Positive Emotions in Psychotherapy: Conceptual Propositions and Research Challenges

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Abstract

In this chapter we discuss the contribution and integration of positive psychology concepts in psychotherapy theory, research, and practice. In the first part we introduce the basic tenets, axioms, and foundational concepts of positive psychology followed by the presentation of the broaden-and-build theory of positive emotions and the research findings that support it. We argue that the broaden-and-build theory contributes to psychotherapy theory and research and practice. We focus on the concepts of broadening, undoing, and building and their potential contribution to psychotherapy. In the last part of the chapter, we focus on the methodological and conceptual research issues that need to be addressed in order to facilitate research initiatives.

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17.1 Introduction

After years in which the landscape of psychology was pathology, psychology has begun to cultivate the terrain of the positive (Maddux 2008). A corner of that terrain is the field of positive emotions. The purpose of this chapter is to review what is known about positive emotions in the realm of psychotherapy. We begin with a brief look at positive psychology to establish a context for understanding positive emotions and their role in human functioning. Using a framework called the broaden-and-build theory

(Fredrickson 1998), we present an understanding of the role of positive emotions in our lives. The research support for that model both outside and within psychotherapy is reviewed. We will also suggest that positive emotions have a generative role of change in psychotherapy and then discuss the psychotherapeutic findings as a framework for considering methodological strategies and challenges for psychotherapy researchers who study positive emotions.

17.1.1 The Growth of Positive Psychology

Prior to World War II, psychology had three missions: curing mental illness, making the lives of all people more fulfilling, and identifying and nurturing talent. In the period following the war, thousands of veterans with psychological problems needed treatment, and psychology responded by shifting its research and treatment emphasis toward curing mental illness (Seligman 1998). The other two important missions—the improvement of normal life and the identification and nurturing of talent—were largely set aside. The question "What is wrong?" guided the thinking of applied psychologists throughout the twentieth century. Diagnostic and measurement methods for disorders such as schizophrenia, depression, anxiety, and alcoholism were developed, and many effective treatments were validated for specific disorders (see Champless and Hollon 1998). Psychotherapists engaged in helping their patients face and overcome struggles. However, the focus of the pathology model on accurate descriptions of specific problems is somewhat incomplete; problems are only part of humankind. This attention to the negative has come at a price. With little research support in the domain of what makes life worth living or how normal people flourish, psychologists must either proceed without an empirical basis or ignore the positive emotions of their clients.

Positive psychology emphasizes the exploration of people's strengths along with their weaknesses. It is the scientific study of optimal human functioning that aims to discover and promote the factors that allow individuals and communities to thrive (Seligman and Csikszentmihalyi 2000). In the twenty-first century, positive psychology has increased in influence; its ideas have grown not only within the psychology community but in the larger society. This growth has probably been fuelled by a confluence of factors, in particular the satiation of pathological models to explain well-being, the increase in pathology in spite of the psychotherapeutic and medical developments for combating it, and the increasing cost of psychological treatments. Theories with alternative depictions of human structure, development, and function, and research developments in areas, such as neuropsychology (e.g., Isen 2002), neurophysiology (e.g., Fredrickson and Levenson 1998; Fredrickson et al. 2000), and psychobiology (e.g., Ashby et al. 1999; Fredrickson and Joiner 2002; Fredrickson et al. 2000; Watson et al. 1988a), have provided alternative conceptual and empirical frameworks.

17.1.2 Positive Emotions: The Broaden-and-Build Model

Fredrickson's (1998) broaden-and-build theory is one prominent and useful theoretical framework situated within the positive psychology domain. Her model has shifted attention to positive emotions and spawned a body of research. Instead of attempting to shoehorn an understanding of positive emotions into existing ideas developed from studying negative emotion, her model is built on the premise that there is a unique evolutionary importance and purpose to positive emotion. Positive and negative emotions are understood to have distinct and complementary adaptive functions, and cognitive and physiological effects (Tugade and Fredrickson 2004, p. 321). The experiences of positive emotions *broaden* a person's thought-action repertoire, meaning that a wider array of thoughts and actions become available (Fredrickson 1998,

2001). This broadening process results in the building of enduring personal and social resources, which can be drawn on when necessary. The resources can be *cognitive*, like the ability to mindfully attend to the present moment; *psychological*, like the ability to maintain a sense of mastery over environmental challenges; *social,* like the ability to give and receive emotional support; or *physical,* like the ability to ward off the common cold. This is the broadening aspect of the theory. People with these resources are more likely to effectively meet life's challenges and take advantage of its opportunities, becoming successful, healthy, and happy in the months and years to come (Fredrickson 2008); this is the *build* element of the broaden-and-build theory.

Fredrickson describes two hypotheses for how positive emotions generate change: the upward spiral and the undoing hypotheses. The upward spiral includes increases in positive emotion that lead to cognitive broadening; increases in cognitive broadening further facilitate the experience of positive emotion. The net result is that of an upward spiral that leads to increases in wellbeing. The undoing hypothesis refers to the idea that positive emotions reduce the autonomic arousal caused by negative emotions by speeding the recovery from the cardiovascular effects of fear, anxiety, and sadness. Positive emotions loosen the grip that negative emotions hold on thinking; individuals experience a distance that can prompt them to explore alternative thoughts and actions other than those prompted by the initial negative emotion (Fredrickson and Branigan 2005).

17.1.3 Broaden-and-Build Research in General Psychology

These fundamental hypotheses of the broaden-and-build theory have garnered substantial empirical support. Relative to the *broaden* hypothesis, positive emotions have been shown to produce patterns of thought that were notably unusual (Isen et al. 1985), flexible (Isen and Daubman 1984), creative (Isen et al. 1987),

integrative (Isen et al. 1991), open to information (Estrada et al. 1997), and efficient (Isen and Means 1983; Isen et al. 1991). Isen and colleagues have also shown that positive emotions increase people's preferences for variety and their openness to new experiences (Kahn and Isen 1993). These cognitive effects of positive emotions have been linked to increases in circulating brain dopamine (Ashby et al. 1999; Isen 2002). Studies examining positive emotions relative to neutral and negative states showed that induced positive emotions widen the scope of people's visual attention (Fredrickson and Branigan 2005; Rowe et al. 2007; Wadlinger and Isaacowitz 2006), broaden their repertoires of desired actions (Fredrickson and Branigan 2005), and increase their openness to critical feedback (Raghunathan and Trope 2002). At the interpersonal level, induced positive emotions increase people's sense of "oneness" with others (Hejmadi et al. 2008), their trust in acquaintances (Dunn and Schweitzer 2005), and their ability to accurately recognize individuals of another race (Johnson and Fredrickson 2005).

Relative to the *build* dimension, the theory suggests that the cognitive broadening accompanying states of positive emotion builds personal resources that expand and improve the ways people cope during crises. Laboratory experiments have shown that positive emotions facilitate attention to, and processing of, important self-relevant information (Reed and Aspinwall 1998; Trope and Pomerantz 1998; for reviews, see Aspinwall 1998, 2001). Consistent with these experimental data are naturalistic studies that also support broaden-and-build processes. Longitudinal studies of bereaved caregivers found that those who experienced positive emotions in the midst of their bereavement were more likely to find positive meaning in their experiences (Moskowitz 2001). Similarly, those who experienced more positive emotions during bereavement were more likely to develop long-term plans and goals. Together with positive emotions, plans and goals predicted greater well-being 12 months after bereavement (Stein et al. 1997; see also Bonanno and Keltner 1997; Keltner and Bonnano 1997). A study of stress

and coping among college students linked positive emotions to a style of coping characterized by taking a broad perspective on problems, seeing beyond immediate stressors, and generating multiple courses of action. Positive emotions and broad-minded coping enhance one another; initial levels of positive emotions predicted improvements in broad-minded coping over time and initial levels of broad-minded coping predicted increases in positive emotions over time (Fredrickson and Joiner 2002; see also Fredrickson 2000). This body of work demonstrates that positive emotions do more for people than simply causing them to feel good in the moment. By improving the ways that people cope with adversity, positive emotions also increase the odds that people will feel better and do better in the future. Moreover, as the study by Fredrickson and Joiner (2002) shows, this upward spiral toward improved emotional well-being is linked to the broadened thinking that accompanies positive emotions.

Empirical evidence for the *upward spiral* effect has been largely indirect. Prospective correlational studies have shown that people who, for whatever reasons, experience or express positive emotions more than others show increases over time in optimism and tranquility (Fredrickson et al. 2003), ego resilience (Cohn et al. 2009), mental health (Stein et al. 1997), and the quality of their close relationships (Gable et al. 2006; Waugh and Fredrickson 2006). The first experimental evidence testing the upward spiral hypothesis came from a field experiment with working adults, half of whom were randomly assigned to begin a practice of loving-kindness meditation (Fredrickson 2008). Results showed that this meditation practice produced increases over time in daily experiences of positive emotions, which, in turn, produced increases in a wide range of personal resources: increased mindfulness, purpose in life, and social support and decreased illness symptoms. In turn, these increments in personal resources predicted increased life satisfaction and reduced depressive symptoms.

Relative to the *undoing hypothesis*, research suggests that positive emotions undo the cardiovascular aftereffects of negative emotions.

Contentment-eliciting and amusing films produced faster cardiovascular recovery than neutral or sad films (Fredrickson et al. 2000). Laboratory experiments have shown that experiences of positive emotions can quell or undo the lingering cardiovascular effects of these negative emotions. Compared with neutral distractions and sadness, positive emotions produce faster returns to baseline levels of cardiovascular activation following negative emotional arousal (Fredrickson and Levenson 1998; Fredrickson et al. 2000). It is notable that this undoing effect of positive emotions has been demonstrated for high-activation positive emotions such as joy or amusement as well as for low-activation positive emotions such as contentment or serenity. The body of research strongly suggests that positive emotions promote cognitive functioning (Alvarez and Nemény 2001), broaden attention focus (Fredrickson 2001; Fredrickson and Branigan 2005; Isen and Shmidt 2007), and regulate both the psychological and physiological effects of negative emotions (Fredrickson et al. 2000).

Positive emotions also contribute to *valuable life outcomes* (Lyubomirsky et al. 2005) including greater satisfaction and success at work (Losada and Heaphy 2004), greater marital satisfaction (Waldinger et al. 2004), and better coping (Folkman and Moskowitz 2000; Tugade et al. 2004). Research investigating the relationship between positive affects and health has associated positive affectivity with longer life (e.g., Danner et al. 2001; Levy et al. 2002; Ong and Allaire 2005), lower risk of developing a disease (e.g., Cohen et al. 2003; Ostir et al. 2001), survival from life-threatening diseases (e.g., Carver and Scheier 1993; Kubzansky et al. 2001, 2002; Middleton and Byrd 1996; Moskowitz 2003), and reporting of fewer symptoms, less pain, and improved health (e.g., Cohen et al. 2003; Gil et al. 2004; Salovey and Birnbaum 1989) (*for review*, see Pressman and Cohen 2005). Positive emotions are correlated with increased life satisfaction (Schimmack et al. 2004) and a sense of subjective well-being (Hooker et al. 1992; Khoo and Bishop 1997; Sweetman et al. 1993).

While research throughout the twentieth century focused largely on negative emotions, that trend has shifted. Following the lead of Isen and colleagues (for reviews see Isen 2000, 2008), the evidence began to accumulate to indicate that positive emotions function in a different way than negative emotions. An alternative theoretical framework, the broaden-and-build theory of positive emotions (Fredrickson 1998, 2001) has spawned a large body of research. The conclusion that positive emotions are implicated in protecting us during difficulties and enhancing our lives now has a strong empirical base. However, most of this research relates only tangentially to psychotherapy.

17.2 Positive Emotions and Psychotherapy Research

17.2.1 Therapeutic Outcomes of Broadening and Positive Emotion

Fitzpatrick and Stalikas (2008) have suggested that irrespectively of the way they are named in the different treatment modalities, "change events in successful treatment often involve a process of broadening within the client that builds toward successful therapeutic outcomes" (p. 141). Sequences at the level of a change process or change event can be described as common factors in psychotherapy (Grencavage and Norcross 1990). However, a strong evidence base is needed before arriving at the conclusion that broaden-and-build is a therapeutic common factor. Positive emotions may function as generators of change by either directly promoting change or indirectly by facilitating as mediators the psychotherapeutic change process (Fitzpatrick and Stalikas 2008). Research is needed to study how the broadening process undoes or replaces the narrowed or negative perspectives of the individual and if positive emotions build toward change in psychotherapy.

Studies across major therapeutic modalities have already provided strong links between broadening and positive therapeutic outcomes.

In the framework of psychodynamic psychotherapies, Gelso et al. (1997) showed that the interaction of transference and emotion insight predicted therapeutic outcome. Kivlighan et al. (2000) have found that increases in insight predicted decreases in target complaints. Alvarez and Nemény (2001) suggested that positive experiences and pleasurable states promote cognitive functioning; introjection, internalization, and sharing of positive experiences were proposed to promote emotional and mental development. In the humanistic tradition, the construct or experiencing came from the work of Carl Rogers and Eugene Gendlin. Experiencing refers to a process of cognitive-affective exploration of feelings related to self or others, in which clients turn their attention inward and attempt to get in touch with the edges of their own personal experience (Gendlin 1996). At higher levels, this cognitive-affective exploration is used to ask questions that challenge current modes of functioning—effectively to broaden the experience of the client. A review of 91 studies examining experiencing in different treatments indicated that higher levels of experiencing related to better therapeutic outcomes (Hendricks 2002). In cognitive and behavioral therapies, cognitive challenging of automatic thoughts and beliefs and modification of core schemata have been linked to positive therapeutic outcome for different types of psychopathology (see Butler et al. 2006). The strong support for the relationship between broadening and outcome in psychotherapy begins to suggest the potential of the broaden-and-build theory within the therapeutic process. However, the role of positive emotions needs further exploration.

Boutri and Stalikas (2009) examined the application of the broaden-and-build model in psychotherapy sessions. For the purpose of the study, they first constructed an instrument for locating the process of broadening in psychotherapy process (Broadening Inventory; Boutri and Stalikas 2005). The instrument consists of 22 statements that describe various manifestations of broadening during the session, at the cognitive, emotional, behavioral, and process levels. At the end of the session, clients were invited to select the

statements that accurately describe their in-session experience. Results with 35 psychotherapy sessions indicated several interesting findings: (a) clients experience the process of broadening in therapy sessions; (b) broadening is related to both depth and smoothness of the session, as measured by the Session Evaluation Questionnaire (Stiles and Snow 1984), and thus the quality of the session; (c) broadening is conceptually different, yet related, to in-session therapeutic phenomena such as insight, experiencing, and reflecting and serves a distinct function; (d) the occurrence of the broadening experience during the session is related to the experience of the positive emotion of enthusiasm at the beginning of the session; and (e) broadening leads to the experience of more positive emotions at the end of the session, especially the positive emotions of feeling "strong" and "inspired." Finally, (f) clients' experience of positive emotions at the end of the session leads to the experience of more positive emotions, in general, and more enthusiasm at the beginning of the following session (Boutri and Stalikas 2009). Overall, this early investigation of Fredrickson's model in psychotherapy process provided initial support for several links between broadening and positive emotions and the upward spiral and revealed the importance of broadening to the outcome of the session.

Several studies have suggested that the experience and expression of positive emotions potentially plays an important role in treatment. Pennebaker et al. (1997) investigated the association between the words people use to process their grief in writing interventions and improvement in their physical and mental health. Their findings indicated that those who more frequently used positive rather than negative emotion words in the writings had better mental and physical health; the more frequent use of negative emotion words was associated with poorer outcomes in the subsequent months. Joiner et al. (2001) studied suicidal individuals and found that those who were prone to positive mood showed more positive problem-solving attitudes following treatment of suicidal symptoms and a better response to treatment

compared with those less prone to positive moods. Piper et al. (2002) studied complicated grief and found that the experience and expression of positive emotions was associated with positive therapeutic outcome, while the intense expression of negative emotions was related to negative outcomes in short-term group psychotherapy. Mergenthaler (2003) showed that therapeutic change seemed to follow the experience of positive emotions; the experience of only negative emotions was found to be related to negative therapeutic outcome.

The cross-theory support for the importance of broadening to outcome, together with research suggesting that positive emotions also relate to outcome, begins to suggest the potential of the broaden-and-build theory within psychotherapy. For the broaden-and-build theory to have utility in psychotherapy, however, research is needed to link broadening and positive emotion in an upward spiral and to indicate how positive emotions undo or transform negative emotions.

17.2.2 The Upward Spiral and the Undoing Hypothesis in Therapy

17.2.2.1 The Upward Spiral in Therapy
Direct examinations of the broaden-and-build hypothesis have produced preliminary research support of the upward spiral in therapy. Stalikas and colleagues (Seryianni et al. 2004; Stalikas et al. 2004) conducted a series of psychotherapy studies designed to explore the implementation of the key constructs of Fredrickson's theory. With 30 client-therapist dyads, they assessed the emotions of the client before entering the session using the Positive and Negative Affect Scale (PANAS; Watson et al. 1988b). After the sessions, they assessed the therapeutic alliance (Working Alliance Inventory; Horvath and Greenberg 1989) along with the clients' evaluation of the sessions using the Session Impact Scale (Elliott and Wexler 1994) and Session Evaluation Questionnaires (Stiles and Snow 1984). According to their data, clients who reported experiencing positive emotions *before* a session reported higher levels of insight,

understanding, and depth in their session (Seryianni et al. 2004). This is the link from PE to broadening. In addition, clients who reported higher broadening levels *during* a session reported higher levels of positive emotions immediately after that session (Stalikas et al. 2004). This is the link in the opposite direction, from broadening to PE. Finally, clients who reported higher depth and alliance in their sessions reported also higher levels of positive emotions before their next session (Seryianni et al. 2004); clients who reported higher positive emotions before the session evaluated alliance and the quality of the session as better (Mertika et al. 2005). Together these data indicate the presence of an upward spiral in psychotherapy.

17.2.2.2 Undoing in Therapy

The other change process of the broaden-and-build model is undoing. Experiencing positive emotions "undoes," counteracts, and minimizes the effects of experiencing negative emotions. Greenberg and Pascual-Leone (2006) have suggested that there are four types of emotional processes that are useful in therapy: emotion awareness and arousal, emotion regulation, active reflection on emotion, and emotional transformation. One of the main outcomes of experiencing negative emotions is their influence on the creation or modification of the emotional schemata, the effects of those new schemata on perceiving and experiencing the self and the world. The modifications lead to changing the perception, experience, and labeling of the emotion. An example of this would be the transformation of the perception of the desire to be close to someone from neediness, weakness, and handicap to desire for intimacy, togetherness, love, and mutual caring.

The work of Leslie Greenberg within the framework of emotion-focused therapy (EFT) provides evidence of emotion transformation. In EFT, a maladaptive emotion state can be transformed by replacing the maladaptive emotion with another, more adaptive emotion. This is not replacing bad feelings with happy feelings or simply looking at the bright side but rather evoking meaningfully embodied alternative

experiences that undo perceptions that had been established because of experiencing negative emotions (Greenberg 2008). Research on the in-session resolution of two different kinds of tasks—resolving splits and unfinished business—in emotion-focused therapy (Greenberg 2002) indicated that tasks involving emotional transformation predicted outcome at both termination and 18-month follow-up. The performance of the emotional processing tasks predicted was associated with fewer relapses over the follow-up period (Greenberg and Pedersen 2001), indicating that this undoing of negative affect had impacts on outcome.

Fosha (2004) accelerated experiential dynamic psychotherapy (AEDP) proposes a therapeutic version of emotional transformation. In AEDP, positive emotions function as affective markers that signal that healing transformational processes are at work. Through meta-therapeutic processing—a set of interventions developed for working with emotions, involving alternating waves of experience and reflection—the positive affective experiences that arise as an integral part of healing becomes a sustained focus of experiential exploration. Positive affective states in AEDP do not refer simply to feelings of happiness but rather to experiences that feel *right or true*, even when painful. Positive affective phenomena occurring within the AEDP stages of transformation can include a sense of ease, calm, openness, connection, faith, hope, creativity, enthusiasm, liberation, truth and meaning, competence, agency, initiative, and action (Fosha 2009). These positive emotions instigate a transformational process that can undo the effects of painful experiences.

Research studies offer support for the concept of undoing in psychotherapy across a range of problems. Experiences of positive emotions are momentary. When they accumulate, they undo the impacts of the negative experiences that brought people to therapy and can lead to positive outcomes. In other words, experiencing positive emotions not only initiates the broadening process but changes the maladaptive perspectives, narratives, and meaning making established by experiencing negative emotions.

For people who are grieving, laughter has been found to predict recovery; being able to remember the happy times, to experience joy, serves as an antidote to sadness (Bonanno and Keltner 1997). For people who are depressed, a protest-filled, submissive sense of worthlessness can be transformed therapeutically by guiding them to the desire that drives their protest—a desire to be free of their cages and to access their feelings of joy and excitement for life (Greenberg 2008, p. 96). In women experiencing postpartum depression, instilling an optimistic outlook and attitude had a significant effect in reducing depression (Moraitou and Stalikas 2004). For those who have had a distressing experience, resilience was associated with generating a positive feeling (often through imagery or memory) in order to soothe and combat negative feelings (Whelton and Greenberg 2004). These studies indicate that positive emotions are useful in regulating or transforming emotions in a therapeutic framework.

The growing evidence for the efficacy of positive emotions in the therapeutic context has created momentum. A number of intervention modalities and practices that attempt to harness positive processes in helping people to live better have emerged along this slipstream. While these interventions do not necessarily work directly with positive emotions, they do provide a framework for research initiatives. As positive emotions would be expected to occur with some frequency in these kinds of interventions, they would offer opportunities to study the therapeutic microprocesses in which positive emotions play a role.

17.2.3 Positive Interventions

A range of new clinical approaches within positive psychology offer these opportunities (for a review see Magyar-Moe 2009). In the framework of psychotherapy, these interventions focus not on the reduction of symptoms but on the enhancement of well-being (Fava and Tomba 2009). A number of them focus on the enhancement of positive affect both in clinical and non-clinical populations (Sin and Lyubomirsky 2009). Most of the interventions are oriented to

client strengths and are used to overcome problems and enrich lived experiences. Below we highlight several of these approaches and indicate how they actively engage positive emotions to create change.

Hope therapy (Lopez et al. 2000, 2004) is an approach that uses the experience of positive emotions to create and develop hope. In this modality, hope is the active agent of therapeutic change. *Strengths-based counseling* (Smith 2006) also has a hope component. This ten-stage model with elements from a number of different therapeutic modalities draws on emotional strengths, such as insight, optimism, perseverance, perspective, purpose, love of life, and hope. It offers clients feedback that emphasizes their efforts to improve rather than the outcomes of their *efforts*. *Well-being therapy* (Fava 1999; Fava and Ruini 2003) is based on a multidimensional model of psychological well-being suggested by Ryff (1989). Positive emotions facilitate personal growth, autonomy, positive relations with others, purpose in life, and self-acceptance. *Quality of life therapy* (Frisch 2006) uses positive emotions for finding meaning, attaining goals, and recognizing strengths. This life satisfaction approach encourages clients to find and pursue goals and satisfy their needs and wishes. Positive emotions are linked to meaning making and to the active search for the ingredients that generate life satisfaction. *Strength-centered therapy* (Wong 2006) emphasizes empowerment of clients' character strengths and virtues (Peterson and Seligman 2004). The experience of particular positive emotions helps to identify strengths and virtues. Recognizing and harnessing strengths and virtues also generate positive emotions and increase well-being.

One clinical approach that has begun to accrue research support is *positive psychotherapy* (Rashid 2008). The approach is based on the idea that happiness comes from leading not only a pleasant but an engaged and meaningful life (Seligman 2002). Research studies have indicated that *positive psychotherapy* results in a reduction of depression symptoms and more cases of complete remission of depression in comparison to treatment as usual with or without medication and also leads to increased happiness (Seligman

et al. 2006). Group *positive psychotherapy* for college students resulted in reductions of depressive symptoms and increases in life satisfaction over a year (Seligman et al. 2006), and a brief version of group *positive psychotherapy* with children led to increases in well-being (Rashid and Anjum 2007). Many of the homework exercises utilized in *positive psychotherapy* have been validated through a variety of web-based studies conducted by Seligman et al. (2005).

Another therapeutic model that emphasizes the positive is REACH (Recall the hurt, Empathize with the one who hurt you, (offer the) Altruistic gift of forgiveness, (make a) Commitment to forgive, and Hold on to the forgiveness). This model specifically includes a place for negative emotion, helping clients to move toward forgiveness and reconciliation (Worthington 2001). There are at least eight controlled outcome studies assessing its outcome. In the largest and well-designed study, a consortium of Stanford researchers led by Thoresen et al. (2001) randomly assigned 259 adults to either a 9-h forgiveness workshop or to an assessment-only control group. Sizable effects were observed relative to reducing anger and stress and increasing optimism and health as well as forgiveness.

Clearly applications of positive psychological principles are increasing including approaches that actively harness strengths and positive emotions to help clients to effect important changes in their lives. As the aforementioned research findings indicate, there is at least a preliminary support for facilitating beneficial therapeutic processes and contributing to therapeutic outcomes. Some interventions attribute a healing role to experience of positive emotions; others propose that positive emotions facilitate other therapeutic processes such as the creation of meaning, and still others suggest that positive emotions are part of the attainment of well-being and happiness. However, research is preliminary and work still needs to be done to link the processes that engage positive emotions to the promising outcomes. For research to move forward, a number of methodological issues need to be addressed.

17.3 Challenges in Studying Positive Emotions in Psychotherapy

There are several methodological and conceptual issues that make research on positive emotions a substantial challenge. We begin with considering the challenges inherent in defining any emotion and discuss how those definitional issues become increasingly complex when considering positive emotions. Finally, we consider particular issues related to the assessment of positive emotions in psychotherapy.

17.3.1 Definitional Issues

The problems in accurately defining emotions have been extensively reviewed (see Lewis et al. 2008). These problems include issues related to discriminating between different emotions, describing the relationships between emotions, mapping their structure, identifying basic emotions, and grouping emotions with similar qualities. Most emotion theories define emotions as including four components: (a) a specific event that elicits the emotion, (b) an appraisal process of the event, (c) the neurophysiological arousal that accompanies the appraisal, and (d) a specific action tendency or behavioral response (i.e., Frijda 1986; Izard 1977; Panksepp 1982; Plutchik 1980; Rosenberg and Ekman 2000; Tomkins 1984). While the first three components may apply to the definition of a positive emotion, the fourth does not. Experiencing a negative emotion is most often related to an action tendency; experiencing a positive emotion is different. The most common ways of differentiating emotion from mood or affect involve the existence of a perceived triggering event, the duration of the emotional experience, and its intensity. Emotions are closely related to the occurrence of the triggering event. The response to the triggering event is brief and intense and leads to specific actions. Moods, on the other hand, develop in more subtle ways and last for longer periods of time (Fridja 2000).

Despite the vivid scientific dialogue around this definition, emotions and moods are often conflated in research measures along with a variety of other emotion-related constructs such as affect and emotional states, which are sustained and not momentary experiences.

Emotion research is often conducted with reference to emotion models that fit into three categories: (a) models of basic emotions (e.g., Ekman 1992; Otorny and Turner 1990; Panskepp 1992), (b) dimensional approaches, (i.e., Russell 1980; Schimmack and Grob 2000; Watson et al. 1999), and (c) hierarchical approaches (Watson and Clark 1992). Basic emotion research has identified discrete emotional states like anger and fear that can be reliably elicited and identified. Dimensional or circumplex models of emotion suggest that affective states are the end product of a complex interaction of *arousal* (level of activation or alertness) and *valence* (positive and negative) systems (Posner et al. 2005). Research on the valence and arousal systems has consistently suggested two factor solutions for each of these dimensions, dividing valence into positive and negative affect (Anderson and Phelps 2002; Northoff et al. 2000) and arousal into activation and deactivation (Nesse and Ellsworth 2009; Posner et al. 2005). Hierarchical models of emotions constitute the integration of those two traditions, proposing two (Watson and Tellegen 1985) or three (Tellegen et al. 1999) levels of hierarchical structure. For example, in the two-level model, positive and negative valences form the higher order factors, whereas the lower level reveals the content of the mood descriptors in the form of correlated but discrete emotions (Watson and Tellegen 1985).

Fredrickson (1998) proposes that positive emotions and moods are incompatible with these traditional definitions and models. The central idea is that positive emotions are rather diffuse and difficult to differentiate. She draws on a body of literature to assert that positive emotions are not initiated by discernible appraisal processes, are not connected to distinguishable autonomic responses, do not tend to have unique facial configurations, and do not

lead directly to specific action tendencies. Positive emotions are even experienced in a less distinctive manner; they tend to be less keenly felt than negative emotions. Effectively, the characteristics that defined the construct of negative emotions are different for positive emotions. This represents a particular challenge with respect to understanding and ultimately measuring positive emotions.

17.3.2 Assessing Positive Emotions in Psychotherapy

The definitional and structural issues highlighted above become methodological issues for psychotherapy researchers. These issues have implications for *what*, *where*, *when*, and *how* to assess positive emotions. However, all of these questions ultimately need to be decided based on the overarching research question of *why* we measure positive emotions. Fitzpatrick and Stalikas (2008) have suggested that in psychotherapy positive emotions have generative qualities that relate to important kinds of broadening processes. The research that we have considered to this point provides evidence to support that suggestion both outside and inside the psychotherapy realms. With the potential generative quality of positive emotions as answer to the why question, we will now consider the what, where, when, and how issues and suggest possible strategies and directions for psychotherapy researchers.

17.3.2.1 What to Measure: Selecting and Developing Instruments

Clearly psychotherapy researchers need validated process measures of both positive emotions and what positive emotions generate—the broadening dimension. Within positive psychology, scales and instruments have been constructed to measure concepts like forgiveness, gratitude, altruism, flow, broadening, compassion, and self-compassion, just to name a few.

Discrete positive emotions can be analyzed separately, can be combined into groups or

families of emotions that act in similar ways, or can be conjoined to form a general positive emotion variable. Fredrickson (1998), for example, has suggested that there are families of positive emotions including joy, interest, contentment, and love. More specifically, joy is described to share conceptual space with other positive emotional states such as happiness, amusement, mirth, exhilaration, elation and gladness, interest with challenge and intrinsic motivation, and contentment with mild or receptive joy, while love is considered to include a number of discrete positive emotions among which are joy, interest, and contentment.

In measuring positive emotions, researchers also need to take a stand on the issues of whether positive and negative emotions are two independent variables or two opposite poles that function in contrasting ways (Lucas et al. 2009). Depending on the researchers' stance on this issue, positive emotions investigations may look at positive and negative emotions together or measure positive emotions independently. The PANAS (Watson et al. 1988b) is a popular research instrument that can accommodate either strategy (for a review of the issues involved in measuring positive emotion see Larsen and Fredrickson 1999). In PANAS positive emotions can be calculated in two ways: either as the total sum of discrete positive emotion items or as the result of subtracting the total sum of the negative emotion items from the total sum of the positive ones.

Positive emotions alone are particularly difficult to measure because they are diffuse and difficult to differentiate. To study negative emotions, researchers have developed instruments that can tap aspects such as voice quality, paralinguistic characteristics, neurophysiological changes, and facial expressions. If Fredrickson is correct and positive emotions are not connected to distinguishable autonomic responses and do not tend to have unique facial configurations, these strategies will tend to yield little. Foa et al. (2010) have developed a preliminary vocal profile for interest, distinguishing between the vocal acoustical properties of animated and contemplative interest. However,

vocal acoustics alone are not sufficient to identify emotions that are relatively subtle. Additional work is needed to complement these parameters in order to make reliable identification possible.

In the context of psychotherapy research, potentially useful process measures include the Client Perceptual Processing Scale (CPPS; Toukmanian (1994, 2004), the Therapeutic Realizations Scale–Revised (TRS-R; Kolden et al. 2000), the cognitive-emotional processing category of the Change and Growth Experiences Scale (CHANGE; Hayes et al. 2006), and the Experiencing Scale (Klein et al. 1986). These are observer-based measures that include aspects of the elaboration that can represent the broadening construct. The Broadening Inventory (Boutri and Stalikas 2005) has been constructed specifically to measure this construct and includes items that tap the cognitive, affective, and behavioral dimensions of broadening separately.

17.3.2.2 How to Measure: Finding Positive Emotions and Selecting Measurement Strategies

As most clients come to therapy with a surfeit of negative emotions, in order to know how positive emotions operate in the therapeutic setting, we need to be able to find them. While positive emotions presumably operate in all therapeutic modalities, therapies that actively prescribe the therapeutic elaboration of positive emotions such as accelerated experiential dynamic psychotherapy (Fosha 2000), process-experiential therapy (Elliott et al. 2004), and emotion-focused therapy (Greenberg 2002) would seem to be good places to readily find examples for study. Given the building component to which positive emotions are theorized to contribute, we also need to examine extra-session processes in order to follow positive emotions in the upward spiral. It will also be important to explore client processes over a longer time frame than the course of the session in order to trace the ongoing role of positive emotion in building necessary resources that support change.

Self-report questionnaires are one way to access client's positive emotions. Most emotion measures include at least a few positive emotions

or a general factor of positive emotionality or pleasantness [i.e., Affect Balance Scale (Bradburn and Caplovitz 1965), PANAS (Watson et al. 1988a), modified Differential Emotions Scale (Fredrickson et al. 2003), Mood Adjective Checklist (Nowlis and Green 1957), Affect Grid (Russell et al. 1989), Multiple Affect Adjective Checklist (Zuckerman and Lubin 1985)]. Having clients report on positive emotions raises an important definitional issue. Are positive emotions those that have a pleasant valence or those that lead to approach behavior (Lucas et al. 2009)? The answer to this question will ultimately be embedded in the research question. However, asking clients to report on positive emotions probably will only access experiences that have a positive valence. A further limitation to the self-report strategy is that we can only ask clients to report *after* sessions on what happens in the process. This limits access to positive emotions as they are happening and introduces the possibility that clients are not reporting on the phenomenon itself but on a recreation of it from memory.

Using clinical judges is another common psychotherapy process research strategy. The use of clinical judges allows researchers to review a session at a later time, locate the segments of interest, and investigate them thoroughly, without disrupting the natural course of the session. The method usually entails a set of comprehensive instructions, training of the clinical judges, and a consensus process. The difficulty with this strategy is that positive emotions could be considered as semiprivate phenomena, since they are not necessarily accompanied by observable change in the clients' appearance or specific behavioral responses, thus yielding few valid and observable indices to guide the assessment. A possible way to overcome this obstacle is expert training in identifying specific signs of emotional expression, such as facial muscle movements (i.e., facial action coding system—FACS, Ekman and Friesen 1978), a method that requires extensive training and considerable amount of time. However, the nature of positive emotions represents an ongoing challenge for

those interested in investigating this potentially fruitful variable.

17.3.2.3 When to Measure

Deciding the place to focus our investigations is always a challenge to psychotherapy process researchers. It is a particularly salient challenge when the purpose of the research is to relate the emotional experience with other significant therapeutic phenomena. *Events-based* research may hold promise for the investigation of broaden-and-build sequences. This approach draws on the tradition of critical incident research (Flanagan 1954) and of protocol analysis in which specific verbal behaviors or interactions are examined to understand the nature of change (Elliott and James 1989; Greenberg et al. 1996; Greenberg and Pinsof 1986). It requires researchers to isolate "key episodes" in order to gain a better understanding of change processes in clinically meaningful units. Examining therapy events or episodes has three advantages: specificity, richness, and immediacy (Greenberg and Pinsof 1986). Events can be isolated using *markers* of a key process such as in task analysis (Rice and Greenberg 1984; Pascual-Leone et al. 2009). Client input is also extremely valuable in locating key incidents of their own emotional experiences. Combining self-reports with brief structured recall interviews (Elliott 1986) in which clients review recordings of their sessions to identify the place where positive emotions begin or peak would seem to offer a solution to this dilemma. Clients are also capable of providing rich information about the complexity involved in therapy events, increasing our understanding of how particular change processes work in therapy. In addition, immediate post-session reports of events are not contaminated by the subsequent effects of other therapies or life experiences.

17.3.2.4 Integrating the *What*, *How*, and *When* to Study Positive Emotions

In the previous sections, we separately presented the three basic questions a researcher answers regarding the what, how, and when to study

positive emotions in psychotherapy. These answers are not independent from one another since most often decisions regarding the "what" are related to the "how" and the "when." There is a relationship among the choices. Deciding on the "what" to assess creates a conceptual framework regarding the "how" and the "when." For example, if the "what" is the assessment of the frequency of the different types of positive emotions appearing during the session (e.g., joy, interest, pride, etc.), a self-report assessment after the session, and an interpersonal process recall (IPR) procedure represent two very different but acceptable choices. If, however, the IPR interest of the researcher focuses on the agreement between client experiencing and therapist's perception of client experiencing, then the choices regarding how and when to assess are different. Ultimately, the criteria regarding what, how, and when to assess are related to: (a) the aim, goal, or research questions of the study, (b) the nature and assessment of the other variables in the study, and (c) the epistemological foundation and overall design of the research program.

The research questions of the study guide the researcher for the identification of the exact aspect, facet, or content of the variable measured. For example, for research questions aiming in identifying the emotional state of the client before or after a session, assessing overall mood or naming the experience of specific emotions (what) using self-report scales (how) before and after the session (when) is an appropriate choice. On the other hand, research questions aiming in studying carefully selected session segments, or session events for their therapeutic significance and contribution to change (like incidents of client insight, events characterized by high levels of experiencing, etc.), and the possible contribution of positive emotions preceding the onset of the event may use an IPR process (how) where the client recalls-describes right after the session (when), in an either quantitative or qualitative way, the nature, experience, valence, and intensity of the emotions present at that moment (what).

One of the ways to safeguard the statistical validity of a research study is to properly assess the variables under study using valid tools and collecting data for all variables using compatible measurement scales among variables that allow the application of the appropriate statistical analyses. For example, data collected on a nominal measurement scale (e.g., category of emotions) are not compatible for statistical analyses with data collected on an ordinal measurement scale (e.g., number of session).

Finally, the setting where the research will be carried out, the sample size, and the number of variables under study will also influence what, how, and when to assess positive emotions. Large samples allow for complex and multivariable analyses. Small samples and special settings (e.g., prisons) provide unique opportunities for qualitative descriptions.

To date, most research initiatives involving the study of positive emotions fall in the quantitative research strategy. This preference is to be expected, since it is customary to apply quantitative assessment to new concepts aggiungi crossreference con stiles. The quantitative "scrutiny' produces the first wave of research findings and provides for the initial support (or not) of the new concept. In a sense, descriptive quantitative research strategies first establish the presence, variability, and strength of the new concept (in our case positive emotion), followed by the establishment of their relationship with other psychotherapy concepts. Qualitative research strategy initiatives often follow this first wave in an effort to provide better descriptions and conceptual clarity. In addition, positive emotion research was initiated within the domain of social psychology where there is a preference for quantitative research designs.

Given the relatively recent development of concepts such as broadening, positive emotions as generators of change, and the upward spiral, most studies in psychotherapy research focus in providing research support and apply quantitative methodologies. This initial focus on quantitative assessment resulted in the design of several instruments, scales, self-reports, and quantitative rater assessment procedures. Qualitative research initiatives are rare for the moment. As it has been aforementioned, this absence of qualitative

studies may reflect the lack of an initial quantitative research framework which can be used as the basis for developing conceptual clarity. Having said that, there are presently several ongoing qualitative projects which study the role of positive emotion in specific therapeutic approaches, with distinct client pathology and from different perspectives (Pagnini 2013; Vandenberghea and Silvestreb 2013; Willutzki 2013).

Conclusion

This chapter has provided a theoretical framework, the broaden-and-build theory, which is a useful model for the operation of positive emotions in psychotherapy. The model represents a way of understanding the operation of positive emotion that is compatible with existing cognitive theory and provides additional insight into change processes that have been largely unexplored in psychotherapy process and outcome research. We have reviewed the preliminary research findings that bear on the role and the value of positive emotions in the therapeutic healing process and found evidence that positive emotions are part of a process that contributes to improved therapeutic outcomes. Some of the clinical approaches associated with positive psychology are presented here in order to orient psychotherapy researchers to the core concepts and variables that need to be understood in research initiatives in this area. Our final goal has been to identify salient research challenges and issues. We believe that the study of positive emotions has the potential to make an important and lasting contribution to our understanding of psychotherapeutic change, a contribution with significant clinical implications. A systematic and sustained focus by psychotherapy researchers is needed to address the conceptual and methodological difficulties and realize this potential.

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