CHAPTER II
CONCEPTUAL AND THEORETICAL FRAMEWORK

Most people are exposed to at least one violent or life-threatening situation during the course of their lives (Ozer, Best, Lipsey, & Weiss, 2003). Not everyone copes with these potentially disturbing events in the same way. Some people experience acute distress from which they are unable to recover. Others suffer less intensely and for a much shorter period of time. Some people seem to recover quickly but then begin to experience unexpected health problems or difficulties concentrating or enjoying life, the way they used to. However, there is evidence that large numbers of people manage to endure the temporary upheaval of loss or trauma remarkably well, with no apparent disruption in their abilities to function at work or in close relationships, and indeed some of them seem to move on to new challenges and greater heights with apparent ease. To illustrate, research suggests that about 40-60% of adults in any community have been exposed to trauma (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Yehuda, 2004), yet only a fraction (8%) of the general population develops acute and chronic stress reactions (American Psychiatric Association, 2000). This positive capacity of people to cope with stress and catastrophe is known as resilience (Bonanno, 2004), and is often used to distinguish between people who react to adversity with symptoms of distress, and other people who, in similar conditions, do not experience distress at all (Dyer & McGuinness, 1996; Rutter, 1987).

In this chapter, the conceptualization of resilience, based on existing theoretical knowledge and historical antecedents, is introduced in detail in terms of its current utility to reflect upon the concept. From this perspective, concept analysis of resilience including the definitions, theories, recent approaches, correlates of resilience, and conceptual issues is presented.

Defining Resilience

Coming from the Latin etymology resilire, resilience means ‘to rebound, recoil, or spring back’ (Oxford Dictionary, 2013). The dictionary definition of resilience suggests that it is ‘the power or ability to return to the original form or position after being bent or compressed, and/or the ability to recover readily from illness, depression, or adversity’ (Merriam-Webster Dictionary, 2014).
Definitions of resilience vary as do the perspectives on it (Khanlou & Wray, 2014), yet despite the lack of universally accepted scientific definitions of resilience (Wald, Taylor, Asmundson, Jang, & Stapelton, 2006), there exist several definitions that share in common a number of features, all implicating resilience with notions of plasticity and recovery, human strengths, disruption followed by growth, adaptive coping, and positive outcomes despite exposure to adversity, and at the same time reflecting the diversity in resilient behaviors across contexts and time (refer to Table 1).

These definitions of resilience illustrate considerable divergence in the literature with regard to contextual and temporal influences (Gillespie, 2007), and purported sources of resilience (Wald et al., 2006). While some researchers assume resilience to be a trait-like stable characteristic (Block & Kremen, 1996; Wagnild & Young, 1990, 1993), others emphasize upon it as a dynamic process (Luthar, Ciccheti, & Becker, 2000) or an outcome (Maddi, 2005). Some researchers assume that resilience is located ‘within the person’ (Davidson et al., 2005), and others propose multiple pathways to resilience, including biological, psycho-social, and socio-cultural factors (Rutter, 1987; Werner, 1993). Further, some hail resilience as a global feature (Masten, 2001), and others favor it as being relative within certain contexts like academic, behavioral, psychological functioning, or social competence (Luthar et al., 2000). Lastly distinctions among definitions of resilience typically involve differences in criteria or standards for resilience and the nature of adversity required for resilience to be demonstrated, such that prevalence of resilience ranges from 15% to 50% depending upon the definition of resilience and the population studied (Bonanno, 2004; Richardson, 2002; Tugade & Fredrickson, 2004). These rates further suggest that the trait, process, or outcome of resilience does not function uniformly and automatically, but waxes and wanes in response to contextual variables and develops over time (Flach, 1988; Richardson, 2002; Rutter, 1987; Staudinger, Marsiske, & Baltes, 1993).

In the wake of 21st century resilience, however, is defined by two phenomena (Zautra, Hall, & Murray, 2010).

First is recovery or how well people bounce back and recover fully from a challenge (Earvolino-Ramirez, 2007; Masten, 2001; Rutter, 1987). People who are resilient reportedly tend to quickly regain physiological, psychological, relational, and
### Definitions of Resilience across different contexts

<table>
<thead>
<tr>
<th>Authors</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Block &amp; Kremen (1996)</td>
<td>An ability to flexibly and resourcefully adapt to internal and external stressors, resilience connotes an individual’s predisposition to resist anxiety and engage the world in a positive way, as manifested by a positive temperament and openness to experiences.</td>
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<td>Bonanno (2004)</td>
<td>Resilience is the ability of adults in otherwise normal circumstances, who are exposed to an isolated and potentially highly disruptive event such as the death of a close relation or a violent or life-threatening situation, to maintain relatively stable, healthy levels of psychological and physical functioning as well as the capacity for generative experiences and positive emotions.</td>
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<td>Connor &amp; Davidson</td>
<td>Resilience embodies the personal qualities that enable one to thrive in the face of adversity. It is a multidimensional characteristic that varies with context, time, age, gender, and cultural origin, as well as within an individual subjected to different life circumstances.</td>
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<td>Luthar, Lyman, &amp; Crossman (2014)</td>
<td>Resilience is a dynamic process wherein individuals display positive adaptation despite experiences of significant adversity or trauma. This term does not represent a personality trait or an attribute of the individual... Rather, it is a two-dimensional construct that implies exposure to adversity and the manifestation of positive outcomes.</td>
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<td>Garmezy (1991, 1994)</td>
<td>Efforts made to restore or maintain personal equilibrium when under threat are known as resilience.</td>
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<td>Luthar &amp; Cicchetti (2000)</td>
<td>Resilience is a process or phenomenon reflecting positive adjustment despite conditions of risk.</td>
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<td>Masten, Best, &amp; Garmezy (1990)</td>
<td>Resilience refers to the process of, capacity for, or the outcome of successful adaptation despite challenging or threatening circumstances. In this sense, resilience corresponds to cumulative ‘protective factors’ and is used in opposition to cumulative ‘risk factors’.</td>
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<td>Miller (2003)</td>
<td>Resilient behavior is more than whether an individual has pathological symptoms or disorders of some sort after experiencing a major negative life event. But individuals who do not show such symptoms or disorders-despite the fact that clinically and statistically we would expect them to (due to the nature of a given stressor) - illustrate resilient behavior.</td>
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<td>Paton, Smith, &amp; Violanti (2000)</td>
<td>Resilience as an active process of self-righting, learned resourcefulness, and growth—the ability to function psychologically at a level far greater than expected given the individual’s capabilities and previous experiences.</td>
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<td>Rutter (1990, 2006)</td>
<td>The dynamic process involving interaction between risk and protective processes, internal or external to a person, that act to modify the effects of adverse life events is called resilience.</td>
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<td>Smith (2006)</td>
<td>Resilience occurs when an individual shows competence in response to a significant risk exposure.</td>
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<td>Tugade &amp; Fredrickson (2004)</td>
<td>Psychological resilience has been characterized by the ability to bounce back from negative emotional experiences and by flexible adaptation to the changing demands of stressful experiences.</td>
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<td>Wagnile &amp; Young (1993)</td>
<td>Resilience connotes emotional stamina and has been used to describe persons who display courage and adaptability in the wake of life’s misfortune.</td>
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<td>Werner (1993)</td>
<td>Personal competencies and strengths, which emphasize capabilities and positive attributes rather than human weaknesses or pathologies, are known as resilience.</td>
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social equilibrium following an adverse event. Second, is sustainability i.e., the capacity to continue forward in the face of adversity (Bonnano, 2004). This aspect of resilience is equally important and is addressed by perseverance and sustenance that people exhibit in a dynamic and challenging environment with respect to health and psychological well-being. While resilient recovery focuses on healing and return to a former, more balanced state, sustainability calls attention to ongoing purposeful, affective engagement with different aspects of life that helps in sustenance of mind–body homeostasis (Zautra et al., 2010) and depends on unique human capacity to exercise awareness and choice, appraise, plan, and carry out intentional action (Bonanno, 2004; Bonanno, Field, Kovacevic, & Kaltman, 2002; Ong & Bergeman, 2004).

The aforementioned definitions of resilience conceptualize it within the context of different forms of risk and protective factors, and processes that lead to recovery from trauma, sustenance of competent functioning, resistance to oppression, development of preferred outcomes, and survival (Sheikh & Kauppi, 2010). However, according to Ungar (2008a, 2013), there are two major limitations of these approaches to define resilience. Firstly, they highlight individual and relational factors typical of mainstream western culture and, secondly, they lack the appreciation of underlying contextual and cultural variability that conceptualizes resilience and of how it might be defined by different populations across various non-western cultures.

Ungar (2008a, 2013) proposes a more ecological definition of resilience which addresses the above limitations and unifies apparently disparate conceptualizations of resilience. According to this definition, “resilience is the capacity of individuals to navigate their way to resources that sustain well-being, the capacity of individuals’ physical and social ecologies to provide these resources and the capacity of individuals and their families and communities to negotiate culturally meaningful ways for resources to be shared” (Ungar, 2008b, p. 225). This definition emphasizes the agentic exercise of personal power capacity towards the acquisition of resources (internal and external) to meet individual’s needs within the context of personality disposition, past experiences, current situation, cumulative risks/adversities, future goals, physical ecology, social factors, structural conditions, and personal
understandings of self and outside world (Fine, 1991; Hitlin & Elder, 2007; Ungar, 2008a). Resilience process is, thus, reliant upon culturally bound physical and social ecologies which include tangible aspects of environment such as the quality of housing, water, safety of streets, levels of pollutants in the air, and personal attachments and structural supports like schools, transportation, and health care (Ungar, 2008a, 2008b, 2013).

It may be noted that inconsistencies within its theoretical construct and underlying mechanisms have made the phenomena of resilience difficult to measure and to define operationally i.e., because of its multidimensional nature (Block & Kremer, 1996) and absence of a theoretical formulation, variations in scientific operational definition of resilience have led to diversity in both empirical research designs and findings related to resilience (Khanlou & Wray, 2010; Polk, 1997).

These variations may be due to matrix of factors woven within the fabric of the lives of people and their communities that confer resilience, the indices of which may be found within the person, his or her primary network of kith and kin, and the socio-cultural profiles of the neighborhood and community settings (Zautra et al., 2010). The need for clarity here is made all the more urgent and of utmost importance by the growing popularity of resilience in everyday discourse, becoming what Rutter (1999) has called the ‘millennium Rorschach’ (Luthar, Cicchetti, & Becker, 2000).

Conversely, this deficiency of an operational definition to create a common understanding might seem like a disadvantage for a research subject at first, but in actual fact, the multidimensional nature of resilience has allowed enrichment of the research findings in different adverse conditions and has contributed a great deal to the creativity of the researchers. Instead of diminishing the understanding of the construct, such diversity has been purported to be essential for its expansion (Luthar et al., 2000). The disadvantage originating in the nature of resilience itself has turned out to be an advantage (Luthar et al., 2000), and such heightened awareness cuts across different sections including practitioners, educators, researchers, and policy makers alike (Khanlou & Wray, 2014).
Resilience and related concepts

While defining resilience, few related and overlapping constructs need to be mentioned which share certain similarities with it yet differ in essence. Hardiness, a dispositional characteristic defined by a sense of control, commitment, and openness to view change as challenge, is associated with and is reported to enhance resilience (Bonanno, 2004; Kobasa, 1979; Maddi, 2002). Thriving is yet another concept associated with resilience. While resilience connotes recovery to pre-trauma functioning, “thriving (physical and psychological) may reflect decreased reactivity to subsequent stressors, faster recovery from subsequent stressors, or a consistently higher level of functioning” (Carver, 1998, p. 245). Lastly, a concept which is constantly equated (or used interchangeably) with other constructs including adversarial growth, thriving, positive adjustment, positive adaptation, and resilience is that of posttraumatic growth (PTG) (Tedeschi & Calhoun, 1995, 2004). Similar to thriving, PTG pertains to personal development or significant improvement in a person’s level of functioning following a trauma or adversity (Linley & Joseph, 2004; Tedeschi & Calhoun, 2004), and includes an increased appreciation of life, personal strengths, ability to find new opportunities in life, having close and intimate relationships, and improvement in spiritual and existential development (Tedeschi & Calhoun, 1995, 2004).

Theoretical Foundations of Resilience

Several theories have attempted to elucidate resilience factors, their interrelationships, as well as their underlying mechanisms, processes, and outcomes. These theories have emerged from developmental, personality, cognitive, and biological orientations, and none to date provides a comprehensive framework for resilience (Luthar et al., 2000). However, with the evolution in approach and knowledge brought forward by years of resilience research, the following major theoretical perspectives have emerged in the literature:

Theories based on individual differences

Originating from psychiatry and developmental psychology, these are a set of theories which focus on within-person factors and are premised in the notion that differences in individuals’ skills and abilities, and their characteristic ways of
responding to a stressful situation determine the differences in resilient outcomes (Khanlau & Wray, 2014).

Based on one of the earliest studies on resilience, Minnesota Risk Research Project (1971-1982), Garmezy, Masten, and Tellegen (1984) proposed Triad of Resilience Theory including personality disposition, a supportive family environment, and an external support system as an explanation for differences between individuals who succeeded and those who did not despite similar adverse stressors. Individuals who had personality attributes of positive outlook, self-esteem, internal locus of control, self-discipline, good problem-solving skills, critical thinking skills, and humor; supportive parents, siblings, or relatives; and external support from school, community, etc. were reported to display resilient outcomes like warmth and competence (Garmezy, 1994).

The investigators subsequently presented three different yet complementary models in a bid to understand the factors that promote resilience in the context of risk (Garmezy et al., 1984; Luthar et al., 2000; Masten et al., 1988). These models describe patterns of association among risks and adaptive outcomes, including additional variables that may explain variations in outcome. Two of the most basic models describe compensatory and moderating influences of explanatory factors.

In compensatory or ‘main effects’ model, factors that neutralize or counterbalance exposure to risk or stress have direct, independent, and positive effects on the outcome of interest, regardless of risk level. These compensatory factors have been termed assets, resources, or promotive factors in the literature.

In protective or ‘moderating effects’ model, a theoretical factor has effects that vary depending on the level of risk. A classic ‘protective factor’ shows stronger effects at higher levels of risk. In other words, the importance of the explanatory variable is greater when risk is higher, suggesting a buffering or ameliorative influence. A protective factor may also show a main effect (for e.g., good parenting is associated with better functioning at all levels of risk but also provides specific, ‘extra’ protection under very high-risk conditions), but this is not necessarily the case. Analogous to antibodies or an automobile airbag, a protective factor may be deemed to matter only in the presence of a threat or risk.
In addition to the above two models, the ‘challenge’ model (Garmezy et al., 1984), described the possibility of an ‘inoculation or steeling effect’, where manageable doses of exposure to adversity prepare an organism by strengthening capacity for mobilizing an adaptive response similar to the way a vaccination works to boost immune function with respect to a specific infectious agent. In other words, moderate levels of stress provide a challenge that enhances arousal and, when overcome, strengthens competence through successful engagement. This theory has gained respectable empirical support and has been catalytic in starting off a number of scientific endeavors (Luthar, 1999; Masten et al., 1988; Rutter, 1987).

Further, the Cognitive Appraisal Theory of resilience, suggested by Mrazek and Mrazek (1987), identified twelve skills and abilities that resilient people use during stressful times and which differentiate them from non-resilient individuals. These skills were reported as: rapid response to danger, positive projective anticipation, decisive risk-taking, precocious maturity, disassociation of affect, formation and utilization of relationships for survival, the conviction of being loved, idealization of aggressor’s competence, cognitive restructuring of painful events, altruism, optimism, and hope.

In Grounded Theory of resilience, Wagnild and Young (1990) identified five components of resilient personality: self-reliance – belief in oneself and one’s capabilities (Caplan, 1990; Druss & Douglas, 1988; Richmond & Beardslee, 1988), perseverance – the act of persistence despite adversity or discouragement (Caplan, 1990; Richmond & Beardslee, 1988), meaningfulness – the realization that life has a purpose and the valuation of one’s contributions (Caplan, 1990; Frankl, 1963, 1984; Rutter, 1985), equanimity – balanced perspective of one’s life and experiences (Beardslee, 1989), and existential aloneness – the realization that each person’s life path is unique; while some experiences are shared, there remain others that must be faced alone (Frankl, 1984). People high on these componential traits tend to be higher on resilience (Wagnild & Young, 1990, 1993).

Polk (1997), on the basis of a meta-analysis comprising of a review of 26 resilience-based articles and subsequent concept synthesis, derived four clusters of attributes defining resilient personality: dispositional, relational, situational, and
philosophical, and thus proposed an *Attributes Theory* of resilience. The dispositional attributes consisted of ego-related psychosocial components such as self-esteem, self-confidence, global self-worth, autonomy, self-efficacy, self-reliance, and intelligence. The relational attributes consisted of intrinsic relationships (commitment to relationships and personal intimacy) and extrinsic relational patterns (interests, hobbies, commitment to education, jobs and social activities, seeking social support and healthy relationships). The situational attributes comprised of appraisal of one’s strengths and capabilities, and internal locus of control through cognitive appraisal skills, problem solving strategies, novelty seeking, curiosity, and creativity. Lastly, the philosophical attributes related to existential themes of meaningfulness and purposeful living (Polk, 1997; Wald et al., 2006).

To further explain differences in resilient outcome, *Individual Differences’ Model* (Figure 2) proposed by Mancini and Bonanno (2009) puts emphasis on heterogeneous individual differences associated with resilience and describes ‘how the person-centered factors affect resilient trajectory and differentiate it from other trajectories of response to loss’. Some of these differences lie in the use of pragmatic coping, repressive coping, worldview, self-enhancement, concrete aspects of self, and emotion regulation (Bonanno, Papa, & O’Neill, 2002). Resilient individuals tend to use a single minded and goal directed approach to problem solving marked by flexible adaptation to impinging challenges; have self-enhancing cognitions comprising of downward social comparisons with less fortunate others or reframing of the aversive experience as providing unexpected benefits; have favorable worldviews, experience minima change in their sense of self during trauma or loss; are less likely to search for, but find meaning in loss; and make conscious use of positive emotions (Bonanno et al., 2002). These multiple factors across individuals affect the appraisal process, use of exogenous resources, and social support, which further affects the type of coping used by the individual and finally the resilient outcome (Mancini & Bonanno, 2009).
Ecological theories of resilience

To illuminate upon the discourse of the development of resilience within an individual’s ecological and natural systems, Bronfenbrenner (1979) offered the Ecological Systems Theory which described the influence of different but linked systems on a person’s development. These systems tend to have bi-directional relationship with the individual and play significant role in either impeding or enhancing his/her potential.

Further, drawing impetus from the work of Bronfenbrenner (1979), Cicchetti and Lynch (1993) conceptualized resilience amidst a number of nested ecological levels in an Eco-systemic Theory. These levels tend to vary in degrees of proximity to the individual, and interact and transact with each other over time to shape the individual’s development and ability to adapt to his/her environment. Closest to the individual, the microsystem incorporates the immediate family environment and associated experiences of the individual. Next, the exosystem consists of the neighborhood and community level settings in which individual and his/her family...
live, and further the macrosystem includes permeable cultural beliefs and values affecting the societal and family functioning. Finally, within the individual, level of ontogenic development includes the individual and his or her unique developmental adaptation. This theory postulates that individuals are important agents of change in their environments and there is a mutual reciprocal transaction between an individual’s functioning and his/her context which further allows for continuity in persona and contextual development over time and creates potentialities for change and resilient adaptation.

Ecological theories of resilience put emphasis on interdependency between individuals and their social systems, and have formed the conceptual basis for research involving diverse risks including family poverty, experiences of maltreatment, and others (Baldwin et al., 1993; Barankin & Khanlau, 2007; Cicchetti & Lynch, 1993; Cicchetti & Lynch, 1993; Waller, 2001).

Pathways theories of resilience

O’Leary and Ickovics (1995), in their Pathways Theory of resilience, proposed that when individuals are confronted with a challenge or stressor they may succumb or respond in one of the following three ways – survive, recover, or thrive. While survival implies continued but impaired functioning especially in case of debilitating events, recovery indicates a return to pre-trauma social, psychological, and occupational functioning following stressor, and thriving comprises of growth and flourishing over and above the original level of psychological functioning, thus adding ‘value to life’. Thriving can be behavioral, cognitive, and/or emotional, and occurs as a transformation due to the interactive process of confronting and coping with stressor or challenge. Thus, resilience views challenge as an opportunity for change as it involves confrontation of personal priorities, re-examination of individual’s sense of self, and alteration of social roles in terms of acquisition of a new role, loss of an old role, or re-ordering of role priorities. All this leads to change in cognitive response to a challenge and resilient transformation (O’Leary & Ickovics, 1995).

Further researchers have identified a variety of patterns or pathways leading to resilience in the context of acute and chronic stressors (Bonanno, 2004; Masten &
One of the patterns is that of resistance which connotes reasonably steady and positive adaptive behavior in the presence of significant threats. Another pattern involves return to a pre-trauma positive level of functioning following an initial decline due to adversity and is called recovery. This pattern is usually contingent upon stressors like severe continuing adversity or sudden catastrophe, wherein conditions are so challenging that even maintaining good adaptation is a bleak chance. Recovery is normally expected with time as the threat abates and the situation improves, however, in case of repeated or prolonged exposure to stressor, it may be delayed (Bonanno, 2004). Normalization as a pattern, is observed in situations of initial adverse environment during development (e.g., a neglecting orphanage or abusive parents), and then as conditions improve (e.g., through adoption or better parenting) a marked accelerated development and associated changes eventually put individual back on a normal developmental trajectory (Beckett et al., 2006; Rutter et al., 1998). Lastly, transformation pattern corresponds to the concept of posttraumatic growth and involve significant improvement in adaptive functioning in the aftermath of adversity (Linley & Joseph, 2004; Park, 2003; Tedeschi & Calhoun, 1995).

**Interaction theories of resilience**

As the name specifies, interaction theories of resilience place value on the interaction between life challenges and protective factors in managing stressors and producing resilient outcome.

In this category, Flach (1988, 1997) proposed the *Reintegration Theory* of resilience, which drew inspiration from the relational pattern between equilibrium and disequilibrium as in Piagetian developmental theory. This theory defines ‘bifurcation points’ as traumatic times or life challenges which disrupt the homeostatic state of individuals and lead to a state of cognitive, behavioral, or affective destabilization called chaos. While these bifurcation points can be life-threatening traumatic events or daily life stressors, they lead to either greater vulnerability or more effective functioning through the cognitive process of reintegration. According to Flach (1997), ‘resilient personality’ is the source of reintegration and reintegration is a source of resilience.
Similar to Flach’s (1988, 1997) theory, Richardson et al. (1990) proposed what had been termed as the *Meta-theory* of resilience (Figure 3), focusing on the interaction between negative life events and protective factors, called ‘bio-psycho-spiritual’ protective factors. Richardson (2002) defined bio-psycho-spiritual homeostasis as “a point in time when one has adapted physically, mentally, and spiritually to a set of circumstances whether good or bad” (p. 311). When the continuous disruptive or highly stressful events violate this homeostasis, individuals initially go through emotional states of fear, hurt, guilt, and confusion followed by conscious or subconscious analysis of imminent course of action which further paves way for the adaptive process of reintegration. An individual’s ability to cope with such stressors is a function of the bio-psycho-spiritual protective factors such as purpose in life, self-esteem, and social skills, and results in four types of reintegration as described in the theory: resilient reintegration (when adaptation leads to a higher level of homeostatic functioning), homeostatic reintegration (going back to the same level of functioning or baseline homeostasis in an effort to move past the disruption), maladaptive reintegration (going back to an inferior level of functioning or homeostasis implying resilience with loss), and dysfunctional reintegration (using completely dysfunctional coping mechanisms often leading to psychological disorders) (Richardson, 2002; Richardson, Neiger, Jensen, & Kumpfer, 1990).

![Figure 3. Meta-theory of resilience. Adapted from Richardson (2002).](image-url)
Both these theories emphasize the utility of the causal idea of disruptions and reintegration. While bio-psycho-spiritual balance is bombarded by stressors or other adverse events, bio-psycho-spiritual factors act protective and the interaction between these stressors and protective factors determine the resilient outcome.

The process of reintegration and its elements comprising of self-esteem, creativity, self-mastery, problem solving skills, autonomy, purpose in life, flexibility, general well-being, etc. are cited numerous times by many scholars (Flach, 1988; Kumpfer, 1999; Richardson et al., 1990) and have gained sufficient empirical support across varied samples (Dunn, 1994; Richardson, 2002).

**Positivist theories of resilience**

Recent researchers in the field of trauma and its sequelae have developed the concept of post-traumatic growth (PTG) as a possible underlying mechanism for the development of resilience (Joseph & Linley, 2005; Schaefer & Moos, 1992; Tedeschi & Calhoun, 1996, 2004). The phenomenon of transformation or growth following adversity resonates with theorists and practitioners from the positive psychology school of thought. It has been argued that resilience is more than maintaining psychological function following a traumatic event and involves learning and development by the individual to cope with future trauma. It describes the experience of individuals who do not only overcome and recover from trauma, i.e. return back to pre-trauma functioning after a period of distress, but also use it as an opportunity for further individual development and emerge with improved psychological functioning in various domains (Joseph & Linley, 2005). These individuals overcome trauma and grow beyond it with what Calhoun, Cann, Tedeschi, and McMillan (2000) have defined as the concept of posttraumatic growth, i.e., “the experience of significant positive change arising from the struggle with a major life crisis” (p. 521).

Following three important positivist theories explain resilience with posttraumatic growth as the underlying mechanism:

Schaefer and Moos (1992), in their *Life Crisis and Personal Growth Theory* of positive outcomes and transitions, outlined the role of three different components, i.e., personal system, environmental system, and event-related factors, in shaping the life crisis experience and its aftermath. While the personal system comprises of socio-demographic characteristics like age and gender, and personal resources such as self-
efficacy, resilience, optimism, self-confidence, an easy-going disposition, motivation, health status, and prior crisis experience; environmental system involves personal relationships, support from family and friends, and social environment along with financial resources and other aspects of the living situation; and event-related factors comprise of the effects of the severity, duration, and timing of the life crisis and its scope for the individual. Schaefer and Moos (1992) further postulate that all components of the model are linked by feedback loops and interact with each other, and together they influence the cognitive appraisal processes and coping responses which, in turn, affect the outcome of the crisis.

Secondly, a *Functional-Descriptive Theory of Posttraumatic Growth* (PTG) was proposed by Tedeschi and Calhoun in 1995 and was later revised in 2004. In this theory, the authors describe PTG solely as an outcome variable (Figure 4). The growth process is conceptualized as follows: it is set in motion by a traumatic event or major life crisis, which is an event of ‘seismic’ proportions that severely challenges and perhaps shatters the individual’s understanding of the world and his or her place in it. It shakes or destroys some key elements of a person's important goals and worldviews, and represents a challenge to higher-order goals, higher-order beliefs, and the ability to manage emotional distress. As a result of the emotional distress experienced, a process of recurrent rumination and attempts to engage in behavior designed to reduce distress is initiated. Initially, the individual typically focuses on managing the overwhelming emotions and hence, rumination is more automatic than deliberate and is marked by frequent returns to thoughts regarding the trauma and related issues. After the first coping success that leads to reduction of emotional distress and disengagement from unreachable goals, rumination takes the form of more intense cognitive processing of the difficult circumstances and deliberate thinking about the trauma and its impact on one's life. The degree to which the individual cognitively engages with the crisis, i.e., rumination in its constructive version of cognitive processing (analyzing the new situation, finding meaning, and re-appraisal), is assumed to be the central element in the process of personal growth, which is further influenced by within person attributes and social system of the individual through the provision of new schemas related to growth, and empathetic acceptance of disclosures about the traumatic event and growth-related themes.
Thus, posttraumatic growth is conceptualized as a multidimensional construct that emphasizes distinct transformative positive changes in beliefs, goals, behaviors, and identity as well as the development of a life narrative and wisdom in the aftermath of trauma, that go beyond illusion (Tedeschi & Calhoun, 2004). This model of PTG as an underlying mechanism of resilience has been supported by studies indicating links of PTG with quicker cortisol habituation (Epel, McEwen, & Ickovics, 1998), and lower psychological distress (Frazier, Conlon, & Glaser, 2001; Park, Cohen, & Murch, 1996). However, this model has also sustained considerable criticism (Wortman, 2004). Due to the vague definition of some of the predictors, it is difficult to be tested empirically and needs further research for disentangling and validating of the concept.

Figure 4. Process of Posttraumatic Growth. Adapted from Tedeschi and Calhoun (2004).
Further, within the framework of positive psychology, Joseph and Linley (2005) proposed an Organismic Valuing Theory of growth and resilience through adversity. It postulates that individuals are propelled by an intrinsic motivation towards growth which, in the state of trauma, leads to cognitive-emotional processing characterized by intrusion, avoidance, and existential issues raised by the event. The theory further posits three possible outcomes of this processing. First, experiences can be assimilated (return to pre-trauma baseline). Second, experiences can be accommodated in a negative direction (psychopathology). Finally, experiences can be accommodated in a positive direction (growth and resilience) (Wald et al., 2006). When individuals rebuild their assumptive world in a direction consistent with new trauma-related information through accommodation, provided that the social environment is able to support this positive accommodation process through it’s ability to meet the individual’s psychological needs for autonomy, competence, and relatedness, this leads to greater psychological well-being and greater appreciation of relationships, personal strengths, life in general, and resilience. The theory also provides a realistic check by stating that positive accommodation of the traumatic materia and development of meaning may not necessarily lead to ‘happiness’, but it does lead to ‘wisdom’ that comes with recognition of the vicissitudes of the human life (Linley & Joseph, 2004).

**Psychobiological theories of resilience**

While the above mentioned conceptualization of resilience focuses on behavioral aspects, advances in knowledge about neural plasticity and the developing brain (Cicchetti & Blender, 2006; Masten & Obradovic, 2006) has led to a different genre of resilience research which links biology and the neurosciences with human adaptation, and permits a closer study of the biological underpinnings of resilience, well-being, and flourishing in life (Lemery-Chalfant, 2010).

The psychobiological theories focus on the underlying psychological and neurobiological mechanisms involved in promoting resilient responses to stress (Epel et al., 1998; Feder, Nestler, Westphal, & Charney, 2010). Herein, the construct of resilience refers to the ability of the individuals to adapt successfully in the face of acute stress, trauma, or chronic adversity by maintaining or rapidly regaining...
psychological well-being and physiological homeostasis (Charney, 2004), and is often associated with physical and psychological thriving (Epel et al., 1998).

Elevation in hypothalamic–pituitary–adrenal (HPA) axis activity in response to stress sets off a cascade of hormonal processes that facilitate cognitive, metabolic, immunological, and behavioral adaptations to environmental demands (Sapolsky, Romero, & Munck, 2000; Weiner, 1992). The same chemical mediators that promote survival, however, may produce negative health consequences when the stressors become chronic or are perceived as overwhelming, resulting in allostatic overload (McEwen & Wingfield, 2003). Resilience is associated with the rapid activation and efficient termination of the stress response, and is thought to involve an optimal balance of glucocorticoid and mineralocorticoid receptor functioning (Charney, 2004; de Kloet, Joels, & Holsboer, 2005; de Kloet, Derijk, & Meijer, 2007). Based on the characteristics of the stressor i.e., duration, frequency, and intensity, when an individual appraises a stressor as controllable, he or she may display a resilient profile of stress hormone responding comprising of rapid cortisol recovery and cortisol adaptation over time (Epel et al., 1998).

Recent trends in theorizing resilience

Although many of the afore mentioned theories (e.g., Richardson, 2002; Richardson et al., 1990; Rutter, 1990; Tedeschi & Calhoun, 2004) have received modest empirical support, findings from these studies are limited by various methodological shortcomings and in their generalizability. Recent trends in research stress upon the urgent need for ‘multiple levels of analyses’ in resilience studies, which may integrate knowledge from interdisciplinary fields of psychology, sociology, medicine, genetics, and neurosciences. Researchers propose that risk and protective processes can operate at genetic, neurobiological, individual, and social levels, and even interact across these levels and as Rutter (2006) puts it, “what is clear is that we need to consider both risk and protective processes in relation to genetic as well as environmental effects” (p. 21).

A mere reductionist approach to any one particular aspect of research in resilience has been discouraged, and the powerful role of the interaction of context, experience, genes, and environment might retain a central place (Cicchetti & Blender, 2006; Masten & Obradovic, 2006) as depicted in the following current trends:
Heritability of resilience

In present times, a greater interest has been placed in theories and models examining the moderating influence of genes and personality on differential reactivity in the context of adverse life situations and with advances in genetics as well as behavioral genetics, models of resilience encompassing gene–environment interaction are expanding rapidly (Kim-Cohen & Gold, 2009; Lemery-Chalfant, 2010). This research is in its infancy and emphasizes the significant role of gene–environment interactions in determining the individual’s degree of adaptability to acute or chronic stressors, with a lifespan perspective (Jang, 2005). These theorists tend to step away from the popular notion of genome as a passive blueprint whose sole purpose is to guide development and embrace ‘gene expression as highly responsive to the environment and its variations throughout the life’. Exposure to traumatic event is deemed to be under partial genetic control and gives rise to the mechanism of ‘gene–environment correlation’ in which genetically influenced factors (such as genetically based personality traits that work to select specific environments for the expression of these genes) influence the probability of exposure to adverse events, by placing oneself in, or creating, potentially hazardous situations, critical to the development of specific psychopathologies (Jang, 2005; Lemery-Chalfant, 2010).

Related concepts of gene based ‘differential susceptibility’ and ‘sensitivity to context’ have also been advanced to explore the possibility of differential responsiveness to the influence of adverse and/or beneficial contexts (Belsky, Bakermans-Kranenburg, & Ijzendoorn, 2007; Boyce & Ellis, 2005; Ellis & Boyce, 2008).

Resilience in evolution

One significant question encompassing resilience research is the evolutionary survival of some positive aspects of human psychology. Researchers argue that similar to the maladaptive patterns of vulnerability like traits of sadness and depression, the human capacity for resilience may have survived in evolutionary terms (Hofer, 2006; Keedwell, 2008). It has been proposed that resilient patterns of behavior, given their asset value might have survived because they provide an
important function in adaptation and are only useful when there is an environment of moderate adversity and some resources are available so as to increase the likelihood of the survival of subsequent generations in similar conditions (Hofer, 2006).

Cultural dimensions of resilience

Ungar (2005, 2010, 2013) has offered a theory of resilience that accounts for both processes and outcomes associated with adaptation in culturally meaningful ways. “Resilience is a conceptual nameplate for a body of research and interventions focused on positive developmental outcomes among populations that face substantial amounts of risk. Typically the term is used in two ways. First, as an outcome, resilience is associated with the acquisition of both internal and external assets that work together to potentiate a state of mental and physical well-being when individuals are exposed to non-normative levels of psychological stress. The term may also be used to indicate engagement in protective processes associated with the development of preferred outcome” (Ungar, 2010, p. 404-405).

Culture, comprising of “everyday practices that are ritualized into a set of values and systems of codified beliefs that reflexively perpetuate orderly social relations” (Ungar, 2010, p. 405), is deemed essential while theorizing resilience as it shapes the availability and accessibility of facilitative internal or external resources (within individual’s physical and social ecologies) required for positive development under stress.

Underlying the culturally and contextually relevant conceptualization of resilience, are the multidimensional constructs of navigation and negotiation. Within a facilitative environment, navigation is described as individual’s exercise of personal power towards acquisition of available, accessible, or latent resources within his or her physical and social ecologies, and genetic predisposition. Negotiation, on the other hand, comprises of successfully securing of resources followed by active engagement in processes that sustain these resources in culturally meaningful ways (Ungar, 2010). The dual processes of navigation and negotiation must be understood within the universal framework of homogeneous processes associated with adaptation, while showing marked tolerance for heterogeneity in resilient outcomes as a result of culture i.e., while some underlying resilience processes are common across cultures.
the specificity of the expression and the associated outcomes are culturally
determined across various social ecologies (Ungar, Liebenberg, & Brown, 2005).

This theory warrants empirical attention to resilience processes and outcomes
in a culture and context specific framework, with a shift from western Eurocentric
tradition of psychology to prove it’s generalizability to the majority world within
ethno-racial background (Smith, 2006; Ungar, 2010), and greater use of culturally
sensitive investigations of resilience (Ungar, 2010).

Towards a holistic science of resilience

More recently, a ‘holistic approach’ towards resilience has been advocated in
line with recognition of lack of a unified theory of resilience capable of guiding more
structured and empirically based approaches for development of the construct (Luthar
et al., 2000) and most importantly an appreciation of the value of combining multiple
theoretical perspectives and epistemologies in studying resilience (Khanlau & Wray,
2014; Rutter, 2006). In a Hybrid Theory of resilience, Khanlau and Wray (2014)
propose resilience as a process that develops over time depending upon the
interactions between systems involved, as a continuum rather than a binary outcome
such that the same person can be on different parts of the continuum of resilience
depending upon the support systems available and challenges faced over time, and as
a global concept with specific domains.

In line with the emerging trends, resulting new theories in the future may use
more sophisticated methodologies and measurement strategies, which can be
validated across a range of populations (Ungar, 2013; Wald et al., 2006), and expert
knowledge from different fields (Rutter, 2007) as “in practice we need multidisiplinary
and intersectoral approaches to promote resilience” (Khanlau & Wray, 2014, p. 7).

Conceptual Issues

Differential views regarding constitution and developmental course of
resilience within a lifespan perspective have reverberated throughout the decades of
vulnerability and resilience research. Deliberated and discussed upon for years, some
of these conceptual issues gain salience in the context of the present study and are
described as follows:
Resilience: Trait, process, or outcome

Underlying the field of resilience, is an ongoing debate about nature of resilience: whether it is a personality trait, therefore measurable, fixed, and stable over time (Block & Block, 1980; Connor & Davidson, 2003; Wagnild & Young, 1990), or a dynamic process which can develop at any time during the lifespan and may vary with context (Jacelon, 1997), or a mental health outcome (Luthar et al., 2000; Masten, 2007). Researchers and theorists have offered various answers to this question and, indeed, the field has both suffered and gained from a lack of conceptual and terminological clarity (Mancini & Bonanno, 2010).

Those who describe resilience as a trait postulate that it is a fixed and relatively enduring characteristic of the individual irrespective of the situation, such that some people are deemed to possess this quality and some are not. Such judgments are based in findings of early empirical researches in the area, wherein presence of certain personal characteristics or their clusters had been observed to predispose a person towards success in the face of adversity and regulate the negative effects of stressful situations (Bartlelt, 1994; Cowen & Work, 1988; Garmezy, 1993; Miller, 1988; Wagnild & Young, 1993). Resilient individuals have been associated with congeries of personality traits that reflect a strong, well-differentiated, and integrated sense of self and its structure, motivational control, resourceful adaptation, autonomy, self-esteem and self-efficacy, positive social outlook, flexible thinking, and ability to have strong, reciprocal interpersonal relationships with others (Block & Block, 1980; Campbell-Sills, Cohen, & Stein, 2006; Connor & Davidson, 2003; Garmezy, 1991; Jacelon, 1997; Wagnild & Young, 1993; Waugh et al., 2008). This definitional premise of resilience is perhaps most clearly illustrated in the development of ‘trait measures of resilience’ like the Resilience Scale (Wagnild & Young, 1993), Ego-Resiliency Scale (Block & Block, 1980), and Connor–Davidson Resilience Scale (Connor & Davidson, 2003). These scales offer the ease of quantification of resilience and allow the researchers to categorize and compare research subjects with respect to presence or absence, and degree of certain resilient characteristics.

Recent approaches go further and conceptualize resilience as a dynamic process that must be assessed in the face of adversity rather than as a static characteristic or attribute of an individual (Brooks, 1994; Cicchetti & Rogosch, 1997;
Normar, 2000; Rutter, 1985, 1987, 1990, 2006; Werner & Smith, 2001). To this end, Rutter (2006) argued that ‘resilience is not and cannot be a personality trait’, and made an important distinction between resilience as a process or mechanism, versus a factor, trait, or variable: “The terms ‘process’ and ‘mechanism’ are preferable to ‘variable’ or ‘factor,’ because any one variable may act as a risk factor in one situation but as a vulnerability factor in another” (Rutter, 2006, p. 317). The researcher further proposed that people can only become resilient in the presence of adversity and that this dynamic process can vary with context in relation to four main processes. The first of these is reduction of risk impact by altering the appraisal of the risk factor or by altering exposure to the risk. The second type of mechanism comprises of reduction of negative chain reactions that follow exposure to risk and perpetuate risk effects through alteration of the meaning of the risk and associated coping. The third mechanism by which protective functions may be served is through the establishment and maintenance of self-esteem and self-efficacy which further develop through secure and harmonious love relationships, and opportunities for success in accomplishing tasks that are salient to the individuals. Finally, protective factors like personal coherence, family cohesion, and social support operate through opportunities to obtain experiences that might mitigate the effects of early risk factors (Rutter, 1987, 1990).

Rutter’s notion of resilience as a process has been further strengthened by concept analysis of resilience as a skill acquired in the process of struggle against hardship that can be learned at any age (Gillespie, 2007). At this point it is imperative to note that the American Psychological Association (2004) describes resilience not as “a trait that people either have or do not have… (but something) that can be learned and developed in anyone” (p. 1).

In contrast to the above two views of resilience, researchers studying individuals exposed to acutely adverse but time-limited stressors have argued that resilience should be characterized as an outcome reflecting adaptive functioning in the face of adversity (e.g., Bonanno, 2004). Even when resilience is conceptualized in terms of outcome, conceptualizations vary in defining resilience as the absence of negative outcome, presence of positive outcome, or a combination of both (Mancini & Bonanno, 2010).
As Wilkes (2002) underscored the dilemma between early theorists who considered resilience as a general trait with reasonably stable characteristics and later theoreticians who emphasized upon the multidimensional nature of resilience and its variability across age, gender, social context, or cultural background, there is no universal agreement on what constitutes resilience. Whether resilience is described as a trait, process, or an outcome is largely dependent on the nature of the stressor and the population being studied (Mancini & Bonanno, 2010) and relies upon the integration of biological, psychosocial, and socio-cultural factors (Flach, 1988; Richardson, 2002; Rutter, 1987, 2006). However, amidst the controversy between early and modernist definitions of resilience stemming from the emphasis placed either on personal attributes or the underlying processes within environmental context framework, or the resultant successful products, there exists a common element in almost all definitions with different emphases on successful or flexible human adaptation to stressful life events, reality constraints, or adversity resulting from the operation of basic human adaptational systems (Block & Kremen, 1996, Masten, 2001).

Masten and Obradovic (2006) caution that many factors are involved in the development of resilience, which they argue is not a single trait or process, but a “complex family of concepts” (p. 22), and Richardson (2002) does not view the personality compared with learned skill perspectives as an either/or debate, but he argues that this signals a maturing of the research field. Hence, instead of discussing resilience as a trait or process, it may be more fruitful to highlight how these two different views can come closer and merge in a unified resilience theory. It is noteworthy that carrying out research studies to identify the working principles underlying the resilience concept and specifying the relationship between attributes and processes of resilience, and resilient outcomes would help to understand the concept better (Mancini & Bonanno, 2010).

**Childhood v. Adult resilience**

Much of the original theorizing on resilience came from pioneer researches that documented healthy developmental trajectories among children who grew up in otherwise enduring aversive contexts like caustic and impoverished socioeconomic circumstances (Garmezy, 1991: Murphy & Moriarty, 1976: Rutter. 1979; Werner.
Research in childhood resilience has been followed by ‘trickling up’ of the construct of resilience to the adult literature and subsequent sporadic reports of widespread resilience among adults exposed to isolated, potentially traumatic events (Bonanno, 2004; Mancini & Bonanno, 2010). As such the burgeoning researches on child and adult resilience (Bonanno, 2005; Luthar & Brown, 2007; Rutter, 1979; Ryff & Singer, 2003; Werner, 1993) have revealed important parallels, as well as notable differences.

Both emphasize the need to assess the relative contribution of personality styles (e.g., behavioral flexibility, ego resilience, greater emotional regulation, positive self-concepts) and positive contextual/situational factors (e.g., having access to supportive relationships, close and nurturing family bonds, quality relationships within the community) in response to challenge (Bonanno, 2004, 2005; Luthar & Brown, 2007; Masten, 2001; Ryff & Singer, 2000). Understanding of specific causal mechanisms of resilience is a central interest in both the child and adult literatures (Luthar et al., 2000; Rutter, 2000; Ryff & Singer, 2003) as the simplistic study of association of individual assets and social resources with positive adaptation is fast growing into a need to understand how such factors actually contribute to resilience in the face of challenge. Further the ‘multiple risks and protective factors’ model has gained greater acceptance (Bonanno, 2005; Hobfoll, 2002). Shift in focus from single, dominant factors in resilience to multiple pathways and multiple levels of analyses is consistent with recent reviews of both child and adult resilience (Cicchetti & Dawson, 2002; Masten, 2007).

On the other hand, the key differences between child and adult resilience reportedly hinge upon the temporal and socio-contextual characteristics of stress and adaptation at different points in the lifespan (Bonanno, 2004, 2005; Bonanno & Mancini, 2008). For developing children, healthy adaptation is a conceptually complex issue. For instance, domain specific competence in children does not ensure long-term developmental success in other domains and often traumatized children are unable to remove themselves from stressful environments (Luthar et al., 2000; Masten, 2001). By contrast, developmental considerations are less pronounced in adults (Bonanno, 2004, 2005; Carver, 1998). Most of the traumatic events that the
adults encounter are singular and isolated events of potential trauma, with or without concomitant stressors, which occur in a broader context of otherwise normative or low stress circumstances. This situation is arguably more straightforward for adults and can be measured with a reasonable degree of reliability in terms of deviation from or return to normative (baseline) functioning (Bonanno, Galea, Vucciarelli, & Vlahov, 2006; Bonanno, Moskowitz, Papa, & Folkman, 2005). Lastly, in comparison to children, adults tend to exhibit pragmatic forms of coping that are specifically effective for a brief, isolated event and may be maladaptive for an ongoing traumatic situation (Bonanno, 2005), and as opposed to children, adult resilient individuals may experience mild to moderate form of transient stress reaction but these reactions usually are relatively short term, and do not significantly interfere with their ability to continue functioning (Bisconti, Bergeman, & Boker, 2006; Bonanno et al., 2005; Bonanno, Field, Kovacevic, & Kaltman, 2002; Ong, Bergeman, Bisconti, & Wallace, 2006).

Continuity of Resilience: A Lifespan Perspective

Variations across resilience in terms of considerable stability as well as shifts, from childhood to adulthood, call for the importance of a lifespan developmental approach to its study (Masten et al., 2004; Rutter, 2006; Werner, 2012). as some children who initially demonstrate considerable resilience may become more vulnerable in adulthood, whereas others who initially are quite vulnerable can develop a capacity for resilience in adulthood given the right context, capabilities, and opportunities (Luecken & Gress, 2010). Developmental pathways to resilience are neither linear nor without setbacks, and the rise and fall of resilience has been reported to be 3-4 times from one age group to another (Du Mont, Widom. & Czaja, 2007). Phrased this way, the focus is on the persistence and variation of resilience as well as the optimism that disadvantaged populations can navigate their way through developmental tasks at different points of time in their lives and there is always hope for intervention (Ungar, 2010).

Variables associated with Resilience

To build up an extensively acknowledged resilience theory and research methodology which combines the positive adaptation of human being in the face of
negative life events, there is a need to be guided by conceptual and theoretical models of how people adapt successfully to stressful events (Zautra et al., 2010) through the underlying singular and/or cumulative effects of personal and environmental resources. Keeping in mind the bidirectional influences of environmental and individual characteristics of causality and their relevance to the sample of present study, some of the variables are discussed as follows:

**Stress and coping**

The word ‘stress’ evokes images of both normal and abnormal situations and events that are perceived as difficult, uncertain, or threatening by an individual (Brooks-Gunn, 1991; Colten & Gore, 1991). In day-to-day terms, it is the very real, often uncomfortable psychological and physiological response or sensation that people may have when an occurring event is perceived with anxiety.

Perceived stress is the outcome variable measuring the experienced level of stress as a function of objective stressful events, coping processes, personality factors, etc. (Cohen, Kamarck, & Mermelstein, 1983).

Lazarus and Folkman (1984) have defined stress as ‘the relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being’ (Lazarus & Folkman, 1984) and the causes of such an appraisal are called stressors. This definition conceptualizes stress as a mismatch between perceived demands of a situation and individual’s assessment of his or her resources to deal effectively with these demands (Seligman & Csikszentmihalyi, 2000).

Stress gained popularity as a construct in the period surrounding around World War II (Lazarus & Folkman, 1984; Seligman & Csikszentmihalyi, 2000) and much as a psycho-physiological response to a demand (Lazarus & Eriksen, 1952; Lazarus & Folkman, 1984; Selye, 1936). Stressful experience engender both biological and psychological mechanisms and has been conceptualized as a perceived threat to an individual’s homeostasis and as a situation that brings about increase in the reactivity of the autonomic nervous system through hormone secretion (McEwen, 1994), triggered by psychological factors such as the anticipation of stress and perceived lack of control over it (Cicchetti & Walker, 2001).
Types of stressors

Literature identifies three major forms of stressors: daily stressors, chronic strains, and stressful life events (Thoits, 1995). While daily stressors are common place hassles that occur during the course of the day and require minor to moderate behavioral adjustments (e.g., forgetting important documents, traffic jams), chronic strains are persistent or recurrent demands which require readjustments over a prolonged period of time (e.g., physical handicap, marital problems). Further on the severity index are stressful life events, these are acute (often sudden) changes which require major or life altering readjustments within a short span of time (e.g., divorce, death of spouse).

To ease the strain of these stressors, individuals search for and develop a variety of behaviors or ways of thinking that reduce their discomfort (Hess & Copeland, 1997) and increase their sense of well-being. Often multiple and varied, these behavioral and cognitive skills are critical for creating and managing a successful life by dealing constructively with the demands of stressful social, economic, and health-related issues. Learning these skills to deal effectively with stress is integral to what is called ‘coping’ (Hess & Copeland, 1997; Patterson & McCubbin, 1987).

Coping refers to the resources a person uses to manage the situations that are appraised as stressful, in order to be protected from psychological harm (Folkman & Moskowitz, 2004; Lazarus & Folkman, 1984).

It is defined as the process of managing external and/or internal demands that tax or exceed the resources of the person (Folkman, 2008; Lazarus, 1981, 2003). Coping, thus, is a process explanation for differences in stress outcomes (Bolger, 1990).

Coping response, a stress-specific pattern in which an individual’s perceptions, emotions, and behaviors are directed towards adapting and changing (Beutler & Moos, 2003; Moos & Holahan, 2003), may or may not be consistent across stressful situations or functional roles but if developed into a general way of interacting with environment becomes a person’s coping style.
Types of coping

As conceptualized by Lazarus and Folkman (1984), the appraisal of stress is followed by either coping that is directed at managing or altering the source of stress, i.e. the problem, or coping that is directed at regulating emotional response to the problem. Coping that is directed at managing or altering the problem is called problem-focused coping, it refers to efforts to resolve a threatening problem or diminish its impact by taking direct action, and coping that is directed at managing or reducing emotional distress is called emotion-focused coping, characterized by management of emotional sequelae of the experience (Lazarus & Folkman, 1984; Folkman & Moskowitz, 2004; Lazarus, 1981; Pearlin & Schooler, 1978).

Two major, overriding functions of coping strategies are engagement and disengagement (Folkman & Lazarus, 1984; Tobin, Holroyds, Reynolds, & Wiggins, 1989). Engagement coping strategies, such as planning and problem solving, involves facing and handling the stressors at cognitive and behavioral levels and is often linked to a higher degree of well-being and capacity to handle stress, trauma, and medical illness (Southwick, Vythilingam, & Charney, 2005). By contrast, disengagement coping involving escape/avoidance of stressful situations is considered maladaptive and is linked to higher distress levels (Carver, 1997; Folkman & Moskowitz, 2004; Southwick et al., 2005).

Instead of depending on a particular type of coping, it has been observed that most individuals use a combination of coping skills with a primary emphasis on one approach (Patterson & McCubbin, 1987). Hauser and Bowlds (1990) supported this notion by noting that both emotion-regulating and problem-solving coping strategies are used in almost all stressful situations. In effect, individuals tend to use a broad range of overlapping coping strategies to effectively manage their stress.

Resilience, stress, and coping

Significance of perceived stress in determining an individual’s subjective response to an aversive event draws its impetus from Transactional Model of Stress (Lazarus, 2003; Lazarus & Folkman, 1984) that views stress as the result of an imbalance between perceived demands and perceived resources. Accordingly, both the appraisal of the seriousness of demands and the adequacy of one’s coping
resources become important factors in determining whether demands will trigger stressful reactions. Chronic stress, when experienced, is typically associated with deleterious outcomes such as neurobiological dysfunction and dysregulation, immune deficiencies, and behavioral as well as mental problems (Gunnar & Vazquez, 2006). Yet there is lack of uniformity at either the biological or psychological level in appraisals of and responses to stress in those who are affected. While some people deal with stress and associated uncertainties better than other, such differences are conceptualized and explained by the existence of resilience. Multiple converging processes determine such variability in the responses to stressors and observations such as these have stimulated interest in the components of stress, coping and resilience. As Block and Block (1980) put it, “resourceful adaption to changing circumstances and environmental contingencies, analysis of the ‘goodness of fit’ between situational demands and behavioral possibility, and flexible invocation of the available repertoire of problem-solving strategies” is called resilience (p. 48).

Further, Stress Theory elaborates that resilient individuals do not discard the presence of stress in life, but they incorporate the use of effective coping strategies like problem-solving and positive reappraisal, and coping resources like social support to combat the effects of stress and show successful outcomes (Thoits, 1995). Thus resilient outcome following a stressful event is a byproduct of the coping used, as Janoff-Bulman puts it, “Not a chosen fate but some choice in coping” (Janoff-Bulman, 1992, p.138).

Health

Just like resilience, health is a compound and complex term that defies simple definitions and measurements. Historically, a negative definition of health prevailed in biomedicine as absence of disease, dysfunction, or injury. However, the rising expectations of the past decades have led to a shift away from viewing health in terms of survival, through a phase of defining it in terms of freedom from disease, onward to an emphasis on an individual’s ability to perform daily activities, and more recently to positive themes of happiness, social and emotional well-being, and quality of life, as well as ‘equity and justice in the distribution of health care across societies’ (Labonte, 2000; McDowell & Newell, 1996; Morreim, 2000; Riley, 1987).
As enshrined in the Preamble to the Constitution of the World Health Organization (adopted by the International Health Conference, New York, in June 1946 by representatives of 61 member states following World War II), health is defined as ‘a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity’. It is a multi-attribute concept that depends upon a complex network of physical, biological, environmental, economic, social, cultural, and possibly metaphysical (spiritual and moral) factors (Cutler & Richardson, 1998; Thorser & Harris, 2002). The term ‘health’, thus, epitomizes the overall well-being of an individual in terms of his fully functioning physical, psychological, and relational self.

In the current line of research, emphasis is placed on two important aspects of health, i.e., physical health and psychological health, as in order to fully understand resilience in adults, a mind-body approach is advocated that incorporates both physical and psychological health, and the interaction between the two.

Calnan and Johnson (1985), and Calnan (1987) have defined physical health in terms of getting through the day, never being ill, feeling strong, feeling fit, being active, being energetic, getting plenty of exercise, having a certain state or attitude of mind, being able to cope with life’s crises/stresses, and not being overweight. Unhealthiness has been defined as being below normal continually, having a poor lifestyle, lack of energy, being ill, having a serious illness, having a chronic illness, having an incurable illness, being in bed or in the hospital, going to the doctor, being depressed or unhappy, not coping with life, losing weight, being dependent on others, and being unable to work. This concept of physical health has been expanded and evolved to a bio-psycho-social model (Epel et al., 1998) with an orientation towards positive outcomes rather than deficiencies and emphasis on bi-directional causality and feedback (i.e., bio-psycho-social capital influences the physical health endowment and the endowment influences access to and use of bio-psycho-social resources).

Mental health, on the other hand, has been defined as “a state of successful performance of mental function, resulting in productive activities, fulfilling relationships with people, and ability to cope with adversity” (US Department of Health and Human Services, 2003, p. 4). Embedded in hedonic and eudemonic dimensions of well-being and flourishing (Keyes, 2002, 2005), it is referred to as “the
state of balance that individuals establish within themselves and between themselves and their social and physical environments” (Sartorius, 2003, p. 101). Concept of mental health includes “subjective wellbeing, perceived self-efficacy, autonomy, competence, intergenerational dependence, and recognition of the ability to realize one’s intellectual and emotional potential. It has also been defined as “a state of wellbeing, wherein, individuals recognize their abilities, are able to cope with the normal stresses of life, work productively and fruitfully, and make a contribution to their communities” (World Health Organization, WHO, 2003, p.7).

Resilience and health

Several rationales are given in the literature to explain the association between health and resilience. The ‘salutogenesis’ approach (Antonovsky, 1998) advocates social model of health and focuses on socially derived health maintenance processes as responsible for resilient outcome in the face of adversity. Other frameworks place emphasis on the underlying processes of disease and health i.e., psycho-neuro-biological systems associated with stress (Epel et al., 1998; McEwen & Gianoros, 2010), wherein physical immunity is said to be achieved through psychological resilience and its moderating effect on bodily stress response, and vice-versa (Miller, 1980; O’Leary & Ickovics, 1998).

Social Support

There has been an increasing appreciation within psychology of the fundamental importance of warm, trusting, and supportive interpersonal relationships. So important is relatedness that some of the theorists have defined it as a basic human need that is essential for well-being (Baumeister, 1991) and others have suggested that having stable, satisfying, and supportive relationships is a central theme across the lifespan (Mikulincer & Florian, 1998).

Social support is broadly defined in the literature as living with companionship, social contacts, participating in a society, and feeling valued and supported as member of a friendship or group or community (Heinrich & Gullone, 2006; Victor, Scambler, Bond, & Bowling, 2000), and receiving positive regard from others, which can be conveyed as a combination of instrumental (source of information and problem solving) and emotional (source of comfort) support (Bernardon, Babb, Hakim-Larson, & Gragg, 2011; Cutrona, 1990).
According to Allen, Blieszner, and Roberto (2000), “Social support, like connectedness, is defined as receiving various forms of informal assistance (e.g., information, tangible help, emotional support, and social integration) from relatives, friends, neighbours, and other community members” (p. 918).

Types of Social Support

Social support is a multidimensional concept usually defined in terms of its source, structure, and functions (Provost, 1995; Sherbourne & Stewart, 1991). While the sources of the support include family, friends, community members, strangers, animals, etc., it can be considered structural (quantitative) or functional (qualitative). The quantitative or structural aspect of social support includes size (number of social ties), density (frequency of contact with network members), or the range (amount of social support received). The qualitative or functional aspect of social support refers to the nature or functions of social relations (Berkman, Glass, Brisette, & Seeman, 2000; House & Kahn, 1985). Three commonly assessed social support functions are instrumental support (help and assistance to carry out necessary tasks), informational support (information and guidance for an individual to carry out day-to-day activities successfully), and emotional support (caring and emotional comfort provided by others). For each of these three support functions, a distinction can be made between perceived and received support. Perceived support is the subjective perception that network members are available to help, if need arises, while received support is the actual behaviors that network members have performed (Helgeson & Lopez, 2010).

Resilience and social support

Social support is often known as a social ‘fund’ from which people may draw when faced with chronic life stressors (Thoits, 1995). It is a commonly reported resource for coping with adverse circumstances (Cohen & Wills, 1985; Sinha & Watson, 2007) and has been linked with a number of positive outcomes of psychological resilience (MacDonald, 2007; McGuire-Schwartz, 2007; Miura & Agari, 2006; Rozario, Chadiha, Proctor, & Morrow-Howell, 2008).

Embedded in the paradigms of Organismic Valuing Process Theory (Joseph & Linley, 2005), and Stress Buffering Model of social support (Alloway & Bebbington, 1987; Cohen & Wills, 1985), the social environment of a person is deemed to be of highest relevance, which can either satisfy his/her needs for informational, emotional,
or practical support and facilitate growth, or impede success by not providing for these resources in the presence of trauma, such that resilient outcome is functional upon the social support (received or perceived).

**Positive Affect and Negative Affect**

One hundred and twenty years after William James defined emotion as feeling towards the bodily changes, that follows directly the perception of an exciting fact (James, 1884), researchers write that there is still no generally accepted definition of emotion (Scherer, 2005). Such is the state of affairs, that according to ‘new scientific realism’, a definition of emotion stands as an empirical hypothesis formulated against the background of a theory of emotion generation and remains revisable (Reisenzein, 1994, 2007).

In one of its most widely accepted form, Scherer (2005) has defined emotion as “an episode of interrelated, synchronized changes in the states of all or most of the five organismic subsystems in response to the evaluation of an external or internal stimulus event as relevant to major concerns of the organism” (p. 697). According to this definition, emotions are processes of casually linked mental (appraisal, action tendency, subjective experience) and behavioral (physiological reactions, facial and vocal expression) elements (Reisenzein, 2007).

Two dominant dimensions of affect/emotion that consistently emerge in studies of affective structure and are relevant from the focal point of present research are positive affect and negative affect. These are dispositional dimensions, wherein positive affect (PA) reflects the extent to which an individual experiences pleasurable engagement with the environment. It connotes the degree to which a person feels enthusiastic, active, and alert. High PA is the state of high energy, full concentration, and pleasurable engagement, whereas low PA is characterized by sadness and lethargy. In contrast, negative affect (NA) is the general dimension of subjective distress and unpleasurable engagement that subsumes variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness to be associated with high NA, low NA being a state of calmness and serenity (Watson, Clark, & Tellegen, 1988; Crawford & Henry, 2004).

**Resilience, positive affect, and negative affect**

Underlying the assumption that ‘positive emotions appear to be an essential ingredient in adaptation and resilience’ (Ong, Bergemen, & Chow, 2009), theoretical
and empirical work implicate the following salient mechanisms: Firstly, the Stress and Coping Theory (Lazarus & Folkman, 1984) suggests that under extremely stressful situations, positive emotions tend to provide ‘psychological time-out’, sustain coping efforts, and lead to restoration of physical and psychological resources depleted by stress. Second, the Broaden-and-Build Theory (Fredrickson, 2001) proposes that positive emotions provide a buffer against the adverse consequences of stress by decreasing physiological stress response and by increasing flexibility in cognitive processes of thinking and problem-solving (Tugade & Fredrickson, 2004). The adaptive significance of positive affect is further supported by the Dynamic Model of Affect (Zautra, Smith, Affleck, & Tennen, 2001) wherein, capacity for positive emotional engagement tends to be independent of negative affect experienced by the individual during times of stress and represents one potential pathway underlying stress resistance and resilient outcome (Zautra et al., 2001).

**Satisfaction with Life**

Satisfaction is a state of mind. It is an evaluative appraisal of something and encompasses both ‘contentment’ and ‘enjoyment’. Satisfaction with life refers to a cognitive judgmental process. Shin and Johnson (1978) proposed that life satisfaction is a global assessment of a person's quality of life according to his or her chosen criteria. wherein, judgment of satisfaction is dependent upon comparison of one's circumstances with what is thought to be an appropriate standard. It is important to point out that the judgment of how satisfied people are with their present state of affairs is based on a comparison with a standard which each individual sets for him or herself; it is not externally imposed. As a hallmark of the subjective well-being area, it centers on person's own judgments, not upon some criterion which is judged to be important by somebody else or even the researcher (Diener, 1984).

Satisfaction with life thus, has been defined as an individual’s conscious cognitive appraisal of the quality of his or her life (Headey & Wearing, 1992) and may reflect a global appraisal as well as appraisals within specific life domains (e.g., family, self, etc.).

It is the degree to which a person positively evaluates the overall quality of his or her life as a whole. In other words, how ‘much’ the person likes the life he/she leads (Veenhoven, 1996, 1999).
Resilience and satisfaction with life

Embedded within the hedonic and eudemonic approach to well-being and health, satisfaction with life and resilience are reported to exert positive protective effects on each other such that presence of one has been associated with greater probability and enhancement of the other (Cohen, Baziliansky, & Beny, 2014; Pavot & Diener, 1993).

Meaning in Life

Meaning in life as a concept originated in the orientation of humanistic-existential psychology and is based in Frankl’s (1963) concept of ‘will to meaning’. Frankl described the will to meaning as the primary motivational force and argued that frustration of this force gives a desperate feeling of existential vacuum. Definition of meaning in life is as vast and varied as the field of psychology itself. While some (Baumeister, 1991) offer semantic definitions (e.g., what does my life mean?), others often describe it as sense of coherence in one’s life (Battista & Almond, 1973; Recker & Wong, 1988), purposefulness (Ryff & Singer, 1998), and/or “the ontological significance of life from the point of view of the experiencing individual” (Crumbaugh & Maholick, 1964, p. 201).

Recker and Wong (1988) proposed that “meaning of life is the cognizance of order, coherence, and purpose in one’s existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfillment” (p. 221), and Steger and Frazier (2005) defined meaning in life as the sense made of, and significance felt regarding the nature of one’s being and existence.

In general, life is deemed meaningful if and when it is understood by the person living it to matter to some larger sense, when moving beyond the trivial or momentary it is felt to have significance, a greater purpose, or to have a coherence that transcends chaos (King, Hicks, Krull, & Gaiso, 2006) and the person is able to see the day-to-day events within a larger perspective of comprehensibility and ultimate life goals (Wong, 2013).

Although precise definitions have varied, two aspects of meaning in life have been delineated in the literature as presence of meaning which refers to the degree to
which an individual finds his or her life to be meaningful, and search for meaning which refers to an active exploration into finding a sense of meaning (Steger, Frazier, Oishi, & Kaler, 2006).

Park and Folkman (1997) also distinguish between situational and global meaning. Global meaning of life encompasses a person’s enduring beliefs and valued goals that remain relatively stable over the lifespan. Situational meaning of life, on the other hand, is formed as an outcome of interaction between person’s global meaning and specific circumstances of his life, and tends to vary as a function of time and situation.

Diversity lies not only in the definition of meaning in life, but also in its sources and in perspectives on how to achieve it (Vogler-Ebersole & Ebersole, 1985). There is no universal meaning that can fit everyone’s life (Frankl, 1965); meaning in one’s life is a personal forte such that every person is responsible for his or her own meaning (Battista & Almond, 1973; Frankl, 1965). Embedded in culture specific and universal elements, it can be achieved through the pursuit of important goals (Klinger, 1977), self-acceptance (Wong, 1998), personal relationships and meeting basic needs (Prager, 1996), or even the development of a coherent life narrative (Kenyon, 2000; McAdams, 1993). Importance of everyday decision-making and action, value, efficacy, and self-worth (Baumeister, 1991) and self transcendence (e.g., Seligman, 2002; Wong, 1998) has been implicated in the creation of meaning in life. Also, Lin (2001) proposed that meaning in life can be framed in relation to others, society, and nature. 

**Resilience and meaning in life**

The association between resilience and meaning in life is rooted in the principle of Antonovsky’s (1998) ‘salutogenesis’, which proposes that successful adaptation is related to the way in which people bring ‘order out of chaos’ (Antonovsky, 1998). In the wake of traumatic events, resilient outcome depends upon three key elements: the ability for people to understand what happens around them, the ability to find meaning in the situation, which further leads to and determines the extent to which they are able to manage the situation on their own, or through other
resources in their social networks. Further this meaning-making process tends to act as a coping resource (Lazarus & Folkman, 1984) in the resilience process.

**Generalized self-efficacy**

The concept of self-efficacy is rooted in the work of Bandura (1999, 2002) and refers to people’s beliefs in having control over their own functioning and over what occurs in the proximal environment (Bandura, 1999). Pertaining to an individual’s beliefs about his or her competence and performance in a particular domain, self-efficacy plays a significant role in individual’s capacity to persist during difficult situations through this perception of control (Schwarzer & Renner, 2000). If self is perceived as capable of success in certain situations, it leads to increased perseverance toward producing desired outcomes (Bandura, 1999).

Sherer et al. (1982) described self-efficacy as a stable trait that leads individuals to believe that they are able to manage stressful situations in their lives. It (self-efficacy) is the belief in one’s capabilities to organize and execute the courses of action required to produce given attainments (Maciejewski, Prigerson, & Mazure, 2000).

Self-efficacy draws impetus through its innate ability to impact both the intensity and the continuity of an individual’s reaction to stress and it does so via three distinctive processes. As described by Benight and Bandura (2004), these three processes consist of attentional and construal processes, in which threat or danger in a situation is appraised according to individuals own coping capabilities and extent of his or her control over the situation (Benight & Bandura, 2004; Lazarus & Folkman, 1984); transformative action processes, which affect the action taken by the individual to transform aspects of his or her environment from threatening to benign, and thus eventually transforming the stressful situations (Bandura, 1999; Schwarzer & Renner, 2000); and thought control processes, through which individual’s self-efficacious beliefs function to self-regulate his or her thoughts, emotions, and behaviors (Kinniburgh, Blaustein, Spinazzola, & van der Kolk, 2005).
Resilience and generalized self-efficacy

The significance of self-efficacy in the resilience research draws valence from three different approaches: trait based approach to resilience wherein self-efficacy is deemed an integral part of resilient personality (e.g., Garmezy et al., 1984; Werner, 1982, 2012), appraisal theories of stress and coping which put forward self-efficacious beliefs as essential to appraisal of stressful event as something one can deal with and for appropriate choice of coping strategies (e.g., Lazarus, 2003; Lazarus & Folkman, 1984), and lastly, attribution theories which propose that self-regulatory functions of high self-efficacy lead to enhancement of resilience via internal locus of control (Bandura, 1999).