5%). In looking at Canadian data specifically, Van Ameringen, Mancini, Patterson, & Boyle (2008) report that 76.1% of adults had been exposed to at least one traumatic event in their lifetime. Exposure rates are slightly more elevated for men, at 78.6%, versus women, at 73.8%.

The effects of trauma are far reaching. A history of trauma has been found to be related to higher levels of many behaviours that increase health risks including smoking, drug and alcohol misuse, risky sexual behaviors, and obesity (Felitti et al., 1998; Springs & Friedrich, 1992; Walker et al., 1999, as cited in Rheingold, Acierno, and Resnick, 2004). Additionally, exposure to trauma has been strongly correlated with posttraumatic stress disorder (PTSD), depressive disorders, anxiety disorders, and difficulties with emotional regulation (Coker et al., 2002; MacMillan et al., 2001 as cited in Goldsmith, Chesney, Heath, & Barlow, 2013); negative outcomes often include social and occupational impairments (Diagnostic and Statistical Manual of Mental Disorders, DSM-5, 2013). It is clear that the impact of trauma can be high in terms of
significantly diminished quality of life, increased physical and mental health risks, and increased social costs via the health-care and economic systems. However, it is important to note that the majority of those who experience loss and trauma recover (Masten, 2014, p. 7). Broadly, this recovery, or successful adaptation to severe adversity, has been defined as resilience (Rutten et al., 2013), and the high prevalence of this phenomenon has resulted in it being termed “ordinary magic” by Masten (2014, p. 22).

In examining possible trajectories of risk and resilience, many emerge (See Figure 1). This fact raises some significant questions. Why do many individuals, over time, recover to a previous level of well-being and functioning after experiencing an adverse event while for others this same event engenders maladaptive coping strategies and psychopathology? Why do some individuals experience a higher level of well-being or post-traumatic growth? Can the factors and processes that influence and differentiate these divergent trajectories be defined? Is there the ability to foster skills, qualities, and practices that would enhance resilience, limit the psychological impact of adversity, and create improved well-being? And conversely, what factors increase an individual’s risk for decreased functioning and psychopathology as a consequence of adversity? In light of scientific advances, are there neurobiological underpinnings to resilience that can be leveraged to ameliorate outcomes? This is not the first time these questions have been asked. The concept of psychological resilience and the makeup of its component parts have been studied for over four decades.
**Figure 1. Model of Resilience - Trajectories of Risk and Resilience**

![Diagram](image)

*Fig. 1. Model of resilience (a) and trajectories of risk and resilience (b). (a) Provides a model for illustrating the level of an individual’s mental wellbeing over time and illustrates a decline of mental wellbeing in response to a severe adversity such as exposure to trauma followed by recovery in mental wellbeing. An individual may vary in i) the level of mental wellbeing before the exposure, ii) The speed and severity of mental health disturbance in response to the exposure, iii) The speed and timing of mental health recovery and iv) level of mental health and wellbeing after the exposure-related disturbance and recovery. (b) four different trajectories (grey full, grey dashed, black full and black dashed lines) of individuals’ risk and resilience for developing psychopathology in response to exposure to a severe stressor/trauma. The grey full line depicts an individual with a positive level of mental health preceding the exposure, a consistent decline in mental health following the exposure without subsequent recovery. The grey dashed line depicts an individual with a positive level of mental health preceding the exposure (a more positive mental health than the others), with a temporary and relatively brief decline in mental health following the exposure followed by swift recovery up to a somewhat higher level of mental health than before the exposure. The full black line depicts an individual with a positive level of mental health preceding the exposure, a consistent decline in mental health following the exposure that recovers quickly to pre-exposure levels of mental health after a certain delay period in which the individual expresses psychopathology. The dashed black line depicts an individual with a positive level of mental health preceding the exposure, a consistent decline in mental health following the exposure that recovers quickly to pre-exposure levels of mental health and continues to increase thereby surpassing pre-exposure levels of mental health (this can be seen as post-traumatic growth). (Source: Rutten et al., 2013)*
History of Study

Masten (2011, 2014, p. 6) outlines four waves of research that have investigated psychological resilience. From the outset researchers recognized that it was important to understand strengths and positive adaptation as well as risks and pathological processes in order to prevent or mitigate negative outcomes of extreme adversity (Masten 2001, 2007 as cited in Masten, 2011). Pioneers in this area initially focused on “defining and operationalizing the concepts and their measurement” regarding resilience phenomena (Masten, 2011). Subsequent waves of research focused on areas of greater complexity in an attempt to understand the process of change, test emerging theories, and develop strategies to actively promote resilience (Masten, 2007 as cited in Masten 2011).

Wave 1 of research on psychological resilience emerged in the 1970’s as researchers focused on defining, measuring, and describing the phenomenon of resilience in the context of risk and adversity (Masten, 2014, p. 6). Inspired by examples of good outcomes in the face of extreme adversity, and curious about the variance in possible outcomes, these early researchers were interested in identifying the predictors of resilience. Masten (2014, p. 6) outlines that they focused on questions that asked: What is resilience? How can it be measured? What makes a difference?

Building on the work in Wave 1, Wave 2 researchers focused on the processes that facilitate resilience in the context of risk factors (Masten, 2014, p. 6). They investigated how protective, promotive, and preventative influences impact this process.

The second wave of research laid the groundwork for Wave 3 (Masten, 2014, p. 6). Researchers in this wave were interested in developing interventions that promoted resilience and testing emerging theories from the previous waves of research.
Wave 4 has evolved with advances in genetics, neuroscience, neuroimaging, and statistical analysis. Masten (2014, p. 7) states that questions associated with this wave are just emerging. This most recent wave of investigation into psychological resilience has focussed on a system-orientation and examines dynamic interactions found in epigenetics, brain development and the impact of hormones, and individual differentials in sensitivity to traumatic experiences.

Wave 4 researchers, have emphasized integration, neuroplasticity, how processes interact with the stress and reward systems, and whether it is possible to influence individual adaptive systems to foster resilience (Masten, 2014, p. 7; Rutten et al., 2013; Bonanno & Diminich, 2012; Masten & O’Dougherty Wright, 2010).

What has emerged from these waves of research is a multitude of insights and evidence regarding factors and processes implicated in risk and resilience. Over the past four decades, studies have examined resilience through a range of lenses including: psychological, sociological, and biological (Rutten et al., 2013), and with advances researchers have been able to refine the focus to a molecular and neuroendocrine level (Russo, Murrough, Han, Charne & Nestler, 2012). It is important to note that while any one study may view resilience through one or two of these lenses, a full understanding of resilience likely requires an examination of how these factors interact on many levels (Zuatra, Stuart Hall, & Murray, 2010).

An additional development from the vast research undertaken since the 1970’s has been a fundamental shift in focus from a deficit-oriented model that outlines pathology to approaches that emphasize strengths, health, well-being, and positive outcomes while also taking risk factors into account (Masten & O’Dougherty Wright, 2010; Masten 2011). Masten (2011) notes that this shift has been revolutionary in the field of psychology and psychiatry.
The Challenge of Defining and Explaining Psychological Resilience

Although the use of the word “resilient” is ubiquitous in colloquial language, the exact meaning from a psychological perspective is somewhat nebulous. The word traces its roots back to the Latin verb *resilire*, which means to leap back, and its use in the English language to the mid-17th century (Oxford Dictionaries, 2015). Resilience is formally defined as 1) “able to spring back into shape after bending, stretching, or being compressed”, and 2) “able to withstand or recover quickly from difficult conditions” (Oxford Dictionaries, 2015). It has been applied diversely to describe people, materials, ecologies, organizations, governments, and other systems (Masten, 2014, pp. 9-10). In the field of psychology, it is generally defined as “positive adaptation in the context of risk or adversity” (Masten, 2014, p. 9). Two specific conditions form the foundation of this definition: 1) exposure to risk and 2) evidence of positive adaptation despite these threats (Ong, Bergeman, & Chow, 2010).

Russo, Murrough, Han, Charne & Nestler (2012) offer a slightly expanded definition. They state that resilience “refers to the capacity of an individual to avoid negative social, psychological and biological consequences of extreme stress that would otherwise compromise their psychological or physical well-being”. They report that recent research views the phenomenon of resilience as an active adaptive process and not merely the absence of pathology.

Rutten et al. (2013) augment the generally accepted definition of resilience and state that while it can be considered “the successful adaptation and swift recovery after experiencing severe adversity during life”, it entails both the process of sustainability, i.e. preventing or mitigating mental health disturbances after adversity, and the process of swift recovery after experiencing life adversities.
Kent, Davis, and Reich (2013) view resilience as comprised of three fundamental elements: 1) a sustained adaptive effort that prevails in the face of challenge, 2) a bouncing back or recovery from that challenge, and 3) a process of learning and growth. They emphasize that it is a dynamic, embodied process rather than an inherent trait.

Masten (2014, p. 10) also offers a broadened definition of resilience that could apply across disciplines to assist in integrative research and application. In this context, she defines resilience as “the capacity of a dynamic system to adapt successfully to disturbances that threaten system function, viability, or development”.

Inherent in these varied but similar definitions of resilience are the concepts of “risk factors”, defined as discrete experiences, cumulative experiences, or chronic conditions, “positive adaptation”, such as good developmental outcomes, sustained competence, or recovery from trauma, and “protective factors” that serve to mitigate risks (Ong, Bergeman, & Chow, 2010).

In terms of patterns of resilience, Masten and O’Dougherty (2010) outline that four have been identified: 1) Resistance, steady and positive adaptive behaviours, 2) Recovery, a return to positive levels of functioning following adversity, 3) Normalization in which accelerated development occurs that places an individual back on a “normal trajectory” after an earlier experience of chronic conditions of adversity, and 4) Transformation, in which functioning surpasses the level experienced prior to adversity. The latter is often referred to as post-traumatic growth and is more often experienced by adults.
Developmental versus Adult Resilience

The research into resilience grew from a developmental perspective with a focus on children and youth (Luther, 2006, as cited in Zuatra, Stuart Hall, & Murray, 2010). It is only more recently that the phenomenon of adult resilience has gained increased attention. Pioneering researchers focused on positive developmental outcomes in the face of severe risk and adversity (Bonanno & Diminich, 2012). As longitudinal studies progressed, the study of resilience expanded to include resilience in early, middle, and late adulthood, and outcomes over the life-course emerged (Fava & Tomba, 2009). Continuing with the theme of achieving age-relevant markers as indicators of resilience some studies have tracked developmental task domains and a person-focused model (Masten & O’Dougherty Wright, 2010). Here individual competencies such as Ericson’s generativity versus self-absorption in early adulthood and integrity versus despair in later adulthood have provided guideposts similar to those in earlier stages of life. Other studies have investigated a single outcome variable in an attempt to understand protective processes that are salient for its development. These have been termed variable-focused models. And finally, some studies have combined person-focused and variable-focused strategies (Masten & O’Dougherty Wright, 2010).

Significantly, the considerable research that resulted from the past four decades points to many consistencies across the areas of resources, individual qualities, and relationships (Bonanno & Diminich, 2013). There appears to be an ability to categorize key features and factors associated with resilience into three categories: 1) intrapersonal qualities, 2) interpersonal qualities, and 3) the social context or relationships to larger groupings (Kent, Davis, & Reich, 2013). However, it is important to note that the nature of research into resilience has stemmed from developmental roots and the context of at risk children (Masten, 2014, p. 5). The ability to
apply these same categories in the same way to adult resilience is less clear. Other perspectives, such as the mind-body connection, may be important to incorporate into the adult context (Zautra, Stuart Hall, & Murray, 2010). And, the neurobiological research currently underway points to physiological underpinnings to resilience that are significant (e.g. Rutten et al., 2013).

**Hypothesis**

It is possible that the psychosocial factors influencing resilience in adulthood differ in some respects to those influencing developmental resilience. During developmental years social support through schools and other extended social networks may be crucially important in promoting resilience in children. However, this dynamic likely has different nuances for adults. Additionally, in adulthood more mature brain development and subsequent enriched cognitive functioning may enhance the ability to link purpose, meaning, and the concept of a greater consciousness to trauma and loss as an adaptive coping mechanism. This author hypothesizes that adult resilience is better categorized into 1) intrapersonal factors, 2) interpersonal factors, which can be viewed from a micro and macro perspective, and 3) factors that transcend the personal. While there are strong indications that there are also physical and neurobiological factors important for resilience, this document will primarily focus on psychosocial factors.

The remainder of this document will investigate the outlined hypothesis through an analysis of the existing literature. A discussion of implications for clinicians and interventions will be provided as well as a summary of areas for further research.
CHAPTER 2: Intrapersonal Factors of Adult Resilience

“In the depth of winter, I finally learned that within me there lay an invincible summer.”

— Albert Camus

Introduction

The inquiry into what intrapersonal strengths and behaviours some individuals possess that allows them to adapt and recover from adverse experiences better than others is at the core of many questions regarding psychological resilience. Over the past four decades, much has been researched and written regarding these factors. Masten points out that early research into resilience has illuminated a high degree of consistency in a list of factors that correlate with the manifestation of resilience in young people. She states that this list has been researched for over 20 years, but has changed little (Luthar, 2006; Masten, 2001, 2007; Wright et al., 2013, as cited in Masten 2014, p. 148). The “short list” presented by Masten (2014, p.148) contains ten factors associated with resilience in children and youth; of these, four relate to intrapersonal capabilities (see Appendix A). Ong, Bergeman, and Chow (2010, p. 84) also state that in both child and adult research personality characteristics are highlighted as potential protectors against stress and trauma.

In examining intrapersonal factors related to resilience it is important to note that resilience itself is generally not viewed as a stable personality trait (Ong, Bergeman, & Chow, 2010, p. 84). As discussed in the previous chapter, most researchers now consider resilience to be a dynamic process rather than a single enduring trait; this connotes change over time, an interaction among multiple variables, and the potential to increase resilience through the acquisition of specific skills, behaviours, and qualities over the life course (Masten, 2014, pp 167, 290). White, Driver and Warren, (2010, as cited in Lee et al., 2013) also note that the
greater the number of these attributes, the more likely it is that successful adaptation will occur after a disruptive event. As the etiology for psychopathology is often multi-factorial in nature (Skodol, 2010), it is not surprising that the etiology for resilience is similarly so.

This chapter will investigate the intrapersonal traits, behaviours, and skills that have been found to be particularly salient for adult resilience. As these are broad topics with vast amounts of research behind them, this chapter will emphasize factors that appear to differentiate a resilient response.

**Self-Efficacy/Mastery**

Lee et al. (2013) conducted a meta-analysis on the relationship between psychological resilience and its relevant factors. The analysis included over 31,000 participants from 33 studies published between 2001 and 2010. The large majority (78.8%) of the participants were adults. This research found that self-efficacy was the intrapersonal trait most strongly correlated with resilience. While these researchers defined this as “people’s belief that they have control over their own functioning and over what occurs in the environment” (Lee et al., 2013), it is a concept that has many nuances. Skodal (2010, p. 114) expands on the definition of self-efficacy above stating that a “resilient personality is characterized by a belief in one’s own ability to manage life’s challenges and situations effectively.” He further states that resilient people have an internal locus of control which promotes the belief that problems in life can be solved through one’s own efforts versus an external locus of control which contributes to the belief that adverse events are due to bad luck, “fate”, or actions of another. An additional distinction is made by Vahia, Chattillion, Kavirajan, and Depp (2011) who differentiate between self-efficacy and mastery - although they note that the two are sometimes used synonymously. Self-efficacy, they
define as being isolated to a specific task or domain, while mastery “involves a global sense of control over one’s future and life circumstances”.

The origins of this concept appear to start much earlier in life, and fostering a sense of self-efficacy, mastery and an internal locus of control may have developmental roots. Masten (2014, p. 79) discusses the role of developmental cascades in engendering resilience and the importance they might play in interventions. Developmental cascades refers to the concept that functioning in one area, level, or domain can extend to others and the idea that “competence begets competence” (Masten, 2014, p.79). She points to studies that highlight the link between competencies in developmental domains resulting in success in other domains in early adulthood. An example is work competence predicted by earlier success in academic and social contexts (Masten et al., 2010, as cited in Masten 2014, p. 81).

Accomplishment

The concept of accomplishment, related to the cascades described above, may also be important in the development of self-efficacy and mastery. Seligman, a pioneer in the field of Positive Psychology includes accomplishment (or achievement which he uses synonymously) as one of the central components in his theory of well-being (2011, p. 11). He notes that achievement is often pursued for its own sake, rather than for the positive outcomes that can result regarding positive emotions, meaning, or relationships (2011, p. 18). As outlined by Masten above, it is likely that as accomplishment builds in one area of life, it cascades into other areas, and a sense of self-efficacy develops.
Positive Affect/Emotion

The second factor most highly correlated with resilience in the meta-analysis conducted by Lee et al. (2013) is positive affect. This they defined as “the extent to which a person feels enthusiastic, active, and alert”. The view that positive emotion is implicated in resilience is not new; thirty-five years ago, Lazarus, Kanner, and Folkman (1980, as cited in Ong, Bergeman, Bisconti, & Wallace, 2006) posited that “under intensely stressful conditions, positive emotions may provide an important psychological time-out, sustain continued coping efforts, and restore vital resources that have been depleted by stress”. Until recently there was little evidence supporting this theory (Ong, Bergeman, & Chow, 2010). However, the Dynamic Model of Affect (DMA) proposed by Zautra, Smith, Affleck, and Tennen (2001, as cited in Ong, Bergeman, & Chow, 2010) delineates the associations between positive and negative emotion under stress. This model asserts that under everyday circumstances positive and negative emotions are independent constructs; however, under stressful circumstances this dynamic changes. In encountering stressful events, negative emotions are inversely related to positive emotions and increase rapidly – outpacing positive emotions. Thus, the ability to retain positive emotions under stressful circumstances may indicate a higher capacity for resilience. In researching the validity of this model, and looking at older adults specifically (62-80 years of age), Ong, Bergeman, Bisconti, and Wallace (2006) found that a significant proportion of individuals managed to experience positive emotions, even during times of overwhelming loss, and this ability had beneficial effects. In general, they found that the positive emotions of more resilient individuals were not easily eradicated by negative emotions experienced in stressful circumstances. More explicitly, their research produced five significant findings related to resilience: 1) the adaptive benefits of positive emotions are highest for individuals under stress;
2) positive emotions are more prevalent among higher resilient individuals; 3) those lower in resilience are more inclined to have difficulty regulating negative emotions and have a higher reactivity to everyday stressful life events; 4) the experience of positive emotions is especially important for less resilient individuals, and this becomes more important in the context of stress; and 5) over time, positive emotions assist individuals who are more highly resilient to effectively rebound from adversity (Ong, Bergeman, Bisconti, & Wallace, 2006).

Ong, Bergeman, and Chow (2010, p. 81) similarly state that positive emotion is a “basic building block” of resilience and suggest that higher resilient adults demonstrate a greater responsiveness to, engagement in, and “savoring” of positive events. They further posit that these differentials may be important in activating a cascade of positive experiences. This appears to be supported by the work of Hurley (2013). The general construct of savoring is defined by Bryant (2003, as cited in Hurley, 2013) as a “propensity to focus on and enjoy past, current, and future events”. Bryant and Veroff (2007, as cited in Hurley, 2013) elaborate on this to state that it enables the generation, intensification or prolonging of enjoyment of positive events through anticipation, reminiscing, or savouring the moment. Hurley (2013) found that higher levels of savoring the moment were associated with both higher levels of positive affect and satisfaction with life.

Seligman (2011, p. 16) also emphasizes the importance of positive affect and includes it as one of five principal components in his theory of well-being; he outlines savoring as a technique to increase the intensity and duration of positive emotion (Seligman, 2011, p. 42).
Positive Emotion and Self-Regulation

Masten (2014, p. 156) states that self-regulation skills, including management of attention, arousal, emotions and actions, appear to play a vital role in adaptation, development and resilience. Tugade and Fredrickson (2004) investigated the role of positive and negative emotions in the capacity for self-regulation in adults. These researchers, similarly to Ong, Bergeman, Bisconti, and Wallace (2006), were interested in the differences between the two types of emotions. They developed a model that outlines how positive emotions, experienced during times of stress, have the ability to help individuals regulate negative emotional experiences and cope more effectively. According to their Broaden-and-Build theory (Fredrickson, 1998, 2001 as cited in Tugade & Fredrickson, 2004), positive and negative emotions have different adaptive functions. Negative emotions narrow the “thought-action repertoire” in preparation for specific action, while positive emotions broaden the “thought-action repertoire” and expand the possible cognitions and behaviours that come to mind. The latter enables individuals to build out their psychological resources as they seek out innovative and creative thoughts and actions. And, over time, through experimentation and discovery, an arsenal of coping resources is developed. Significantly, Tugade and Fredrickson (2004) found that both high and low resilient individuals experienced equal levels of frustration in laboratory-induced stress conditions; however, more resilient individuals were able to experience positive emotion in the midst of stress and cope more successfully. This they found contributes to highly resilient individuals’ ability to recover better both psychologically and physically from negative emotions.
Positive Emotion and Life Satisfaction

Cohn, Fredrickson, Brown, Mikels, Conway and Phelps (2009) further investigated the role of positive emotions and the relationship to life satisfaction and resilience. Expanding on the Broaden-and-Build theory of positive and negative emotions, these researchers investigated the role of positive emotions specifically. They proposed that when an individual is experiencing positive emotions and using them to meet life’s challenges and opportunities, global life satisfaction can rise (Cohen, et al., 2009). Their results found that positive emotions were predictive of increases in both resilience and life satisfaction and negative emotions had small to negligible effects. This indicates, as earlier researchers have also found, that the two emotions function differently. Increases in life satisfaction were predicted by feeling good, not the absence of feeling bad (Cohen, et al., 2009).

In the meta-analysis conducted by Lee et al. (2013), life satisfaction was the fourth most important variable positively related to resilience. However, it appears from the results observed by Cohen et al. (2009) and Hurley (2013) that life-satisfaction may be strongly influenced by positive emotions.

Self-Esteem

In the meta-analysis conducted by Lee et al. (2013) self-esteem, defined as “judgments of self-worth, and/or the degree to which people like or dislike themselves”, was found to be the third most important intrapersonal protective factor correlated with resilience. Skodol (2010, p. 114) defines this trait as a sense of self-worth, self-respect, and self-acceptance and similarly emphasizes its importance in resilience.

Walter, Horsey, Palmieri, and Hobfoll (2010) investigated the role of self-cognitions with women who had previously experienced childhood abuse. They were interested in the role of
self-cognitions in the development of Posttraumatic Stress Disorder (PTSD) symptoms and the development of resources to assist with coping. As outlined by Hobfoll (1989, as cited in Walter et al., 2010), when coping resources cannot be developed in childhood, this leaves individuals more vulnerable to additional stresses and additional resource losses. These losses, range from energy resources, to interpersonal resources, family resources, and material resources that decrease an individual’s ability to cope with everyday challenges and thrive in life. The results found by Walter et al. (2010) demonstrated that PTSD symptoms were negatively related to self-esteem and self-efficacy. Conversely, self-esteem and self-efficacy were negatively related to resource losses later in life. Overall, the results indicate that the specific self-cognitions of self-esteem and self-efficacy may mitigate the effects of childhood abuse, and may provide a buffer against later resource losses (Walter, Horsey, Palmieri, & Hobfoll, 2010).

**Optimism and a Positive Future Orientation**

Lee et al. (2013) found that optimism was the fifth factor most positively associated with resilience. This was defined as “the tendency to believe that one will generally experience good outcomes in life”. Seligman and colleagues have also been interested in this trait as a protective factor. Since 2009, Seligman and the University of Pennsylvania have been working with the US military to increase the resilience of personnel and their families, and to decrease the occurrence of PTSD. Through this partnership, the Master Resilience Training (MRT) program has been developed and deployed as a pilot program. One of the objectives of the MRT program has been to change beliefs regarding the nature of adversity and an individual’s ability to solve problems (Reivich, Seligman, & McBride, 2011).

Reivich, Seligman, and McBride (2011) state that a key element of the MRT program, is Albert Ellis’ model of Activating Event-Belief-Consequent Emotion (ABC). Similar to the
concept of locus of control, Ellis’ model can be used to understand how positive and negative life events are viewed by individuals. Abramson, Seligman, and Teasdale (1978, as cited in Reivich, Seligman, & McBride, 2011) found that different attribution styles were used by optimists and pessimists. Pessimists tended to attribute the causes of negative events to permanent, uncontrollable, pervasive, factors. And, optimists, in contrast, tend to attribute the causes of negative events to temporary, changeable, specific factors. In aiding individuals to evaluate their explanatory styles and the accuracy of their thought patterns, the MRT program was designed to enhance optimistic beliefs regarding adversity and an individual’s ability to solve problems (Reivich, Seligman, & McBride, 2011).

The importance of optimism as a protective factor was also found by Segovia, Moore, Linnville, Hoyt, and Hain (2012) who conducted a 37 year longitudinal study with individuals who had been prisoners of war in Vietnam in the 1960’s and 1970’s. In looking at the development of psychopathology in the following decades, as expressed by the diagnosis of a psychiatric disorder, versus resilience, or the absence of such a diagnosis in the subsequent years, these researchers found that optimism was the most salient variable associated with resilience. In determining a definition of optimism, they also turned to the optimistic explanatory style outlined above. Segovia et al., (2012) note that the finding of optimism as the most important variable in determining resilience after severe trauma is significant; of the six variables they investigated, it was the only one that could be altered through training or intervention.

An important distinction regarding optimism is made by Vahia, Chattillion, Kavirajan, and Depp (2011). They differentiate between explanatory optimism and dispositional optimism, and outline that explanatory optimism relates to how an individual interprets past events while dispositional optimism is oriented towards future expectations. This claim is based on the work
of Carver and Scheier (1981, 1988 as cited in Scheier et al. 1989) who investigated dispositional optimism, coping and motivation. These researchers state that if individuals believe their desired outcomes are attainable, they continue to exert effort towards attaining them, even when doing so is difficult or painful. Dispositional optimism appears to be strongly linked to physical resilience, psychological resilience, and life-satisfaction. In examining the role of dispositional optimism and surgery recovery rates in coronary patients, Scheier et al. (1989) found a positive relationship between dispositional optimism, problem-focused coping style, faster recovery rates, and a faster return to life activities. He, Cao, Feng, Guan, & Peng (2013) also found a positive relationship between dispositional optimism and subjective well-being among hospitalized burn victims. Their findings indicate that burn patients with higher dispositional optimism are more likely to recover a higher degree of subjective well-being.

**Positive Cognitive Triad**

A view of resilience that connects positive emotions, self-esteem, and a positive future orientation is the Positive Cognitive Triad. This multi-faceted view of resilience is provided by Mak, Ng, and Wong (2011) who investigated the importance of positive cognitions in relation to well-being and resilience. They conceptualize resilience as an intrapersonal cognitive capacity that is “conducive to adaptive functioning” and propose that resilient individuals have a positive view of themselves, the world, and the future (Mak, Ng, & Wong, 2011). They hypothesized that this Positive Cognitive Triad promotes positive emotions and life satisfaction, and mitigates stress and adversity. Their findings demonstrated that such a relationship exists and suggest that the relationship between resilience and well-being can be mediated by the Positive Cognitive Triad. Significant relationships were found between resilience, life satisfaction and views of the self, the world, and the future in Chinese young adults.
Coping Style

Coping style has been identified as an important intrapersonal factor related to resilience (Skodol, 2010). Lazarus and Folkman (1984b, as cited in Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986) defined it as “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the person’s resources”. According the model of coping in response to a stressor developed by Lazarus and Folkman (1984, as cited in Skodol, 2010, p. 117), cognitive appraisal first occurs as an individual evaluates the potential for harm, threat or challenge presented. Harm is defined as damage already done, threat is the anticipation of harm, and challenge refers to demands that can be met. In the next phase, secondary appraisal, an individual evaluates what can be done to overcome or prevent harm or improve prospects for an effective outcome and mastery. Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986) outline that various coping options are evaluated; these may include altering the situation, accepting it, seeking more information, or holding back from impulsivity. As the appraisals converge, two broad styles of coping emerge: 1) problem-focused coping and 2) emotion-focused coping. The former relates to resolving a stressful situation by taking direct action and the latter refers to efforts to reduce the impact of the negative emotions aroused through changing the way the threat is attended to or interpreted. Generally, problem-focused coping is reported to be more strongly related to resilience (Simeon et al., 2007, as cited in Skodol, 2010 p. 117). However, it is important to note that the two types of coping can co-occur (Skodol, 2010, p. 117). An example is provided by Min, Yu, Lee, and Chae (2013). They researched adaptive and maladaptive cognitive emotional regulation approaches with adults who had depression or anxiety disorders. Their results found that the two most important predictors of resilience were positive reappraisal of negative life events as well as
refocussing on planning. These point to the impact of both problem-focused and emotion-focused coping styles and their potential for interaction.

Additionally, Lazarus et al. (1986) outline how an emotion-focused coping style can also be adaptive. If a situation is deemed negative and unalterable, then distancing (an emotion-focused coping pattern) may be adaptive; similarly, reappraisal of a stressful situation (another emotion-focused coping pattern) may also be adaptive.

**Hardiness**

Some researchers have taken the view that a number of specific factors comprise one resilience construct. Hardiness is one such concept. Kobasa (1979, as cited in Kobasa, Maddi, & Kahn, 1982) proposed that hardiness is a constellation of personality characteristics that aid resistance to stressful events. Hardiness is composed of control, commitment and challenge. Kobasa, Maddi, & Kahn (1982) expand on this and state that commitment is a tendency to be involved in whatever one is doing or encounters, and finding meaning and purpose in life’s activities; control is a tendency to feel and act influentially; and challenge is the belief that change is the norm in life, and that the anticipation of change provides opportunities for growth rather than a threat to security.

**Ego-Resilience and Flexibility**

A similarly multi-faceted construct is ego-resilience. This concept grew out of the work of Jack and Jeanne Block (Block, 1950; Block, 1951; Block & Block, 1980, as cited in Klohnen, 1996), and is defined as the capacity for resourceful adaptation to external and internal stressors; it is associated with adaptation to changing circumstances and stressors through flexibly applying problem-solving strategies. In researching this construct with adults specifically, Klohnen (1996)
identified four salient groups of traits related to resilience: confident optimism, autonomous and productive activity, interpersonal insight and warmth, and skilled expressiveness

**Emotional Intelligence**

Another multi-faceted construct of resilience is Emotional Intelligence (EI). This concept has been marked by a divide that developed in the 1990’s (Mayer, Salovey, & Caruso, 2008). Originally, EI was broadly defined as the ability to “identify, express and understand emotions, assimilate emotions in thought and to reflectively regulate both positive and negative emotions” (Salovey & Mayer, 1990, as cited in Gorgens-Ekermans & Brand, 2012). However, based, in part, on this model, Goleman (1995, as cited in Mayer, Salovey, & Caruso, 2008) produced a model of EI that includes a number of personality traits and competencies. While this model garnered a great deal of coverage in popular media, it also generated a great deal of criticism for moving the concept of EI into a realm that incorporated an eclectic mix of dispositions and emotional abilities with little or no justification for why some were included and others not (Mayer, Salovey, & Caruso, 2008). Mayer, Salovey and Caruso (2008) posit that EI is better viewed as a distinct group of mental abilities and refer to the Four-Branch model of EI they developed earlier (Mayer & Salovey, 1997, as cited in Mayer, Salovey & Caruso, 2008). This model states that EI can be arranged into four branches of emotional processing that are roughly hierarchical. They include the ability to 1) perceive emotions in oneself and others accurately, 2) use emotions to facilitate thinking, 3) understand emotions, emotional language, and the signals conveyed by emotions, and 4) manage emotions so as to attain specific goals.

In looking at a similar, ability based model of EI, Gorgens-Ekermans and Brand (2012) found that higher EI was significantly correlated with lower stress and burnout in nurses in South Africa. In particular they found the ability to manage emotions and control emotions were
critical EI dimensions negatively correlated with stress and burnout. This points to specific facets of EI as protective factors in resilience from stress accumulated over time. Similarly, Schneider, Lyons and Khazon (2013) found that ability-based EI facilitated stress resilience in a laboratory setting. Higher EI was related to lower threat appraisal, more moderate declines in positive affect, less negative affect, and a differentiated physiological responses to stress. Specifically, the dimensions of emotional perception and emotional understanding facilitated resilience. Interestingly, these researchers examined stress outcomes over time and found that the effects of EI on resilience appeared at the onset of the stressor and remained over time.

**Discussion**

In reviewing the interpersonal factors that provide a buffer against negative outcomes of adverse events as well as better recovery from them, it is evident that many build on one another and overlap. Cascades appear important in adult resilience as they are in developmental resilience. It is also evident that underlying constructs appear to harness constellations of factors to promote resilience. While some researchers have attempted to subsume specific factors into one defining construct such as ego resilience or hardiness, others have been more vague in suggesting that multiple intrapersonal factors are important in the overall process of resilience and the more factors one has the greater the probability of a positive outcome. Many researchers have attempted to understand the mechanisms underlying specific factors such as positive emotion or coping style. This is now being mapped to underlying neurobiology by Wave 4 researchers who are investigating reward and stress pathways in the brain, neurochemical transmissions, and links with the mesolimbic system (Rutten et al., 2013).

Of note is the finding that resilient individuals are not immune to the impact of adverse events. Tugade and Fredrickson (2004) found that a “polyanna” effect was not present in
resilient individuals; they felt the same frustrations as others, but were able to channel their internal resources more effectively.

The theme of emotional regulation – up-regulating positive emotions in particular, and down-regulating negative emotions to a lesser extent – appears to be underpinning many intrapersonal factors related to resilience. This ability may emerge as an essential foundation that other intrapersonal factors of resilience build from. Lee et al. (2013) state that the strong correlation of self-efficacy, positive affect, and self-esteem with resilience indicates that the construct is composed mainly of these factors. It is possible that emotional regulation, and the related neurobiology, is the causal factor underpinning these.

Overall, as has been pointed out by others (see Kent, Davis, & Reich, 2013, p. xiv, Masten, 2014, p. 148), many of the factors associated with resilience fit well into the category of intrapersonal traits, skills, and abilities. This is true from both a developmental and adult perspective of psychological resilience.
CHAPTER 3: Interpersonal Factors of Adult Resilience

“We are like islands in the sea, separate on the surface but connected in the deep.”
— William James

Introduction

The last chapter found resilience to be a process embodied in the individual; however, humans are social beings, and their functioning is embedded in an intricate network of interdependent relationships and social systems that also foster many regulatory and protective processes (Masten & Obradovic, 2008). This context, which can be viewed from both the micro and macro level, shapes the development of psychological resilience in many direct and indirect ways (Masten, 2014, p. 171). To fully understand psychological resilience an individual’s social functioning and context needs to be taken into account in addition to intrapersonal factors.

As stated in the previous chapter, Masten points out that early research into resilience has illuminated a high degree of consistency in a list of factors that correlate with the manifestation of resilience in young people. In the ten items “short list” presented by Masten (2014, p.148) six relate to support within various social contexts (see Appendix A).

This chapter will investigate how early social support relates to later adult resilience, and delve into the role that positive relationships and social support play within the construct of adult psychological resilience.

Social Support

In considering the factors that mitigate negative responses to traumatic events and life stressors, the important role that support from family, friends, and the larger community plays in assisting with recovery seems intuitive. Research does, in fact, support this. In a meta-analysis of trauma experienced by adults, conducted by Ozer, Best, Lipsey, Weiss, & Cooper, Harris (2003),
perceived lack of social support was one of the most influential predictors of developing PTSD following a traumatic event. The only variable found to be more predictive of the development of PTSD was the experience of disassociation during or immediately following the event (Ozer, et al., 2003). However, if a lack of social support predicts a trajectory of little resilience, the questions that arise include: 1) what emerges as this negative perception is removed and social support is perceived as neutral? 2) is positive social support a requirement of a more resilient trajectory? and, 3) what components of social support are particularly relevant for adult resilience? The following will provide an overview of both positive and negative social support as factors in psychological resilience in an attempt to answer these questions.

**Negative Social Support**

There are nuances to the type of social support and connectedness to others that are critical in ameliorating responses to trauma and stress or, conversely, exacerbating a negative trajectory. Social support can be defined as “those social interactions or relationships that provide actual assistance or a feeling of attachment to a person or a group that is perceived as caring or loving” (Hobfoll and Stephens, 1990, as cited in Feeny, Rytwinski, & Zoellner, 2014, p. 293). While the perception of positive supportive social connection has been found to be a protective factor in psychological resilience, it is important to note that negative social support can be harmful. The deleterious effects of negative social support are outlined by Andrews, Berwin, and Rose (2003) who found that negative social responses to trauma have a greater impact than positive responses. This type of response has been linked to worse trajectories of recovery and maladaptive reactions. Holea, Tarrier, and Wells (2001, as cited in Feeny, Rytwinski, & Zoellner, 2014, p. 294) state that the most common forms of negative social support take the overt forms of blame, doubt, and criticism. However, the more covert negative
reactions of indifference and invalidation of the trauma have also been found to be harmful (Pruitt & Zoellner, 2008, as cited in Feeny, Rytwinski, & Zoellner, 2014, p. 295). Overall, these negative reactions may challenge an individual’s experience, may suppress coping responses, may be generalized from a specific encounter to others, and ultimately may serve to silence survivors (Feeny, Rytwinski, & Zoellner, 2014, p. 296).

This silencing of survivors can be particularly harmful. Putting one’s feelings into words has been found to temper negative emotional experiences (Wilson & Schooler, 1991 as cited in Lieberman et al., 2007), and recent neuroimaging research has found that the process of affect labelling in particular diminishes the response of the amygdala and other limbic regions to negative emotional images while also increasing activity in specific regions of the cortex (Lieberman et al., 2007). This decreased activity in the amygdala points to the regulating effect of labelling affect on emotions while the increased response in the cortex may suggest the importance of this process in the reappraisal of the event (Lieberman et al., 2007). These results highlight the positive effect of language based processing of traumatic experiences and indicate the potential for positive social support to provide this.

Positive Social Support

The role of positive social support as a protective factor has much research behind it. However, as outlined above, this factor has many nuances that are important in fostering psychological resilience. In researching women with multiple risk factors for negative outcomes to stress and trauma, Notter, MacTavish, and Shamah (2008) found that distancing from non-supportive relationships as well as building supportive relationships with others provided significant turning points towards resilience. It is important to note that decreasing negative social support is not sufficient to increase resilience and positive outcomes (Feeny, Rytwinski, &
Zoellner, 2014, p. 299); it is the perception of positive support from others that is associated with better coping and resilience.

Feeny, Rytwinski, and Zoellner (2014) delineate a number of dimensions that are important in the overall construct of positive social support. The first of these is quality, defined as the connection and acceptance that make relationships meaningful, versus quantity. From the discussion above, it is evident that the quality of social support is critical. However, a diverse social network is also related to resilience. Platt, Keyes and Koenen (2014) add that a diverse social network is associated with lower levels of PTSD among individuals exposed to a range of traumatic life events in the US; they suggest that perceived social support is contingent on an active and diverse social network structure.

The second dimension delineated by Feeny, Rytwinski, and Zoellner (2014) is received support versus perceived support. Perceived support is “support that is interpreted to be available in the environment” regardless of the accuracy of this interpretation (Feeny, Rytwinsky, & Zoellner, 2014, p. 303). It is linked to the view that one is cared about and that help is available if needed. Received support relates to actual assistance provided. It is likely that the perception that support is available if needed is shaped by experiences with actual support (Norris & Kaniasty, 1996, as cited in Feeny, Rytwinsky, & Zoellner, 2014, p. 304).

The third dimension of positive social support is emotions versus instrumental support. Emotional support focuses on how well emotional needs are being met whereas instrumental support emphasizes practical needs. (Sarason, Pierce, & Sarason, 1994, as cited in Feeny, Rytwinsky, & Zoellner, 2014, p. 305). While a combination of the two is likely important for resilience, it is emotional support that appears to be most significant (Dikel, Engdahl, & Eberly, 2005 as cited in Feeny, Rytwinsky, & Zoellner, 2014, p. 305). Through supportive interactions
including attentive listening, validation of emotional experience, and expressions of positive regard (Burleson, 2003 as cited in MacGeorge, Samter, Feng, Gillihan, & Graves, 2007) the context in which negative appraisals of events can be consciously processed and potentially revised is created, ultimately leading to more functional perceptions (Burleson & Goldsmith, 1998; Pennebaker, Zech, & Rime, 2001 as cited in MacGeorge, Samter, Feng, Gillihan, & Graves, 2007).

In former World War II prisoners of war, a lack of emotional support after the war versus lack of instrumental support was one of the best predictors of PTSD (Dikel, Engdahl, & Eberly, 2005 as cited in Feeny, Rytwinsky, & Zoellner, 2014, p. 305). Similarly, Schnurr, Lunney, & Sengupta (2004) conducted a longitudinal study with Vietnam War veterans that differentiated emotional sustenance components of social support from instrumental assistance. They found lower emotional sustenance at homecoming was significantly correlated with the development of PTSD; further, they found that the failure to recover from PTSD over time was associated with lower current emotional sustenance.

A fourth dimension of positive social support outlined by Feeny, Rytwinsky, and Zoellner is formal versus informal support (2014, p. 306). Informal support is defined as support stemming from informal relationships such as partners, family, and friends, while formal support is offered via professional associations such as health care, mental health care, and police (Ullman & Filipas, 2001, as cited in Feeny, Rytwinsky, & Zoellner, 2014, p. 306). A combination of the two appears important with emotional support more often offered by established relationships, and practical assistance, such as food and shelter, offered by more formal networks. López-Fuentes & Calvete (2015) found that both formal and informal social support assisted resilience in women who had experienced intimate partner violence. They state
that both types of support can play an important role within the resilience process as they appear to promote other factors of resilience (such as normalizing reactions and promoting exercise).

Similarly, Maulik, Eaton and Bradshaw (2010) found in a longitudinal study that informal social support was associated with lower levels of psychological distress following trauma across life events. Specifically, they found that having the support of more than four friends was associated with reduced probability of distress when bereaved. Across life events such as life threatening illness, loss of job, or divorce, having a higher than median level of social support from a friend was associated with an almost 30% reduction in the probability of psychological distress. Further, having a higher than median level of support from a spouse and a relative, was associated with a 47–57% reduction in the odds of suffering from distress.

A final consideration offered by Feeny, Rytwinsky, and Zoellner is sustained versus acute support (2014, p. 308). In the meta-analysis conducted by Ozer et al. (2003) an important finding was that low levels of social support and related higher levels of psychological distress were strongest in studies in which the traumatic event occurred more than three years previously versus studies in which less than one year had elapsed. This may indicate that social support becomes more important over time (Feeny, Rytwinsky, & Zoellner, 2014, p. 309). However, both, again, appear important in resilience.

In researching support during the acute stage of trauma, Besser, Weinberg, Zeigler-Hill, and Neria (2014) found that among Israeli civilians who were in the midst of experiencing continuous life-threatening rocket fire and missile attacks, perceived social support from family, friends, and significant others mitigated acute anxiety. Others have found effects over the longer term. Koenen, Stellman, Stellman, and Sommer, (2003) found, in a 14 year longitudinal study with Vietnam War veterans, that recovery from PTSD was significantly influenced by perceived
level of community support and participation in the community. Along the same lines, the longitudinal study conducted by Schnurr, Lunney, & Sengupta (2004), and outlined above, found that failure to recover from PTSD over time was associated with lower current emotional sustenance.

**Attachment Theory**

It is through the lens of attachment established in childhood that positive relationships and the perception of and search for positive social support can be better understood. Initially, attachments are biologically driven relationships that are based on a child’s need for comfort, protection and nurturance (Zilberstein & Messer, 2010). Bowlby was the first to investigate this area and recognize the importance of attachment between a child and their caregiver. He believed that a mentally healthy infant or child needed a warm, intimate, continuous relationship with a mother or mother substitute (Bowlby, 1982). Bowlby (1973, as cited in Mikulincer & Shaver, 2013, p. 156) also outlined individual differences in attachment-system functioning. Attachment figures available in times of need, and sensitive and responsive to bids for proximity and support, foster a stable sense of security and a positive mental representations of the self and others. Conversely, attachment figures who are not reliably available and supportive promote negative models of the self and others. In this case, children find that their bids for proximity-seeking fail to relieve distress and their sense of security is destabilized. Bowlby (1982) stated that through relationships with attachment figures children develop an internal working model for subsequent relationships. He additionally posited that once formed, an individual’s attachment pattern is a stable organization of cognition, emotion and behaviour throughout life (1973, as cited in (Florian, Mikulincer, & Bucholtz, 1995).
Mary Ainsworth worked independently and with Bowlby to further understand attachment. She categorized attachments as either secure or insecure/avoidant or insecure/resistant (later categorized as insecure/ambivalent) (Ainsworth et. al, 1978 as cited in Zilberstein & Messer, 2010). When children are securely attached, Ainsworth believed their caregivers serve as a “secure base” from which they can explore the world and unfamiliar situations (Bretherton & Parke, 1992).

Both Bowlby and Ainsworth believe that a secure attachment involves having an internal working model of one’s caregiver as responsive and reliable and of oneself as deserving of love and attention (Ainsworth, 1979; Bowlby, 1969; as cited in Anderson & Gedo, 2013). Additionally, in securely attached relationships, the responsiveness of caregivers to an infant’s distress assists in regulating tension and bringing comfort and relief (Florian, Mikulincer, & Bucholtz, 1995). Conversely, a child with an insecure attachment may “have an internal working model that depicts his caregiver as unresponsive, his environment as dangerous or threatening, and himself as fundamentally undeserving of love and a secure attachment” (Ainsworth, 1979; Bowlby, 1969; as cited in Anderson & Gedo, 2013).

In developing a secure attachment, Siegel and Hartzell (2004, as cited in Carnes-Holt & Bratton, 2014) discussed the essential role of attunement. According to these authors, the attuned caregiver is seen as both emotionally responsive and consistent. It is through the caregiver’s ability to communicate empathy, understanding and acceptance that an attuned parent-child relationship develops that is vital for developing a secure attachment. Zilberstein and Messer (2010) state that it is through this attuned response from an attachment figure that the child internalizes a sense of safety and a working model of relationships. The repeated experiences of soothing, protection, nurturance and attunement promote the development of a child who can in
turn soothe themselves or self-regulate, experience a sense of safety in the world, as well as a sense of confidence.

**Attachment Style and Social Support**

Florian, Mikulincer, and Bucholtz (1995) investigated the relationship of a sense of social support to attachment style in adults over a variety of situations in which individuals might need assistance in coping. They found that securely attached individuals perceive higher levels of social support available and are more likely to seek social support in times of need. They suggest that securely attached individuals’ trust in others to provide support may underlie their tendency to seek support in times of need. They also propose that securely attached individuals perceive others as an effective means of affect regulation and would, therefore, be more likely to seek social support in times of need. Their results regarding securely attached individuals were similar for both emotional and instrumental support, as well as intra and extra-familial relationships. Of note, and similarly to Maulik, Eaton, and Bradshaw (2010), romantic partners were perceived as offering the most emotional and instrumental support.

Florian, Mikulincer, and Bucholtz (1995), also found that insecurely attached individuals, both avoidant and ambivalent, perceived a relatively low level of instrumental and emotional support available from others, and had a lower tendency to seek social support in times of need. Overall, their results suggest that internal working models of the self and others had been generalized and, as adults, reflect individuals’ orientations to social support.

More recently, Mikulincer, Shaver, and Pereg (2003) proposed that individuals with secure attachment styles have specific goal oriented security-based strategies designed to alleviate distress, build resources, and broaden perspectives. They differentiate this from the goals of insecure attachment strategies that aim to manage attachment-system activation and
reduce or eliminate the pain caused by frustrated proximity-seeking attempts. These strategies link back to affect and cognitions. Security-based strategies lead to dealing actively and constructively with threats and taking advantage of the enhanced creativity made possible by positive affect. Mikulincer, Shaver, and Pereg (2003) state that this enhanced creativity may help securely attached individuals find new ways to deal with events, enjoy task performance, and maintain a positive mood.

Intrapersonal Skills and Positive Relationships

Skodol (2010, p. 116) states that resilient individuals possess specific interpersonal skills that enhance the development and maintenance of relationships. He posits that through these skills, resilient individuals have more social support that assists in coping with trauma and stressful life events. While these skills may be considered intrapersonal factors of resilience, their importance is highlighted here as they are of benefit within a social context in building a network of social support. Within this realm, the concept of Emotional Intelligence (EI) and the elements of insight and warmth as well as skilled expressiveness, outlined as part of the construct of ego resilience in the previous chapter, are noteworthy.

Seligman (2011, p. 20) similarly highlights the importance of positive relationships and includes them as a core component of his model of well-being. Further, he has been instrumental in the creation of tools to promote their development. A module on strengthening relationships is incorporate in the in the US Army Master Resilience Training (MRT) program developed to enhance the resilience of those who serve in the armed forces. The curriculum is based on materials developed by the University of Pennsylvania, the Penn Resilience Program, and other work in the field of Positive Psychology (Reivich, Seligman, & McBride, 2011). The “Connection” module is designed specifically to strengthen relationships and challenge beliefs
that hamper positive communication; the focus is on relationships within military ranks as well as within families. The training in this module emphasizes effective communication, empathy towards others, a willingness to ask for help, and supporting others (Griffith, 2013).

The role that positive relationships have regarding re-integration into social networks is illuminated in studies of military personnel returning from conflict as well as peacekeeping troops. Positive re-integration including a positive homecoming reception by family, friends, and the community has been shown to be related to better post-deployment psychosocial adjustment with military personnel (Bolton et al., 2002, as cited in Blais, Thompson, & McCreary, 2009) and with peacekeepers (Bolton, Litz, Glenn, Orsillo, & Roemer, 2002). Similarly, other research has indicated that the success and quality of reintegration post-deployment may facilitate resilience, determining “whether acute stress reactions are either diminished to subclinical intensity or are preserved undiminished to become recognized at some later point …” (Fontana & Rosenheck, 1994, p. 683, as cited in Blais, Thompson, & McCreary, 2009).

Discussion
In reviewing the interpersonal factors that provide a buffer against negative outcomes of adverse events as well as better recovery from them, it is evident that an inter-relatedness and complexity exists. The research connects attachment style to perceived social support and seeking out social support as a means to buffer trauma and distress and enhance resilience. Additionally, a connection is advanced regarding attachment, affect regulation, and the ability to maintain positive mood. This links secure attachment to the intrapersonal coping strategy of positive mood regulation proposed in the previous chapter. It appears that the attachment patterns developed through interactions with early caregivers reverberate throughout an
individual’s life in subsequent relationships. And, the effect that these early patterns have on mitigating or exacerbating psychological resilience in adulthood is significant. Overall, the findings suggest that interpersonal factors of resilience related to attachment in childhood enable intrapersonal factors of resilience to develop, that, in turn, enhance interpersonal factors of resilience in adulthood.

The research also points to the interaction of an active and diverse social network in providing opportunities to develop a number of positive emotional connections and a higher perception of available support. Within this context the significant role of emotional support in buffering against negative trajectories and recovery after trauma is highlighted. Additionally, this support appears to be crucial both in the midst of trauma and over the longer term in ameliorating resilience. The research also indicates that perceived positive social support on a micro level is related to greater resilience than support on a macro level, although both appear to provide buffering effects.

Wave 4 researchers are investigating the link between interpersonal resilience factors and neurobiology. Over the past decade many inroads have been made in this area. Feder, Nestler, and Charney (2009) outline that social competence and the ability to effectively utilize social support are critical psychosocial factors in psychological resilience. They additionally state that the oxytocin produced through social interaction enhances the “reward value of social attachments and reduces fear responses”. And, Leiberman et al. (2007) found that affect labelling diminishes the response of the amygdala and other limbic regions to negative emotional images while also increasing activity in specific regions of the cortex (Lieberman et al., 2007). These and other studies point to the neurobiological underpinnings of resilience that link to interpersonal factors.
Overall, and in line with the findings of others (see Kent, Davis, & Reich, 2013, p. xiv, and Masten, 2014, p. 148), many of the factors associated with resilience fit well into the category of interpersonal interactions at the micro and macro level.
CHAPTER 4: Factors of Resilience that Transcend the Self

“He who has a why to live can bear almost any how.”
– Friedrich Nietzsche

Introduction

The previous chapters have focused on factors of resilience that are embodied by the self or relate to the self in a social context. This chapter will focus on those factors of resilience that are associated with transcending the self. Within this realm a connection to greater meaning in life and a sense of purpose can facilitate resilience as can a connection to a greater consciousness and spirituality. Although meaning in life and spirituality have been defined by various researchers in various ways with no clear agreement on definitions to date, the accumulation of findings indicate that both are factors in psychological resilience and may be inter-related. Many researchers have established that finding meaning in life is linked to “psychological and spiritual well-being, psychological strengths, and positive development” (Ryff, 1989, as cited in Shin, & Steger, 2014), and have found it to be a “facilitator of adaptive coping and adjustment” (Park & Folkman, 1997; Thompson, Coker, Krause, & Henry, 2003, as cited in Shin, & Steger, 2014).

Similarly, regarding religion, Seybold and Hill (2001) assert that religiousness can provide a protective effect on mental health in response to life stressors. Pargament and Cummings (2010, p. 193) further state that religion has unique effects on resilience via helping individuals to sustain a relationship with the sacred; they suggest resilience and even transformation can occur as a result. And, Masten (2014, p. 148) combines both spirituality and meaning (faith, hope, and the belief life has meaning) as a resilience factor in the “short list” for children and youth.

This chapter will investigate the role that self-transcendence plays in the phenomenon of psychological resilience and will explore why this is particularly salient for an adult population.
Meaning in Life

Frankle (1992, as cited in Larner, Blow, & Candland, 2011) states that assigning meaning to events plays a crucial role in determining the stressfulness of an event. Based on this concept, he posits that it is this meaning that helps individuals to cope with stress and trauma. Along the same vein, Masten and O’Dougherty Write (2010, p. 227) note that both older youth and adults under extreme stress have reported that feelings of transcendent hope and meaning kept them going. It is important to note that this aspect of resilience may be particularly salient for adults. Masten and O’Dougherty Write (2010, p. 228) state that younger children generally do not have the cerebral development for the skills and reflection required for the cognitive restructuring involved in making meaning and finding benefit in adversity.

The concept of creating meaning appears to be particularly important during adulthood. Erickson saw this concept as central to the issues of middle and late adulthood. He outlines that the central concern of middle adulthood is generativity versus stagnation (Erikson, 1975 as cited in Guinee, 1998). Generativity he defined as attempting to make something that makes a difference to society. During late adulthood Ericson emphasized the struggle between integrity versus despair (Erikson, 1975 as cited in Guinee, 1998). Integrity, he defined as, contentment and fulfillment as a result of living a meaningful life and having made a valuable contribution to society. Thus, as individuals transcend the self they connect to meaning, fulfillment, and contentment.

Seligman also highlights the importance of meaning making and includes it as a core component of this theory of well-being (2011, p. 17). He defines this aspect of his theory as belonging to and serving something that one believes is bigger than the self. Other multi-faceted constructs of resilience similarly highlight this factor. In the construct of ego-resilience,
productive activity is considered a core element that promotes resilience (Klohnen, 1996 as cited by Skodal, 2010, p. 115). And, in the paradigm of hardiness, the element of commitment, defined as the “tendency to be involved and find purpose and meaning in life’s activities and encounters” is also a core element of psychological resilience (Skodal, 2010, p. 115).

**Eudaimonic Well-Being versus Hedonic Well-Being**

The idea of well-being ensuing from meaning is both a contemporary and an ancient concept. Its origins can be traced back to ancient Greece and Aristotle’s *Nichomachean Ethics*, written in 350 B.C. (Ryff & Singer, 2006, as cited in Ryff, 2014). Ryan and Deci (2001) outline that Aristotle believed hedonic happiness to be a vulgar ideal that made humans “slavish followers of desire”. Hedonic happiness was defined by Aristippus as the sum of an individual’s total moments of pleasure; he advanced that the goal of life was to maximize this total. Instead, Aristotle believed that happiness is found in virtue – “activity of the soul in accordance with virtue” (Ryff & Singer, 2006, as cited in Ryff 2014). The term eudaimonia was first used by Aristotle to describe this state. Waterman, (1993, as cited in Ryan & Deci, 2001) proposes that, in contrast to hedonic happiness, eudaimonic happiness calls individuals to “live in accordance with their daimon, or true self”. He posits that eudaimonia occurs when an individual’s life is lived in congruence with deeply held values and a sense of self-realization occurs. McGregor and Little (1998, as cited in Ryand & Deci, 2001) found that the two constructs of hedonic well-being and eudaimonic well-being are in fact distinct. They established that meaning and integrity were disconnected from feeling happy and doing well while pursuing personal goals.

**Promotion of Resilience**

In viewing this concept in relation to resilience, Ryff (2014) points out that eudaimonic well-being is often forged in the context of adversity. In her review of numerous studies
investigating resilience after negative life events, she notes that those who are able to find meaning as they navigate losses and hardships seem to benefit both biologically from well-regulated biological systems, as well as phenomenologically.

A specific example of this was found by DeRoon-Cassini et al., (2009) who investigated psychological well-being with veterans living with spinal cord injuries. Significantly, they found that the severity of an individual’s injury was not related to psychological well-being; however, global meaning making was and accounted for a large portion of the variance observed in psychological well-being. Global meaning making they outline as the belief that one is living a purposeful life that is aligned with individual beliefs and values. This is linked to the definition offered by Park and Folkman (1997, as cited in Pargament & Cummings, 2010, p. 197) who state that global meaning involves beliefs, assumptions, and expectations about the world and one’s self. This is distinct from situational meaning making which is related to the appraisal of a threatening event and whether one is able to deal with it or not (Park & Folkman, 1997, as cited in Pargament & Cummings, 2010, p. 197). Global meaning making stems from factors such as having clear aims in life, feeling as though life goals are being achieved, having a sense that one’s daily activities are worthwhile, and perceiving one’s life as coherent and meaningful (Marsh, Smith, Piek, & Saunders, 2003, as cited in DeRoon-Cassini et al., 2009). DeRoon-Cassini et al., (2009) assert that the generation of meaning and purpose in life are important factors in positive adaptation following trauma and point out that similar results have been found with cancer survivors (Park, Edmondson, Fenster, & Blank, 2008 as cited in DeRoon-Cassini et al., 2009).

Others have found the same result in the oldest elderly population (those aged 85 or more) in which experiences of physical losses are prevalent. Nygren, et al., (2005) found that
perceived mental health was not correlated with physical health; they suggest that resilience is a form of compensating for losses of functional capacity and physical health developed via a purpose in life, self-transcendence, and a sense of coherence.

Davis, Nolen-Hoeksema, and Larson (1998) propose that making meaning of loss is done in two distinct ways: 1) through making sense of the loss and 2) through benefit finding. Benefit finding is defined as “identifying positive outcomes of an otherwise negative experience” (Pargament & Cummings, 2010, p. 198). Davis, Nolen-Hoeksema, and Larson (1998) found that 80% of partners of terminally ill individuals reported positive benefits six months after death; they further found that both making sense of the loss and finding some benefit from the loss resulted in less psychological distress at 6 months post-loss. In contrast, Murphy, Johnson, and Lohan (2003) found that only two percent of parents whose child had died from violent causes were able to find benefit in the death five years later. Those who did reported that either a sibling or friend had turned their life around in some way as a result of their child’s passing. This outcome points to the possibility that finding benefit may be easier with chronic illness, when the event is less violent, or when the loss is less unexpected.

**Spirituality and Religiousness**

Spirituality and religion can also facilitate a connection to something greater than the self and engender resilience. Pargament and Cummings (2010, p. 195) state that religiousness can play a significant role in mitigating life stressors and state that it is commonly linked to a search for meaning and a way to understand life experiences. These researchers broaden the concept of religiousness to include spirituality and define it as “a search for significance in ways related to the sacred” (Pargament, 1997, p. 32 as cited in Pargament & Cummings, 2010, p. 194). The “sacred” they define as encompassing concepts of God or another higher power, as well as
aspects of life that take on elevated meaning by their association with the divine. Examples include marriage and child rearing (Pargament & Mahony, 2005, as cited in Pargament and Cummings, 2010, p. 194).

More recently, Pargament and Sweeny (2011) have defined spirituality as “the journey people take to discover and realize their essential selves and higher order aspirations”. This particular definition of spirituality is very similar to the Aristotelean concept of eudaimonic well-being. These authors were instrumental in the development of a multi-dimensional program for the US military similar to the Master Resilience Training outlined in chapter three of this document. In providing an overview of this program, the Comprehensive Soldier Fitness (CSF) program, developed to facilitate resilience, health and well-being for those in the US Army, these authors outline that it is composed of components associated with physical, emotional, social, familial and spiritual functioning. They were integral in designing the spiritual component of the program, and they emphasize that it is related to the human spirit as opposed to a more theological sense of spirit. Spirit in this sense, they define as “the essential core of the individual, the deepest part of the self, and one’s evolving human essence”, and point out that it is also intimately linked to other “higher order qualities, including purpose and meaning, enlightenment, authenticity, interconnectedness, and self-actualization” (Pargament & Sweeny, 2011). They note that evidence indicates that those motivated by a strong human spirit are better able to accept the reality of a situation, develop creative coping strategies, find meaning in traumatic events, maintain an optimistic view of the future, access social support, develop the motivation to persevere, grow from adversity, and mitigate psychological concerns such as posttraumatic stress disorder (e.g., Frankl, 1985; Tedeschi & Calhoun, 2004, as cited in Pargament & Sweeny, 2011).
Promotion of Resilience

Brewer-Smyth and Koenig (2014) note that religion and spirituality may promote resilience in two ways – through both intrinsic and extrinsic forms of support. They define intrinsic support as being derived from religious beliefs that give meaning to traumatic events as well as support from a relationship with the divine; they view extrinsic social support as stemming from other members of the faith community in the form of emotional and instrumental support.

Stratta, et al., (2013) separated the constructs of religiousness and spirituality in an Italian population who experienced an earthquake. Those who defined themselves as religious rather than spiritual coped better after the earthquake. These researchers note that it is possible that a natural disaster, such as an earthquake, is shared by a population as a whole and the social support offered by a faith community may be adaptive at the macro level. Additionally, these researchers posit that rituals associated with a formal faith based religion may provide a sense of order and control for those affected, and self-regulation through these rituals, as well as ceremonies and rules for living, may help to offset uncertainty and help maintain control in the aftermath of disaster. As Brewer-Smyth and Koenig (2014) suggested, these findings point to both extrinsic and intrinsic support. These findings further indicate religiousness as promoting resilience to a greater degree than spirituality.

There is some evidence of a temporal importance to religion and spirituality in the face of trauma. Besser, Weinberg, Zeigler-Hill, & Neria (2014) found that during the acute stress of life-threatening missile attacks in Israel, religiousness was not significantly associated with resilience in female civilians. This raises the question of whether religion and spirituality are
more effective in making meaning of events after an event has passed - during less acute stages of stress - or in a long-term struggle.

This possibility is supported by a longitudinal study conducted by Murphy, Johnson, and Lohan (2003) who researched a group of parents who had recently lost a child to a violent death. At the end of the first year a minority (12%) had found significant meaning in the death. At five years 57% of the parents had been able to find meaning in the death. Significantly, these researchers found that religious coping predicted a greater ability to find meaning in the child’s death five years post-loss (Murphy, Johnson, & Lohan, 2003). Those who were able to find meaning in the loss experienced less mental distress, higher rates of marital satisfaction, and better physical health than those who were not able to find meaning. Other longitudinal studies (e.g. Herbert et al., 2007; Koenig, 2007; Pargament et al., 1994, as cited in Pargament & Cummings 2010) have also found that religion offers emotional benefits in relation to trauma and stress over the long term. These results point to religion as a factor in resilience and as well as a temporal nature to this factor.

**Negative Trajectories Associated with Spirituality and Religion**

It is important to note that spirituality has also been linked with less resilient trajectories. Pargament, Koenig, Tarakeshwar, and Hahn (2001, as cited in Brewer-Smyth & Koenig, 2014) report that hospitalized patients who experienced a religious struggle, and particularly those who felt abandoned or unloved by God or those who blamed the devil for their illness, may be at increased risk for mortality.

Spiritual struggles are defined as “efforts to transform or conserve a spirituality that has been harmed” (Pargament, Murray-Swank, Magyar, & Ano, 2005, p. 247 as cited in Pargament & Cummings, 2010, p. 204). These struggles can be interpersonal, representing a struggle
between individuals in a faith community, or intrapsychic, representing an individual’s struggle with doubts and questions regarding core religious beliefs. Spiritual struggles can lead to negative religious coping. Pargament, Magyar, Benore, and Mahoney (2005) found that perceptions of sacred loss and violation were associated with negative religious coping including questioning perceived punishment from God, spiritual and religious discontentment, demonic reappraisal, reappraisal of God’s power, and pleading for divine intervention. This type of coping has been associated with anxiety, phobic anxiety, depression, paranoid ideation, obsessive-compulsiveness, and somatic concerns (Pargament & Cummings, p. 205). Overall, negative religious coping results in greater impact of trauma and emotional distress in relation to negative life events and increases the likelihood of negative outcomes (Pargament & Cummings, p. 205).

Discussion

The importance of factors that transcend the self in buffering against adverse life events as well as in recovery from them have a great deal of evidence behind them; however, this area of resilience has garnered less attention from researchers than intrapersonal and interpersonal factors of resilience. Pargament and Cummings (2010, p. 207) state that religiousness in particular has been neglected or viewed as having a diminished role in resilience for many years. This appears to be changing; the broader concept of spirituality is being embraced by the US Army as it proactively strives to enhance the resilience of military personnel and their families.

The factors of resilience that transcend the self include making meaning from negative events as well as spiritual and religious elements that assist with coping. There are overlapping portions of these factors that indicate they are inter-related. Through promoting positive affect, self-regulation, and social support, these factors also appear to be linked to both intrapersonal and interpersonal factors of resilience. And, as suggested by Masten and O’Dougherty Write
(2010, p. 228) these factors emerge as particularly salient within the construct of resilience from an adult perspective.
CHAPTER 5: Discussion and Implications

“A good half of the art of living is resilience.”
— Alain de Botton

Discussion

The hypothesis outlined in chapter one of this document was that the psychosocial factors influencing adult resilience differed to some degree from those influencing developmental resilience. Specifically, it was hypothesized that adult resilience is better categorized into 1) intrapersonal factors, 2) interpersonal factors, which can be viewed from a micro and macro perspective, and 3) factors that transcendence the self. The current overview of existing research supports this hypothesis. The inclusion of a category called self-transcendence and the merging of micro and macro interpersonal factors into one category are variances from categories of resilience proposed by other researchers (see Masten, 2014, p. 148, Kent, Davis, & Reich, 2013, p. xiv).

The proposed perspective takes into account brain development that enables the adult capacity for more complex thought, reflection, cognitive restructuring, and the ability to grasp abstract concepts. It also takes into account the psychological tasks of middle and late adulthood that emphasize the importance of creating, and reflecting on, meaningful contributions to society (Ericson, 1975 as cited in Guinee, 1998).

An interesting finding that has emerged from this research review is that factors that enhance adult resilience appear to include both hedonic and eudaimonic aspects of well-being. Some aspects of resilience, such as positive emotion and optimism, are linked with hedonic well-being, while other aspects, such as purpose and meaning, are linked with eudaimonic well-being.
Another interesting finding that emerged was that four of the five core elements of Seligman’s (2011) theory of well-being fit well into the categories of resilience proposed. Positive Emotion, Achievement, Positive Relationships, and Meaning all fit well into the categories of intrapersonal factors, interpersonal factors, or factors of self-transcendence. The only element that is more vague in terms of fit is the element of Engagement.

Implications

The finding that the factors of adult resilience fit well into the categories hypothesized has implications for clinicians in terms of assessment and interventions. As the US Army has done, there is an opportunity to proactively enhance resilience in clients by fostering specific capabilities. As trauma, loss, adverse experiences, and stressors are very likely to occur at some point over the life course for all, building skills, connections, and practices that will assist when they do occur, could make a significant difference in terms of resilience.

Assessment

In assessing the functioning of adult clients and their capacity for resilience clinicians may want to specifically investigate the categories outlined and the robustness of factors within each. As proposed by Kent, Davis, and Reich (2013), among others, the process of resilience is a dynamic one that is multidimensional. Instead of defining constellations of specific factors that are subsumed under one construct such as hardiness or ego-resilience, the current research points to the importance of having a variety of protective factors within each category that can be harnessed as needed to buffer against negative life events, and aid in recovery afterwards. And, as stated by White, Driver and Warren, (2010, as cited in Lee et al., 2013), the greater the number of these attributes one has, the more likely it is that successful adaptation will occur after a disruptive event.
The evaluation of client protective factors within these categories would illuminate important gaps and provide clearer direction for therapeutic interventions to enhance targeted skills and capacities versus a broad list of possible factors that could be enhanced. The ranking of intrapersonal factors of resilience highlighted by Lee et al., (2013) provides specifics regarding the most salient aspects to focus on. Wide social networks, connections at the micro level, positive social support versus negative social support, and emotional support versus instrumental support outlined by Feeny, Rytwinski, and Zoellner (2014) illuminate the nuances in bolstering interpersonal factors of resilience. And, the ability to find purpose and meaning in life, and a connection to something greater than the self appears to be have increased significance in the occurrence of adult resilience.

**Interventions**

While an outline of interventions that could be utilized to bolster resilience and promote factors within the categories of resilience identified is beyond the scope of this document, understanding how to work with clients within this context would be important for clinicians. As stated above, an assessment of gaps in factors of resilience could provide initial focus. Then, exploring ways to increase specific protective factors where gaps exist and decrease overall risk factors related to resilience provides a path forward. It would be possible to develop a program to enhance resilience for clients who are struggling to recover from trauma, adverse events, loss or stress, as well as clients who are functioning at a more optimal level.

Additionally, similar to the initiative undertaken by the US Army, it may also be possible to develop a program to bolster resilience in a broader adult population. The focus of this type of program would be to outline a protocol for psychoeducation and efficacious interventions that
enhance salient factors aligned with intrapersonal, interpersonal, and self-transcendent categories of resilience.

**Limitations and Future Research Directions**

There are some limitations to this review of adult resilience that are important to note. These also have implications for future research. While some of the studies included are cross-cultural, and an effort was made to include meta-analyses, the majority of the research is North American and Western oriented. This has limitations regarding the generalization of these findings to other populations. The inclusion of more studies that provide a non-Western perspective would provide further evidence that the findings regarding the factors of adult resilience are common cross-culturally.

A further limitation is the possibility of gaps in the research and literature included. This could result from the scope of the search terms used or from the scope of the search engines employed. Additionally, my own personal biases may have influenced the search terms used as well as the research reviewed and included in this document. And, my own experiences with trauma, stress, and loss, and the process of resilience that I personally have undergone may have influenced not only the search terms used, but also the original hypothesis proposed.

As indicated above, the current overview is not a meta-analysis. While a wide range of research was included, a methodically undertaken meta-analysis investigating the three categories of adult resilience identified here would provide greater evidence of their validity and reliability.

Additionally, the current overview of adult resilience examined factors from a psychosocial perspective. However, there are biological, neurological and even molecular
perspectives that have been illuminated and identified as also being important in the process of resilience. As outlined by Zuatra, Stuart Hall, and Murray (2010), a full understanding of resilience likely requires an examination of how factors interact on many levels.

Overall, mapping neurobiological findings to the broader categories of intrapersonal, interpersonal, and self-transcendent factors of resilience would be an important next step in bridging this review with the existing and evolving neurobiological research.

As outlined in chapter one, Wave 4 research into resilience, is experiencing increased attention and has made significant strides in the understanding of the neurobiological underpinnings of resilience. Linking the emerging neurobiology to specific psychosocial factors of resilience such as attachment and emotional regulation has been made possible with advances in the field. As outlined by Wu et al. (2013) the hypothalamic-pituitary-adrenal (HPA) axis, oxytocin, neural peptide Y, the dopaminergic and serotonergic systems, brain-derived neurotrophic factor (BDNF), as well as the reward and fear neural circuitry all appear play a part in resilience.

Another area for future focus is the definitions used within this field of study. As stated previously, an agreed upon definition of resilience remains elusive. As indicated by Masten (2014, p. 10), a collaborative approach may assist in finding a definition that is broad enough to include research from multiple disciplines and narrow enough to accurately describe the phenomenon. Additionally, definitions regarding recovery, adaptive coping, and posttraumatic growth all would benefit from more precise definitions. It is possible that these definitions remain somewhat nebulous as they focus on well-being versus pathology or the absence of it. This represents the profound shift in psychology that has taken place in researching resilience that moves the focus towards optimal functioning.
Finally, delving further into inventions that align with the three categories of resilience factors identified would provide greater direction for clinical treatment and would also provide input into the development of an overall program to enhance adult resilience.

**Concluding Thoughts**

In viewing trauma, loss, and adverse life events and the trajectories of coping and adaptation that result, many questions arose. These included: Why do many individuals, over time, recover to a previous level of well-being and functioning after experiencing an adverse event while for others this same event engenders maladaptive coping strategies and psychopathology? Why do some individuals experience a higher level of well-being or post-traumatic growth? Can the factors and processes that influence and differentiate these divergent trajectories be defined? Is there the ability to foster skills, qualities, and practices that would enhance resilience, limit the psychological impact of adversity, and create improved well-being? And conversely, what factors increase an individual’s risk for decreased functioning and psychopathology as a consequence of adversity? In light of scientific advances, are there neurobiological underpinnings to resilience that can be leveraged to ameliorate outcomes?

The present review of existing research has provided answers to most of these questions and has brought to light significant variances between different trajectories of psychological resilience. In addition, the review of the literature has highlighted specific categories of factors important in fostering resilience. The hypothesis that these categories of factors can be viewed as intrapersonal factors, interpersonal factors, and factors that transcend the self has been supported.

Masten (2014, p. 22) has stated that resilience following negative events is the norm for most and terms it “ordinary magic”. This research indicates that for adults there are specific pathways to enhance the probability of experiencing this phenomenon. Understanding how to
buffer against trauma and increase the potential for positive trajectories after adversity has the potential to provide a better life for many.
References


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### Appendix A

The Short List of Widely Reported Factors Associated with Resilience in Young People and Implicated Adaptive Systems

<table>
<thead>
<tr>
<th>Resilience Factors</th>
<th>Adaptive System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective caregiving and parenting</td>
<td>Attachment, family</td>
</tr>
<tr>
<td>Close relationships with other capable adults</td>
<td>Attachment, social networks</td>
</tr>
<tr>
<td>Close friends and romantic partners</td>
<td>Attachment, peer and family systems</td>
</tr>
<tr>
<td>Intelligence and problem solving skills</td>
<td>Learning and thinking systems of the CNS</td>
</tr>
<tr>
<td>Self-control; emotional regulation; planfulness</td>
<td>Self-regulation systems of the CNS</td>
</tr>
<tr>
<td>Motivation to succeed</td>
<td>Mastery motivation and related reward systems</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>Mastery motivation</td>
</tr>
<tr>
<td>Faith, hope, belief life has meaning</td>
<td>Spiritual and cultural belief systems</td>
</tr>
<tr>
<td>Effective schools</td>
<td>Education systems</td>
</tr>
<tr>
<td>Effective neighbourhoods; collective efficacy</td>
<td>Communities</td>
</tr>
</tbody>
</table>

Note: CNS: Central Nervous System

Source: Masten, 2014, p. 148
Appendix B

Confirmation of Completion of Ethics Training

From: Brian Guthrie <bguthrie@cityu.edu>
Sent: Monday, March 30, 2015 11:20 AM
Subject: IRB Research with Human Subjects Training Module: Hilary Edwards Confirmation of Completion of Ethics Training

Hi Hilary

Please keep a copy of this email to confirm successful completion of City University of Seattle Research Ethics Training course.

Please forward this email to your research supervisor. Please indicate on your Ethics Protocol submission to the IRB the date of this email as verification that you have successfully completed ethics training.

cheers

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