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Personal Resilience in the Midst of Crisis: Empirical Findings From Positive Psychology

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Abstract

People vary in their resilience in response to personal crises. A relatively new science entitled positive psychology offers some suggestions for ways to improve one's own resilience. This science uses empirical scientific methods to study wellbeing, strengths, and optimal human functioning. Some findings from positive psychology are reviewed.

Introduction

Personal resilience is the ability to cope well with or at least recover well from stressful life circumstances (e.g., Masten, 2001). Some people face particularly difficult stressors, yet seem to succeed in maintaining or rebuilding personal wellbeing. Others have more difficulty recovering from life stressors.

Though this current discussion will focus on adults, most resilience research has focused on children. The studies suggest that factors such as the following promote resilience among children: Relations with nurturing adults, positive friends, faith, a sense of control, and effective teachers (Masten, Herbers, & Cutuli, 2008). Resilience, though, has relevance for adults as well.

Adults differ in their tendency to display resilience. For example, during some research, one of the authors of this paper met a man residing at a shelter for people lacking housing. He shared a room with about five other men. Every day, he was kicked out during the day; he could only come inside for evening and night.

He had a job to which he could return. In fact his salary, when he worked, was significantly higher than the national average and higher than that of the researcher. Previously, he had a nice home, had his own car, and regularly went on vacations in other countries. His problem was that he found this life boring. He said that he coped with his boredom by often skipping work and purchasing cocaine or heroin. He spent all his money on cocaine or heroin, so that even though he had a high income, he failed to pay rent, and he was kicked out of his place. A few months later, the researcher encountered him again; the man had begun sleeping outside in the downtown core, had lost much weight from not eating, and used drugs frequently. He had not returned to work yet. He is an example of a person who, according to his own reports, was not coping well with his crisis.

Here is second story about a man named Gerald Sittser. He too had a good job, though Gerald's job did not pay nearly as well as the fellow in the first story. He was married and had children. Here is what happened to him. One day the family was in a tragic car accident. One of Gerald's daughters died. Also, his wife died. Also, his mother died. He lost a daughter, his wife, and his mother. Thus, within a very short time he lost people from three generations. How, did he cope? Somehow, he carried on. He eventually went back to work. He continued the task of raising his remaining children. He eventually wrote a book about his experiences (Sittser, 1995).

Of these two people facing crises, one coped in a way that led to self-damage. One coped surprisingly well. What was the difference between these two people? Why was one coping well with a crisis and one not coping well? That question is the topic of this discussion.

Many domains of behavioral science have relevance to a discussion of adult resilience; the focus here is on evidence from positive psychology.

The Science of Positive Psychology: Not Simply Looking on the Bright Side of Life

Various definitions of positive psychology have been proposed, but all tend to focus on using scientific methods to study well-being, strengths, and optimal human functioning (e.g., Linley, Joseph, Harrington, & Wood, 2006). Seligman (2002), who helped begin the positive psychology movement, also includes the

study of positive institutions (such as families and democracy) that support well-being.

Other academics have tried to study well-being in the past (e.g., Maslow, 1969; Rogers, 1961), but now this movement is growing rapidly and focusing on carefully conducted empirical research.

In part, positive psychology is a reaction to the pathology focus that characterized much of the history of psychology. For the past 100 years, psychology researchers have devoted much attention – literally thousands of studies -- to learning what causes depression, what causes anxiety, and what causes other pathologies. As a result of the past focus on pathology, psychological researchers now know factors that create pathologies. That knowledge has value, but in recent years, people have begun to realize the limitations of that knowledge. The problem is that we don't want to make people pathological. We want to make people well.

For most of the history of psychology, relatively few studies examined human strengths, well-being, and happiness. Ed Diener (Diener & Biswas Diener, 2008) is one of the leaders in positive psychology. Early in his career, however, he was told not to devote too much attention to studying happiness because that would be perceived as a flaky topic, a topic not worthy of serious study. Focusing on happiness, he was told, could hurt his career chances. He might not get tenure; he might not get research grants. He nonetheless persevered and empirically studied positive human functioning. Many others are now following this path. In fact, there are now graduate programs and an academic journal devoted to the science of positive psychology. Of course, we still need research on pathology, and of course, some psychologists were studying well-being prior to the popularization of the term "positive psychology." However, the balance has begun to shift, so that more psychological researchers now examine well-being.

Those unfamiliar with positive psychology may misconstrue it. Thus, some corrective discussion may be deserved. An internet search for the term "positive psychology" will turn up many sites presenting an unscientific approach to positive psychology. Some of this material could create a mistaken impression that positive psychology exhorts people to 1) always act happy even when they are not, or 2) always try to look on the bright side of life. These would be misrepresentations of the science of positive psychology.

Voltaire's writing provides an illustration of what positive psychology is not. Voltaire, in Candide, wrote about a character named Dr. Pangloss. Pangloss definitely looked on the bright side of life. He argued that all events are positive because we live in the best of all possible worlds. Thus, no matter how bad the news, he responded positively. He largely denied the presence of evil. There are some advantages to this kind of denial, but there are serious negative consequences. In the story, Dr. Pangloss was eventually executed, and thus symbolically provides an illustration of the negative effects of denial. Pangloss is not an illustration of positive psychology. Positive psychology is not the denial of tragedy or of evil.

Gerald Sittser, the fellow who tragically lost his mother, wife, and daughter, provides a better example of positive psychology in practice. He said, "My suffering is as puzzling and horrible to me now as it was the day it happened. The good that may come out of the loss does not erase its badness or excuse the wrong done. Nothing can do that" (Sittser, 1995, p. 11). So, yes, some good did come out of his pain. He even described some aspects of the results as a grace, an undeserved gift. Yet, the pain was real, and the event was bad, not good. He didn't need to deny evil or pain in order to cope well and build a positive life. Likewise, positive psychology is not *merely* looking on the bright side of life.

Reasonable Expectations for Positive Psychology

Some limitations deserve mention prior to any discussion of empirical research on well-being. The empirical methods of positive psychology place some limits on the nature of information available from this science.

Limitation 1: Predictions work best for groups.

One qualification relates to individual and group outcomes. Social scientists cannot explain individual cases very well. Instead social scientists explain group differences best. A social scientists can say, for example, that people who cope in certain ways tend to be less depressed than people who cope in other ways, but there will always be exceptions. There are people who seem to engage in less adaptive behavior, but for some reason still cope well.

Limitation 2: Best for testing rather than generating ideas.

Also, social science research seldom generates new strategies for building resilience, but it can be helpful for clarifying whether strategies are supported by evidence. Common sense, on the other hand, is effective at generating ideas for how to cope with stress. Some people will say you merely need to keep busy; if you keep busy with your job and other things, you will cope well. Others will say that you need to stay physically fit; if you keep your body in good shape, you'll cope well. Others might think that catharsis, or expressing your self is good; you need to let your frustrations out. Others might recommend staying quiet and carrying on. Others may say you need to stay close to your family. Others may see therapy as the magic bullet for coping well. Others would suggest finding a mentor or spiritual guide. Others would suggest finding peace through music or other arts. Our point here is that common sense gives lots of suggestions, but you cannot devote yourself fully to all of these. You cannot do everything people tell you to do. Social science can provide some guidance on which strategies work best.

Limitation 3: Provision of evidence, but seldom proof.

Here is one last qualification. Social science cannot prove much; it can, however, provide valuable evidence. We will not devote much space here to discussing social science methods. Nonetheless, we will assert that a perfect social science study cannot be created. A competent social science researcher will be able to find fault with almost any social science study addressing sources of resilience. To use more technical terms for a moment, readers who know methodology will know that studies having the best internal validity often lack external validity and vice versa. Studies that focus on one particular group (e.g., young men) will inevitably have problems with generalizability to a larger group. Studies that do the opposite and include men, women, and a variety of ages tend to have more error variance and often lack statistical conclusion validity for specific groups.

Thus, the studies described in this discussion will not prove much definitively. Social science studies rarely do. Nonetheless, the weight of the evidence from these studies may provide valuable evidence about how to build resilience. Thus, readers of social science studies should not demand proof, but be willing to listen to evidence.

What Does Positive Psychology Research Say About Coping in Crises?

Now that we have discussed what positive psychology *is,* let us turn our attention to some findings from positive psychology. Below, we aim to sketch out some larger pictures of research programs in positive psychology relevant to this question. Sometimes, those research programs directly studied crises; at other times, those programs studied well-being more broadly. The two issues are interrelated; developing general well-being may help one better cope with crisis when the time comes.

Positive Emotion

Folkman (2008, see also Folkman & Moskowitz, 2000, 2007), for example, provided evidence that positive emotion helps to sustain coping. People who feel positive emotions cope better. Thus, she has recommended studying sources of positive emotion among people in a variety of situations. The suggestion might seem obvious, but previously, researchers usually assumed that good coping produced positive emotion. The researchers usually ignored the reverse pattern, that positive emotion sustains resilience and coping. Thus, she encourages the simple study of positive emotions and their sources, an obvious, but surprisingly neglected area of research among those interested in resilience.

The paradox of positive psychology: Selflessness

One interesting starting place is the paradox suggested by some recent research on well-being. In particular, the recent evidence suggests that selfless acts facilitate selfish goals. In other words, providing support to other people (an apparently selfless act) seems to promote selfish goals, including coping well with stress, living a long life, and avoiding depression.

For example, Seligman, Steen, Park, and Peterson (2006) provided evidence that among a group of internet users, expressing gratitude towards others provides emotional benefits to the self. In the study, some randomly assigned participants were directed to write a letter expressing gratitude to someone who had been treated them well, but who had not yet been thanked properly. The participants were asked to deliver this letter in person. The activity clearly meets esteem needs of the person being thanked. However, the researchers also found that the letter writers themselves reported greater happiness and less depression than a control group for the next four weeks. This

remarkably implies that a singular act of gratitude can prepare people to cope effectively with life for an entire month.

The paradox also appears in studies focused on young adults. Lyubomirsky, Sheldon, & Schkade (2005) conducted a study in which they randomly assigned participants to engage in five selfless acts each week for six weeks. In particular, they asked participants to engage in acts that would make others happy or otherwise benefit others. Participants did such things as giving blood, visiting the elderly, and helping others with homework. Those who engaged in these selfless acts achieved the selfish goal of greater self-reported happiness when compared to a control group not engaging in these acts.

Of course, some could dispute the findings because the results depend on subjective self-reports. However, Brown, Nesse, Vinokaur, and Smith (2003) also studied selflessness and found that selflessness predicted a longer life. The study examined 423 married couples for whom the husband was at least 65 years of age. The subset of participants who provided concrete assistance to others in the community (e.g., shopping, providing transportation, and providing childcare for others) and those who provided emotional support to the spouse (i.e., made the spouse feel loved and cared for) tended to live longer than did the other participants in the study. Admittedly, this was an imperfect study. Critics could argue that the causal effect is more complicated: Possibly, pre-existing physical problems cause both reductions in altruistic activity and subsequently shorter lives. In order to control for this possibility, Brown statistically controlled for health status of the participants. She statistically removed effects predictable based on health status.

Nonetheless, she still found that altruism predicted longevity.

Based on this study, Brown et al. (2003) argued that "interventions designed to make people feel supported may need to be redesigned so that the emphasis is on what people do to help others" (Brown et al., 2003, p. 326),   In other words, in order to help people experiencing crises, we may want to think about facilitating their efforts to help others.

Likewise, for people with history of serious mental health issues, one study found similar results (Roberts, Salem, Rappaport, Toro, Luke, & Seidman, 1999). The researchers studied self-help groups of people with serious mental health problems. Among these groups, the people who helped others showed the

greatest subsequent increases in well-being. Thus, even among these people experiencing *severe* problems, this paradox seems to hold true. Selfishness is served by selflessness.

Admittedly, altruistic behavior (i.e., efforts to help others) can be difficult to distinguish from selfishly motivated helping (e.g., helping others in order to avoid a sense of guilt). There has been debate about whether pure altruism can ever exist (Batson, 1988). Nonetheless, the research reviewed here suggests that apparent altruism (whether purely selfless or not) tends to be associated with positive outcomes.

Thus, once again, apparently selfless behavior, a variable that has held great interest for positive psychologists, tended to predict resilience in the face of crisis. This result is odd. Most researchers seem to assume that people in crisis are in need of support, and that's probably true, but this research suggests that people who give to others will also cope with the crisis better.

Life Goals: Improving the world, building relations, fitness and self-acceptance
Other research similarly suggests that pursuing more selfless ends can lead to more positive outcomes. Kasser (2002) theorized that excessive pursuit of selfish goals like wealth, fame (being well-known and admired), or good looks (via physical looks and clothing) causes psychological problems. In one study, Kasser and Ryan (1996) asked people to rate the importance of these life goals. What they found was that pursuit of these three life goals tended to be associated with poorer emotional and physical health. Kasser and Ryan (1996) also explored other life goals, some of which were more selfless in nature: To build relationships, to increase one's self-acceptance, to improve the world, and to maintain good physical fitness. Pursuit of these goals was associated with fewer physical symptoms and more positive emotions. Although two of these could be construed as self-focused (increasing self-acceptance, maintaining physical fitness), two of these goals are clearly other-focused (improving the world, building relationships). Thus, in the main this suggests that the intentionally selfish pursuit of wealth and fame is less beneficial to the self than a more balanced focus that includes concern for the needs of others. Again, people seem to cope better with life when they help others along the way.

Now, we want to be careful about strong conclusions from evidence like this; in particular, this is a correlational study, so we should be careful.

Nonetheless, the pattern of data fits well with his theory that excessive pursuit of wealth may provoke psychological pain. This conclusion does not imply that pursuit of material gain for selfish ends is wrong or always bad, but an excess may be associated with poor psychological outcomes. In contrast, pursuit of psychological growth, relational well-being, improvement to the world, and physical fitness tends to be associated with positive psychological outcomes.

Of course, there are likely some exceptions. Possibly, in times of intense distress, helping others can usurp personal resources that are needed by the self. In so far unpublished studies of men who are homeless and women who are bereaved, some of these limitations become evident. In particular, among homeless men, we have seen mixed results. One study suggested that occasional acts of altruism enhance well-being (Tweed & Lehman, 2009a). Another study of homeless men, however, produced evidence that frequent and personally demanding acts of altruism may actually predict increased depression (Tweed & Lehman, 2009b). Likewise, among women who are bereaved, some types of altruism predict well-being, but other types of altruism predict poorer outcome (Tweed, Wortman, & Lehman, 2009). For now, we recommend caution. Selfless acts seem to enhance well-being even among people in self-help groups who are dealing with significant life difficulties, but among those facing severe stressors, widespread, frequent acts of altruism may be personally costly. Maybe during these times of intense distress, widespread obligations towards community members may require resources we needed for coping well.

However, taking what we know so far in total, the paradox seems to hold true in most cases: In most cases for most people, selfless acts facilitate selfish goals. During times of intense distress (e.g., homelessness and bereavement), the pattern may become more complicated, but in most studies at most times, selflessness benefits the self. Thus, when we consider our two persons at the beginning of this paper – you may remember, the one who coped well with life, and the other who did not – and we ask why they differed, one possibility is that the successful coper had more of a focus on other people. Perhaps psychologically navigating our way through a sometimes-troublesome world involves, in part, simply a mindset of helping other people.

Extraversion

Of course, one cannot simply deal with all of one's crises by helping other people unrelated to the crisis; one must also deal with the actual crisis itself. Writing a letter of gratitude will not entirely solve the grief of losing a beloved child. What other sorts of things have positive psychologists found to be related to life success? One interesting finding relates to extraversion. Extraversion is the tendency to be bold, talkative, energetic, active, assertive, and adventurous. Extraverts tend to gain pleasure from crowds, from attention, and from frequent interpersonal interactions.

Some evidence suggests that extraverts have a tendency to experience more frequent positive emotion than do other people. Initially, this finding may seem to offer no help at all. In particular, extraversion is usually treated as a dimension on which people see little change. Some evidence suggests that extraversion is genetically influenced. Some people are born with a tendency to be more extraverted than are other people.

However, Fleeson, Malanos, and Achille (2002) decided to test whether even people who are not extraverted can benefit by acting a little more extraverted. To be a little more technical, they wondered whether the emotional benefit comes only from trait extraversion (being born an extravert) or also from state extraversion (acting extraverted). Traits are stable and enduring. States are short-lived. Some people have the trait of extraversion, meaning then tend to often show the characteristics of an extravert. However, almost everyone at some time shows the behaviors of extraversion (state extraversion).

Fleeson, Malanos, and Achille (2002) decided to find out whether state extraversion can cause happiness. For the first study, participants carried pocket computers for 13 days. Five times a day the participants reported both their level of extraversion and their level of positive emotion in the last hour. In particular, they rated the extent to which they had been "talkative," "energetic," "assertive," and "adventurous." They also rated the extent to which they had experienced positive emotions. In almost all psychological studies, one finds exceptional people who do not fit the expected pattern. In this study, there were no exceptions. For every single person, the times when they were most extraverted also tended to be the times they felt most positive. Thus, the relation between extraversion and positive emotion is not just based on certain people being naturally more

extraverted and also more positive. All participants tended to be most positive when they were acting extraverted.

Admittedly, social science researchers may notice a serious problem with the study. The causal direction is unclear. The results could indicate that extraversion causes positive emotions or instead that positive emotions cause extraversion.

So, in a second study, Fleeson, Malanos, and Achille (2002) tried to find out which way the causal effect flows. In this second study, participants discussed preparations for a plane crash. In small groups, they rated the usefulness of various items for survival after the plane crash. Here is the interesting part. The participants were randomly instructed to act extraverted (act bold, talkative, energetic, active, assertive, and adventurous) or introverted (the opposite). After the discussion, the participants all rated the positivity of their emotions. Then, the participants were asked to act in the opposite way for a second discussion. During the second discussion, they ranked possible solutions to a parking problem. Again, they rated the positivity of their emotion. The people acting more extraverted reported more positive emotions than did people acting introverted.

Though other explanations might also be found for this effect, this study is at least consistent with the idea that increased extraversion caused positive emotion. Thus, it seems that state extroversion can contribute to positive emotions. In other words, acting a little more extraverted than usual may often increase positive emotions. As with all social science principles, there will be boundary conditions. In some situations, extraversion is inappropriate, but in reasonable quantities at appropriate times, it seems to increase positive emotion possibly in part because it helps build social relations.

This effect might have direct relevance for resiliency. As we mentioned earlier, research suggests that fostering positive emotion is an important part of successful coping (Folkman, 2008). Thus, using techniques that help foster positive emotion may better prepare one for dealing with life's inevitable crises when they do in fact arrive. Although of course we are not suggesting that simply "behaving more sociable" will make one suddenly happy and resilient, it is possible that slightly increasing one's extraverted tendencies may serve as a part of a larger dynamic that at the least facilitates good coping behavior.

Positive aging

One of the longest-running social science studies ever conducted was reported by George Vaillant (2004). The study began with research on men in their mid 20's and tracked these men until they were in their 80's. Some participants were students at a prestigious university (Harvard), and some were living in the inner city. Using these data, Vaillant reported on factors predicting positive aging, i.e., factors present among people who more effectively weather the storms of life.

First, though, the appropriate definition of positive aging is debatable. George Vaillant (2004) used the following criterion to define positive aging: absence of objective physical disability (at age 75 for college men, 65 for inner city men), subjective physical health at age 75, length of functionally healthy life, objective mental health, objective measures of social support, and subjective life satisfaction. People who had these characteristics when they were older were considered to have aged well.

Vaillant (2004) was particularly interested in factors predicting positive aging. Vaillant referred to some potential predictors as "fate variables" because, he argued, these are largely beyond the individual's control: ancestral longevity, cholesterol level, parental social class at age 14, warm childhood environment, stable childhood temperament, and stress-related physical symptoms (ulcers, asthma, colitis…). Admittedly, some of these "fate" variables can be influenced by individual behavior, so one could argue with Vaillant's definition of "fate." Nonetheless, most of these seem less controllable (on average) than the variables Vaillant describes as non-fate variables.

Surprisingly, these "fate" variables did not predict positive or negative aging in this study. Instead, variables over which individuals can exert more direct control (according to Vaillant) predicted positive aging, including not smoking (or at least quitting by age 45), an adaptive and mature coping style, absence of alcohol abuse, a stable marriage, physical exercise, years of education, and a healthy weight (the weakest predictor). Although some of these variables are undoubtedly influenced by things outside of the person's control (and indeed, all behavioral and psychological variables are likely influenced in part by both internal and external factors), this second set of variables seem on average more controllable than the first set. Thus, one conclusion from these results is that things people have more direct control over are more important in predicting positive aging.

Most of these variables are self-explanatory, but the meaning of mature coping may be less obvious. Vaillant (2004) claimed that those who aged well were able to minimize their problems. They did not ignore them, but they made the best of things despite their problems. Vaillant said that the mature copers were able to take bitter things and make the best. This means they didn't deny that bitter things had happened, but they made the best of it. Instead of catastrophizing (believing the situation is a catastrophe), they dealt with their problems. They even tried to find positive aspects of their experience during their problems. Collins (2001), discussed a similar strategy in his business advice book entitled "From Good to Great." In that book, Collins studied companies that had made great positive changes during a particular time period. In all these successful companies, the leaders at first openly confronted the brutal reality of their difficult situation, but refused to lose faith. The leaders refused to ignore their biggest problems. In spite of the pain of doing so, the leaders forced everyone to deal with the biggest problems facing the company, but simultaneously, these leaders refused to be overwhelmed by these realities. Thus, these successful leaders kept faith they could overcome in spite of (or perhaps because of) their willingness to deal with their difficulties.

Vaillant's (2004) education finding is also interesting. Vaillant found that education predicted successful aging. The men from the prestigious university tended to be significantly healthier in old age than did the inner city men (They had healthier lifestyles: less smoking, less alcohol abuse, and healthier weight). However, the health effect disappeared when Vaillant compared inner city men who attained a university degree to those from the prestigious university. The university educated inner city men held lower paying and less prestigious jobs than did those from the prestigious university, but in old age, the health of the two groups was indistinguishable. The study provides evidence that education matters.

Space limitations here preclude a more full description of Vaillant's (2004) study. For those interested, the study is describe further in Vaillant's chapter in a book entitled Positive Psychology in Practice (Linley & Joseph, 2004). One of the most interesting aspects of this study is the fact that most of the predictors tend to be at least somewhat controllable. Vaillant's (2004) conclusion was that individuals should focus on developing these seven factors in their lives in order to promote successful aging: not smoking (or at least quitting by age 45), an

adaptive coping style, absence of alcohol abuse, a stable marriage (or other stable relations), physical exercise, years of education, and a healthy weight.

Life goals: Perseverance and withdrawal

 Thus far we have made inferences about "coping" and "resilience" from research that provided few direct tests of those variables. However, there are studies of how people cope with problems. For example, Gregory Miller and Carsten Wrosch (2007) conducted some important research. They had read studies suggesting that conscientiousness and willingness to persevere in the face of difficulty tends to be associated with good outcomes for people. These studies showed that effort to pursue goals tends to be good.

Miller and Wrosch (2007) however, also surmised that the opposite trait might be associated with well-being. In particular, they thought that knowing when to give up on an important life goal might be associated with well-being. They designed a questionnaire assessing people's ability to give up on unattainable goals. They believed this skill may be important because prolonged effort towards unattainable goals may lead to psychological pain.

Miller and Wrosch (2007) also suspected that when individuals give up on one life goal, they also need to find a new goal or be at risk of aimlessness and hopelessness. Consider the following example: One young man wanted to become a police officer, but his family had been in the restaurant business and he was being pressured to follow in that tradition. His parents had a restaurant. His brother and sister both worked in or owned restaurants. They encouraged him to do the same. Instead, he resisted the pressure and told them that he was going to finish high school and become a police officer. His family mocked him, but he persisted. However, when he applied to be a police officer, he was rejected repeatedly. Next, he gave up on that goal. According to Miller and Wrosch, giving up this unattainable goal might be a good thing. But this young man did not just give up on this one goal; instead, he gave up on *everything*. He quit working. He stopped all contact with his family and friends. He lived on the streets and ate out of garbage cans. He was able to disengage from one goal, but he wasn't able to reengage in another goal.

So, Miller and Wrosch (2007) wanted to study this ability to disengage from unattainable goals and acquire new life goals. They studied teenagers

between 15 and 19 years of age. Then they followed these people over the next year and tracked their levels of C Reactive Protein (CRP). When your body detects an infection or injury, it increases levels of CRP. However, prolonged increases in CRP predict health problems including diabetes, heart disease and other problems. Miller and Wrosch found that people who lack the ability to give up on unattainable problems tend to show increasing levels of CRP. Now, this is just one study, but Miller has conducted a series of studies, and he has repeatedly found this pattern. Ability to disengage from unattainable life goals seems to be associated with positive outcomes. The ability to reengage may also be important, but research results on this second variable have been less consistent (Miller & Wrosch, 2007; Wrosch, Miller, Scheier, & Brun de Pontet, 2007; Wrosch, Scheier, Miller, Schulz, & Carver, 2003).

This does not mean that people should give up on life goals at the first sign of setback! Remember that prior research had shown that perseverance at life goals is important. People who persevered gain in terms of positive life outcomes. These more recent studies, however, suggest that people also need the ability to give up on unattainable life goals.

One-week interventions

Few of the studies discussed so far have focused on therapeutic interventions. Some positive psychologists, however, have begun to develop interventions to enhance well-being. Seligman, Steen, Park, and Peterson (2006), for example, assessed whether a simple set of activities conducted over one week could make people significantly happier over the next six months. That was a high goal. Psychologists have a hard time promoting real change in people's lives, yet these researchers hoped that simple exercises requiring just a few minutes a day for one week could significantly increase happiness for 6 months. As with all studies, this one had limitations, but the results suggest that two of the six exercises created increases in happiness that lasted 6 months.

One successful exercise was called three good things. People in this group were asked each night to write down three things that had gone well that day and also to write down an explanation of what had caused each good event. People in this group tended to show increases in self-reported happiness lasting 6 months.

The significance of this result is difficult to overstate. People will often say that a particular activity has helped them, but seeing lasting increases in standardized measures of well-being is not common.

Why did this activity seem to help people? We cannot know for sure, but here is a suggestion. Perhaps most people already know some factors that promote well-being: relationships, purpose, psychological growth etc. But on a daily basis, they fail to think about the priority these deserve. On a daily basis they make their life decisions based on urgent demands or on factors dominating their consciousness. This little exercise forces them on a daily basis to recognize factors contributing to their well-being. As a result, they may have more consistently chosen activities promoting well-being.

A second exercise also demonstrated similar effects. In this exercise, people completed a questionnaire to help them identify their character strengths. The strengths measured include curiosity, humor, love of learning, kindness, leadership and a number of other strengths. Then, the people were told their scores and instructed to use their top character strengths in a new way each day for a week.
This strength group, like the three good things group, seemed to experience an increase in happiness that lasted for six months. So, learning your strengths and using those strengths seems to be good for your well-being.

Alex Linley (see also Hodges & Clifton, 2004) recommends applying this strength utilization model to the workplace. He realized that many feel that their job fails to use their true abilities. Thus, he instructs workers to complete strengths questionnaires and encourages supervisors to redesign jobs to more often use employee's strengths.

For example, an employee may work in a clerical position, but have a character strength of encouragement. Linley would encourage the supervisor to give that employee additional chores (maybe taking only a small part of the work week) using that strength. Linley argues that when people use their character strengths at work during even a small part of their week, then job satisfaction may rise considerably.

For those readers interested in strengths, psychological assessments of self-perceived character strengths are available at www.viastrengths.org. Merely taking the test does not seem to improve well-being. What improved well-being

was taking the test and then using one's top character strengths in a new way each day for one week (Seligman et al., 2006). Alex Linley has also developed a measure of character strengths which is available at www.cappeu.org.

These results might seem obvious in hindsight, but who could have guessed that these simple exercises would have worked so well? It is nothing short of shocking that such a simple intervention could have an effect over a sixth month period. Indeed, these effects became stronger over time. Many things we do have an immediate and short-lived payoff, but these two exercises had a longer-lasting and increasing effect. Such delayed and long lasting effects are rarely seen in psychology. A third exercise, practicing gratitude, also had strong effects, though that exercise was focused on a single action (giving a letter of gratitude to one person) and not surprisingly the effects of that one action diminished over time (see also Froh, Sefick, Emmons, 2008).

Summary

The studies reviewed here suggest that a number of variables may promote wellbeing, and thereby either directly or indirectly prepare people to cope well with the stressors of life. These factors include expression of gratitude, selfless behavior, extraversion, not smoking (or at least quitting by age 45), adaptive coping, absence of alcohol abuse, a stable marriage (and/or other stable relations), physical exercise, educational attainment, a healthy weight, and life goals related to self-acceptance, good relationships, improving the world, and physical fitness. We have also detailed the possible role of perseverance towards life goals, disengagement from unattainable life goals, and the role of simple exercises such as reviewing three good things and their causes each day, and finding and using one's character strengths. Positive psychology does not have all the answers, and we could write a whole paper discussing the limitations of positive psychology. But the results reviewed here provide important suggestions for strategies that may enhance well-being and better prepare people to cope with the demands of life.

Many, many more studies have been conducted on variables related to well-being. For further information, lay people could be directed to the work of Carol Craig at the Centre for Confidence and Well-Being which is located in Glasgow, Scotland. Carol's work is focused on disseminating research findings to policy makers and lay people. Also, Linley and Joseph's (2004) book entitled

Positive Psychology in Practice provides a number of short readable chapters detailing some of the most important research findings available.

How should one apply these findings to one's own life? In the movie "Pirates of the Caribbean," the villain Barbossa explains that one need not always follow the infamous Pirate's Code because it is "really more like guidelines than actual rules." While we hope and trust that we are not treacherous pirates, we nonetheless recommend a similar approach with respect to applying the findings of positive psychology. Obviously, positive psychology is not meant to be used as an absolute set of rules that will help in every situation. Indeed, no social science research should be taken like that. Positive psychology research produces very general findings that look at large group averages, and are often only specific to certain groups and situations.

So how might it be useful, then? First, it might be useful in developing lifestyle habits, writ large, that may in general help one be better psychologically prepared to take life as it comes. Thus, rather than being viewed as a repair kit that fixes up specific psychological leaks in our metaphorical dam when they occur, it might be best viewed as some kind of general agent, spread through the whole of our dam, that strengthens it against whatever may come its way. Second, it might be useful at narrowing the range of techniques we would use. We do not really need science to generate such techniques; our own common sense, experience, and relations with others probably produce plenty. Indeed, it probably produces too many. But our problem is that we are only capable of focusing on a few of these strategies. Positive psychology can provide some guidance as to which strategies one might follow to develop resilience in the face of crises.

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