# POSITIVE PSYCHOLOGY II

Presented by

CONTINUING PSYCHOLOGY EDUCATION INC.

6 CONTINUING EDUCATION HOURS

"Positive psychology, that's a good way to spend your time."
Snyder & Lopez (2002, p. 766)

**Course Objective**
The purpose of this course is to provide an understanding of the concept of positive psychology. Major topics include: flow, positive affectivity, emotional intelligence, creativity, personal control, optimism, hope theory, and self-efficacy.

**Accreditation**
Continuing Psychology Education Inc. is approved by the Texas State Board of Social Worker Examiners (Provider # 3329), Texas State Board of Examiners of Professional Counselors (Provider # 386), and Texas State Board of Examiners of Marriage and Family Therapists (Provider # 110). This course, Positive Psychology II, meets the qualifications for 6 hours of continuing education for social workers, LPCs, and LMFTs as required by the above-mentioned State Boards; for psychologists, LSSPs, LPAs, and provisionally licensed psychologists as required by the Texas State Board of Examiners of Psychologists; and for LCDCs as required by the Texas LCDC Program.

**Mission Statement**
Continuing Psychology Education Inc. provides the highest quality continuing education designed to fulfill the professional needs and interests of mental health professionals. Resources are offered to improve professional competency, maintain knowledge of the latest advancements, and meet continuing education requirements mandated by the profession.

**Learning Objectives**
Upon completion, the participant will be able to:
1. Introduce the basic principles of flow.
2. Discuss the advantages of experiencing positive affectivity.
3. Acknowledge that emotional intelligence affects numerous life domains.
4. Recognize the value of adaptive originality in people and creative endeavors.
5. Explain various advantages of personal control.
6. Describe the association between optimism and emotional/physical well-being.
7. Understand ways that hope influences psychological adjustment.
8. Convey how self-efficacy impacts human potential and possibilities.

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The history of positive psychology dates back to at least the Athenian philosophers in the West and to Confucius and Lao-Tsu in the East (Dahlsgaard, Peterson,& Seligman, 2005). Contemporary positive psychologists are asking the same questions as the ancient philosophers: What is the good life? What is happiness? Can one actively seek happiness or is it a by-product of other endeavors?

The growing field of positive psychology believes that what makes life worth living warrants a field of specialization within mainstream psychology, until general psychology accepts the study of human goodness and potential along with the study of illness and that which is bad (Peterson & Park, 2003).

Research on positive psychology covers diverse topics; this course explores the concepts of flow, positive affectivity, emotional intelligence, creativity, personal control, optimism, hope theory, and self-efficacy, with the goal of improving the quality of life.

# FLOW

The process of flow is the experience of complete absorption in the present moment. One feels impassioned about the activity being engaged in and that talents and abilities are fully actualized; life has meaning and authenticity. Creativity research observed that when work on a painting was proceeding well, the artist maintained a single-minded focus, and ignored fatigue, discomfort, and hunger, then lost interest in the artwork upon completion (Getzels & Csikszentmihalyi, 1976). Flow research and theory originated with the goal of understanding this process of intrinsic motivation, or "autotelic" activity - defined as activity which is rewarding in and of itself unrelated to extrinsic rewards that may ensue from the activity (auto is self, and telos is goal).

Csikszentmihalyi (1975/ 2000) examined the essence of enjoyment by interviewing chess players, rock climbers, dancers, and others who claimed that enjoyment was the essential reason for involvement in their activity. The prerequisites for entering flow include: a) perceived challenges or opportunities for action that expand but do not overbear existing skills, and b) clear, immediate goals with instant feedback on progress. These two conditions lead to a state of here and now interwoven experience resulting in a subjective state with the following features:

- Acute and focused concentration on the present moment
- Action and awareness converge
- Reflective self-consciousness ceases (e.g. one loses self-awareness of being a social actor)
- A feeling of internal control over the situation due to confidence in managing whatever happens next
- Distortion of time perception (generally, a sense that time has passed faster than usual)
- The activity is intrinsically rewarding such that commonly the process is more satisfying than the end goal

These characteristics are very similar across different leisure and work environments. People function at full

capacity when in flow (de Charms, 1968; Deci, 1975).

A prerequisite for entering flow is creating a balance between perceived action capacities and action opportunities (Berlyne, 1960; Hunt, 1965). The balance is sensitive because when challenges surpass skills, the individual becomes vigilant and then anxious; if skills exceed challenges, the person relaxes and ultimately becomes bored. Anxiety or boredom sensitizes the individual to modify his or her level of skill and/or challenge to extinguish the aversive state and re-experience flow.

Goal and feedback mechanisms facilitate "flow activities" such as sports, games, along with daily work and leisure routines such as doing the laundry, driving a car, or inputting data on a computer. Subjective rather than objective challenges and skills instill flow and subsequently enhance life experience.

An ordered state of consciousness arises when one's attention is fully absorbed in the challenges of the moment (Nakamura & Csikszentmihalyi, 2002). Thoughts, feelings, desires, and action operate in harmony, and subjective experience is differentiated and integrated.

Over time, people master the challenges of an activity through greater skill-level attainment and the activity becomes less engaging. The person must encounter progressively more complex challenges to maintain the state of flow. The ideal challenge level extends existing skills (Vygotsky, 1978) thus creating more complex opportunities for action. This aspect differentiates the flow model from paradigms that describe optimal challenge by either an equilibrium point of homeostasis to be returned to or a peak level of challenge to be achieved (Moneta & Csikszentmihalyi, 1996). A flow activity dynamically adjusts to changing challenges, skills, and enjoyment. This model accepts that the tendency of the self is to strive for complexity through pursuing new goals and interests, and new opportunities for action in relation to existing interests (Csikszentmihalyi & Nakamura, 1999).

Csikszentmihalyi (1975/2000) suggested the existence of an "autotelic personality," which is an individual who enjoys life or "generally does things for their own sake, rather than in order to achieve some later external goal" (Csikszentmihalyi, 1997, p. 117). This personality type displays "meta-skills," which allow for the entrance into and maintenance of flow. Meta-skills include a general curiosity and interest in life, persistence, low self-centeredness, and commonly performing activities for intrinsic reasons only.

Csikszentmihalyi and Nakamura (2011) propose that optimal life-span development involves the creation of "psychological capital" (PK) which includes a wider range of meta-skills or learned habits that allow for enjoyment of present activity as well as increasing the probability of enjoying future experiences. PK is characterized by: 1) having confidence (self-efficacy) to put forth the necessary effort to succeed at challenging tasks, 2) being optimistic about succeeding now and in the future, 3) perseverance toward goals and, when needed, changing paths to goals (hope) to succeed, and 4) sustaining, and demonstrating

resilience when confronted by problems and adversity to achieve success.

Flow principles have been implemented in various work and educational contexts. The Swedish state-owned transportation company, Green Cargo, had been unprofitable since its inception in 1889, until they utilized new systems based on flow principles, in 2004. Line managers were trained to recognize workers' personal strengths; then they routinely set clear goals for the workers, identified appropriate challenge-levels, and supplied timely feedback. The flow-based program was touted as a significant factor in the turnaround (Marsh, 2005). Several museums, including the Los Angeles Getty Museum, used flow principles for the design of exhibits and buildings. Flow principles assisted in product design at car-maker, Nissan USA, for the purpose of making product-use more enjoyable. Within educational settings, the Key School in Indianapolis (Whalen, 1999), a K-12 public school, strives to provide a learning environment that facilitates flow experiences, and assists students to develop interests and acquire the capability to experience flow. Students are given opportunity to choose and participate in activities related to their inherent interests. Educators in Denmark are incorporating flow principles into the curriculum and teaching method in schools from kindergarten upward (Knoop & Lyhne, 2006; Kristensen & Andersen, 2004), and various schools are running assessments on student flow experience and other elements of positive functioning.

Several international countries, including Italy and Somalia, use flow-based therapeutic methodologies with clients, rather than the traditional approach of resolving conflict and then well-being will automatically occur. The flow principles approach centers on building client interests and strengths and then utilizes the ensuing growth of skill and confidence (Wells, 1988) that accompanies flow experience which enables client to lower dysphoric experience as a by-product of this growth.

The goal of therapeutic and educational applications of flow principles is not to produce the state of flow directly, instead, to help individuals become aware of activities that they enjoy and learn how to empower their attention in the work of these chosen activities.

## POSITIVE AFFECTIVITY

Having a temperament or tendency to commonly experience positive emotional states, entitled positive affectivity, is a moderately stable trait over time. People exhibit consistent mood levels across different situations, for instance, in social settings, being alone, and at work (Costa & McCrae, 1992; Watson, 2000). Individuals high in positive affectivity frequently experience intense episodes of pleasant, pleasurable mood, and are cheerful, enthusiastic, energetic, confident and alert. Persons low in positive affectivity report reduced levels of happiness, excitement, vigor, and self-confidence.

Recent research has identified two essentially independent factors that constitute the basic dimensions of emotional experience - positive and negative affect. These two affect types characterize the subjective elements of two broader biobehavioral systems that evolved to respond to different evolutionary tasks (Tomarken & Keener, 1998; Watson, Wiese, Vaidya, & Tellegen, 1999). Notably, negative affect is a component of the withdrawal-focused Behavioral Inhibition System which helps the organism to avoid trouble by inhibiting behavior that could lead to pain, punishment, or an undesirable outcome. Positive affect, contrarily, is a component of the approach-centered Behavioral Facilitation System which leads organisms toward encounters and experiences that can produce pleasure and reward. These systems have adaptive significance because they contribute toward the attainment of vital resources (i.e., food and water, shelter and warmth, social cooperation, sexual partners) necessary for survival of the individual and the species.

Causal factors for positive affectivity include genetics, a neurobiological basis, and environmental/demographic correlates. Much of the genetic research on positive affectivity is based on extroversion, and heritability estimates for extroversion, attained from twin studies, are generally in the .40-.60 range, with a median of roughly .50 (Clark & Watson, 1999).

Neurobiologically, Davidson, Tomarken, and their colleagues found that happy people generally display relatively greater resting activity in the left prefrontal cortex than in the right prefrontal area; dysphoric individuals exhibit relatively greater right anterior activity. It seems that positive emotionality mainly reflects the level of resting activity in the left prefrontal area, and negative emotionality is strongly related to right frontal activation (Davidson, Jackson, & Kalin, 2000; Tomarken & Keener, 1998).

The left prefrontal activity can be associated with the mesolimbic dopaminergic system, which is strongly implicated in the functioning of the Behavioral Facilitation System and in the subjective experience of positive mood (Depue & Collins, 1999; Wacker, Chavanon, & Stemmler, 2006). The evidence suggests that the dopaminergic system is a vital contributor in both left frontal activation and phenotypic differences in positive affectivity. Depue et al. (1994) experimented with this idea by administering biological agents that stimulate dopaminergic activity, and then measured the strength of the system's response. Supportive of their hypothesis, Depue et al. determined that various measures of dopaminergic activity were strongly correlated with individual differences in positivity, but were not related to negative affectivity.

Many studies have shown that objective demographic factors are relatively weak predictors of happiness and positive affectivity (Argyle, 1987; Myers & Diener, 1995; Watson, 2000). Positive affectivity scores are not shown to be systematically related to age (Clark & Watson, 1999; Watson & Walker, 1996). Factors such as annual income, level of educational attainment, and socioeconomic status are, at most, only weakly associated with happiness and

well-being (Myers & Diener, 1995; Watson, 2000). Gender differences are not significant as men and women report essentially identical levels of happiness and positive affectivity (Watson, 2000; Watson & Clark, 1999). Positive affectivity, therefore, is not significantly limited by objective conditions such as gender, age, wealth, and status.

Two significant predictors of positive affectivity have arisen. First, positive affectivity, but not negative affectivity, is moderately correlated with several forms of social behavior, including number of close friends, frequency of interaction with friends and relatives, establishing new acquaintances, engaging in social organizations, and general level of social activity (Myers & Diener, 1995; Watson, 2000; Watson & Clark, 1997a). High positive affectivity individuals tend to be extroverts who are socially active. The relationship between these variables appears to be bidirectional, in that social activity and positive affectivity mutually influence one another (Watson, 2000; Watson & Clark, 1997a). In support, social interaction is known to create a temporary elevation in positive mood (Watson, 2000); and feelings of cheerfulness, liveliness, and enthusiasm are related to a greater desire for affiliation and interpersonal contact (Lucas et al., 2000).

Second, individuals who describe themselves as being "religious" or "spiritual" report higher levels of happiness than those who do not, and this has been observed in the United States and Europe (Myers & Diener, 1995; Watson, 2000). Religion and spirituality are positively correlated to positive affectivity but are not related to negative affectivity (Clark & Watson, 1999; Watson & Clark, 1993). There are two primary explanations for religious and spiritual people being happier (Myers & Diener, 1995; Watson, 2000). Religion may offer people a deep sense of meaning and purpose in their lives along with possible answers to deep existential questions of life. Additionally, religious activity may provide a form of social behavior through congregating together, sharing personal views, and developing supportive relationships. In fact, people who are religious rate themselves as less lonely than non-religious people (Argyle, 1987).

Low levels of positive affectivity are associated with numerous clinical syndromes, including social phobia, agoraphobia, posttraumatic stress disorder, schizophrenia, eating disorder, and substance disorders (Mineka, Watson, & Clark, 1998; Watson, 2000); it has a central role in mood disorders (Clark, Watson, & Mineka, 1994; Mineka et al., 1998; Watson, 2000; Watson , Gamez & Simms, 2005), and it is strongly linked to the melancholic subtype of major depression, which is identified by a "loss of pleasure in all, or almost all activities" or a "lack of reactivity to usually pleasurable stimuli" (American Psychiatric Association, 2000, p. 420). Low positive affectivity scores have even predicted subsequent onset of depression in prospective data. This data suggests the possibility that lack of positive affectivity may be a significant vulnerability factor for mood disorder (Clark et al., 1994).

High positive affectivity individuals feel good about themselves and the world in which they live. They report more satisfaction and success with relevant life domains such as work and relationships (Lyubomirsky,King, & Diener, 2005). Positive affectivity is a significant predictor of job satisfaction (Connolly & Viswesvaran, 2000; Watson & Slack, 1993). Watson and Slack (1993) administered a measure of positive affectivity to participants and then, 27 months later, asked them to rate their job satisfaction. Positive affectivity continued to be a significant, moderate predictor of various job satisfaction measures (correlations were between .27 and .44), even after the passage of considerable time between the measures. Staw, Bell, and Clausen (1986) determined that a 17-item Affective Disposition scale (measuring high positive affectivity and low negative affectivity) given to participants as adolescents, significantly predicted job satisfaction almost 50 years later, even after controlling for objective differences in work conditions. Additionally, positive affectivity associated with personal accomplishment (a feeling of adequacy and effectiveness on the job) and organizational commitment (Thoresen, Kaplan, Barsky, Warren, & de Chermont, 2003). These data suggest that trait affectivity represents a relevant etiological role in overall job satisfaction.

Positive affectivity is correlated with marital and relationship satisfaction. Watson, Hubbard, and Wiese (2000) examined this relationship by studying 74 married couples and 136 dating couples and found that positive emotionality correlated with satisfaction in the range of .24 to .48. Marital satisfaction and job satisfaction are also linked and some research shows that mood (especially positive affect) may mediate this connection (Heller & Watson, (2005).

With respect to physical health, many studies have illustrated that positive affectivity prospectively predicts increased life longevity in the community dwelling elder population (Danner, Snowdon, & Friesen, 2001; Ostir, Markides, Black, & Goodwin, 2000; Parker, Thorslund, & Nordstrom, 1992). This relationship has not been consistently apparent in other populations. Research also shows a connection between positive affectivity and resistance to developing infectious illnesses. Cohen, Doyle, Turner, Alper, & Skoner (2003) collected daily mood scores to measure trait positive and negative affectivity and then exposed the participants to viruses which cause the common cold. The high positive affectivity group was less likely to acquire a cold after exposure, even after controlling for variables such as negative affectivity and baseline immunity.

Within diseased and healthy populations, higher positive affectivity individuals report fewer symptoms and less pain (DeGucht, Fischler, & Heiser, 2004; Kvaal & Patodia, 2000). Several possibilities explain the connection between positive affectivity and improved health. Positive affectivity changes how people view their health and bodies as opposed to changing their actual physical condition. Supportive evidence shows that given similar objective markers, high positive affectivity individuals report fewer and less severe

symptoms (Cohen et al. 2003). Second, positive affectivity may affect health by its relationship with healthy behaviors , for instance, better sleep habits (Fosse, Stickgold, & Hobson, 2002), increased exercise (Watson, 2000), and enhanced coping skills (Salovey, Rothman, Detweiler, & Stweard, 2000). Third, some evidence shows that positive affectivity may directly impact nervous system activation and hormones that affect disease processes (Cohen et al., 2003); Polk, Cohen, Doyle, Skoner, & Kirschbaum, 2005)

Culturally, there are more similarities than differences in the positive affective experiences of people from different cultures. One cultural factor that may affect positive affectivity and extroversion is the amount of individualism (independent self-conceptualization) versus collectivism (interdependent self-conceptualization) in the culture. Oishi et al. (2004) assessed mood while participants were in different situations, such as being alone versus with another person. The situation more greatly affected the positive affectivity of individuals from collectivist than individualist cultures such that affective experience remained more stable, regardless of the situation, in individualist cultures. Individual differences in positive affectivity may be more consistent and prominent in individualist cultures.

Levels of positive affectivity are not highly limited or determined by objective life conditions. Diener and Diener (1996) showed that most people, including the poor and physically handicapped, report experiencing at least moderate positive affectivity levels. Yet, many people are not as happy, energetic, and cheerful as they would prefer to be. The question then arises: Is lasting change in positive affectivity possible? Some research illustrates that major life events generally only influence well-being in the short-term and then people gradually adapt to the life changes and ultimately revert back to their preexisting baseline or "set-point" (Diener, Lucas, & Scollon, 2006; Myers & Diener, 1995; Watson, 2000). Given that positive affectivity levels are significantly influenced by hereditary variables that affect central nervous system functioning, people may be hardwired to be relatively high or low in cheerfulness and enthusiasm, unrelated to important life events or conscious attempts to change. Contrarily, genetic and biological factors do not exert total control over the individual, in fact, intentional activity changes create enduring higher happiness levels (i.e., Diener et al., 2006; Sheldon & Lyubomirsky, 2006). Behavior geneticists reject the limiting perspective that heredity disallows any positive change. Weinberg (1989) supports this view by stating, "There is a myth that if a behavior or characteristic is genetic, it cannot be changed. Genes do not tax behavior. Rather, they establish a range of possible reactions to the range of possible experiences that environments can provide" (p. 101). Thus, inherited genotypes establish the maximum and minimum phenotypic values that a person may experience, and environmental variables then come into play by determining where the individual's performance registers within the genetic range. This suggests the possibility of significantly increasing positive affectivity regardless of phenotypic value (given that

the person has not already reached maximum phenotypic value - generally, a status not attained). Genetic and biological factors need not necessarily suggest resignation because we can willfully choose to increase our positive affectivity and to reach our potential maximum.

## EMOTIONAL INTELLIGENCE

Emotional intelligence (EI) is the ability to: a) accurately and adaptively perceive, assess, and express emotion; b) understand emotion and emotional knowledge; c) access and/or create feelings which activate cognitive and adaptive activities; and d) regulate emotions in oneself and others (Mayer & Salovey, 1997). Essentially, EI is the ability to effectively process emotional information, allow the information to direct cognitive activities such as problem-solving and to concentrate energy on required behaviors.

Historically, the Stoic philosophers of Greece emphasized virtue and considered emotion to be overly individualistic, self-absorbed, and an unreliable guide for insight and wisdom. The European Romantic movement of the early-nineteenth century displayed a more flexible view of emotion by professing that emotion-rooted intuition and empathy can offer insights that logic alone cannot. One contemporary model of emotional intelligence divides this construct into four components (i.e., Mayer, Caruso, & Salovey, 1999) . The first component, "perceiving emotions," includes the ability to: a) identify emotion in one's psychological and physical states, b) identify emotion in others, c) convey emotions accurately and articulate associated needs to the emotions, d) distinguish between accurate/honest and inaccurate/dishonest feelings. The second component, "using emotions," (to foster cognition) involves the ability to: a) redirect and prioritize thinking based on associated feelings, b) utilize emotions to enhance judgment and memory, c) use mood changes to facilitate appreciation of multiple points of view, and d) use emotional states to promote problem-solving and creativity. The third element, "understanding emotions," highlights the ability to: a) comprehend relationships among different emotions, b) recognize the causes and consequences of emotions, c) acknowledge complex feelings, emotional blends, and contradictory states, and d) discern changes among emotions. The fourth factor, "managing emotions," corresponds to the ability to: a) be receptive to pleasant and unpleasant feelings, b) monitor and reflect on emotions, c) move toward, away, or detach from an emotional state, d) manage emotions in oneself, and e) manage emotions in others.

Many people associate EI with the fourth component, managing emotions, and they hope to discover ways of resolving troublesome emotions, emotional overflow into relationships, and establishing self-control over emotions (Salovey, Bedell, Detweiler, & Mayer, 1999).

Physical exercise is the single most effective way to change a bad mood, among the choices that are within one's control. Other mood regulation strategies include listening to music, social interaction, and cognitive self-management (i.e., a

personal "pep talk"). Enjoyable distractions such as running errands, engaging in hobbies, fun activities, shopping, and reading are effective. Less productive, and sometimes counterproductive strategies include passive mood management (e.g., watching television, food, caffeine, and sleeping), direct tension reduction (i.e., drugs, alcohol, and sex), being alone, and avoiding the person or situation that initiated the bad mood. Generally, the most effective mood-regulation strategies utilize energy expenditure, in fact, active mood management methods that combine relaxation, stress management, cognitive effort, and exercise may be the best strategy for changing bad moods (i.e., Thayer, Newman, & McClain, 1994). Emotional self-regulation centers on reflecting upon and managing one's emotions, and emotional disclosure is a proven way to regulate emotions. The positive effects of verbal self-disclosure are known, additionally, disclosing emotional experiences in writing also improves mental and physical health (Pennebaker, 1989, 1993, 1997).

Those higher in EI revealed better relationships with parents, friends, and romantic partners, and they disclosed having greater satisfaction in their social relationships and in the social support received from parents (Ciarrochi et al., 2000; Lopes et al. 2003). They reported having more friends, experiencing less conflict and antagonism with their close friends, and enjoying higher-quality social relationships (Brackett, Mayer, & Warner, 2004; Ciarrochi et al., 2000; Lopes et al., 2003, 2004; Mestre, Guil, Lopes, Salovey, & Gil-Olarte, 2006). Romantic couples composed of two low EI individuals reported more conflict, negative interactions, and lower relationship satisfaction compared to couples with at least one partner with high EI (Brackett, Warner, & Bosco, 2005).

Along with self-report measures, current studies also include diaries, and ratings by friends and observers to evaluate social relationship qualities. These measures similarly show that EI is an important variable in social relationships. For instance, individuals scoring high on the emotion management component of EI were rated by their friends as offering more support to friends, and having a more positive relationship with friends replete with intimacy, affection, and admiration (Lopes et al., 2004; Lopes, Salovey, Cote, & Beers, 2005). A laboratory social interaction study found that higher EI men were rated by observers as being more socially competent and engaged (Brackett et al., 2006). A cross-cultural study of German students found that individuals higher in understanding emotion felt safer in interactions with others and felt that the interaction partner found the social interaction to be interesting and enjoyable. Individuals higher on managing emotions sensed being more wanted and important during the social interaction and felt being positively perceived by opposite-sex members of the interactions (Lopes et al., 2004). Some findings reveal that EI may affect the attachment style of adults (Kafetsios, 2004).

Adolescents higher in EI exhibit lower tobacco use and a better understanding of the negative social effects associated with smoking (Trinidad, Unger, Chou, & Johnson, 2004, 2005). They also engage in less deviant behavior such as drug and alcohol usage, and lower involvement in fights, gambling, and stealing (Brackett & Mayer, 2003; Brackett et al., 2004).

Relative to happiness, EI is associated with higher life satisfaction (Ciarrochi et al., 2000) and psychological well-being (Brackett & Mayer, 2003).

EI is also associated with the workplace. A study of employees from a Fortune 500 insurance company showed EI was related to percent merit increase, and company rank, even when controlling for related variables to these factors such as age and education. EI was also associated with peer-rated sociability and peer- and supervisor-rated contribution to a positive work environment (Lopes, Grewal, Kadis, Gall, & Salovey, 2006).

There has been a growing interest in the past decade in developing school-based EI programs resulting from literature suggesting that teachers can improve EI in school children (Mayer & Cobb, 2000; Salovey & Sluyter, 1997). For instance, Schilling (1996), in a guidebook for creating EI curricula for elementary school students, recommends teaching sections on self-awareness, managing feelings, decision-making, managing stress, taking personal responsibility, self-concept, empathy, communication, group dynamics, and conflict resolution. One can see the diversity of constructs involved in EI, therefore, many of the school-based interventions enhancing EI are classified as Social and Emotional Learning (SEL) programs (Cohen, 1999a; Elias et al., 1997).

There are over 300 curriculum-based programs in the U.S. teaching SEL (Cohen, 1999b). These programs range from highly specific social problem-solving skills training (i.e., Elias & Tobias, 1996) to general conflict resolution techniques (e.g., Lantieri & Patti, 1996) to broad programs focused on constructs such as "character development" (Lickona, 1991). One SEL program that promotes EI development is the Social Development curriculum in the New Haven (Connecticut) public schools (Shriver, Schwab-Stone, & DeFalco, 1999; Weissberg, Shriver, Bose, & DeFalco, 1997). This kindergarten through Grade 12 program teaches social and emotional skills within various prevention programs, such as drug use, AIDS, and teen pregnancy prevention (Durlak, 1995). The curriculum involves 25 to 50 hours of structured classroom instruction at each grade level on topics including self-monitoring, feelings awareness, perspective-taking (empathy), understanding nonverbal communication, anger management, and other constructs related to EI. Positive outcomes have resulted, including reduced school violence and feelings of hopelessness (Shriver et al., 1999).

Another well-known EI curriculum, entitled Self Science, was initiated at the Nueva School in Hillsborough, California, for first through eighth grades (Stone-McCown, Jensen, Freedman, & Rideout, 1998). This program is based on three assumptions: there is no thinking without feeling and no feeling without thinking; more learning is possible if

one is conscious of what s/he is experiencing; and self-knowledge is fundamental to learning. The Self Science curriculum goals include disclosing feelings and needs; listening, sharing, and comforting others; learning how to gain from conflict and adversity; prioritizing and establishing goals; including others; decision-making; contributing to the larger community (Stone-McCown et al., 1998).

The Emotional Literacy in the Middle School (ELMS) program has been used in many American and United Kingdom schools for ages 10 through 13. The goal is to help students become emotionally literate by increasing their vocabulary and comprehension of emotion words. Students are taught to identify, label, understand, and express emotions and to write about socio-emotional characteristics of life. They are exposed to projects that clarify the four EI skills, for instance, perceiving and using emotions skills by interpreting and analyzing emotions elicited by various pieces of music, or creating collages or mobiles associated with different facial displays of emotion.

Many EI interventions for school children reside within specific intervention programs, for example, the Resolving Conflict Creatively Program (RCCP) which began in the New York City public schools (Lantieri & Patti, 1996). The program goals include enhancing awareness of different choices for managing conflicts, and skill-development for making these choices; learning to respect one's own and others' cultural background; identifying and opposing prejudice; and living peacefully among others. This program facilitates awareness of one's own feelings in conflict situations and taking the perspective of and emphasizing with the feelings of others. A follow-up program, entitled Peace in the Family, teaches conflict resolution strategies to parents. An evaluation of the RCCP program involving 5000 New York City students revealed that hostile attributions and teacher-reported aggressive behavior was reduced in correlation with the number of conflict resolution lessons, and the highest academic achievement occurred in children who received the most lessons (Aber, Brown, & Henrich, 1999; Aber, Jones, Brown, Chaundry, & Samples, 1998).

A promising method for acquiring workplace EI is conducted in the Weatherhead MBA program at Case Western Reserve University where social and emotional competency training is included in the curriculum for future business leaders (Boyatzis, Cowen, & Kolb, 1995). These MBA students are exposed to experiences designed to cultivate initiative, flexibility, achievement drive, empathy, self-confidence, persuasiveness, networking, self-control, and group management. Communication and emotion-related skills are also being utilized at more physician training programs (Kramer, Ber, & Moores, 1989).

The Emotional Competency Training Program at American Express Financial Advisors incorporates EI by helping managers to become "emotional coaches" to their employees. The training highlights the role of emotion in the workplace and how one's own and others' emotional reactions influence management practice. Higher business growth was shown by financial advisors whose managers had participated in the training program relative to those who had not (Cherniss, 1999).

## CREATIVITY

People are nearly universal in their valuing and appreciation of creativity. Most modern societies encourage and reward the human resource of creativity. Patent and copyright laws are instituted to protect creative endeavors and allow the creators to benefit from their creative labors. At the pinnacle, honors and awards are presented to superior models of creativity. Nobel prizes result for ultimate creators in the sciences and literature and Academy Awards and Golden Globe Awards for creators of worthy films.

Creative behavior may be lauded after the creator has died and his/her name may "go down in history," such as Socrates, Shakespeare, Leonardo De Vinci, and Beethoven in Western civilization and Ibn Sina, Shankara, Zhu Xi, Firdawsi, Murasaki, Shikibu, Kalidasa, Du Fu, Wang Wei, Unkei, and Toyo Sesshu in Eastern civilizations. The existence of such noble names may reflect the creative level of an entire civilization at a point in history. A culture bestowed with eminent creators may be labeled a "Golden Age," whereas a dearth of such pioneers can lead to history books describing a "Dark Age." Creativity is thereby perceived as a human capacity that offers individual and sociocultural utility and value.

Creativity is generally defined as the creation of ideas that are original and adaptive (Simonton, 2000). Creative ideas are novel, surprising, unexpected and functional, hence, creativity may be succinctly defined as "adaptive originality."

Creativity appears in three different ways (Simonton, 2003): a) a mental "process" that produces adaptive and original ideas, b) a type of "person" who manifests creativity, and c) the actual "product" that emanates from the creative process or person.

Research on the thought process that generates creative ideas focused on two disparate types of thinking (Guilford, 1967). "Convergent" thought is focusing upon a single correct response, as is required in aptitude and intelligence tests. "Divergent" thought involves generating many alternative responses, including ideas characterized by variety and originality. One common divergent measure is the Alternate Uses Test, which requires the participant to devise many different ways to use a common object such as a paper clip or brick.

The creative person exhibits a personality profile that differs from the average person (Feist, 1988). Creative people tend to be independent, nonconformist, and unconventional; they often have wide interests, greater openness to new experiences, and a more noticeable behavioral and cognitive flexibility and boldness (Simonton, 2008). Interestingly, the personality profiles of artistic creators often differ appreciably from scientific creators (Feist, 1998) such that creative scientists fall within a range between creative artists and noncreative personalities relative to their typical traits.

The creative product is generally measured on the basis of originality and adaptiveness. One approach is to ask individuals to describe their creativity samples, for instance, poems, art work, or projects (Carson, Peterson, & Higgins, 2005). Another method involves asking research participants to produce creative products under controlled laboratory conditions and then having independent judges rate the finished work (i.e., Amabile, 1996). Creativity may be evaluated on the basis of quantity, quality, and impact/influence.

The main predictor of eminence in any creative domain is the number of contributed works (Simonton, 1991a, 1991b, 1997). Eminence evaluations include expert ratings; receipt of major honors such as patents for inventors, positively critiqued plays for dramatists, and award-winning movies for directors; or being included in biographical dictionaries and encyclopedias (e.g., Simonton, 1998).

Research findings illustrate that child prodigies and intellectually gifted children generally experienced rather happy childhoods (Feldman & Goldsmith, 1986; Terman, 1925). Thus, their parents supplied a financially stable, loving, and intellectually/aesthetically stimulating home, and the children were physically healthy and educationally successful. A contrasting image appears for highly creative individuals (Goertzel, Goertzel,& Goertzel, 1978; Ludwig, 1995; Roe, 1953; Sulloway, 1996). The family may have experienced economic hardships, and parental instability; the child may have endured frequent illness, or physical/cognitive disability. Further, the child may have suffered through one or more traumatic events, for instance, the loss of one or both parents during childrearing (Sulloway, 1996; Eisenstadt, 1978; Roe, 1953). These same developmental events are also related to negative life outcomes, for example, juvenile delinquency or suicidal depression (Eisenstadt, 1978).

This inconsistency implies that, given the right conditions, early-life exposure to trauma or adversity can assist in the development of creative potential. Those who can confront and overcome may possibly benefit in that creativity may be an adaptive response to such difficulty (Eisenstadt, 1978).

# PERSONAL CONTROL

Perceived control is defined as the judgment of having the capacity to attain desired outcomes and to avoid undesirable outcomes. Geary's (1998) evolutionary conceptualization of perceived control indicates that the desire for control is the basic motivation that guides all other motives, emotions, cognitions, and social behaviors. Desiring control has been adaptive because it increases the likelihood of acquiring critical resources for survival and reproduction. Theorists who do not support an evolutionary model have also professed that a control drive is the core motivation guiding human behavior and development (Heckhausen & Schulz, 1995; White, 1959).

Perceptions of control are linked to improved coping with stressful life circumstances (Glass, McKnight, &

Valdimarsdottir, 1993; Litt, 1988; Thompson et al., 1993), less anxiety and depression relative to chronic depression (Griffin & Rabkin, 1998; Thompson, Nanni, & Levine, 1994), and less trauma due to victimization (Regehr, Cadell, & Jensen, 1999). Individuals with a stronger sense of perceived control have greater likelihood of implementing the needed action to improve or protect their physical health (Peterson & Stunkard, 1989; Rodin, 1986).

Perceived control is beneficial in the workplace (Parkes, 1989) and in educational settings (Dicintio & Gee, 1999; Eccles et al., 1991). Supportively, children exhibiting a mastery orientation pursue challenge in their tasks and persist when confronted by obstacles (Dweck, 1999). In nearly all life domains, a sense of personal control is associated with emotional well-being, the probability that action is taken, physical health, and general adaptive functioning.

There are many advantages to perceived control. The evolutionary model of perceived control believes that people have been shaped through evolution to want a sense of control. Dating back to our ancestors, people who enjoyed positive emotions and a sense of well-being during the time they had control were more likely to work to maintain control and to manipulate the environment in a manner that would increase the survival likelihood for themselves and their offspring. People with a drive for control had a greater chance of survival and of passing on their genes which resulted in an innate desire for control.

Perceptions of control also can stimulate the person to take action and avoid stressful situations by activating problem-solving and attention to solutions. Moreover, personal control facilitates preparation for an imminent stressor thus reducing the aversiveness of the situation (Miller, 1979). Potentially negative events, therefore, are less stressful given a belief in personal control.

Feelings of uncontrollability have been linked to increased physiological reactivity to stress and depressed immune functioning (Brosschot et al., 1998; Dantzer, 1989), thus, a sense of control may reduce the health-compromising effects of stress.

Three primary ways to maintain control, even in difficult circumstances, include: changing to goals that are attainable under current circumstances, establishing new options for control, and simply accepting current circumstances (Thompson & Wierson, 2000). First, progressing toward goals fuels perceived control and general well-being (Snyder, 1996). When confronted with inability to progress toward an important goal, individuals who are flexible in finding attainable alternate goals can maintain a sense of control. Brandstadter and Rothermund (1994) supported this view by observing that older adults experience a strong sense of general control through deemphasizing the importance of non-achievable goals and focusing instead on reachable goals. It is not adaptive to give-up on goals too easily, but flexibility given unattainable goals sustains perceptions of control. Second, identifying and developing available areas of personal control can maintain general control. Chronically ill individuals, for instance, can exert influence on their

illness by researching and gathering medical information pertinent to them, ensuring receipt of quality medical care, strictly adhering to their recommended treatment plan, lowering stress, and investigating alternative and supplemental treatments. Predictability improves a sense of control (Thompson, 1981), thus, simply pursuing information regarding the causes, course, and treatment options of one's ailment can enhance perceived control. A third strategy, acceptance, is based on Rothbaum, Weisz, and Snyder's (1982) differentiation between primary and secondary control. Primary control is synonymous with perceived control: the perception that one can attain desired outcomes. Secondary control is acceptance of one's life circumstances as they presently are, rather than exerting effort to change them. Acceptance is achievable in numerous ways, including discovering benefits, meaning, and purpose in the loss and the situation. Many people can find meaning in negative experience, for example, stroke patients have reported greater appreciation of life, their spouse, and growth from the experience (Thompson, 1991). Secondary control is linked to improved adjustment to difficult circumstances such as Parkinson's disease (McQuillen, Licht, & Licht, 2003). Acceptance enhances a feeling of control because it reduces a sense of helplessness and victimization and lowers the disparity between desired and achieved outcomes.

Research has investigated whether perceived control offers benefits even if the sense of control is illusory rather than realistic. Laboratory studies on illusory control manipulate the actual level of control over a particular task and then ask participants to estimate their control after task completion (Alloy & Abramson, 1979). Individuals who overestimate their control are often better copers and display more persistence on tasks (Alloy & Clements, 1992).

The benefit of illusory control also appears in the context of coping with traumatic events such as chronic illness. Those experiencing very serious loss or trauma seemingly have less real control, however, perceived control is equally adaptive and helpful for people encountering severely restrictive or adverse circumstances compared to individuals in better circumstances (Hedgeson, 1992; Reed, Taylor, & Kemeny, 1993; Thompson et al., 1993). These findings illustrate that control need not be realistic to be functional and beneficial.

It is assumed that people often combine perceived and illusory control by commonly overestimating their actual control, but utilizing more honest and accurate control assessments at critical times (Taylor & Armor, 1996). This explains why people utilize and benefit from illusory control during difficult life circumstances despite these judgments being overestimations of their actual control. Caution must be taken to not overestimate control for the purpose of avoiding effective but difficult behavior as this would result in illusory control being maladaptive.

Interventions at improving the control perceptions of individuals in low-control circumstances include teaching stress reduction and coping skills. The premise is that effectively lowering stress and managing problems will increase one's sense of control. Supportively, Cunningham, Lockwood, and Cunningham (1991) provided cancer patients with a psychoeducational program with seven weekly 2-hour sessions that resulted in higher perceptions of self-efficacy. Telch and Telch (1986) determined that group coping skills instruction improved self-efficacy for cancer patients. Slivinske and Fitch (1987) applied a comprehensive control-enhancing intervention for the elderly that highlighted responsibility, stress management, physical fitness, and spirituality which yielded a significant increase in perceived control and overall functioning. Parker et al., (1988) administered cognitive behavioral therapy and training in coping, problem-solving, distraction, and self-management to rheumatoid arthritis patients which culminated in less catastrophizing and improved perceptions of control over pain. Likewise, a cognitive behavioral treatment program for pain patients lowered helplessness feelings (Katz, Ritvo, Irvine, & Jackson, 1996), and a similar program for arthritis patients lowered pain, fatigue, and anxiety (Barlow, Turner, & Wright, 1998).

Generally, perceptions of control facilitate well-being and managing life problems. Further, research findings have not found a disadvantage to overestimating a sense of control given low control circumstances such as having a serious and debilitating chronic illness.

## OPTIMISM

Optimists expect good things to happen and pessimists expect bad things to happen. This difference in perspective affects problem-solving, coping with adversity, and the manner in which life is lived. Optimism and pessimism focus on expectations for the future and links to expectancy-value models of motivation. Expectancy-value theories suggest that behavior is based on the pursuit of goals (defined as desired states or actions). People attempt to match their behavior with desirable outcomes. "Value" equates to the degree of importance placed on the goal and "expectancy" is the level of confidence that the goal is attainable.

Optimism and pessimism are larger representations of confidence versus doubt, respectively, as related to most life situations rather than just a few. Optimists generally display confidence and persistence when challenged (even when progress is difficult or slow) while pessimists tend to be doubtful and hesitant in such situations. These different styles of responding to adversity affect coping with stress methodology (Scheier & Carver, 1992).

Peterson and Seligman (1984, chap. 29) believe that people's expectancies for the future originate from their interpretations of the past. If the person interprets past failures as due to stable causes then expectancies will be pessimistic because the cause (which is relatively permanent) is likely to remain. If past failures are perceived as a result of unstable causes then optimism is more likely because the cause may have subsided to be a factor. Clearly, future expectations impact an individual's actions and experiences.

One's emotionality while confronting problems influences optimism and pessimism. Facing adversity elicits a range of emotions extending from excitement and eagerness to anger, anxiety, and depression as a function of level of optimism. Optimists expect good outcomes, even in the face of adversity, which likely will produce a positive blend of feelings. Pessimists expect bad outcomes which often will result in more negative feelings such as anxiety, anger, sadness, or despair (Carver & Scheier, 1998; Scheier & Carver, 1992).

Carver and Gaines (1987) examined the association between optimism and emotional well-being by observing the development of depressed feelings after childbirth. Women completed two depression measures in the last third of pregnancy and again three weeks after delivery. Optimism correlated with lower depression symptoms at initial assessment and predicted lower depression postpartum, controlling for the initial depression levels. Optimism significantly contributed to resistance to postpartum depressive symptoms.

Fitzgerald et al. (1993) studied people undergoing coronary artery bypass surgery by assessing optimism one month before surgery and eight months afterward. Optimists displayed less presurgical distress, and more postsurgical life satisfaction (controlling for presurgical life satisfaction). It was concluded that general life optimism channeled into a specific optimism about the surgery which then transformed to satisfaction with life. Similar research by Scheier et al. (1989) discovered that optimists maintained a higher quality of life up to five years after the surgery.

Optimism was studied in the context of breast cancer (Carver et al., 1993) by interviewing patients at diagnosis, the day before surgery, several days after surgery, and 3, 6, and 12 months afterward. Optimism at initial assessment predicted less distress over time (controlling for medical effects and earlier distress) and resilience against distress during the following year. Likewise, head and neck cancer patients were assessed before treatment and three months afterward and optimists reported higher quality of life before treatment and at posttreatment (controlling for initial ratings; Allison, Guichard, & Gilain, 2000).

Another medical area in which optimism has been studied is in vitro fertilization (a procedure used to overcome fertility issues). Litt et al. (1992) examined individuals who experienced unsuccessful vitro fertilization attempts. The study measured optimism, expectancies for fertilization success, distress, and the impact of infertility on participants' lives, eight weeks beforehand, then distress was measured again, two weeks after notification of a negative pregnancy test. Pessimism was the only variable that predicted follow-up distress (controlling for time-1 distress).

The effect of optimism on caregivers has also been studied. Given et al. (1993) investigated a group of cancer patients and their caregivers. Higher optimism levels of caregivers predicted less depression and less impact of caregiving on their own physical health. Similar findings appeared with caregiver spouses of Alzheimer's patients in that optimism

associated with lower depression and greater well-being (Hooker et al., 1992; Shifren & Hooker, 1995).

Unrelated to medical issues, the start of college is deemed a stressful time and students' adjustment to their first college semester has been studied (Aspinwall & Taylor, 1992; Brissette et al., 2002). Optimism and other variables were measured upon campus arrival and well-being was assessed at semester's end. Higher optimism initially predicted less distress at semester's end and greater friendship development.

One possible explanation for optimists experiencing less distress given difficult times is that they may be more cheerful. Research disputes this theory because the differences still exist when statistical controls are included for prior distress. A more accepted explanation is that the coping strategies of optimists and pessimists qualitatively differ. Specifically, those who are confident about the future continue trying, even in the face of adversity whereas doubtful individuals attempt to escape the adversity by wishful thinking, becoming distracted, ceasing to put forth effort, and so forth.

Optimistic students reported using different situational coping responses and general coping styles than pessimists (Scheier, Carver & Bridges, 2001). Optimism associated with problem-focused coping (particularly in controllable situations), positive reframing, accepting the reality of the situation, and less denial and avoidance. Optimists were viewed as approach copers and pessimists as avoidant copers.

In the previously discussed study of coronary artery bypass surgery patients, Scheier et al. (1989) observed coping differences between optimists and pessimists. Pre-surgery, optimists more than pessimists planned for their future, set recovery goals, and deliberated less on negative factors related to the experience such as distress and symptoms. Post-surgery, optimists more than pessimists actively sought information regarding physician-directed after-surgery requirements for the months ahead, and suppressed thoughts about their symptoms less. Evidence showed that the positive effect of optimism on quality of life six months later resulted from the indirect impact of these coping differences.

The previously mentioned study of failed in vitro fertilization (Litt et al., 1992) also analyzed coping. Pessimism linked to escape as a coping tendency and escape contributed to greater distress after the fertilization failure. Optimists more than pessimists reported gaining benefit from the experience, for instance, by feeling closer to their spouse.

Correlations between optimism and coping in cancer patients have been studied. Stanton and Snider (1993) observed that pessimistic women relied more on cognitive avoidance in coping with an imminent biopsy than optimists. The avoidance apparently mediated the association of pessimism to prebiopsy distress. Cognitive avoidance at prebiopsy predicted postbiopsy distress in women who received positive diagnoses.

The earlier mentioned study of breast cancer in women (Carver et al., 1993) also assessed coping with breast cancer treatment during the first year. Pre- and post-surgery, optimism associated with coping such that optimists accepted

the reality of the situation, interpreted the situation in a positive way, and used humor to relieve the intensity of the situation. In contrast, pessimists used denial and giving-up tendencies at each time point.

A study on the role of coping in women treated for breast cancer (Schou, Ekeberg, & Ruland, 2005) found that the greater fighting spirit of optimists (evaluated before diagnosis) predicted better quality of life at the 1-year follow-up. Hopelessness/helplessness (reported by pessimists) predicted poorer quality of life.

The research suggests that optimists differ from pessimists in stable coping tendencies and in the coping responses utilized when encountering stressful situations (i.e., Solberg Nes & Segerstrom, 2006). Essentially, optimists use more problem-focused coping strategies compared to pessimists. In situations where problem-focused coping is not possible, optimists utilize strategies such as acceptance, humor, and positive reframing. Pessimists often cope through overt denial and mentally and behaviorally disengaging from the goals that the stressor is interfering with.

The difference in response between acceptance and denial is very apparent. Denial, which is refusing to accept the reality of a situation, constitutes an effort to maintain an invalid view. Acceptance suggests restructuring one's experience to encounter and embody the situation, without giving up. Responding to illness with resignation, for example, can quicken death (Greer, Morris, Pettingale, & Haybittle, 1990; Reed, Kemeny, Taylor, Wang, & Vischer, 1994). Acceptance rather than denial of a diagnosis facilitates an understanding that life is compromised but not over and then individuals generally develop adaptive mechanisms within which to live their remaining time. Acceptance thus perpetuates being goal engaged and possible "life engaged" (Scheier & Carver, 2001).

Another coping difference between optimists and pessimists involves proactive coping, defined as behavioral and attitudinal processes that induce good health and well-being instead of only reacting to adversity. This implies that optimists actively take measures to increase the likelihood of positive outcomes in their future. This is similar to problem-focused coping but without an existing stressor.

One way to engage in proactive coping is to seek knowledge. Radcliffe and Klein (2002) assessed heart attack-related knowledge in middle-aged adults and found that people high in dispositional optimism knew more about risk factors than those who were less optimistic.

Cardiac rehabilitation program patients were examined relative to proactive coping in relation to health promotion (Shepperd, Maroto, & Pbert, 1996). Optimism was associated with successfully lowering levels of saturated fat, body fat, increasing exercise, and with an index of overall coronary risk. Scheier and Carver (1992) studied the lifestyles of coronary artery bypass patients five years post-surgery and observed optimists more than pessimists were taking vitamins, eating low-fat foods, and enrolled in a cardiac rehabilitation program.

This research shows that optimists actively attempt to minimize health risks and selectively concentrate on health-threatening risk variables pertinent to them (Aspinwall & Brunhart, 1996). They do not increase vigilance if the potential health issue is minor or does not pertain to them, hence, such individuals limit behavioral response to meaningful threats.

Pessimists more than optimists appear to be more vulnerable to maladaptive behavior such as various types of substance abuse (i.e., excessive alcohol use) due to giving-up tendencies. One study of women with a family history of alcoholism revealed that pessimists reported drinking problems more than optimists (Ohannessian, Hesselbrock, Tennen, & Affleck, 1993). Another study observed people entering an aftercare program after having been treated for alcohol abuse. Pessimists dropped out of the program and returned to drinking more than optimists (Strack, Carver, & Blaney, 1987). Park, Moore, Turner, & Adler (1997) noted that optimistic pregnant women displayed less probability of substance abuse during pregnancy than pessimists.

Breast cancer patients indicated the frequency of illness-related disruption of social activities after treatment (Carver, Lehman. & Antoni, 2003). At every assessment, pessimism predicted more social activity disruption, emotional distress, and fatigue.

Giving up is manifested in many ways, for example, alcohol reduces awareness of life's failures and problems, and a person can ignore problems by distracting oneself with unrelated activities. The ultimate giving up is suicide and pessimism is a stronger predictor of this desperate action than depression (Beck, Steer, Kovacs, & Garrison, 1985).

Pessimism can link to self-defeating patterns as demonstrated by less persistence, more avoidance coping and health-damaging behavior, and potentially suicide. A sense of confidence about the future appears quite important.

Numerous studies link optimism to physical well-being. One study of middle-aged women evaluated carotid intima thickness (an index of atherosclerosis in the carotid artery) at a baseline and a 3-year follow-up (Matthews, Raikkonen, Sutton-Tyrrell & Kuller, 2004). Pessimism at initial assessment predicted intima thickness increases at follow-up while optimists revealed almost no increase during the three-year study.

Patterns of rehospitalization after coronary artery bypass surgery (which is common in this population) showed that optimism significantly predicted less likelihood of rehospitalization and longer timeframes before such need arose (Scheier et al. 1999). Associations between optimism, coping, and disease progression were examined in HIV patients. Optimists manifested more proactive coping, less avoidant coping, and less disease progression (Ironson et al. 2005).

Healing and immunity with respect to optimism has been examined. One study followed the healing process of men who received a biopsy (Ebrecht et al. 2004). The population sample was divided into "slow healing" and "fast healing" groups. Slow healers displayed significantly lower optimism

than fast healers. Another study found that optimism among older adults receiving an influenza vaccine predicted a significantly better immune response two weeks later compared to pessimistic participants (Kohut, Cooper, Nickolaus, Russell, & Cunnick, 2002).

One study discovered that optimism predicted longer life among 900 elderly Dutch people. Specifically, individuals who reported a high level of optimism at baseline were less likely to die during the next ten years (Giltay, Geleijnse, Zitman, Hoekstra, & Schouten, 2004).

Optimists appear to be better off than pessimists in that they are less distressed during difficult times, their coping strategies produce better outcomes, and they are better at taking action to sustain a promising future. Some research suggests that the benefits of optimism do not exist across all situations (i.e., Schwarzer, 1994; Tennen & Affleck, 1987). The assumption is that too much optimism might foster the ignoring of a threat until it is too late, or overestimating one's ability to deal with a difficult situation, leading to poorer outcomes. This premise is generally not the case, but some studies do caution against optimism in certain situations. Some evidence shows that optimism predicts poorer immune response when exposed to relative high challenge (Segerstrom, 2006), and given an accumulation of high life stress lasting a year's time, the buffering effect of optimism reverses (Chang & Sanna, 2003). These findings illustrate that the benefits of optimism are not universal.

Research does not indicate that exposure to major trauma will destroy the life of an optimist. Though such an outcome is possible, findings suggest that optimists will accept their changed reality, establish new future goals, and make the most of their current resources. Contrarily, pessimists are likely to believe that the trauma or disaster confirms their negative worldview and they may continue to expect more adversity. Interestingly, the association between optimism and pessimism and quality of life outcomes exists across different cultures (Chang, 2002).

In that optimism offers advantages, the question arises whether it can be acquired. Change is considered to be possible but questions exist regarding the extent, permanency, and effectiveness of such change compared to a naturally occurring optimistic view.

Cognitive-behavioral therapies are considered to be promising in converting a pessimist into an optimist. This therapeutic model assumes that people with problems create negative distortions in their minds. These negative thoughts create negative affect and prompt individuals to stop trying to pursue their goals. It is assumed that these distortions reflect the inner cognitions of the pessimist. Cognitive-behavioral methodology attempts to change the cognitions from negative to positive, resulting in less distress and energized effort toward goal-attainment.

Cognitive therapy can change a person's explanatory style from pessimistic to optimistic which can lower the degree of depressive symptoms (Seligman et al., 1988). Further, cognitive-behavioral interventions that teach problem-solving skills can help people explain life events more optimistically which can prevent the onset of depression in the future (Gillham, Reivich, Jaycox, & Seligman, 1995).

Therapists may not always want to change a client's existing doubt into optimism, for instance, clients who manifest overly high expectations or perfectionism can feel pessimistic because their unrealistic goals are unmet and, in turn, they may become doubtful about their adequacy. Such clients would benefit from creating realistic goals, and alternative goals to substitute for unattainable aspirations (Carver & Scheier, 2003; Wrosch, Scheier, Carver, & Schulz, 2003).

The literature affirms that people who maintain positive expectations for the future as their general disposition respond to adversity and difficulty more adaptively than those who demonstrate negative expectations. Expectancies significantly influence how people approach life situations and resulting outcomes. Optimism is linked to: positive mood and good morale, perseverance and effective problem-solving, achievement in many life domains, popularity, good health, freedom from trauma, and long life (Peterson, 2000; Peterson & Bossio, 1991; Peterson & Park, 2007; Peterson & Steen, 2002; Seligman, 1990).

## HOPE THEORY

Charles Snyder was a Wright Distinguished Professor of clinical psychology at the University of Kansas and editor of the Journal of Social and Clinical Psychology. He was a contributor to the field of positive psychology and wrote the first textbook in this field, entitled *Positive Psychology*. Snyder based his theory of hope (Snyder, 1989) on the research he was conducting on how people distance themselves from mistakes and failures and the excuses they make (i.e., Mehlman & Snyder, 1985). While investigating ways that people explain what they do not want, Snyder introduced hope theory to explain how people move closer to that which they do want. Thus, Snyder (1989) understood hope as the reverse of the excuse-making process.

The construct of hope has existed for thousands of years. In Greek mythology, hope was the only remaining thing in Pandora's jar after she unknowingly released all the evils into the world. Some historical quotes express the dual nature of hope: "Everything that is done in the world is done by hope (Martin Luther), and "He that lives on hope will die fasting" (Benjamin Franklin, quoted in Bartlett, 1968, p. 422).

In the 20th century, scholars wrote about a seemingly universal human desire to pursue goals as related to hope (Frank, 1975; Frankl, 1992; Melges & Bowlby, 1969; Menninger, 1959). The underlying theme was that hope encompasses the perception that a person's goals can be achieved. In talking with many people about hope and their goals, Snyder observed two recurring themes: the routes needed to reach one's goals and the required motivation to use those routes. Snyder (1994a, 1994c) termed these themes "pathways" and "agency," which ushered in a new theory of hope. Snyder (2002) defined hopeful thinking as the belief

that a person can find pathways to desired goals and can arouse the motivation to use those pathways.

Hope theory believes that much of human behavior is goal directed. Goals are seen as the mental targets that guide action sequences. Goal thoughts, therefore, is the critical element in hope theory (Snyder, 1994a, 1994c, 1998). Goals manifest as verbal or visual representations, hence, it can be a self-statement such as "I want to be healthy" or a mental image such as picturing oneself as healthy. Goals differ in terms of timeframe (i.e., short or long term), specificity, value, and importance. Snyder (1994a, 2002) proposed that goals must have sufficient value in order to occupy conscious thought, however, later research suggests that much human behavior can be directed by the pursuit of nonconscious goals (i.e., Chartrand & Cheng, 2002). Snyder (2002) perceives two basic types of goals: "approach goals" (e.g., getting accepted into graduate school) and "avoidance goals" (i.e., not catching a cold). Research asserts that people believe hope abounds given an intermediate probability of goal attainment (Averill, Catlin, & Chon, 1990).

Hope theory and other research models contend that humans developed the capability to conceptualize time with respect to past, present, and future at some point along the evolutionary scale (Snyder, 2002). Resultantly, people can organize their actions to elicit desired future conditions, for instance, goals. Pathways thinking involves the perceived ability to create routes that connect the present to this imagined future (e.g., connecting point A to point B). The individual believes that s/he can establish minimally one route leading to the desired goal. Generating multiple pathways is important and recommended when confronting barriers to goal pursuits, and high-hope individuals have empirically displayed effectiveness at manufacturing alternative pathways to goals (Irving, Snyder, & Crowson, 1998; Snyder, Harris, et al., 1991).

Agency represents the required motivation in hope theory and it is the perceived ability to use pathways in order to achieve desired goals. Agency thinking comprises self-referenced thoughts regarding the ability to start and maintain movement along a pathway and the thought is couched within a positive self-statement such as "I have the ability to win" (Snyder, Lapointe, Crowson, & Early, 1998). Agency thinking is important and helpful in any goal pursuit, and it can be especially relevant when effort is blocked because it helps people to utilize the needed motivation to find and proceed along an alternate pathway (Snyder, 1994c).

Some similarity exists between agency and Albert Bandura's (1982, 1997) concept of self-efficacy. Bandura conceives efficacy expectancy as a situation-specific evaluation that an individual "can" implement specific action for a particular goal pursuit. Agency is a trait-like perception that a person "will" implement goal-directed actions for numerous goals (Snyder, 2002). Agency, compared to self-efficacy, is therefore more global and signifies the intent to act instead of merely perceiving the ability to act. Agency predicts unique variance in well-being more than self-efficacy (Magaletta & Oliver, 1999).

Snyder (1994a) strongly believes that hopeful thinking requires both the perceived ability to generate routes to a goal along with the perceived ability and drive to utilize those routes. Hope is "a positive motivational state that is based on an interactively derived sense of successful 1) agency (goal-directed energy) and 2) pathways (planning to meet goals)" (Snyder, Irving, & Anderson, 1991, p. 287). The relationship between pathways and agency thinking is that during goal pursuit, pathways thinking enhances agency thinking which leads to increased pathways thinking (Snyder, Harris et al., 1991).

Hope theory highlights cognitive rather than emotional processes and views emotions as the result of goal-directed thoughts and actions (Snyder, Rand, & Sigmon, 2002). Positive emotions derive from perceived progress (i.e., productive movement or overcoming obstacles) toward or actual achievement of the desired goal and negative emotions occur due to perceived stagnation or defeat in a goal pursuit. Research has shown that experiencing difficulties while in pursuit of important life goals leads to decreased well-being (Diener, 1984; Emmons, 1986).

Three phases exist that affect the goal-directed thoughts of a goal-pursuit: a) the person's learning history; b) the pre-event phase; and c) the event sequence phase. One's learning history is important because the foundation of agency and pathways thinking is formed during childhood (Snyder, 1994a, 1994c, 2002). Pathways thinking begins when infants make associations between co-occurring events (Schulman, 1991). At approximately the age of one-year, agency thinking develops as children begin to understand that they are a separate entity from others (i.e., caregivers) and that they can be a causal agent in chain-of-events sequences (Snyder, Rand, & Segmon, 2002).

Pathways and agency thinking co-occur with emotional sets or moods that are predicated on the person's accumulated experience with previous goal pursuits (Snyder, 2002). A conditioning history revealing goal accomplishments and overcoming obstacles, for example, would engender a positive and hopeful emotional set relative to goal pursuits. Future goal pursuits are envisioned with similar emotions that were elicited from past goal pursuits. Accordingly, high-hope people maintain emotion sets that commonly exude confidence and joy (Snyder, Cheavens, & Michael, 1999; Snyder, Harris et al., 1991; Snyder, Sympson, Michael, & Cheavens, 2000) and low-hope individuals often have emotion sets exemplified by negative and passive feelings.

In the pre-event phase of goal pursuit, the individual performs a pre-event analysis of a potential goal by assessing the "outcome value" of the desired goal. The event sequence phase begins upon the decision that the goal is worthy of continued attention. As a person begins to pursue the goal, agency and pathways thinking repeatedly interact with the appraised outcome value which allows the individual to steadily monitor the outcome value of the goal pursuit in relation to available pathways and the required agency to actualize the available pathways. Goal pursuit would be stopped if the imagined outcome value of a goal pursuit is

appraised as unworthy of additional effort. The ongoing outcome value check is relevant because periodically the value of a goal is unclear until the goal pursuit has begun (Snyder, 2002). After a goal pursuit is completed, the individual's appraisal of the process (i.e., success or failure) and the resulting emotions (e.g., positive or negative) influence future perceptions of pathways and agency abilities for goals in that specific domain and in general. Multiple failures can lead to loss of hope within a specific life domain (Snyder, 2002).

During any point of goal pursuit, a stressor/obstacle may arise which hope theory defines as any impediment that could threaten a goal pursuit (Snyder, 2002). The stressor engenders emotions that influence pathways and agency thoughts in relation to the ongoing goal pursuit. The resulting emotions are determined by how the stressor is appraised. Generally, stressors produce some initial negative emotions in everyone, but it is theorized that high-hope people are more likely to feel concomitant positive emotions since they often perceive stressors as challenges to be overcome (Anderson, 1988; Snyder, Harris, et al., 1991).

A surprise event is another emotional influence in a goal pursuit (Snyder, 2002). The surprise event occurs outside the environment of the goal pursuit and can be positive (i.e., upon first observation, the doctor indicates your finger is probably not broken) or negative (i.e., the doctor 's X-ray machine shows your finger is broken). The ensuing emotions created by the event affect agency thinking, often by increasing or decreasing overall motivation. This agency links to a particular goal and pathways that relate to the situation (e.g., closely following the doctor recommended treatment program for healing your broken finger). Hence, emotions can sometimes be triggered that are unrelated to a specific goal pursuit, but frequently these emotions integrate into the ongoing goal-pursuit thought process and influence the goal pursuit outcome (Snyder, 2002).

Studies have assessed the influence of hope on various life domains, including a) academic and athletic performance, b) well-being related to physical health and psychological adjustment, and c) interpersonal relationships. Achieving academic milestones to move toward long-term goals such as graduation and future employment is meaningful for students. High levels of trait hope associate with greater academic achievement. Higher hope scores correlate with higher subsequent achievement test scores in elementary-school children (Snyder, Hoza et al., 1997), higher overall grade point averages among high school students (Snyder, Harris et al., 1991), and higher semester and overall grade point averages for college students (Chang, 1998; Curry, Maniar, Sondag, & Sandstedt, 1999; Curry, Snyder, Cook, Ruby, & Rehm, 1997; Snyder, Harris et al., 1991). A longitudinal study of college students showed that higher hope levels measured at the beginning of the students' first semester in college predicted higher cumulative grade point averages and graduation rates, and lower dropout rates up to six years later, even after controlling for intelligence, previous academic performance, self-esteem, and college-

entrance exam scores (Snyder, Shorey, et al., 2002; Snyder, Wiklund, & Cheavens, 1999).

Hope-based interventions for at-risk students are being tested given the empirical relationship between hopefulness and academic success. The University of Kansas, and Wyoming, for instance, are testing classes designed to improve students' levels of hope and academic performance (Curry et al., 1999; Snyder, Shorey, Rank, & Ritschel, 2005). Success has been reported in augmenting hope in junior high school students (Lopez, Bouwkamp, Edwards, & Teramoto Pedrotti, 2000).

Hope theory hypothesizes that higher hope will create the best routes to achieve athletic goals and provide more motivation to use these routes, culminating in increased success. In support, Division I track athletes exhibiting higher versus lower hope levels performed significantly better at their events, even controlling for coaches' ratings of their athletic ability (Curry et al., 1997). A study of female track athletes (Curry et al., 1997) indicated that combined State and Trait Hope Scale scores accounted for 56% of the variance associated with actual athletic performance.

Snyder, Feldman, et al. (2000) theorized that higher hope levels would facilitate ability to attend to and use information about physical illnesses to enhance prevention efforts. Related research found that high-hope women performed better than low-hope women on a cancer facts test, and they reported stronger desire to employ cancer prevention activities (Irving et al., 1998). Harney (1990) observed that high-hope compared to low-hope participants participated in more physical exercise (exercise is known to offer prevention against illness and disease).

Hope is a relevant factor in coping with and recovering from illness (i.e., Snyder, 2002). Higher levels of hope link to benefits in coping with burn injuries (Barnum et al., 1998), spinal cord injuries (Elliott, Witty, Herrick, & Hoffman, 1991), arthritis (Laird, 1992), fibromyalgia (Affleck & Tennen, 1996; Tennen & Affleck, 1999), and blindness (Jackson, Taylor, Palmatier, Elliott, & Elliott, 1998). One possible explanation is that high-hope people may cope better with pain related to the disease process. A study using the cold-pressor task substantiated that individuals with higher levels of trait hope tolerated pain longer than those with lower levels of hope (Snyder, Berg et al., 2005). Another hypothesis is that higher-hope people may implement increased attention to helpful illness-related information, which fosters more adaptive coping behavior associated with the illness. In fact, a study revealed that higher hope levels were related to more frequent usage of a Web site that disseminated coping information on a health condition along with briefer self-reported duration of symptoms related to this condition (Vernberg, Snyder, & Schuh, 2005).

Similar to physical health, mental health is divided into two classifications: a) maintaining psychological adjustment/preventing psychopathology (primary prevention); and b) coping with and recovering from psychopathology (secondary prevention). In primary

prevention, hope may promote psychological well-being partly due to the influence of successful goal pursuits on affectivity. The premise is that emotions are the result of goal pursuits and hope fosters goal pursuits, therefore, higher levels of hope link to more optimal patterns of affectivity. Consistent with this view, Snyder, Harris et al. (1991) and Snyder, Hoza et al. (1997) determined that hope correlates positively with positive affect and inversely with negative affect. Likewise, a 28-day daily diary study found that higher hope correlated positively with positive thoughts and negatively with negative thoughts (Snyder et al., 1996). Additionally, high-hope college students stated they felt more inspired, energized, confident, and challenged by their goals compared to low-hope peers (Snyder, Harris et al., 1991). This effect of hope on psychological well-being also appears in older populations as a sample of older adults (average age of 76 years) revealed that higher levels of hope were connected to greater life satisfaction and perceived well-being, independent of objective physical health measures and functional ability (Wrobleski & Snyder, 2005). The influence of hope on psychological well-being may be mediated partly through the concept of meaning. Viktor Frankl (1966) believed that finding or developing meaning in life would resolve the angst related to the "existential vacuum." Research has shown strong correlations (.70-.76) between trait hope and several measures of meaning in life (Feldman & Snyder, 1999).

Hope also influences psychological adjustment through its effect upon ways individuals appraise and cope with stressors and obstacles to goals. It is more likely for higher-hope than lower-hope people to find benefits in coping with persisting stressors (Affleck & Tennen, 1996; Tennen & Affleck, 1999). High-hope people perceive their hope offers protection against future stressors (Snyder, 2000), and this belief generates a greater general sense of confidence (Snyder, Feldman et al., 2000), culminating in an enhanced general positive outlook for the future. Higher hope seems to moderate the connection between unforeseen stressors and effective coping (Snyder & Pulvers, 2001). Higher hope associated with lower rates of behavioral problems, for instance, in high risk children whose mothers were in prison, even after controlling for social support and stress (Hagen, Myers, & Mackintosh, 2005). Despite absent maternal care, maintaining positive perceptions of the future and confidence in coping ability yielded protective benefits for these children.

Higher-hope as compared to lower-hope people, upon confrontation with a stressor, are more likely to create more strategies (pathways) for successfully coping with the stressor and report greater probability of implementing these strategies (agency; Snyder, 1994c, 2000; Snyder, Harris et al., 1991). Contrarily, low-hope as compared to high-hope individuals exhibit a greater tendency to use avoidance as a coping strategy. Avoidance associates with distress and decreased psychological adjustment over time (Suls & Fletcher, 1985). Interestingly, hopeful thinking generates benefits even when goal blockages are unchanging.

High-hope people can demonstrate the cognitive flexibility to obtain alternate goals when initial goals are blocked (Snyder, Rand, & Sigmon, 2002) whereas low-hope people frequently ruminate unproductively about being thwarted or stuck (Michael, 2000; Snyder, 1999; Michael & Snyder, 2005) and cope through avoidance. Unfortunately, repeated usage of avoidance coping strategies disallows one to learn from past experiences (Snyder, Feldman et al., 2000) potentially establishing a cycle of goal blockage, escape, and failure.

Jerome Frank (1968, 1973, 1975) felt that hope was a common process among many therapeutic techniques. Snyder and colleagues further investigated how hope helped people to improve within different forms of psychotherapy (Snyder, Ilardi, Cheavens, et al., 2000; Snyder, Ilardi, Michael, & Cheavens, 2000; Snyder, Michael, & Cheavens, 1999; Snyder & Taylor, 2000). Initially, most therapeutic interventions supply a "boost" of mental energy to the client and Irving and colleagues (2004) propose that this reflects an increase in agency thinking, facilitated by the client's new belief that improvement is possible. As therapy continues, each therapeutic modality presents the client with strategies for improving and sustaining psychological well-being (e.g., psychotherapy offers insight, behavior therapy provides behavioral activation, cognitive therapy presents cognitive restructuring, etc.). These strategies are equivalent to pathways to the client's goal of securing psychological adjustment (Cheavens, Feldman, Woodward, & Snyder, 2006). Supportive of this hypothesis, Irving et al. (2004) determined that agency scores associated with improvement during early stages of therapy and pathways scores were linked to improvement during latter therapy stages.

Regarding hope and interpersonal relationships, hopeful thinking is theorized to commence in early childhood as a function of interactions between the child and caregivers, peers, and teachers (Snyder, Cheavens, & Sympson, 1997), and empirical findings reveal that hopeful thinking results from secure and supportive relationships between child and adult caregiver (Shorey, Snyder, Yang, & Lewin, 2003). Connecting with others is an essential human goal because goal pursuits generally reside within the context of sociability. One variable that assesses the degree to which people desire to connect with others is their concern about others' perceptions of them. Thus, presenting oneself to others in a positive manner can be construed as adaptive and prosocial (Taylor, 1989). There is a slight positive association between higher levels of hope and social desirability/positive presentation (Harris et al., 1991; Snyder, Hoza et al., 1997), implying that high-hope people are appropriately concerned about the impressions they leave on others.

Hopeful thinking also facilitates creating human connections. High-hope individuals are likely to experience close connections with others because they show interest in their own goals as well as the goals of others (Snyder, 1994b, 1994c; Snyder, Cheavens, & Sympson, 1997). Moreover, high-hope people demonstrate an enhanced ability to take the perspective of others (Rieger, 1993) and enjoy interacting

with others (Snyder, Hoza et al., 1997). Supporting research asserts that higher levels of hope associate with more perceived social support (Barnum et al., 1998), more social competence (Snyder, Hoza et al., 1997), and less loneliness (Sympson, 1999).

# SELF-EFFICACY

The essence of self-efficacy theory is that "people's beliefs in their capabilities to produce desired effects by their own actions" (Bandura, 1997, p. vii) are the most significant determinants of the behaviors that people willfully choose to participate in and the degree to which they persist in their efforts when confronting obstacles and challenges. This construct represents a set of beliefs in relation to the ability to manage skills and capabilities needed to achieve goals in specific life domains and circumstances. It also asserts that our efficacy beliefs strongly affect psychological adjustment, psychological problems, physical health, and professionally and self-guided behavior change strategies.

Though the term, "self-efficacy" is relatively recent, the concept of personal control has been extant in philosophy and psychology for centuries. Spinoza, David Hume, John Locke, William James, and others explored "volition" and "the will" in human behavior (Russell, 1945; Vessey, 1967). Many theories have examined links between perceptions of personal competence and behavior/well-being such as effectance motivation (White, 1959), achievement motivation (McClelland, Atkinson, Clark, & Lowell, 1953), social learning (Rotter, 1966), helplessness (Abramson, Seligman, & Teasdale, 1978), operant conditioning (Skinner, 1995), and self-regulation (Molden & Dweck, 2006). Bandura's (1977) article pioneered the concept of "self-efficacy" as the operational definition for perceived competence.

Self-efficacy is embedded within social cognitive theory, which is an approach to understanding human cognition, action, motivation, and emotion that maintains people are active shapers of and not only passive reactors to their environments (Bandura, 2001, 2006; Barone, Maddux, & Snyder, 1997; Molden & Dweck, 2006). Social cognitive theory relies on these four fundamental assumptions:

1) Our strong cognitive abilities foster the development of internal models of experience, innovative courses of action, hypothetical testing of our courses of action by predicting outcomes, and communication to others of our complex ideas and experiences. We can analyze and evaluate our thoughts, behavior and emotions through self-observation. These self-reflective capabilities facilitate self-regulation.
2) Environmental events, internal personal factors (cognition, emotion, and biological events), and behavior interact with one another allowing us to respond to environmental events. We utilize cognition to exert control over our behavior, which influences our cognitive, affective, and biological states along with the environment.
3) "Self" and "personality" are socially intertwined such that

self and personality transcend what we manifest in our social interactions, rather, they are also created in these interactions, and they change through these interactions.
4) We experience self-regulation. We select goals and regulate our behavior while pursuing these goals. The essence of self-regulation is our ability to anticipate or create "expectancies," defined as usage of past knowledge and experience to establish beliefs about future events, states, and our capabilities and behavior.

These premises propose that early development of self-efficacy beliefs is mainly influenced by two interacting factors. First, the capacity for symbolic thought, especially understanding cause-effect relationships, and the capability of self-observation and self-reflection. Personal agency begins in infancy and evolves from the perception of the causal relationship between events, to comprehension that actions generate results, to recognizing that the individual, her/himself, can originate actions that influence the environment. As comprehension of language increases in children, so does their capacity for symbolic thought, and resultantly, their capacity for self-awareness and personal agency (Bandura, 1997).

Second, the development of self-efficacy beliefs is affected by how responsive the environments are to the infant's or child's manipulation or control attempts. Responsive environments to the child's actions produce efficacy beliefs while nonresponsive environments slow this development. Efficacy beliefs promotes exploration, which then improves the infant's sense of agency. The child's social environment (particularly parents) generally constitutes the most fundamental aspect of her or his environment, hence, children usually acquire a sense of efficacy by generating actions that influence the behavior of others, which later generalizes to the nonsocial environment (Bandura, 1997). Parents can help or hinder agency by their responses to the infant's or child's actions, as well as nurturing the child to explore and master her or his environment.

Efficacy beliefs and a sense of agency evolve throughout the life span as we perpetually incorporate information from the following five principal sources:

Performance Experiences - The most potent self-efficacy information is derived from our own attempts to control our environments (Bandura, 1997). Successful control attempts attributed to one's effort will strengthen self-efficacy for that specific behavior or life domain. Contrarily, perceptions of failure attributed to lack of ability frequently erode self-efficacy beliefs.

Vicarious Experiences - Self-efficacy beliefs are influenced by observing the behavior of others and the consequences of those behaviors. This information creates expectancies of our own behavior and its consequences as a function of the degree of similarity we perceive between ourselves and the observed person. Vicarious experiences often promote weaker effects on self-efficacy expectancy than performance experiences (Bandura, 1997).

Imagined Experiences - Self-efficacy beliefs can be influenced by imagining ourselves or others acting

effectively or ineffectively in hypothetical situations. These mental images can originate from actual or vicarious experiences with similar situations to the one anticipated, or from verbal persuasion, for instance, when a therapist leads a client through various interventions, such as systematic desensitization and covert modeling (Williams, 1995). Imagined experiences generally influence self-efficacy less than actual experiences (Williams, 1995).

Verbal Persuasion - Efficacy beliefs are influenced by what others verbalize to us about their perception of that which we can or cannot do. The potential of verbal persuasion on self-efficacy expectancies is affected by expertness, trustworthiness, and attractiveness of the source (i.e., Eagly & Chaiken, 1993). Verbal persuasion has less effect on lasting change in self-efficacy expectancy than performance and vicarious experiences.

Physiological and Emotional States - These states influence self-efficacy when we associate poor performance or perceived failure with aversive physiological arousal and success with pleasant feeling states. As people become aware of unpleasant physiological arousal, they exhibit a greater tendency to doubt their competence compared to a pleasant or neutral physiological state which likely leads to confident ability to perform in that situation. Physiological components of self-efficacy expectancy transcend autonomic arousal, for example, within activities requiring strength and stamina, such as exercise and athletics; perceived efficacy is affected by states such as fatigue and pain (i.e., Bandura, 1997).

Most psychological theorists believe that a sense of control over our behavior, environment, thoughts, and emotions is crucial for happiness and well-being. People seeking a therapist commonly report feeling a loss of control.

Self-efficacy beliefs are significantly involved in numerous common psychological issues. Low self-efficacy expectancies are a relevant feature of depression (Bandura, 1997; Maddux & Meier, 1995) in that depressed individuals generally perceive themselves as less capable than others of functioning effectively in many life domains. Dysfunctional anxiety and avoidant behavior are the straightforward result of low self-efficacy beliefs for managing threatening situations (Bandura, 1997; Williams, 1995). Self-efficacy beliefs also affect substance abuse issues and eating disorders (Bandura, 1997; DiClemente, Fairhurst & Piotrowski, 1995). In relation to these issues, improving self-efficacy for resolving the problem and for utilizing self-control strategies in particular challenging situations can be critical for successful therapy (Bandura, 1997; Maddux, 1995).

Changing behavior is central to most strategies designed to prevent health issues, improve health, and speed recovery from illness and injury. Self-efficacy beliefs influence health in two ways. First, such beliefs influence initiating healthy behaviors, stopping unhealthy behaviors, and maintaining needed behavioral changes during difficult and challenging times. The major theories of health behavior include self-efficacy as a crucial variable (i.e., Maddux, 1993; Weinstein, 1993). Further, research shows that enhancing self-efficacy

beliefs is vital to effective change and maintenance of essentially every behavior critical to health, including exercise, diet, stress management, safe sex, smoking cessation, overcoming alcohol abuse, following treatment and prevention regimens, and disease detection behaviors such as breast self-examinations (Bandura, 1997; Maddux et al., 1995). Second, self-efficacy beliefs influence various biological processes, which subsequently affect health and disease (Bandura, 1997). Self-efficacy beliefs influence the body's physiological responses to stress, including the immune system (Bandura, 1997; O'Leary & Brown, 1995). Low perceived control over environmental demands can increase the likelihood of susceptibility to infections and accelerate disease progression (Bandura, 1997). Self-efficacy beliefs also affect the activation of catecholamines, which is a group of neurotransmitters relevant to management of stress and perceived threat, as well as endorphins, which are endogenous painkillers (Bandura, 1997; O'Leary & Brown, 1995).

Self-efficacy contributes to how we direct our behavior during pursuit of desired goals. Such self-regulation relies on three interacting factors (Barone et al., 1997): goals or standards of performance; self-evaluative reactions to performance; and self-efficacy beliefs.

Goals are related to self-regulation because we strive to regulate our thoughts, emotions and actions in order to attain desired outcomes. Conceiving desired future events allows people to generate incentives that motivate and direct their actions and standards which leads to the monitoring of progress, and evaluation of progress and abilities.

Self-evaluative reactions are relevant in self-regulation because the perception we have of our progress, or lack thereof, toward the goal strongly influences our emotional reactions during goal-directed activity. These emotional reactions can positively or negatively affect self-regulation.

Self-efficacy beliefs affect self-regulation in various ways. First, they impact the goals that we initially set in that higher self-efficacy in a particular achievement domain yields loftier goals in that domain. Second, they influence our chosen goal-directed activities, effort, persistence given challenge and obstacles (Bandura, 1997), and responses to perceived differences between goals and current performance (Bandura, 1997). High efficacy beliefs increase resistance to decreases in self-regulation arising from difficulties and setbacks, which enhances persistence. Perseverance often yields desired results and this success increases a sense of efficacy. Third, self-efficacy beliefs impact the efficiency and quality of problem solving and decision making. When making complex decisions, people confident of their problem-solving skills utilize their cognitive resources more effectively than those that doubt their cognitive skills (e.g., Bandura, 1997). This enhanced efficacy often produces better solutions and achievement. When encountering difficulty, high self-efficacy frequently leads to being "task-diagnostic" facilitating the search for solutions to problems as opposed to low self-efficacy that often results in being "self-diagnostic"

and focusing on personal inadequacies which lowers effort to assess and problem-solve (Bandura 1997).

Strategies for improving self-efficacy, based on the five sources of self-efficacy previously described, follows:
Performance Experience - Setting goals and strategies that are specific in nature, concrete, and short-range are more likely to create greater incentive, motivation, and efficacy than goals that are abstract, vague, and designed for the distant future. Specific goals enable identification of specific behaviors required for successful achievement and awareness of when the task is completed. The recommended intervention for phobias and fears, for instance, involves "guided mastery" - in vivo experience with the feared object or situation during therapy, or between therapy sessions as a "homework" assignment (Williams, 1995). Cognitive interventions for depression may involve clients being given assistance in arranging success experiences which will enhance low-self-expectancy expectancies (Maddux & Lewis, 1995).
Vicarious experience - Vicarious learning and imagination facilitates the teaching of new skills and improves self-efficacy for those skills. Modeling films and videotapes, for example, can stimulate socially withdrawn children to interact with other children. The child watching the film views the model child (someone very similar to herself or himself) have success and then believes that she or he can imitate the actions of the model (Conger & Keane, 1981). In vivo modeling has been effective in treating phobic individuals; studies show that changes in self-efficacy beliefs for approach behaviors mediate adaptive behavioral changes (Bandura, 1986; Williams, 1995). Media advertisements for smoking cessation and weight loss programs that feature testimonials from successful participants also uses vicarious experiences to improve self-efficacy. These testimonials convey to viewers that they can perform this challenging task as well. Formal and informal support groups composed of people divulging their experiences in confronting and overcoming a common affliction, such as addiction, obesity, or illness, can improve self-efficacy.
Imagined Experience - Using our imagination to overcome challenges or confront feared behaviors can improve self-efficacy. Cognitive therapy for anxiety and fear issues typically attempts to modify visual images of danger and anxiety, and includes images of successfully coping with the feared situation. Imaginal (covert) modeling is an effective intervention for increasing assertive behavior and self-efficacy for assertiveness (Kazdin, 1979). Systematic desensitization and implosion are established behavioral therapy techniques that highlight the capacity to image coping effectively with problematic situations (Emmelkamp, 1994). Misrepresented and maladaptive imagery underlie depression and anxiety, hence, various techniques exist to modify these dysfunctional assumptions comprising the client's visual images of sadness, danger and anxiety. Clients can feel control over a difficult situation by imagining a future self that skillfully manages this situation.

Verbal Persuasion - Most therapeutic interventions engage in verbal persuasion to elevate client self-efficacy and promote small risks that may produce small successes. Therapists using cognitive and cognitive-behavioral therapies (Holland, Stewart, & Strunk, 2006) guide clients to disclose dysfunctional attitudes, behaviors, and expectancies and then assist clients to understand the irrationality and self-defeating essence of these beliefs. Therapists inspire clients to acquire and employ new, adaptive beliefs and expectancies. In turn, clients experience successful outcomes that can render lasting changes in self-efficacy beliefs and adaptive behavior. On a routine basis, people experience verbal persuasion as a self-efficacy facilitator when they seek support from others to face challenges such as losing weight, continuing an exercise program, or confronting a boss or loved one.
Physiological and Emotional States - People generally feel more capable when they are calm rather than aroused or distressed. Techniques for managing emotional arousal (i.e., anxiety) while experimenting with new behaviors are likely to heighten self-efficacy beliefs and chances of successful enactment. Hypnosis, biofeedback, relaxation training, meditation, and medication are common strategies for lowering physiological arousal associated with low self-efficacy and poor performance.

Positive psychology and social cognitive theory understand the social interrelatedness of the individual and, at times, the need for a person to work cooperatively and efficaciously with others. This concept is illustrated in "collective efficacy": "a group's shared belief in its conjoint capabilities to organize and execute the courses of action required for producing given levels of attainments" (Bandura, 1997, p. 477; Zaccaro, Blair, Peterson, & Zazanis, 1995). Collective efficacy assesses the degree to which people believe they can effectively work together to accomplish a shared goal.

Collective efficacy has proven relevant in numerous collective situations. Spouses who feel more rather than less efficacious about their shared ability to achieve important shared goals are more satisfied with their marriages (Kaplan & Maddux, 2002); this also applies to college-age dating couples (Zapata & Maddux, 2006). An athletic team's collective efficacy can be increased or decreased by false feedback regarding ability and can influence its success in competitions (Hodges & Carron, 1992). Teachers' individual and collective efficacy for effective instruction apparently influences academic achievement of school children (Bandura, 1993, 1997). The productivity of self-managing work teams (Little & Madigan, 1994) and group "brainstorming" (Prussia & Kinicki, 1996) appears associated with a collective sense of efficacy. Personal and collective efficacy interconnect because a "collection of inveterate self-doubters is not easily forged into a collectively efficacious force " (Bandura, 1997, p. 480).

Research on self-efficacy, spanning over thirty years, supports the idea that few limits exist to what can be accomplished by an individual with firm belief in her or his goals and capacity for achievement. Bandura (1997) expresses, "People see the extraordinary feats of others but

not the unwavering commitment and countless hours of perseverant effort that produced them" (p. 119). These people overestimate "talent" and underestimate self-regulation when evaluating accomplishment. Self-efficacy findings reveal that confidence, effort, and persistence are more pertinent than innate ability. Self-efficacy underscores human potential and possibilities, therefore, it is a worthy construct within positive psychology.

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# POSITIVE PSYCHOLOGY II

6 Continuing Education Hours
Record your answers on the Answer Sheet (click
the "Texas Answer Sheet" link on Home Page
and click your answers).
Passing is 70% or better.
For True/False questions: A = True and B = False.

1. **One prerequisite for entering flow is clear, immediate goals with instant feedback on progress.**
   A) True     B) False

2. **Gender differences are not significant as men and women report essentially identical levels of happiness and positive affectivity.**
   A) True     B) False

3. **Positive affectivity is significantly limited by objective conditions such as age, wealth, and status.**
   A) True     B) False

4. **Research shows a connection between positive affectivity and resistance to developing infectious illnesses.**
   A) True     B) False

5. **Perceived control is defined as the judgment of having the capacity to attain desired outcomes and to avoid undesirable outcomes.**
   A) True     B) False

6. **Children exhibiting a mastery orientation pursue challenge in their tasks and persist when confronted by obstacles.**
   A) True     B) False

7. **Older adults experience a strong sense of general control through deemphasizing the importance of non-achievable goals and focusing instead on reachable goals.**
   A) True     B) False

8. **Peterson and Seligman believe that people's expectancies for the future do not originate from their interpretations of the past.**
   A) True     B) False

9. **Numerous studies link optimism to physical well-being.**
   A) True     B) False

10. **Self-efficacy findings reveal that confidence, effort, and persistence are more pertinent than innate ability.**
    A) True     B) False

Continuing Psychology Education Inc. is approved by the Texas State Board of Social Worker Examiners (Provider # 3329), Texas State Board of Examiners of Professional Counselors (Provider # 386), and Texas State Board of Examiners of Marriage and Family Therapists (Provider # 110). This course, Positive Psychology II, meets the qualifications for 6 hours of continuing education for social workers, LPCs, and LMFTs as required by the above-mentioned State Boards; for psychologists, LSSPs, LPAs, and provisionally licensed psychologists as required by the Texas State Board of Examiners of Psychologists; and for LCDCs as required by the Texas LCDC Program.

11. **One prerequisite for entering flow is _____.**
    A) perceived challenges that limit existing skills
    B) perceived challenges or opportunities for action that expand but do not overbear existing skills
    C) challenges that overbear existing skills
    D) delayed feedback on progress

12. **Individuals high in positive affectivity frequently experience intense periods of _____.**
    A) pleasant, pleasurable mood
    B) reduced levels of happiness
    C) low self-confidence
    D) anxiety

13. **Essentially, emotional intelligence is the ability to _____.**
    A) effectively process emotional information
    B) allow information to direct cognitive activities such as problem-solving
    C) concentrate energy on required behaviors
    D) All of the above

14. **High positive affectivity individuals tend to be _____.**
    A) averse to affiliation and interpersonal contact
    B) introverts who are not socially active
    C) extroverts who are socially active
    D) non-spiritual

15. **Creativity is generally defined as the creation of ideas that are _____.**
    A) stimulating
    B) original and adaptive
    C) purposeful
    D) functional

**16. Snyder defined _____ as the belief that a person can find pathways to desired goals and can arouse the motivation to use those pathways.**
A) creativity
B) hopeful thinking
C) stamina
D) nurturance

**17. At approximately the age of _____, agency thinking develops in children.**
A) one-year
B) four-years
C) six-years
D) eight-years

**18. Supporting research asserts that higher levels of hope associate with _____.**
A) more perceived social support
B) more social competence
C) less loneliness
D) All of the above

**19. When encountering difficulty, high self-efficacy frequently leads to being _____.**
A) personally reflective
B) self-diagnostic
C) task-diagnostic
D) deeply introspective

**20. One strategy for improving self-efficacy is to set goals and strategies that are _____.**
A) abstract
B) specific in nature
C) vague
D) designed for the distant future

Please transfer your answers to the Answer Sheet (click the "Texas Answer Sheet" link on Home Page and click your answers).

Press "Back" to return to "Texas Courses" page.