



8-1-2013

Positive Recovery

Jason ZW Powers
jason.powers@rightstep.com

Follow this and additional works at: https://repository.upenn.edu/mapp_capstone

 Part of the [Applied Behavior Analysis Commons](#), [Behavior and Behavior Mechanisms Commons](#), [Biological Psychology Commons](#), [Clinical Psychology Commons](#), [Cognitive Behavioral Therapy Commons](#), [Community Health and Preventive Medicine Commons](#), [Counseling Psychology Commons](#), [Counselor Education Commons](#), [Health Psychology Commons](#), [Industrial and Organizational Psychology Commons](#), [Medical Education Commons](#), [Medical Humanities Commons](#), [Mental Disorders Commons](#), [Neurosciences Commons](#), [Organization Development Commons](#), [Other Mental and Social Health Commons](#), [Other Psychiatry and Psychology Commons](#), [Other Psychology Commons](#), [Other Public Health Commons](#), [Other Rehabilitation and Therapy Commons](#), [Other Social and Behavioral Sciences Commons](#), [Primary Care Commons](#), [Psychiatric and Mental Health Commons](#), [Psychiatry Commons](#), [Psychological Phenomena and Processes Commons](#), [Substance Abuse and Addiction Commons](#), and the [Translational Medical Research Commons](#)

Powers, Jason ZW, "Positive Recovery" (2013). *Master of Applied Positive Psychology (MAPP) Capstone Projects*. 89.

https://repository.upenn.edu/mapp_capstone/89

This paper is posted at ScholarlyCommons. https://repository.upenn.edu/mapp_capstone/89
For more information, please contact repository@pobox.upenn.edu.

Positive Recovery

Abstract

Addiction is a chronic, progressive, and self-perpetuating disease that profoundly diminishes individual, family, and community well-being. Every year in the U.S., drugs (including alcohol and tobacco) are responsible for 25% of hospital admissions, 25% of deaths, and hundreds of billions of dollars in lost productivity, healthcare costs, and criminal justice costs. Addiction adversely impacts every arena of life ranging from hedonistic pursuits, occupational success, familial and other supportive relationships, to a sense of meaning, physical health, and overall fulfillment of individual potential. Addiction is amenable to treatment, but our medical-model approach to addiction is merely effective for initiating abstinence and reducing symptoms. Interrupting addiction in the short term breaks its self-perpetuation and restores individual free will, but it does not build “recovery.” Recovery is a rich and full lifestyle that makes abstinence sustainable because it is accompanied by a rewarding and meaningful life. The medical model has limitations and offers myriad opportunities for improvement, as relapse rates during and soon after treatment remain high. Insights from positive psychology can increase the efficacy and effectiveness of addiction treatment by nurturing recovery. The Positive Recovery construct and curriculum applies positive psychology insights to help recovering addicts establish lifelong skills to pursue happier, more meaningful lives so that addiction is less tempting and relapse is less likely. This capstone discusses the rationale and evidence for an addiction curriculum that integrates existing effective approaches with interventions that enhance wellbeing through positive emotions, engagement, relationships, meaning, and achievement.

Keywords

positive recovery, addiction, rehab, drug treatment, AA, alcoholics anonymous, alcohol, alcoholism, drugs, alcohol treatment, sex addiction, food addiction

Disciplines

Applied Behavior Analysis | Behavior and Behavior Mechanisms | Biological Psychology | Clinical Psychology | Cognitive Behavioral Therapy | Community Health and Preventive Medicine | Counseling Psychology | Counselor Education | Health Psychology | Industrial and Organizational Psychology | Medical Education | Medical Humanities | Mental Disorders | Neurosciences | Organization Development | Other Mental and Social Health | Other Psychiatry and Psychology | Other Psychology | Other Public Health | Other Rehabilitation and Therapy | Other Social and Behavioral Sciences | Primary Care | Psychiatric and Mental Health | Psychiatry | Psychological Phenomena and Processes | Substance Abuse and Addiction | Translational Medical Research

Positive Recovery

Jason Z. W. Powers, M.D.

University of Pennsylvania

A Capstone Project Submitted

In Partial Fulfillment of the Requirements for the Degree of

Master of Applied Positive Psychology

Advisor: Leona Brandwene

August 1, 2013

Positive Recovery

Jason Z.W. Powers, M.D.

jzwpowers@yahoo.com

Capstone Project

Master of Applied Positive Psychology

University of Pennsylvania

Advisor: Leona Brandwene

August 1, 2013

Abstract

Addiction is a chronic, progressive, and self-perpetuating disease that profoundly diminishes individual, family, and community well-being. Every year in the U.S., drugs (including alcohol and tobacco) are responsible for 25% of hospital admissions, 25% of deaths, and hundreds of billions of dollars in lost productivity, healthcare costs, and criminal justice costs. Addiction adversely impacts every arena of life ranging from hedonistic pursuits, occupational success, familial and other supportive relationships, to a sense of meaning, physical health, and overall fulfillment of individual potential. Addiction is amenable to treatment, but our medical-model approach to addiction is merely effective for initiating abstinence and reducing symptoms. Interrupting addiction in the short term breaks its self-perpetuation and restores individual free will, but it does not build “recovery.” Recovery is a rich and full lifestyle that makes abstinence sustainable because it is accompanied by a rewarding and meaningful life. The medical model has limitations and offers myriad opportunities for improvement, as relapse rates during and soon after treatment remain high. Insights from positive psychology can increase the efficacy and effectiveness of addiction treatment by nurturing recovery. The Positive Recovery construct and curriculum applies positive psychology insights to help recovering addicts establish lifelong skills to pursue happier, more meaningful lives so that addiction is less tempting and relapse is less likely. This capstone discusses the rationale and evidence for an addiction curriculum that integrates existing effective approaches with interventions that enhance well-being through positive emotions, engagement, relationships, meaning, and achievement.

Introduction	Page 4
Positive Recovery	Page 6
Addiction: A Misguided Pursuit of Happiness	Page 6
Addiction: Current Treatment	Page 9
Where We Went Wrong	Page 13
Positive Psychology	Page 14
Balance & Depth	Page 20
Positive Psychology and Clinical Populations	Page 20
Boldly Explicit	Page 22
Recovery & Flourishing	Page 23
Metrics	Page 25
Curriculum Design	Page 27
Curriculum Outline	Page 28
Habit Phase	Page 28
Resilience Phase	Page 29
Strengths Phase	Page 30
Relationship Phase	Page 32
Addiction Phase	Page 33
What Do I Stand For Phase	Page 33
Maintenance Phase	Page 35
Evidence Base	Page 39
Business Value	Page 79
Conclusion	Page 81
References	Page 84
Gratitude	Page 120

In the United States, drug use and abuse is a critical issue that calls us to improve treatment strategies. Roughly 10% of Americans meet the criteria for a substance use disorder, which we henceforth refer to as “addiction” for efficiency (Substance Abuse and Mental Health Services Administration, 2010), defined simply as a chronic and progressive harmful disease (Carroll & Miller, 2006). However, addiction is far from simple: addiction robs its host of agency, and involves and disrupts the brain’s reward, motivation, memory, and interrelated circuitry (Yücel, Lubman, Solowij, & Brewer, 2007). Addiction is also malignant: it adversely affects mental and physical health, family health, and public health (Erickson, 2007; Room, Babor, & Rehm, 2005). Furthermore, relapse is the norm and the majority of addicts have a co-occurring illness, which refers to the coexistence of two or more mental illnesses, further compounding an already complex and malignant issue (Emmelkamp & Vedel, 2012).

Recent developments in genetic, pharmacology and neurophysiology research helped (a) establish that addiction is a brain disease (instead of a moral failing), (b) develop several treatment options, and (c) create the nation’s first medical specialty board, The American Board of Addiction Medicine (Miller, 2010; Erickson, 2007; Yücel et al., 2007). In short, we have made progress, but we have not evolved far enough.

Most treatments are too short and narrow in scope, relapse prevention plans are too avoidant, research-to-application gaps are too wide, few validated treatments exist, and fewer of those are even implemented (Sellman, 2010; Miller, Zweben, & Johnson, 2005; Welberg, 2011). These shortcomings combined with high relapse rates both during and soon after treatment, cast doubts on whether our current system of care is viable (Doweiko, 2002; Miller et al., 2005; McLellan, 2006). Quite simply, we designed the Positive Recovery Curriculum

(“PRC”) to help fill these shortcomings and to address the call for a major overhaul in addiction treatment approaches (Dennis, Foss, & Scott, 2007).

PRC expands treatment length and depth. Short episodes of care do not predict successful management in any chronic (aka ‘long-term’) disease, and addiction is not an exception to the rule (McLellan, Lewis, O'Brien, & Kleber, 2000). Like other chronic diseases, addiction should be managed on a long-term basis (McLellan, McKay, Forman, Cacciola, & Kemp, 2005). In addition, a narrow orientation, or one that is only influenced by the disease model, ignores those elements that contribute to well-being. Too many treatments use a one-size-fits-all approach that fails to account for individual differences and appreciate deeply meaningful individual values and beliefs (Heyman, 2013, Carroll & Miller, 2006). The current system successfully stabilizes crises and facilitates abstinence, but it is not designed to do so sustainably, and needs improvement. Once addiction is interrupted, even for a short period of time that science cannot yet quantify, agency is restored. Optimal treatment must account for agency because extrinsic forces that make the disease self-perpetuating very quickly disappear; therefore, individuals resume making lifestyle choices. Without options to enrich their lives, too many people return to addiction too quickly.

Another major shortcoming that we aim to improve upon involves the issue of relapse. Most treatments offer at least some form of relapse prevention (National Institute on Drug Abuse, 2009), but most of these avoid specifically mapping out pathways for clients to take (if and) when they relapse. Since relapse is the *norm* in addiction, clients who prepare specific strategies to manage it can decrease the severity of a likely relapse and will strengthen plans that simply aim at prevention. We address this by including relapse-specific goals, pathways,

negative and positive contingency plans, and accountability partners, all of which we outline in Maintenance Phase (p. 36). Furthermore recovery is a long process, not a destination, one that creates a full and rich life above and beyond abstinence (Carroll & Miller, 2006). Therefore, treatment must help people discover the self-directed motivation necessary to persist long enough to develop recovery habits.

In sum, optimal treatment accounts for, and appreciates, each individual's values and beliefs; balances problem resolution with resource building, is extended over the course of years, not days or weeks; and explicitly addresses relapse. These elements underlie Positive Recovery.

Positive Recovery

This segment of Capstone is divided into five parts. First, we provide a cursory overview of addiction's etiology, nature, and treatment delivery system. Then, we introduce positive psychology and present its applied value in treatment. Afterwards, we review metrics for making course corrections and measuring success of PRC. Finally, we review the curriculum's design and outline, providing brief descriptions of the first six phases (Habit, Resilience, Strength, Relationship, Addiction, and What Do I Stand For) and a more in depth description of the last phase (Maintenance). This segment concludes with the evidence base underlying our model.

Addiction: A Misguided Pursuit of Happiness

What are the sources of human happiness? Philosophers and religious thought leaders have pondered this question for centuries. One enduringly popular idea argues that the ultimate source for human happiness is described in the following simple formula (Linley, Maltby,

Wood, Osborne, & Hurling, 2009):

More Pleasure + Less Pain = Happiness

This approach, also known as ‘hedonism,’ is generally held to be the most widely pursued form of happiness in America today. In 1974, philosopher Robert Nozick constructed a thought experiment to expose flaws in this argument. He challenges us to consider the following:

Suppose there were an experience machine that would give you any experience you desired. Superduper neuropsychologists could stimulate your brain so that you would think and feel you were writing a great novel, or making a friend, or reading an interesting book. All the time you would be floating in a tank, with electrodes attached to your brain. Should you plug into this machine for life, preprogramming your life experiences? [...] Of course, while in the tank you won't know that you're there; you'll think that it's all actually happening [...] Would you plug in? (Nozick, 1974, pp. 42-43).

Nozick (1974) notes that there are three primary reasons why people would reject the option of trading in life for the machine: 1) people intrinsically wish to act and create - to have an influence on the world around them; 2) the experiences of pleasure comes with this, but pleasure alone quickly becomes hollow; and 3) people wish to function like people, not just a collection of cells.

On its surface, substance abuse would seem akin to Nozick's machine: the desire to engage in something that offers pleasure reliably and easily. However, addiction is not a pleasure-only disease. In fact, by the time addiction is activated, pleasure is often absent, replaced by profound adverse consequences such as unemployment, incarceration, and death

(Erickson, 2007). But like the machine, addiction leaves little room to fulfill basic psychological needs to connect with others and to act and create (Brown & Ryan, 2004).

Moreover, addiction is not simply hedonistic pursuits gone wrong. Addicts use substances and act out for many reasons: to feel pleasure, to fit in, to self-medicate, and to relieve unwanted affective states (such as anxiety or depression) (Miller & Brown, 1997). Exactly how and when addiction develops remains unclear (Carroll & Miller, 2006). Some suggest that addiction results from a misguided search for pleasure (Esch & Stefano, 2004), to experience flow-like states (Chou & Ting, 2003; Wu, Scott, & Yang, 2013), in a desire for intimacy, love, and relationships (Vaillant, 2008; Mellody, 1988), to find meaning (Burrell, 1999; Klion, 1993), to bolster spirituality (Jung, 1969), or seek achievement (Weiner, 1985; Snir & Harpaz, 2012). However, addiction does not simply develop because people are misguided in pursuing any one of these in isolation. Instead, these frequently overlap and interact. We arrive at a more precise etiology only by recognizing all of these together: pleasure, engagement, relationships, meaning, and achievement, define psychological well-being, a nuanced and complex construct of human happiness (Seligman, 2011). In turn, we discover that addiction develops from a misguided pursuit of happiness.

Organizations and clinicians that wish to assist clients to maintain recovery will help them establish self-reinforcing behaviors that ultimately create a happier life without addiction. This defines positive psychology's scientific inquiry, and illuminates our motivation to build the Positive Recovery Curriculum.

Addiction: Current Treatment

Addiction is complex. It is a primary, chronic, and progressive disease involving and disrupting the brain's reward, motivation, memory, and interrelated circuitry (American Society of Addiction Medicine, 2011; Yücel et al., 2007). Dysfunction in these brain circuits appears to cause the distinctive negative biological, psychological, social, and spiritual consequences which both define and reflect poor self-regulation, dysfunctional emotional responses, and a pathological behavioral pursuit of reward and/or relief by using drugs and/or addictive behaviors (Miller & Brown, 1997). Addiction is also uniquely characterized by craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and an inability to consistently control the use of drugs and/or engagement in addictive behaviors (Miller & Brown, 1997; American Society of Addiction Medicine, 2011).

Addiction is an increasingly prevalent public health problem. Between 1993 and 2003, the number of admissions for addiction increased from 1.62 million to 1.84 million treatment admissions, reflecting nearly a 14% increase (Wells, Lemak, & D'Aunno, (2006), yet only 6% of addicts receive evidence-based treatment (McGlynn et al., 2003). Every year in the United States, treatment of patients with alcohol problems accounts for approximately 15% of our national healthcare budget (nearly \$360 million according to 2003 data) and 25% of hospital admissions and deaths are attributed to drugs and tobacco (Wells et al., 2006).

While the prevalence of substance abuse is increasing, the question of whether we are able to effectively treat addiction is difficult to parse because addiction is often inaccurately framed (McLellan et al. 2000). Addiction is not an acute disease, like the common cold or even appendicitis, and therefore it does not respond to short episodes of treatment (McLellan et al. 2000). Rather, it is a chronic disease that requires ongoing management. Chronic diseases, such

as high blood pressure or diabetes, require repeated and often life-long treatments. Short-term treatment for any chronic disease is inappropriate, and inappropriate treatments are ineffective. For example, when a patient with high blood pressure is treated appropriately, they receive life-long treatments which include multiple interactions with treating professionals, education, and so forth. If that same patient were inappropriately treated (e.g., for only three days, three months, or even three years), then the symptoms and signs of high blood pressure would recur (McLellan et al. 2000).

In fact, relapse rates for drug addiction are similar to those of other well-established chronic illness like high blood pressure, diabetes, and asthma. Relapse is very common across addiction, high blood pressure, asthma, and diabetes. The reason is simple. We do not cure most diseases: we manage them. And, we are not perfect at it most of the time. Like every other chronic disease, addiction has behavioral and biologic aspects, and both of these must be addressed during long-term treatment. Recovery from addiction is a long-term process and may require repeated attempts and episodes of treatment—which is no different from other chronic diseases. Rarely does a diabetic or high blood pressure patient achieve 100% control of their blood sugar and blood pressure from the first moment they are diagnosed (McLellan et al., 2000).

Long-term management of chronic diseases involves trial and error, adaptation, and repeated attempts to achieve the desired outcome. Changes throughout the course of treatment and multiple attempts at consistent management are the norm, not the exception in most chronic diseases. Relapses, or deviations from perfect management, can occur during the course of treatment for any chronic illness, and are a sign that treatment adjustments should be

made. Note that while relapse is common, it is not mandatory. One can find addicts in stable recovery who have never relapsed (Powers, 2012). Some addiction treatments are effective (NIDA, 2009), but inappropriate treatments including short episodic care, are nearly always ineffective.

The need to make changes is particularly urgent because addiction is frequently accompanied by other problems. The National Comorbidity Study estimated that 41-65% of people with addiction also have at least one other psychiatric health disorder (Kessler et al., 1996). The toll of multiple illnesses impedes the ability to sustain a lifestyle in recovery and compounds the individual suffering and social woes that may have served as the very catalyst for the addiction, especially when we offer nothing more than short-term crisis stabilization.

Addiction is also difficult to treat. Research demonstrates that it takes, on average, seven quit attempts to remain abstinent from all drugs, such as cigarettes, alcohol, cocaine, and heroin (Best et al., 2008; Norcross, Krebs & Prochaska, 2011; Price, Risk, & Spitznagel, 2001). The progress of most patients is marked by cycles of recovery, relapse, and repeated treatments over many years before few even reach stable recovery (McLellan, 2006; Dennis et al., 2007). Relapse and frequent quit attempts are the norm, and addicts are formally treated, on average, four times before remaining abstinent (Scott et al., 2007).

These figures are disheartening but this same data also suggest a real opportunity for improvement. However, recent efforts to improve treatment outcomes reveal limited success: they attempt to improve a delivery system that is broken (McLellan et al., 2005; Miller & Miller, 2009). While noble, these efforts aim to improve episodes of care that are too short (Miller et al., 2005), unidimensionally strive to eliminate negatives (Seligman, 2011), and fail

to account for addiction's chronicity (Miller & Miller, 2009) and the return of agency (Carroll & Miller, 2006).

To summarize the challenges, addiction treatments are too short and narrow in scope (Sellman, 2010; Miller et al., 2005), relapse prevention plans emphasize avoidant strategies to the exclusion of other useful approaches, research-to-application gaps are wide and rarely connected (McGlynn et al., 2003), few validated treatments exist, and even fewer of those are even implemented (Miller et al., 2005; Welberg, 2011). Moreover, outcomes of specific addiction treatments vary extensively, some treatments consistently fail to demonstrate any benefit (Miller et al., 2005), treatment effects vary substantially among different sites, we lack consensus regarding what constitutes an evidence-based therapy, and few clinical trials are even conducted on evidence based therapies under natural conditions (Carroll & Miller, 2006; Miller & Miller, 2009).

At least a few bright spots of effective approaches exist. When we compare outcomes of addiction treatment to other chronic diseases, such as asthma, diabetes, and hypertension, we discover that treatments are generally equally effective (McLellan et al., 2000). We know that people are better off in treatment than not (Sellman, 2010). Indeed, several meta-analyses of drug abuse treatments clearly demonstrate that treatment is effective in decreasing drug use, reducing addiction-related problems, and improving positive life indicators (Prendergast, Podus, Chang, & Urada, 2002; Miller et al., 2005). Validated studies demonstrate the following aspects of addiction care produce positive outcomes: (a) aftercare monitoring, (b) individualized treatment, (c) identification and treatment of co-occurring illnesses, (d) the presence of an empathic and supportive staff, (e) positive therapeutic inpatient treatment

experience (“therapeutic milieu”), (f) patient engagement in recovery fellowships (e.g., A.A), and (g) engagement of family and other support (Carter & Hall, 2011; Prendergast et al., 2002; Miller et al., 2005; Powers, 2012; Vaillant, 2008).

Given this state of affairs, clinicians and treatment providers that strive to *both* prevent relapse and improve clients’ well-being must implement empirically-validated and effective methods that concurrently improve those elements that lead to well-being and sobriety.

Where We Went Wrong

The medical model of disease has been the dominant model of approaching physical and mental wellness in the Western world for over two centuries (Seligman, 1991). According to the medical model, disease is defined as a departure from normal functioning, or a neutral state corresponding to zero on a metaphorical wellness continuum that spans from minus ten to positive ten. U.S.-trained physicians, psychologists, and other clinicians are exposed to and trained almost exclusively to focus on this pathological orientation. As a result, our healthcare system overwhelmingly searches for problem areas to remove disproportionately more than identifying positives (e.g., strengths) to build and nurture (Seligman, 2011).

The medical model approach has spawned an enormous amount of understanding and advancement in health care. For example, we now have effective treatments to alleviate depressive symptoms, curb drug cravings, and minimize adverse problems of addiction (Seligman, 1991; Erickson, 2007; McLellan, 2006). Nonetheless, an obsession with the “what is wrong?” approach fails to consider the “what is right?” one (Seligman, 1991). Normal, or zero on the metaphorical scale, is not equivalent to wellness: removing depression does not create happiness, as the skills necessary to build what is flourishing in life are much different

than the skills necessary to remediate that which is broken (Seligman, 2011).

Positive Psychology

Throughout the world and over the ages, human beings have sought to discover and outline strategies to increase human happiness (Haybron, 2008). What's exciting about positive psychology is that, for the first time, researchers are applying empirical research methods to identify and measure the specific benefits of certain behaviors; deepen our understanding of why these benefits occur; and develop evidence-based applications of their research in health, education, and other domains (Seligman & Csikszentmihalyi, 2000).

Positive psychology describes the scientific endeavor to discover ways that individuals and groups can flourish. This separates positive psychology from self-help approaches and methods whose claims are similar but lacking evidence of their effectiveness. 'Evidence-based' describes theoretical (theory-based), experimental (lab-tested), or evaluative (real-world conditions) methods (J. Pawelski, personal communication, September 6, 2012). Using scientific method, positive psychology collects and analyzes empirical evidence in controlled experiments designed to discover interventions that effectively increase well-being. As is the case for rigorous scientific studies, positive psychology's research findings are reviewed by other scientists (peer review). In fact, positive psychology's "notable strength is its continuity with tried-and-true psychological research methods and its belief that these can be used productively to study new topics—those that make life most worth living" (Peterson, 2006, p. 18).

Positive psychology uses evidence-based interventions, or positive interventions (PIs) to filter effective strategies from those that may sound pleasing but fail to enhance well-being. A

positive intervention is an evidence-based, intentional act, designed to increase well-being, primarily (but not strictly) in non-clinical populations (J. Pawelski, personal communication, September 6). PIs are also considered as simple (and often self-administered) cognitive and behavioral strategies intended to increase individual and/or group well-being.

Positive psychology emphasizes the development of positive human qualities and the facilitation of psychological health and happiness, but does not deny the value in ameliorating negative human qualities and human misery (Maddux, 2009). Positive psychology expanded the orientation and research emphasis of traditional psychology to focus on both the positive (e.g., joy) and the negative (e.g., stress) sides of life. Even though positive psychology focuses on building happiness, positive psychology does not pretend that flourishing results from being unidimensionally optimistic, either (Seligman, 2011).

Positive psychology can also be defined as a ‘positive’ tool that individuals, clinicians, organizations, and institutions can use when appropriate; when added to effective traditional treatments, it adds balance and depth. ‘Positive’ refers to the better aspects of human nature, such as growth, confidence, resilience, honesty, and integrity (Jarden, 2012). In addition, positive refers to what human beings do right that contributes to well-being. In short, positive in positive psychology is the study of that which leads to experiencing life north of zero.

Embracing positive psychology and embracing a life in recovery share some similar attributes. Recovery often involves a transformational change as people discover new meaning, purpose, and hope in life (Powers, 2012). Begbie (1909) argued that alcoholics who recovered did so, not because they changed their behavior, but because they experienced a ‘revolution in character,’ more descriptive of someone who has had a transformational experience that led to

flourishing in recovery than simply being ‘on the wagon.’ Sellman, Baker, Adamson, and Geering (2007) similarly describe how recovery catalyzes a ‘re-orientation’ from a negative to a positive perspective, which, like Begbie’s idea of a character revolution, at least qualitatively supports the idea that recovery is a full lifestyle.

Choice is a large part in developing addiction, but choice disappears with the onset of addiction (Erickson, 2007). In other words, individuals chose to use drugs and/or engage in addictive behaviors until addiction is active, at which point addiction is self-perpetuating. Despite losing volition in active addiction, once drugs and/or behaviors are extinguished for a short time, volition is restored (Powers, 2012). Addiction is associated with brain circuitry and functional changes that impedes the pursuit of happiness (Goldstein & Volkow, 2002; Yücel et al., 2007; Laudet, Becker, & White, 2009). However, these changes do not prevent addicts from either quitting using addictive substances, engaging in addictive behaviors, or desiring to maximize their well-being (Heyman, 2013). Addicts are motivated to quit by the very same moral and pragmatic, or well-being enhancing, elements that catalyzed their engagement with the disease. Addicts don't quit to minimize their “multifaceted dysfunction,” they quit to pursue happiness (Heyman, 2013).

Positive psychology teaches that happiness often requires intentional self-regulation and grit in developing good habits (Duckworth, Peterson, Matthews, & Kelly, 2007; James, 1890). Similarly, research consistently supports the idea that personal commitment is an essential ingredient for recovery (White, 1996; DiClemente, 2006). PRC uses this idea to approach clients as capable and responsible agents (Bandura, 1997; Ryan & Deci, 2000) who are collaborators, and not helpless victims in their treatment experience. Positive psychology

encourages a "metaphysical orientation towards the positive" (Csikszentmihalyi, 2002), defined as a deep and complete appreciation that the positive is just as real as the negative, and offers addiction treatment several validated interventions that can help clients flourish in recovery. However, the current addiction treatment model has grown out of the medical model, a point illustrated in the following two nonfictional narratives:

Mr. Impatient

When "Steve" was five years old, his preschool teacher, Mrs. Lewis, gave him the snide nickname, 'Mr. Impatient.' She identified Steve from amongst a group of five year-olds, who are generally all as self-regulated as Chihuahuas on crack, which reflects how severe his behavior was. Today, the same five year old Steve would most likely be diagnosed with ADHD and medicated. Even today, he continues to exhibit nearly every single criterion for ADHD as listed in the Diagnostic and Statistical Manual (DSM) (American Psychiatric Association, 2013).

However, he was offered neither diagnostic label nor drug. The 'Mr. and Ms. Impatients' of the world had to simply make the most of what they had if they wished to achieve success. Again, Steve continues to frequently misplace things, interrupts people (this one bothers him the most), and gets distracted by shiny objects (the bothersome factor is correlated with the object's shininess). Nonetheless, Steve was still somehow able to complete medical school and residency training without using ADHD (or any other) medication, which are not easy tasks even for those without ADHD.

While we do not deny the existence of mental disorders (Steve is certifiable) nor wish to replace effective psychotherapeutic medications with shame (e.g., calling children by

derogatory names), we do wish to point out that Steve did very well making the most of what he had. Seligman (2011) suggests that sometimes, people are quite capable of mustering the necessary strength and resource to just *deal with it* (where ‘it’ refers to challenges and hardships). Too often, we simply don't give them the chance, or shove, to do just that.

The current approach to diagnose and medicate ADHD (amongst many other diagnoses) may not always be appropriate, but we are not arguing that current practices are immoral, or worse, or useless. Instead, we suggest that for too long we have overlooked a positive metaphysical orientation and the success that constructing the positive in life can yield. Sometimes, working with good enough (that is, working with what you've got) is more than good enough. Steve is nonfictional, not medicated, and doing well today.

Dr. Open Minded

A modern physician comes across a patient that claims his room became filled with light and filled with God's Presence. He then envisioned that he was standing on a mountain peak where Spirit winds flowed through his body, leaving the thought: *You are a free man*. The doctor checks the chart and sure enough, the patient told the staff nurse, the charge nurse, and even the janitor the same story. The disease model of health care is ingrained in our modern “scientific approach” (that is scientific largely in name and not in practice) (Engel, 1977). In modern behavioral and physical medicine, if the doctor decides and charts that what the patient was describing was actually perfectly healthy and spiritual in nature, then the doctor would put his hospital staff privileges and medical license in serious jeopardy.

Dr. Open Minded lived prior to the Diagnostic and Statistical Manual (DSM) (American Psychiatric Association, 2013) era, which places him pre-1952, the year DSM was first

published. In addition, he is not a fictional character. His name is Dr. William Silkworth and he is the last treating physician to detoxify Bill Wilson (1895-1971) in what was his fourth hospitalization for alcohol detoxification. Wilson was not pleased that he was, yet again, detoxing. Perhaps he was desperate because the hospital he was in at the time was performing frontal lobotomies on their alcoholic patients, or perhaps he was just *sick and tired of being sick and tired* (a common recovery phrase used to describe the common experience of scraping by through life, dreadfully, while addiction is active). In any case, Bill cried out, “If there is a God, let Him show Himself!”

The next thing he knew, his room became ablaze with light and he was overwhelmed by a Presence and a vision of being on a mountaintop where a spirit wind blew through him, leaving the thought, “You are a free man.” Wilson never took another drink again. Wilson later cofounded Alcoholics Anonymous, was named by TIME Magazine as one of the most 100 influential people in the 20th Century, and is a household name amongst millions of worldwide 12-Step fellowship members, who refer to themselves and other members as *‘Friends of Bill’* (AA Services, 2001; Powers, 2012).

These two narratives are not meant to suggest that modern physicians, psychologists, or others ignore or simply reframe hallucinations, messianic callings, or minimize other disease, disorder, or dysfunctions. Mental illness does exist and pharmacology and cognitive behavioral therapy, or negative mitigation approaches, can and often do help, the same view supported by positive psychology (Seligman, 2011). Instead, we offer these narratives as testament that a pathology-oriented approach can be terribly misguided at times.

Balance & Depth

Positive Recovery Curriculum can 'balance' such a misguided system. PRC includes strategies to remove the undesirable aspects of life and to build what makes life most worth living. PRC applies findings from positive psychology to enable clients to live his or her life within the "upper reaches" of what is possible in the human experience (Seligman, 2011). Moreover, PRC adds depth by appreciating and accounting for each client's deeply held values, beliefs, and goals, thereby individualizing treatment, which improves outcomes (Magura, Staines, Blankertz, & Madison, 2004; McLellan, Arndt, Metzger, Woody, & O'Brien, 1993). The benefits of building the positive is clear: happier people have healthier relationships, live longer, are more resilient, more successful at work and earn more money, have stronger immune systems, require less medical care, and are more likely to engage in prosocial behaviors (Lyubomirsky, King, & Diener, 2005; Seligman, 2011).

Positive Psychology and Clinical Populations

Positive psychology is not just for happy (nonclinical) people. While most positive intervention (PI) studies have been conducted with nonclinical individuals, validated studies in clinical (e.g., depressed) patients are promising (Layous, Chancellor, Lyubomirsky, Wang, & Doraiswamy, 2011). Similarly, positive psychotherapy (PPT), a psychotherapeutic technique that searches for ways to decrease symptoms and improve lives in clinical populations, also appears applicable to our clinical population (Seligman, Rashid, & Parks, 2006). One study of severely depressed patients demonstrated that PPT removed symptoms of depression better than treatment as usual and better than antidepressant medications. In another randomized controlled trial, PTT demonstrated that both mild-to-moderately depressed students and severely depressed mental health patients experienced increases in happiness and decreases in

depressive symptoms - with moderate to large improvements persisted at a one-year follow-up, too (Seligman et al., 2006). These suggest that both PIs and PPT may improve efficacy and effectiveness of addiction treatment for clients with or without co-occurring psychiatric disorders.

Some PIs not only have persistent effects, they also work quickly. One study (Duckworth, Steen, & Seligman, 2005) showed significant decreases in some of the study participant's depressive symptoms in less than one week. In another study, Seligman instructed severely depressed individuals to engage in *Three Good Things* daily, a positive intervention that asks people to write about three positive events that happened that day. In about two weeks (within 15 days), nearly every participant experienced relief (94%) (Layous et al., 2011). Carroll and Miller (2006) recommend quick-acting interventions: addicts struggle with delayed gratification and the current system of care only provides brief treatments spans.

Positive interventions and positive psychotherapy appear promising, yet only a few clinicians and researchers support the view that positive psychology has worthwhile insights for treating addiction (Miller & Miller, 2009; Krentzman, 2013; Akhtar & Boniwell, 2010). In one such study, researchers hypothesized that patients would be more successful at quitting if they were primed with positive emotions prior to the quit date because positive emotions can improve learning, problem-solving, social bonding, and self-esteem (Fredrickson, 2009). Participants who were primed to experience positive emotions reported greater smoking abstinence and a greater reduction in depressive symptoms than did those in the standard smoking cessation therapy group (MacPherson et al., 2010).

The closest scientific evidence that supports the common-sense idea that higher well-

being helps clients maintain recovery can only be inferred at this point by higher reported levels of wellness (Hattie, Myers, & Sweeney, 2004), a construct similar to quality of life, which is predictive for lower rates of relapse (Laudet et al., 2009). However, there are only a few validated interventions which might effectively enhance well-being or build the ‘positive’ for addicts (e.g., autonomy, mastery, connectedness, supportive relationships, character strengths, self efficacy, hope, etc.).

In another study, Akhtar and Boniwell (2010) investigated outcomes of a positive psychology intervention on 10 adolescents over eight weeks in the U.K. This study, albeit for a small sample size, also supports applying positive psychology in addiction treatment. Study participants experienced more well-being, more positive affect, developed a future goal orientation, an escalation of change amounting to transformation, less drug use, significant increases in happiness, optimism, and positive emotions, and a significant decline in alcohol dependence (Akhtar & Boniwell, 2010).

Boldly Explicit

‘Bold’ describes our straightforward approach to the relapse issue. Many addicts maintain stable recovery from their first treatment episode and relapse is not mandatory, yet relapse is still more likely than not (Sellman, 2010). This point deserves a more explicit and direct, or “bold” approach, for several reasons.

First, if clients suspect that a relapse is not just possible but likely, they may then be motivated to be even *more* vigilant and less complacent in their lives. This may enhance their mindfulness, with its associated benefits, such as relapse prevention (Marlatt & Gordon, 2005), behavioral regulation, and emotional control (Breslin, Zack & McMain, 2002), undo the effects

of stress (Fredrickson, Mancuso, Branigan, & Tugade, 2000; Benson & Stuart, 1992), and enhance well-being (Csikzentmihalyi, 1990).

Second, if clients plan for the most likely event (relapse) they can then have clear contingency plans, which may decrease the intensity of the relapse. Third, if clients understand that relapse is part of every chronic disease (McLellan et al., 2005), then they may adopt a favorable mindset that fosters resilience. For instance, clients that appreciate addiction is a chronic illness that often (but not necessarily) includes relapse, then feelings of helplessness, hopelessness, and isolation are less likely to overwhelm them when and if they relapse. In short, relapses are simply challenges, like any other - such as unexpected unemployment - which can and will be overcome by making course corrections as people pursue meaningful goals in recovery.

Recovery & Flourishing

The Betty Ford Institute Consensus Panel defines recovery as “a voluntarily maintained lifestyle characterized by sobriety, personal health, and citizenship” (White, 2007, p.236) and The American Society of Addiction Medicine defines recovery as a “process of overcoming both physical and psychological dependence on a psychoactive drug with a commitment to abstinence-based sobriety in order to achieve overall health and well-being” (ASAM, n.d.). Notable points in both of these definitions are the robust description of recovery and the emphasis on well-being as an end-goal.

Seligman (1991) learned that once he removed depression, all he saw were empty patients, not happy patients. So he began searching for ways to take these empty patients and fill them up with well-being. He discovered 1) teaching optimism and resilience were possible

(his clients moved their lives in the positive direction), and 2) shifting from depression to emptiness is neither the same nor includes the same skill set as the shift from emptiness to flourishing (Seligman, 1991). Notably, an analogous relationship exists between abstinence and recovery (Teresi & Haroutunian, 2012; Vaillant, 2008). In other words, recovery transforms an otherwise empty abstinent life into a robust one. Recovery is to abstinence what flourishing is to the absence of disease: you can remove the negative but all you are left with is nothing.

Abstinence does not create healthy and adaptive coping skills, supportive relationships, positive emotions, or other elements that contribute to well-being. Abstinence simply refers to a state without drugs and/or addictive behaviors. Organizations and clinicians that wish to assist their clients to successfully prevent relapse will help them establish self-reinforcing behaviors that ultimately create a happier life without addiction. This defines positive psychology's scientific inquiry; this is why we aim to help clients flourish; this is Positive Recovery.

So far, we covered several crucial ideas in our model. To summarize: addiction is a chronic, harmful, and self-perpetuating disease that results from misguided pursuits; positive psychology and psychotherapy demonstrate effectiveness, speed, and long-lasting effects in clinical populations; adopting a positive orientation adds balance to the disease-model approach; and treatment should be individualized: each client holds their own set of deep and meaningful values, beliefs, and preferences that will ultimately motivate them to establish happier lives in recovery. Next, we outline our plan for making process adjustments and measuring success.

Metrics

We may positively influence success in implementing PRC by tracking specific outcomes. Although the measurement-improvement correlation, or “Hawthorne Effect,” was initially presented in business research, it may also apply to clinical practice: since there is a noticeable advantage from engaging in clinical research, then this has ramifications for best clinical practices and for improving outcomes (Braunholtz, Edwards, & Lilford, 2001; Peppercorn, Weeks, Cook, & Joffe, 2004). We plan to implement and measure PRC in two (of four) co-managed inpatient rehabilitation treatment facilities, while the other two will serve as waitlisted control groups. Both process and outcome metrics will help us ensure that the time and resources that we invest are advancing us toward the desired outcomes of the program in the most efficient manner possible.

Program outcomes are lagging indicators of overall program success. The first outcome metric we will measure is the completion rate (CR). Treatment completion is predictive of better outcomes (Emmelkamp & Vedel, 2012; Messina, Wish, & Nemes, 2000) and adds value to the company’s bottom line. In addition to completion rate, we will monitor post-treatment length of continuous sobriety (measured in days), length of relapse (measured in days), and patient satisfaction (measured using surveys). In addition, to track impact of implementation on program staff, we will use the Gallup Well-being for the Workplace Survey (Gallup, 2006) to measure staff engagement, which also positively correlates with productivity and business success. As mentioned earlier, PRC will be initiated at two of four facilities in an inpatient treatment group to start; the waitlisted control groups will be rolled out subsequent to full implementation in the first two facilities.

Process outcome measurement will focus on interim metrics of well-being for participating patients; five assessment tools will be used and based upon the elements that constitute well-being in Seligman's (2011) model of PERMA: positive emotions, engagement, relationships, meaning, and accomplishment. We intend to continue measuring these among clients after discharge (for as long as they are willing). To facilitate this, those clients that participate in the Positive Recovery Online Forum (PRF) will automatically receive these assessments, and that data will automatically be entered into our data set.

Positivity: The Positive and Negative Affect Schedule (PANAS) (Watson, Clark, & Tellegen, 1988) is a 20-item self-report measure consisting of two 10-item subscales (positive affect and negative affect). PANAS treats both variables as separate dimensions rather than polar ends of the same scale and is generally seen as a reliable, valid, and efficient means of measuring positive and negative affect emotions (Watson et al., 1988).

Engagement: The Short Grit Scale (Grit-S) (Duckworth & Quinn, 2009) is the questionnaire we will use as a proxy measure for engagement because it is more economical and feasible than the Flow Scale (Jackson & Marsh, 1996). Grit-S is a validated measure of perseverance and passion for long-term goals (Duckworth & Quinn, 2009).

Relationship: The Medical Outcomes Study Social Support Survey (MOS) (Sherbourne & Stewart, 1991) is a relatively short 19-item survey. MOS measures multiple dimensions of support (affectionate, emotional, informational, positive social interaction, and tangible) that have high reliability and are stable over a 12-month period.

Meaning: The Meaning in Life Questionnaire (MLQ) (Steger, Frazier, Oishi, & Kaler, 2006) is a validated survey that measures perceived meaning in life. MLQ consists of two 5-

item subscales that are rated on a 7-point scale ranging from 1 (absolutely untrue) to 7 (absolutely true). Higher scores indicate greater levels of perceived meaning in life.

Achievement: The Hope Scale, which is frequently called The Goals Scale in practice (Lopez et al., 2004), is the survey we will use as a proxy for achievement. This survey is a validated dispositional survey of hope (Snyder et al., 1991). We do not plan to use this in clients that are just starting their recovery because early recovery is generally awful - people usually enter treatment after hitting some type of bottom – but we will use the hope scale after treatment (e.g., during the maintenance phase).

Curriculum Design

Positive Recovery Curriculum is divided in 7 phases:

- 1) Habit
- 2) Resilience
- 3) Strengths
- 4) Relationship
- 5) Addiction
- 6) What Do I Stand For
- 7) Maintenance

Each of these seven phases are divided into several sessions, at least one of which involves a relapse prevention activity. The sessions within each phase follow a strategic order but several phases cover overlapping ideas or skills, and many sessions are designed for individualized use in any order. In addition, we will provide our staff with a training manual prepared for the

curriculum rollout that will include literature reviews, in-depth session descriptions, metrics we will be using, and checklists that our clinicians can use to ensure major ideas are covered and understood.

Most sessions follow the following format:

- 1) Opening brief meditation (5-10 minutes)
- 2) Review of key teaching points (5-10 minutes)
- 3) Activity designed to enhance a specific skill(s) (30-50 minutes)
- 4) Short de-brief period (5-10 minutes)
- 5) Post-module assignment explanation and close (5 minutes)

Curriculum Outline

Habit Phase

This phase is mostly didactic and introduces clients to key terms and ideas such as self-regulation (Baumeister, Gailliot, DeWall, & Oaten, 2006), positive psychology (Seligman, 2011), positive metaphysical orientation to the positive and optimal health (Pawelski, 2003; Csikzentmihalyi, 1990), Broaden and Build Theory (Fredrickson, 2001), social networks (Fowler & Christakis, 2008), neuroplasticity (Dobkin, 1993), physical exercise, diet, and sleep.

In this phase we also stress personal responsibility. Staff will reinforce the key idea that clients have control over themselves, beginning with the power to choose their perspective by intentionally directing their attention, and when they regulate that limited resource optimally (through positive thoughts and behaviors), they form good habits, create good character, and forge their destiny. ‘There is no skill in a pill’ is a cliché that communicates the idea that

change and growth require effort. For instance, medications may help relieve unwanted feelings (e.g., anxiety or depression), but medication does not do the heavy lifting or remove personal responsibility. These points are crucial to reinforce because happiness generally requires individual grit (Duckworth et al., 2007), self-regulation (Baumeister, DeWall, Ciarocco, & Twenge, 2005), autonomy (Ryan & Deci, 2000) and personal responsibility (Peterson, 2012) to name just a few.

Habit phase includes the following six sessions: (1) PERMA & Positive Orientation; (2) Habit, Attention & Self-regulation; (3) Positivity; (4) Diet; (5) Exercise; and (6) Sleep.

Resilience Phase

This phase is mainly experiential and is based on (1) the pivotal work of Seligman spanning from “learned helplessness” (Abramson, Seligman, & Teasdale, 1978) through *Learned Optimism* (1991), to his more recent work in *Flourish* (2011), (2) Reivich and Shatte’s (2002) cognitive behavioral strategies, (3) Schneider’s (2001) argument for “realistic optimism,” (4) Gable, Reis, Impett & Asher’s (2004) work in positive communication styles, (5) *Emotional Intelligence* (Goleman, 1995), (6) hope theory (Snyder, Feldman, Taylor, Schroeder, & Adams, 2000), and (7) goal-setting theory (Brown & Ryan, 2004; Locke, 1996).

Resilience can help clients maintain recovery (Carroll & Onken, 2005) but if and when relapse does occur, resilience also helps prevent the relapse from spinning out of control (Larimer, Palmer, & Marlatt, 1999). When our clients experience the way we approach relapse, as a normal symptom of their chronic disease, we hope they view their own relapse as having the same significance that a diabetic would with high blood sugar readings. Without the negativity surrounding guilt and shame, they also may be better equipped to see more clearly

the causal variables that led up to the relapse. Whether factors leading up to the relapse were visual or emotional cues, maladaptive behavioral patterns that resulted from stress or ego-depletion, noncompliance with the proper medications or their positive recovery prevention plan, using improper medications or other substances, or denial – they may be able to get a broader view of the facts and learn from their mistakes when negativity is not constricting their attention (Fredrickson & Branigan, 2005).

Staff will emphasize that each client's past, habits, or even genes do not imprison them, that what defined their lifestyle prior to now (each present moment), does not have to define it today or tomorrow. To that end, we will teach clients that they *can* learn to recognize and change catastrophic thinking and increase the accuracy of appraisals about activating events and implications for the future (Seligman, 1991; Reivich & Shatte, 2002). In addition, clients will have opportunities to practice building these resilience skills in several sessions (e.g., “Recognizing Emotions in Others” and “Explanatory Style”).

Resilience phase includes the following five sessions: (1) Emotional Intelligence; (2) Explanatory Style; (3) Hope; (4) SMART Goals; and (5) Pathways.

Strengths Phase

The strengths phase of the curriculum is based on *Character Strengths and Virtues* (CSV) (Peterson & Seligman, 2004), existing strength research (Gillham, Abenavoli, Brunwasser, Reivich, & Seligman, 2012; Park & Peterson, 2009) and curricula such as Master Resilience Training (Reivich, Seligman, & McBride, 2011). This phase strives to boost clients' strengths signature strengths (e.g., gratitude, courage, prudence, wisdom), spot strengths in others, and help them use these positive traits to their fullest extent on a daily basis while at

work, home, school, or leisure.

We believe that teaching clients the foundations of good character can help prevent relapse and enhance well-being. Research has shown that character strengths contribute to optimal human development and well-being (Park & Peterson, 2009; Peterson & Seligman, 2004) and that specific strengths of character, such as hope, kindness, social intelligence, self-control, and perspective, can help buffer people against the negative outcomes caused by stress and trauma in peoples' lives (Park & Peterson, 2009). The life satisfaction gains that result from increased character strengths can serve to build long-term personal resources that enable clients to enjoy a flourishing life (Gillham, et al., 2012; Park & Peterson, 2009; Peterson & Seligman, 2004).

Strengths phase offers clients opportunities to build a strength-based foundation through discovering their own strengths, spotting others' strengths, and speaking in a strength-infused vernacular within the therapeutic milieu. Starting from the first encounter and persisting throughout treatment, our staff will be trained to view clients' strengths in action and to capitalize on opportunities to verbally identify times when clients use them, thereby reinforcing the concepts to help clients better absorb the material. For example, during the first intake experience (live or via the call center) clients (or family members) will hear how courageous they are by simply reaching out for help and/or coming in for a professional assessment. Then, in treatment, as clients achieve meaningful goals, staff will praise their effort (Dweck, 2007) and success, which may increase their future efforts (Dweck, 2007), self-efficacy (Bandura, 1997) and hope (Snyder et al., 2000).

Strengths phase consists of the following seven sessions: (1) Foundations of Character;

(2) What Are Character Strengths; (3) One's Own Character Strengths; (4) Strength Spotting; (5) Benefits of Utilizing Character Strengths; (6) Character Strengths in Action; and (7) 'How True!' Personal Relic.

Relationship Phase

This mostly experiential phase is based on the work of communication styles (Gable et al., 2004), social networks (Fowler & Christakis, 2008), prosocial behavior (Grant, 2013), relationships (Cohen & Wills, 1985), positivity (Fredrickson, 2009), recovery fellowships (Humphreys & Moos, 2004) and more. Activities here are designed to build client's awareness of the value of relationships and to enhance relationship-building skills such as active-constructive response styles (Gable et al., 2004, p. 233). In addition, this phase introduces clients to recovery fellowships because these reliably help members to maintain recovery (McLellan, 2006).

Feelings of support are positively correlated with well-being when individuals are integrated with, and perceive support from, their social networks (Cohen & Wills, 1985). Indeed, many research studies "document the link between society and psyche: people who have close friends and confidants, friendly neighbors, and supportive coworkers are less likely to experience sadness, loneliness, low self-esteem, and problems with eating and sleeping" (Putnam, 2001, p. 332).

Relationships phase consists of the following six sessions: (1) Value of Relationships; (2) Being a Good Friend; (3) 12 Steps & Recovery Fellowships; (4) Trust; (5) Forgiveness; and (6) Positive Relapse Prevention Plan.

Addiction Phase

This mostly didactic phase covers topics that are generally included in most addiction treatment curricula, such as the science of addiction, medical consequences, process addictions, relapse prevention strategies, aftercare planning, family dynamics, process addictions (Blumenthal & Gold, 2010; Yücel et al., 2007; Carnes, 2001; Mellody, 1988; Bechara et al., 2001; Fillmore, 2003; Goldstein & Volkow, 2002; Marlatt & Gordon, 1985), and other (often regulatory-mandated) didactic sessions that cover topics such as infectious and communicable diseases.

Addiction Phase includes the following nine sessions, many of which explicitly include relapse prevention strategies: (1) Definition & Concepts; (2) The Science of Addiction; (3) Post Acute Withdrawal Syndrome; (4) Cross Addiction; (5) Process Addictions; (6) Medical Consequences; (7) Infectious Disease; and (8) Mind Body Medicine & Addiction.

What Do I Stand For Phase

This mostly experiential phase provides clients with several opportunities to conceptualize and organize their values, purpose, meaning, and goals in order to help them think about what they stand for, how they fit in and serve the world, and where they are heading. What Do I Stand For phase includes many activities that draw from and reinforce other phases, but includes a session on spirituality that draws from general spirituality research (Pargament, 2002 & 2007) and spirituality in addiction (D'Souza & Rodrigo, 2004; Richards, Berrett, Hardman, & Eggett, 2006).

Some (Burrell, 1999 & Klion, 1993) suggest that addiction results from a misguided search for meaning and purpose in life while others (Galanter, 2007) suggest that success in

recovery is mediated by discovering new meaning. Today, we know that meaning in life is correlated with several mental and physical benefits (Baumeister & Vohs, 2005) but addicts are an especially vulnerable population that appears to need specific interventions aimed at increasing their meaning and purpose. Indeed, addicts have less meaning and purpose than age matched controls (Nicholson et al., 1994; Klion, 1993), and lack of purpose is a mediating factor in both substance abuse and suicide (Harlow, Newcomb, & Bentler, 1986; Heisel & Flett, 2004).

PRC includes several sessions on these topics because meaning and purpose can make human lives better. Meaning can increase happiness, control, and engagement at work and decrease depression, anxiety, substance abuse, suicidality, and need for therapy (Steger, 2009); and purpose contributes to well-being when it is aligned in the pursuit of the good life (Steger, 2009), is a strong predictor of life satisfaction (Diener, Fujita, Tay, & Biswas-Diener, 2012), improves our overall well-being, physical and mental health (Reker, Peacock, & Wong, 1987), resiliency (Steger & Park, 2012), optimism (Comptom, 2004), self-esteem (Steger, 2009), decreases depression and anxiety (Steger, 2009), and increases vocational commitment and well-being at work (Steger, Dik, & Duffy, 2012).

What Do I Stand For phase is comprised of the following sessions: (1) Valued Psychological Growth and Physical Health Goals, (2) SMART goals for one, three, six, and 12 months, (3) A Higher Purpose, (4) Values, (5) Spirituality: Search for the Sacred in Connecting With Something Larger Than the Self, and (6) Formulating a Comprehensive Positive Relapse Prevention Plan.

Maintenance Phase

Addiction is a self-sustaining, relapsing, progressive disease that is never cured (Erickson, 2007; McLellan et al., 2000). In addition, addiction requires that treatment to be delivered over years, even over a lifetime, rather than in short episodes that defines our current delivery system (Dennis et al., 2007). Again, relapse rates are high during and soon after treatment, which spoils the effectiveness of treatment, predicts continued relapse, and prevents people from living full, rich lives. Addiction is only temporarily self-perpetuating, and soon after abstinence is established, agency is restored (Carroll & Miller, 2006). Treatments must be long enough to provide the training in, and offer adequate opportunities to, develop self-sustained cognitive, behavioral, emotional, relationship, and spiritual resources (McLellan et al., 2000; Marlatt & Gordon, 1985), or “recovery habits,” that ultimately make recovery more fulfilling and attractive than addiction.

The current system has strengths: treatment has demonstrated efficacy and effectiveness at helping people maintain recovery and for reducing addiction-related problems (McLellan et al., 2000; Sellman, 2010). In addition, many treatment providers support positive psychology’s idea that treatments for mental illness (e.g., addiction) should not end once negative symptoms disappear and frequently recommend aftercare for their clients. However, rehabs and clinicians are powerless to enforce compliance in most cases. Participation in post treatment recommendations (e.g., group, individual, or fellowship) depends upon several factors, such as an individual’s level of motivation, ability to attend, or work conflicts. We address this shortcoming by designing the Maintenance Phase to be self-guided, allowing for schedule variations, and to be familiar: many of the concepts and activities are similar, or identical, to

those experienced in treatment. Our goals here are for clients to prevent relapse and (when applicable) decrease the acuity of relapse as well as to continue developing recovery habits in a guided pursuit of happiness.

Maintenance Phase consists of three main parts: Positive Recovery Daily Meditation Guide (a daily positive intervention guide), Positive Recovery Online Forum (an online positive recovery support group, host for journaling assignments, and automated program that offers reminders of goals, rewards for accomplishments, and triggers contingency plans in case of relapse), and Aftercare Monitoring (an extended therapeutic contact with clients).

Positive Recovery Daily Meditation Guide & Positive Recovery Forum

The Positive Recovery Daily Meditation Guide (PRMG) is a daily positive intervention guide that provides clients with options to intentionally direct their behavior while forming recovery habits. PRMG is based on the idea that treatment for addiction should be a long process, involving years and often entire lifetimes rather than 30, 60, or 90 days. This guide is a recurring exercise meditation book that clients can use every day for the rest of their lives. It consists of relapse prevention strategies, PIs, and other activities that incorporate correlated ideas (e.g., good relapse prevention strategies involve nurturing one's healthy relationships). Furthermore, many activities are strategically placed to coincide with seasons and holidays. For instance, the Good Consumerism positive intervention (J. Pawelski, personal communication, December 2, 2012), which encourages more meaningful gift giving than the usual materialism that defines holiday gift-giving, is placed in early December where many people will be preparing for holiday season. Thus, PRMG will reminded users to focus on spending time with the people they love and spending money on altruistic, in addition to only

materialistic ends.

We strongly encourage that clients comply with treatment team suggestions for aftercare, such as counseling, medication management, or testing. PRMG is not meant to substitute for an aftercare plan whether it may include individual therapy, outpatient treatment (after inpatient treatment), or attending recovery fellowships. The day's activities will expose clients to a wide array of activities, improving the chances of finding a person-activity fit (Lyubomirsky, 2008).

Positive Recovery Online Forum (PRF) is one option where clients can connect with other like-minded people. PRF enables clients to join a supportive online community at no cost where they can exchange ideas, experience, strength, and hope with other members. Many PRMG days include written assignments and offer readers the option to post them on the forum and comment on other's posts. We encourage journaling as a means to enhance mental and physical health, goal attainment, and learning (King, 2001). While digital community support is not meant to replace offline interpersonal dynamics, recent developments in, and studies of, web-based interventions for a wide array of mental health issues (e.g., smoking cessation, substance abuse, etc.) supports the efficacy of using online formats (Bennett & Glasgow, 2009).

PRMG is not a daily "meditation" guide in the strict sense. While a few specific days include meditation exercises, these books are called "meditation guides" in the recovery genre. Recovery fellowships use meditation books like PRMG to discover interesting topics as discuss starters for fellowships meetings. With that in mind, PRMG begins with an inspirational quote followed by a brief discussion of how the passage relates to positive

recovery. Each day provides the instructions for that day's activity, one of any variety of activities that frequently include written assignments that can be submitted at the participant's discretion to the community forum. On the forum, members can provide feedback for others and read feedback others provide. A licensed therapist will moderate the site and any improper or unhealthy posts will quickly be removed.

Aftercare Monitoring

Again, many people with addiction receive multiple, short, and disconnected episodes of treatment. While routine monitoring of symptoms over long periods of time by health care providers or patients is considered the gold standard of care for chronic disorders (e.g., diabetes, asthma, etc.) (McLellan et al. 2000), people with addiction do not receive the same level of care. Instead, they generally receive disjointed, short episodic treatments. We address this shortcoming for our clients by providing routine and integrated services through aftercare monitoring. Whether it is due to stress, biological vulnerability, or waning motivating, countless studies indicate that continued and integrated contact with patients increases lengths of sobriety and decreases substance abuse-related problems (Wagner et al. 2001; McLellan et al. 2005). Moreover, regularly recording symptoms and behaviors can motivate people to persist in efforts at behavioral change and is associated with health benefits (Pelletier, Dion, Slovinec-D'Angelo, & Reid, 2004; Febraro & Clum 1998; Bandura 1991). One study demonstrated that aftercare monitoring reduced sick days, hospital lengths of stay, and mortality rates at 6-16 years compared to control group participants (Kristenson, Ohlin, Hulten-Nosslin, Trelle, & Hood, 1983; Kristenson, Osterling, Nilsson, & Lindgarde, 2002).

Positive Recovery Evidence Base

In this section, we will provide a limited literature review of the evidence based regarding the major conceptual elements of the positive recovery curriculum, including habit, attention, self-regulation theory, positive and negative emotions, optimism, positive interventions and positive psychotherapy, positive psychology & addiction, the body (exercise, diet, and sleep), emotional intelligence theory, goal setting theory, hope theory, self-determination theory, character strengths, relationships & social connections, recovery fellowships, meaning & purpose, spirituality, journaling, and business value.

Habit

James (1890) is credited as the first person who claimed habits are responsible for forming neural pathways, which is a genuine physiological process modern scientists call “neuroplasticity.” Repetition leads to learning, mastery, and eventually habits that change us physically (Dobkin, 1993). Nearly half of our daily behavior is automatic, habitual, and unconscious (Wood, Quinn, & Kashy 2002). Habits are powerful, and like double-edged swords, habits can help and harm. We teach that addiction is a BAD habit in need of breaking, and that recovery is a GOOD habit in need of forming. Resolutions take little effort to say but are very difficult to carry it out: good habits are difficult to create but easy to break while bad habits are easy to form but hard to break (James, 1890).

Addiction is a *habitual* process more than an isolated event (Dennis et al., 2007; Larimer et al., 1999), which is associated with specific structural and functional brain changes (Goldstein & Volkow, 2002). Fortunately, abstinence is also associated with neuroplastic changes (e.g., white and grey matter volume and synaptic activity) (Demirakca et al., 2011).

Similarly, happiness is also more like a *habitual* process than an isolated event (Peterson, 2012; James, 1890). However, bad habits, like addiction, are hard to break and good habits, like recovery are not (Duhigg, 2012; James, 1890). If recovery is not ultimately more fulfilling, though, most people will probably relapse.

Habit requires repetition, repetition takes time, and time passes slowly. PRC reinforces the idea that habit changes the self, that human attention and will power are finite resources, and that self-regulation (or ‘willpower’) helps direct attention in the formation of habits and in the pursuit of happiness. Habits (both healthy and harmful) allow individuals to conserve attention and energy (James, 1890; Duhigg, 2012). Habits lead to mastery and help the novice to become the master. Long-term recovery, which results from repeatedly performing recovery behaviors in the formation of recovery habits, predicts further recovery: studies show that some sobriety is predictive of more sobriety (Maddux & Desmond, 1986; Vaillant, 1995; Duvall, Locke, & Brill, 1963).

Attention

Every day, we are exposed to a nearly infinite amount of noise. Thoughts, feelings, interactions, and impulses constantly bombard the mind (Csikszentmihalyi, 1990) to such a large extent that Seligman proclaimed, ‘the mind is a mess!’ (M. Seligman, personal communication, November 3, 2012). Which personal resources, if any, can clean this mess? Voluntary control of attention does: it regulates the mind and determines experiences, shapes judgment, builds character, and affects well-being (Csikszentmihalyi, 1990; James, 1890). However, we only have a limited bandwidth of attention. Therefore we must direct our attention wisely on those thoughts and impulses that help us forge good habits and avoid

attending to those which erode them (Csikszentmihalyi, 1990).

Self-regulation

Self-regulation, or “willpower,” is defined as the strength that controls our limited supply of attentional bandwidth (Baumeister et al., 2006). In addition, self-regulation is a character strength every human possesses, albeit on a continuum – some of us have more than others (Baumeister, 2002). Self-regulation manages behavior, resists temptation (e.g., cravings), controls impulses, delays gratification, and pursues long-term goals (Baumeister et al., 2005). High amounts of self-regulation predict better health, life and work satisfaction, success, and popularity (Baumeister et al., 2006).

Self-regulation is a limited strength: under stressful situations, self-regulation can fatigue, a state which Baumeister (2002) calls “ego depletion.” Like a muscle, the more we use self-regulation, the more ego depleted we become. Hungry participants in one study that had to use their willpower to not eat chocolate chip cookies, became ego depleted by not eating the cookies and quit a puzzle-solving task more quickly than the control group (Baumeister, Bratslavsky, Muraven, & Tice, 1998). In addition, participants in another study, who were told not to think of a *white bear*, drank more beer than the control group (in a ‘taste test’ ruse), despite knowing they would subsequently be taking a driving test (Muraven, Collins, & Nienhaus, 2002).

Studies prove the wisdom of an oft-repeated cliché in recovery fellowships, “don’t let yourself get too hungry, angry, lonely, or tired.” When self-regulation becomes worn-out, people are less able to inhibit certain socially undesirable behaviors, which are usually kept under strict control. For instance, low self-regulation can lead to immoral, unlawful, or

inappropriate behavior (Baumeister et al., 2006). In addition, self-regulation also helps prevent relapse. Studies show that when triggers (i.e., high-risk situations) activate physiological cravings, low self-regulation predicts relapse (Bandura, 1982).

Self-regulation is a precious, limited resource that can be strengthened. In addition, self-regulation is not limited by specific contexts or tasks. Self-regulation in one arena of life, like physical exercise, leads to better self-regulation and improvements in other, even unrelated spheres of life, too, such as money management or study habits (Baumeister & Vohs, 2005). Just as habitual weight lifting over time builds strength, using self-regulation can also slowly increase endurance against ego depletion (Baumeister & Vohs, 2005). For instance, research participants in one study who engaged in a fitness program for two months reported greater discipline across apparently unrelated areas of their life: they watched less television and spent less money impulsively (Baumeister et al., 2006).

Self-regulation may be the single most crucial strength human beings have at our disposal (Baumeister et al., 2006). Indeed, how we override and alter our reactions to people, places, and things and how we manage our limited attention bandwidth does result in more positive outcomes across a broader range of well-being pursuits than result from using any other strength (Baumeister et al., 2006). Furthermore, much of life is under personal control: we can either regulate our attention to embrace beliefs of self-doubt and pessimism, or embrace those that are more beneficial and helpful in improving well-being, achieving success, and building character (Peterson, 2006).

Addiction strips the addict of volition, thereby removing intentionally-directed attention (self-regulation) (Erickson, 2007). However, addicts do not lose self-regulation forever

(Schneider et al., 1993), which is fortunate because self-regulation is required to maintain recovery (Robinson & Berridge, 1993; Noël et al., 2007; Tiffany, 1990).

Negative Emotions

Negative emotions can, at times, contribute to human flourishing. For example, engaging in conflicts may be productive and healthy within relationships, provided that both partners communicate both verbally and nonverbally with respect (Gottman, 1994). Other negative emotions, such as guilt and shame, can alert individuals to recognize when their own behaviors impede on others' rights, which lead them to admit fault or adjust their behavior, thereby letting others know that they are valued and respected (P. Rozin, personal communication, November 11, 2012).

Negative emotions can also be appropriate in therapeutic settings. For example, Feudtner (2009) demonstrates that within profoundly sad pediatric hospice scenarios, using negative emotions can help motivate families to act on positive emotions such as hope. Furthermore, when individuals are in the midst of a major personal growth phase, which often accompanies the metamorphosis from addiction to recovery, negative emotions frequently accompany these periods of personal growth. In such cases, negative emotions would not indicate a 'negative' process in need of professional amelioration. Instead, as James (1902, p. 187) notes, "[w]hen the new centre of personal energy has been subconsciously incubated so long as to be just ready to open into flower, 'hands off' is the only word for us, it must burst forth unaided!" Clearly, there are times when negative emotions are useful and PRC supports the adaptive value of negative emotions that are context-appropriate. However, we also hold that constructing the positive is at least as valuable as mitigating the negative (Peterson, 2006).

Negative emotions are often adaptive, and not always “bad,” however when they become self-propagating and prolonged without an adaptive outcome, they can adversely impact health. Stress and anxiety damage the cardiovascular-pulmonary system, immune system, decrease longevity (Black & Garbutt, 2002; Davidson et al., 2003), alters executive functioning by impairing speed and accuracy of cognitive processes (Ciesla & Roberts, 2007; Cabeza & Nyberg, 2000), and predicts relapse (Sinha, 2001). Indeed, addicts report that stress and negative affect are major reasons why they relapse (Marlatt & Gordon, 1985; Lowman, Allen, & Stout, 1996). Negative emotions elicit conditioned behaviors that increase the likelihood of relapsing (Ludwig, 1986) and anxiety is positively correlated with alcohol consumption (Anton & Miller, 2005). Empirical evidence demonstrates that stress increases the vulnerability to relapse and while addiction alters the stress response and coping, thereby increasing the likelihood of drug seeking and relapse (Sinha, 2001). The intensity of negative affect prior to relapse predicts the duration of relapse (Zywiak, Connors, Maisto, & Westerberg, 1996). These findings strongly suggest that optimal treatments must include ways to undo the detrimental effects of maladaptive amounts of negativity and/or increase positivity.

Positive Emotions

Fortunately, positive emotions can reverse the effects of stress (Fredrickson et al., 2000), and help protect against cravings (McHugh, Kaufman, Frost, Fitzmaurice, & Weiss, 2013), both of which are especially prevalent in addiction. In one study, Fredrickson and colleagues (2000) studied volunteers who were subjected to high stress situations and then exposed to view one of four films with themes of: joy, contentment, neutrality, or sadness. In three independent samples, participants in the two positive emotion conditions (joy and

contentment) predictably demonstrated faster physiologic recovery from the effects of stress (e.g., elevated heart rate) than those in the neutral and sadness conditions. This study also points to how bad unopposed negativity can be: those who were exposed to the sadness condition exhibited the slowest return to baseline.

Negativity and positivity are not equipotent: ‘bad is stronger than good’ (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Rozin & Royzman, 2001). In other words, negativity trumps positivity: equivalent financial gains are not as strongly pleasing as equivalent financial losses hurt (Schwartz, 2009), and our brains react more quickly and powerfully to threatening images than it reacts to positive ones (Öhman, Lundqvist, & Esteves, 2001). ‘Bad is stronger than good’ implies that equal amounts of positivity and negativity do not balance one another; we must cultivate positive experiences more frequently to balance the dose of negativity. Cultivating positivity may improve completion rates and compliance because depressed patients are less likely to adhere to medical treatment recommendations (Chwastiak et al., 2002). Indeed, recovery fellowships may be effective in relapse prevention precisely because they induce positive emotions in members (Galanter, 2007; Vaillant, 2008).

There are more reasons to care about positive emotions than feeling better and managing stress. Interventions that increase positivity can provide the positive reinforcements that distract us from the lure of addictive substances and/or behaviors (Carroll & Miller, 2006). In addition, positive emotions can improve resilience to adversity (Fredrickson, Tugade, Waugh, & Larkin, 2003), enhance overall well-being (Fredrickson & Joiner, 2002), nurture psychological growth (Fredrickson et al., 2003), and is associated with increased longevity (Levy, Slade, Kunkel & Kasl, 2002; Danner, Snowdon, & Friesen, 2001). Positive emotions

also are associated with reduced levels of cortisol in response to everyday stress (Steptoe, Wardle, & Marmot, 2005), reduced susceptibility to the common cold (Cohen, Doyle, Alper, Janicki-Deverts, & Turner 2009), and inflammatory responses to stress (Steptoe et al., 2005). Furthermore, beyond making us feel good as individuals, the experience of positive emotions (e.g., joy, happiness, and contentment) can improve our relationships (Lyubomirsky et al., 2005), widen the scope of attention, and broaden behavioral repertoires (Fredrickson & Branigan, 2005).

One session in PRC designed to increase positivity in clients is ‘savoring,’ a strategy with three separate time-based perspectives: anticipation, online hedonic enjoyment, and reminiscence (Bryant, 2003). Life can be full of positive emotions, but experiencing these does not guarantee that individuals will make the most of them - some individuals do not feel capable of intentionally “generating, intensifying, and prolonging enjoyment” (Bryant, 2003, p. 176). A fundamental assumption of savoring is based on an individual’s sense that they can savor, which is a form of perceived control. This control is distinct from the control one would perceive when mitigating negative events, thereby making savoring a strategy in need of specific cultivation (Bryant, 2003). Therefore savoring may help clients discover that they *can* experience more positive affect than they previously imagined.

Happiness is Changeable

Lyubomirsky (2008) devised a largely symbolic, though easy to remember, range of happiness that explains how roughly 40% of our happiness is under individual control. Genes influence approximately 50% of our happiness, external factors contribute but 10%, and 40% is under individual control. These broad percentages, while symbolic, support the idea that

individuals are in control of at least some of their well-being (Lykken & Tellegen, 1996). Furthermore, this indicates that individuals are not helpless victims of fate; rather, we are responsible for at least those things that we can change. Lyubomirsky (2008) reminds us that while 40 per cent is not 100 per cent, it remains substantial. The take away message for clients will not be whether this happiness range is a valid construct, but that each individual is an active agent participating, at least in some degree, in creating personal well-being.

Optimism

Seligman (1991) posits that anyone, both pessimists and optimists alike, can learn optimism and improve responses to both big and small adversities. PRC aims to facilitate this type of resilience by teaching clients to develop, or strengthen, an optimistic explanatory style. Explanatory style, or the way we habitually explain stressful and adverse events, is crucial in developing resilience and optimism (Seligman, Reivich, Jaycox, & Gillham, 1995). When any event happens, individuals explain or interpret them according to three main components:

- ‘Personalization’- is the event is personal (who is to blame?)
- ‘Permanence’- how long will it last (will it last forever?)
- ‘Pervasiveness’- what are all the implications (is my whole world affected or just a portion of it?)

Clients will learn that optimism or pessimism can be viewed as choices of explaining why certain events happen. Since realism and optimism are not mutually exclusive, the finite amount of certainty in the world enables the freedom to choose the best possible realistic interpretation (Schneider, 2001). This perspective implies that flourishing is not something that we mine or pick but we create (J. Pawelski, personal communication, February 2, 2013). In

other words, people do not need to feel limited by certain epistemological notions of what they can and cannot do; instead, we are co-creators of reality, and we have a role in crafting rich, full lives in recovery.

Optimistic explanatory style may help people maintain recovery because emotional and explanatory responses to events are more important in maintaining recovery than the specific events (Larimer et al., 1999; Reivich & Shattè, 2002). In addition, optimistic explanatory style appears to exert protective health benefits independent from risky health behaviors frequently seen in addicts (e.g., smoking) (Kubzansky, Sparrow, Vokonas, & Kawachi, 2001).

On the other hand, a pessimistic explanatory style generally explains positive events as temporary, context-specific, and external but explains negative events as permanent, pervasive, and personal (Seligman, 1991). A pessimistic explanatory style does not simply refer to overall pessimism. Instead, a pessimistic explanatory style is a specific, dispositional, and rather automatic form of self-talk which explains both negative and positive life events in a self deprecating, catastrophic, and gloomy manner (Seligman, 1991). Pessimistic explanatory style is associated with low amounts of resilience (Reivich & Shatte, 2002; Seligman, 1991), poor mental and physical health, diminished work production (Peterson & Barrett, 1987; Peterson & Seligman, 1984; Kubzansky et al., 2001; Sweeney, Anderson, & Bailey, 1986), poor treatment outcomes (Carroll & Onken, 2005), and depression (Peterson & Seligman, 1984; Sweeney et al., 1986).

Addicts are especially vulnerable to threatening and stressful events: they generally exhibit low self-regulation, self-efficacy, and emotional intelligence that compound their ability to effectively manage emotional states (Marlatt & Gordon, 1985). Additionally, people

who frequently relapse report that they view their relapse as permanent, pervasive, and personal proof that they will *always* fail at maintaining recovery (Larimer et al., 1999), which erodes self-esteem and well-being (Seligman, 1991).

A shift toward optimism is a shift away from depression. According to Beck (2005), depressed patients explain the world to themselves through a self-deprecating and catastrophic lens (pessimism). PRC teaches clients that they *can* control how they respond to adversity, that they can learn optimism. Clients will learn to explain negative events as temporary, context-specific, and external and, when appropriate, explain positive events as permanent, pervasive, and personal; using this style protects against feeling helpless and overwhelmed (Seligman, 1991). Optimism is often more accurate, flexible, and certainly are more helpful interpretations on events (Schneider, 2001). Indeed, when things go bad for us, probability suggests that we are rarely the only ones to blame (personalization), things are hardly messed up forever (permanence), and problems rarely extend to the entirety of our existence (pervasiveness).

Clients who develop more levels of optimism can experience a decrease in depressive symptoms (Seligman, 1991), enhanced coping skills (Peterson & Seligman, 2004; Reivich & Shatte, 2002), better social relationships (Peterson, 2012), and (potentially) higher salaries (Schulman, 1999).

Positive Interventions and Positive Psychotherapy

Simply stated, both positive interventions (PIs) and positive psychotherapy (PPT) can improve efficacy and effectiveness of addiction treatment for clients with or without co-occurring psychiatric disorders. While most PI studies have been conducted with nonclinical individuals, “two randomized controlled studies in patients with mild clinical depression have

reported promising initial findings” (Layous et al., 2011, p. 11). The application of this approach to addiction has not gone unnoticed (Slade, 2010; Miller & Miller, 2009; Krentzman, 2013; Layous et al., 2011).

In a study of mildly depressed volunteers who were randomly assigned to engage for one week in one of five well-being-enhancing activities (involving practicing gratitude, positive thinking, and one’s strengths) versus a placebo control activity (involving writing one’s early experiences), participants in the well-being-enhancing activities experienced a boost in well-being and a decline in depressive symptoms both during and after the intervention ended (Layous et al., 2011). In fact, the boost in well-being and decline in depressive symptoms lasted for six months in those participants who wrote about three good things in their life and used their signature strengths in a new way (Layous et al., 2011).

Some PIs not only have persistent effects, they also have quite rapid onsets of action. In one study (Seligman, Steen, Park, & Peterson, 2005) severely depressed individuals were instructed to engage in the Three Good Things PI every day, and in about two weeks (within 15 days), nearly every participant experienced relief (94%). These results indicate that not only can PIs be effective in reducing depressive symptoms, but that they can also work quickly. This latter point makes PIs especially valuable in our population for two reasons: first, the addicted population often has trouble with delaying gratification, and secondly, the current system of care grants brief treatments spans and short lengths of stay.

A widely used and especially powerful strengths intervention we include in PRC is to use their ‘signature strengths’ in a new and unique way daily for a week (Niemeic, 2013; Seligman et al., 2005). Signature strengths are defined as the top 5 VIA character strengths as signature

strengths (note: a validated set of signature strengths does not yet exist and the construct is merely used as a general rule, though research is underway). In one study, which was a large, randomized, and controlled trial on the Internet, using a signature strength in a new and unique way each day for a week boosted happiness levels and decreased depression levels at one week and even 6 months later (Seligman et al., 2005). In another study, groups assigned to using strengths also experienced significant gains in life satisfaction (Rust, Diessner, & Reade, 2009). *The Best Possible Self* PI is another validated positive intervention we use in PRC that can lead to significant health benefits, significantly increases positive affect (PA), improves levels of intrinsic motivation (Sheldon & Lyubomirsky, 2006; King, 2001), self-regulation, mental health, and physical health (Sexton & Pennebaker, 2009). In addition, we believe this PI will usher in many other benefits of positive thinking such as positive affect and optimism (Taylor & Brown, 1988).

PPT is a psychotherapeutic technique that searches for ways to decrease symptoms and improve lives in clinical populations by enhancing positive emotion, engagement, and meaning in life (Seligman, 2011; Seligman et al., 2006). In one study of severely depressed patients, PPT “relieved depressive symptoms on all outcome measures better than treatment as usual and better than antidepressant medications” (Seligman, 2011, p. 43). In another randomized controlled trial using PPT in clinical groups, happiness increased and depressive symptoms decreased - with persistent (12-month) moderate to large improvements (Seligman et al., 2006). These two studies do not constitute a robust set of findings, instead these demonstrate that balanced interventions can be effective and also suggest that similar approaches (e.g., PRC) may have positive effects on treatment outcomes (e.g., completion rates and continuous

sobriety) and well-being.

Positive Psychology & Addiction

Only a few clinicians and researchers support the view that positive psychology has worthwhile insights for treating addiction (Slade, 2010; Miller & Miller, 2009; Krentzman, 2013). Although the limited number of studies does not reflect a robust interest in addiction treatment thus far, aspects of positive psychology have demonstrated positive effects in medicine. For example, one study demonstrated that inducing positive affect in physicians can improve their clinical decision-making skills (Estrada, Isen, & Young, 1994). We believe that positive psychology can enhance treatments for addictive disorders but we need more studies. The two studies that directly applied positive psychology to addiction medicine are reviewed next.

Smoking tobacco is one of the hardest habits to quit (Powers, 2012). Mark Twain claimed that, 'Quitting smoking is easy, I've done it thousands of times!' (as cited in Powers, 2012). Perhaps Twain could have stayed abstinent had he received positive psychotherapy, which MacPherson et al. (2010) used successfully on smokers. In the study, researchers hypothesized that patients would be more successful at quitting if they were primed with positive emotions prior to the quit date because they could have more resources at their disposal: positive emotions can improve learning, problem-solving, social bonding, and self-esteem (Fredrickson, 2009). Consequently, researchers found that participants who were primed to experience positive emotions reported greater smoking abstinence than did those in the standard smoking cessation therapy group and reported a greater reduction in depressive symptoms than did those in the standard smoking cessation therapy group (MacPherson et al.,

2010).

In another study discussed earlier, Akhtar and Boniwell (2010) investigated outcomes of a positive psychology intervention on 10 adolescents over 8 weeks in the U.K. This study, albeit for a small sample size, also supports applying positive psychology in addiction treatment. Study participants experienced more well-being, more positive affect, developed a future goal orientation, an escalation of change amounting to transformation, less drug use, significant increases in happiness, optimism, and positive emotions, and a significant decline in alcohol dependence (Akhtar & Boniwell, 2010).

The Body

A technique we teach our clients to try when they feel sad is to “fake it till you make it.” When individuals imitate how the body naturally behaves when experiencing a certain emotion, they can powerfully influence the very same thoughts and feelings that usually accompany or result from that emotion (Levenson, Ekman, & Friesen, 1990; Larsen & Sinnett, 1991; Kim & Kim, 2007). Bodies can be utilized to feel better simply by flexing certain facial muscles: if individuals smile and laugh, they may end up feeling better because the act of smiling can lead to experiencing positive emotion (Levenson et al., 1990). Or, many people slouch while standing or sitting because they may be tired, bored, or simply wish to relax, but slouching can cause people to feel tired, bored, or even powerless. In contrast, standing and sitting upright takes effort and focus, especially when individuals feel bored or tired, but standing and sitting upright can elicit individuals to feel powerful (J. Pawelski, personal communication, August 20, 2012). Simply stated: the human body can significantly affect emotional health, cognition, and well-being (Mutrie & Faulkner, 2004).

Habit Phase includes three sessions on the body (diet, exercise, and sleep) because we are what we repeatedly do. That is, habits create tangible, physical changes in our bodies (James, 1890; Cramer et al., 2011). Since our bodies are malleable, repeated actions create advantageous neural pathways that increase competence and decrease future effort (James, 1890). Our bodies reflect and direct how we regulate attention and behavior. In other words, habits can build personal resources if we repeatedly act in healthy ways. Time and practice can make even challenging acts nearly automatic, which allows for attention to be directed in other ways. Master professional basketball players, for example, are so automatic that they get nicknames like *The Mailman* (because mailmen always deliver the mail) and *Magic* (self-explanatory).

Strategically applied attention in habit formation, makes an ally of one's nervous system and is the means by which individuals shape their character, forge their destiny, and thrive (James, 1890). We cannot afford to be complacent in this process: good habits are difficult and slow to form while easy to break, and bad habits are quick to form and difficult to break (James, 1890). Therefore, we must be forever diligent in directing our attention to our growth (Peterson, 2012). James suggests we SNAP: Start strong, No exceptions (be consistent), Always act (take advantage of every opportunity), and Practice exercising the will.

Modern scientists can prove that habit rewires our brain at even the most microscopic, genetic level (Miller, 2010). Similarly, addiction causes specific genetic (Rhodes & Crabbe, 2005) changes that can drive and control further brain circuitry changes (Blednov et al., 2012). Fortunately, human beings do not become forever trapped by even bad habits from the past. Diet, exercise, and sleep all can alter how hundreds of genes are expressed, from increasing the

activity of disease-preventing genes to lowering the activity of disease-promoting genes (Miller, 2010). Behaviors alter genes in both positive and negative directions, so we must be careful what we do, or don't do, and genetic influences (predispositions) make it easier to become addicted, but genes do not prevent one from choosing to behave and think in optimal ways from now on.

While a complete discussion about all things exercise, diet, and sleep are beyond the scope of this work, we will discuss findings pertinent to addiction that will guide physical fitness groups, food service for inpatients, sleep strategies, and educational processes.

Exercise

We support exercise as a pathway to improve overall health and prevent relapse. Exercise reduces the risk of cancer, heart disease, high blood pressure, obesity, and depression; and exercise slows aging (Rath, 2013). The key to health is exercise: the fitter one is, the lower the mortality risk for any cause, even when one is overweight (Blair et al., 1995). However, if one wants to lose weight, exercise cannot be the only tool: exercise without healthy dietary habits may actually cause weight gain because exercise can increase appetites (Bailey, 1991). While the food one consumes is crucial for overall health, it is one's fitness level that is most important for extending lifespan (Lee et al., 2011). In addition, exercise appears to prevent relapse: a 12-week exercise intervention study of alcohol dependent patients revealed significant increases in percent days abstinence and decreases in drinks per drinking day at follow up visits (Brown et al., 2009).

Physical activity is strongly correlated with psychological well-being for all ages in both clinical and nonclinical populations (Moses, Steptoe, Mathews, & Edwards, 1989; Park, 2005).

Exercise may be especially useful for our clientele. A study of trauma-exposed alcoholics demonstrated that vigorous exercise can decrease coping-oriented alcohol use (Medina et al., 2011). And in another study, just one session of moderate intensity exercise was enough to reduce cravings for alcohol (Ussher, Taylor, & Faulkner, 2012). Zschucke, Heinz, & Ströhle (2012) conclude from their literature review that exercise is an effective option to help smokers quit.

One strategy to improve the health of our clients is by using pedometers and counting daily steps totals. Research suggests that when individuals wear pedometers, they walk over a mile longer per day than when they don't, overall activity increases 27%, body mass index (BMI) decreases, and blood pressure decreases (Dwyer et al., 2011; Tudor-Locke, 2002). Current research supports setting a goal to walk at least 10,000 steps a day to prevent diabetes and improve weight loss (Dwyer et al., 2011; Tudor-Locke, 2002). We could also apply this principle to other pro-positive recovery behaviors, such as continuous sobriety and weight goals, because measurement itself creates improvement – simply asking people to track specific outcomes makes them more likely to engage in those behaviors (Rath, 2013).

We can maximize the benefits of each workout by turning up the intensity: the more intense each workout is, the more calories are burned throughout the next 14 hours (Knab et al., 2011). Additionally, morning workouts can increase our mood for up to 12 hours throughout the rest of the day (Sibold & Berg, 2010). Exercise also improves brain function: multiple studies demonstrate that aerobic exercise increases critical brain structure size and improves cognition, and even one 20-minute yoga session can significantly enhance the speed and accuracy on tests of working memory and inhibitory control (Goethe, Pontifex, Hillman, &

McAuley, 2013).

In an open study of 156 adult volunteers with major depressive disorder, Babyak and colleagues (2000) discovered that exercise could help mitigate undesirable moods more powerfully than antidepressants. The volunteers were divided into three groups: an aerobic exercise-only group, an antidepressant-only group, and an exercise + antidepressant group. After 4 months patients in all three groups exhibited significant improvement; but after 10 months, volunteers in the exercise-only group had significantly lower relapse rates than subjects in both the medication-only and medication + exercise groups. Puterman and colleagues (2011) measured the effects of exercise on chronic stress, and found that compared to sedentary participants, those who exercised experienced less rumination and produced lower levels of stress hormones.

Diet

Nutrition education should be part of any addiction treatment since poor diets can cause or exacerbate many medical consequences of addiction (Cala et al, 1983; Estruch, Nicolás, Villegas, Junqué, & Urbano-Márquez, 1993). Moreover, nutrition education is positively associated with addiction treatment outcomes. Grant, Haughton, & Sachan (2004) discovered that individual nutrition/substance abuse education was associated with significant (99%) decreases in addiction-related family/social problems.

Alcoholics who stop drinking frequently crave sweets because sugar alcohols are no longer in their diet (Erickson, 2007), and many clients who stop one addiction (e.g., drugs or sex) run the risk of acting out with another specific substance or behavior (Blumenthal & Gold, 2010; Carnes, 2001). Drug cues that elicit drug-seeking behavior activate reward and

deactivate inhibitory pathways in the same brain regions in which food cues elicit food intake (Childress et al., 1993; Gearhardt et al., 2011). While food cues trigger hunger and feeding behavior (Jansen, 1998), drug cues trigger craving and relapse (Shiffman et al., 2002). The neural response to cues as measured by functional magnetic resonance imaging (fMRI) predicts weight gain (for food cues), relapse for drug cues (Payne, Smith, Adams, & Diefenbach, 2006; Janes et al., 2010), and persistent smoking for cigarette cues (Janes et al., 2010; Le Foll & Goldberg, 2005). MRI studies also demonstrate that when we are hungry we eat worse than when we snack regularly throughout the day: those parts of our brain that light up indicate our brain craves calorie-rich foods (Führer, Zysset, & Stumvoll, 2008). Thus, we hope to prevent this effect by keeping nutrition-dense foods (e.g., bowls of raw almonds) available in high visibility in between meal times.

For meal times, we will implement the following cost effective and easy to implement strategies that can improve client health: a strategic use of plate color, plate size, and allowing for adequate meal times. We can help clients to eat less unwanted food without feeling hungry while decreasing food waste costs. Smaller serving plates decrease the amount of food people eat (Wansink, 2012) and when the plate's color contrasts with the foods on it, people eat less than if the plate is the same color as the food (Van Ittersum & Wansink, 2012). The goal is not to shrink client's waists along with overhead expenses. Instead, the participants in these studies ate less amounts of (unwanted food) but did not feel hungrier (Van Ittersum & Wansink, 2012; Wansink, 2012). Furthermore, we will educate staff and clients to slow down when they eat. Eating slowly, at least over a 20 minute time span, is ideal since that is the time required for stomachs to tell brains how full they are getting (Andrade, Greene, & Melanson, 2008), which

is better than shoveling in food quickly and later discovering that one's clothes have atrophied.

Again, addiction causes innumerable health consequences. We use one major common consequence of addiction, heart disease, to demonstrate how healthy diets (e.g., more fruits and vegetables) can benefit our clients in more ways than enhancing their well-being. It appears that high raw vegetable and fruit consumption nearly negates the effect of even the most powerful known genetic mutation for heart disease that predisposes human beings to develop cardiovascular disease (Do et al., 2011). Heart attacks and other cardiovascular diseases (e.g., stroke) may be modified by a sensible diet high in raw vegetables and fruits.

PRC nutrition sessions also present various other current and scientifically accurate dietary information. For example, sugar is now identified as a causative agent for several health problems. Sugar is a toxic, inflammatory agent that causes brain atrophy, speeds up aging rates, and increases the prevalence of non-communicable disease (Lustig, Schmidt, & Brindis, 2012). In fact, some experts now refer to sugar as 'candy for cancer cells' (Rath, 2013) since it presents a clear and present danger for public health. Sugar is recognized by many experts as an addictive drug, and compulsive overeating as an addiction (for a review, see Blumenthal & Gold, 2010) and according to this position, sugar is a legal drug that deserves as much scrutiny as tobacco and alcohol. Fortunately, cutting back on carbohydrates (sugars) can decrease cancer growth rates by 50% (Ho et al., 2011), and one study of over 800,000 people demonstrated that "each additional serving of fruits or vegetables, all the way up to seven servings, continues to improve well-being" (Rath, 2013).

Sleep

Sleep disturbances are common among addicts in early recovery (Brower, 2001;

Schierenbeck, Riemann, Berger, & Hornyak, 2008) and poor sleep increases relapse rates for all psychoactive substances (Brower & Perron, 2010). Our clients are not alone: approximately 50–70 million adults in the United States have sleep problems and any number of associated physiologic consequences of sleep problems such as obesity, diabetes, and cardiovascular disease (Orzeł-Gryglewska, 2010). Poor sleep also predicts mental, emotional and physical fatigue, poor performance on cognitive tasks (Li et al., 2008), and decreases physical health (Cohen, et al., 2009; Orzeł-Gryglewska, 2010).

Our literature review and situation analysis leads us to make the following low-cost and easy to implement recommendations that can help improve sleep, help prevent relapse, and improve physical, emotional, and cognitive health and performance including engagement in treatment: (a) use specific light bulbs around bedtime, (b) limit exposure to specific forms of light around bedtime, (c) maintain a low ambient room temperature around bedtime, and (d) sleeping for approximately eight hours per night.

In one study, light bulbs with wavelengths of 6500K were more effective than light at both 2500K and 3000K wavelengths for decreasing subjective sleepiness and increasing cognitive performance (Chellappa et al., 2011). This effect, which is explained by 6500K light exposure's suppressive effect on melatonin levels that decreases sleep efficiency (Rath, 2013), can easily be addressed by 1) minimizing client exposure to all light starting every evening and 2) when lights must be on, we will use only 2500K and 3000K wavelength light.

Individuals sleep better and longer when ambient room temperatures are lowered at bedtime: optimal temperature range for sleep appears to be between 65 and 72 degrees (Van Someren, 2004). Strategically closing off vents in rooms that are not utilized can help divert air

and keep electricity costs down (Rath, 2013). Furthermore, duration of sleep is a crucial variable we plan to address and teach about in treatment. One study showed that sleeping 8.6 hours on average per night helps individuals to perform at their peak while negotiating motivational and external constraints (Ericsson, Krampe, & Tesch-Römer, 1993).

Emotional Intelligence

Emotional intelligence (EI) is defined as the capacity to synchronize reason and emotion together in order to do the next right thing (Salovey, Caruso, & Mayer, 2004). Emotional intelligence aligns cognitions and emotions to make optimal situation-specific decisions and behaviors. Emotional intelligence is not only directed inwards, EI also includes the ability to recognize and shape emotions in others (Salovey et al., 2004).

In order to sustainably recover, addicts must have chronic, extended treatment options that not only address their addiction, but also enable them to sustainably build elements of well-being. Most addicts in early recovery have poor coping skills, poor impulse control, arrested emotional development, uncontrolled and unmanageable lives, and low self-esteem (Carnes, 2001; Erickson, 2007), and preventing relapse is extremely difficult for even the most stable and resourceful individual. Adverse consequences lead many addicts to feel helpless and hopeless, especially after several repeated unsuccessful quit attempts (Erickson, 2007), and many addicts simply just give up (Larimer et al., 1999).

Research show us that individuals in crises can learn to overcome unwanted affective states, strengthen their relationships with others, and appreciate life more deeply (Fredrickson, 2008; Seligman, 2011). This implies that even addicts that are early in their recovery can develop emotional intelligence, improve decision-making, enhance relationships, and decrease

substance abuse (Goleman, 1995; Larimer et al., 1999). In addition, EI appears to protect against destructive behaviors (e.g., drug use) and improve social relationships (Salovey et al., 2004).

Sessions in PRC designed to help clients improve their EI include such activities as identifying emotions in others through movie clips and identifying their own emotions through frequent journaling assignments and biweekly individual therapy sessions.

Goal Setting Theory

Throughout PRC, staff and clients work collaboratively in constructing a list of goals. Based on goals research about, we utilize the SMART (Specific, Measurable, Aligned with values, Realistic yet challenging, and Timely) goal model as a general construct and with special emphasis on subgoals. SMART goals are those goals associated with highest goal attainment (Brown & Ryan, 2004; Locke, 1996). Challenging goals lead to a better sense of achievement, but even highly meaningful stretch goals (e.g., “flourish in recovery”) are hard to achieve if they are too broad and nebulous to be useful (Locke, 1996).

Specific goals that are broken down into an incremental hierarchy (“subgoals”) also improve performance (Locke, 1996). For example, “staying sober forever” is a daunting and depleting goal – no one can live his or her life in one day. When people are depleted, they abandon goals and standards, focus more on their fatigue, and give up more easily (Baumeister 2002; Baumeister & Vohs 2007). Perhaps this explains the sage Alcoholics Anonymous cliché, *one day at a time*, which encourages members to focus on the present and set short-term, attainable subgoals. No one can stay sober forever, but anyone can stay sober today.

The goal- and hope-related sessions in PRC provide clients with other useful instructions,

such as setting subgoals (Locke, 1996), formulating several pathways to achieve their goals (Brown & Ryan, 2004), setting challenging, yet realistic goals (Locke, 1996), and the wisdom of when to let goals go (e.g., when they are no longer healthy) and set new ones. Furthermore, PRC incorporates both positive and negative contingency management relapse prevention planning. Positive contingencies are positive reinforcers that each client will include in the relapse prevention plan. For example, a client may plan to reward herself with a mani-pedi when she reaches the 90-day mark in recovery. Negative contingencies are aspects of the relapse prevention plan that activate if a relapse occurs. For example, if “Joe” begins to behave in “risky” ways (e.g., stops therapy, medications, or spending time with family and friends), his therapist, physician, friends, family, and work manager all have permission to intervene.

Treatment plan goals are not concrete or fixed. Instead, they are dynamic and adaptive through staff and client collaboration based on current variables (e.g., client progress, input, circumstances, feedback, etc.). In this way, clients experience what it feels like to attain goals by adjusting and collaborating (Locke & Latham, 2002). Staff can increase clients’ commitment to their goals through other effective techniques, such as inspirational and supportive communication, role modeling, helping them set high standards, and resilience (Locke & Latham, 2002). In fact, the simple act of collaboration between staff and clients itself can increase client’s self-confidence (Locke, Alavi, Wagner, & Ferris, 1997).

One session aims to use hope’s ability to help individuals generate more pathways and persist more in maintaining their recovery, even when faced with roadblocks (Snyder et al., 2000). Hope is associated with adaptive coping and positive adjustment across several domains, including school, work, and health (Snyder, Cheavens, & Michael, 1999) and helps

people formulate several alternate pathways and persist more in achieving goals, even when confronted with difficulties and blockages (Snyder et al., 2000).

Hope Theory

In PRC we use findings from research on hope theory to specifically cultivate hope, which we believe ranks among the most powerful motivating constructs for our clients. Hope is “goal-directed thinking” in which individuals assess their competency of constructing viable ways to attain goals (‘pathways’) and their potential to start and continue following those pathways (‘agency’) (Lopez et al., 2000). In other words, hope helps clients to set meaningful goals (e.g., flourish in recovery), figure out how to achieve them (maintain recovery and regulate attention and behavior), and be self-motivated enough to succeed. Individuals with high levels of hope persist and succeed more often in attaining their goals (Snyder et al., 2000); higher levels of hope increase life satisfaction, self-esteem, perceived competence, mental health (Valle, Huebner, & Suldo, 2006), positive coping skills (Compton, 2005), physical and psychological health (Lopez et al., 2004), and with balance, interventions based on this model simultaneously increase hope and decrease psychopathology (Cheavens, Gum, Feldman, Michael, & Snyder, 2001).

While maintaining uninterrupted, stable recovery is a realistic goal that we will encourage: relapse is still the norm in addiction. Hope also appears to mediate how resilient individuals are during a relapse. Individuals with high hope appear to ruminate unproductively about a problem less than peers with low levels of hope (Snyder et al., 1999), which may protect them against negative and narrow thinking and enable them to apply lessons learned from their own, or others, experience to manage their current problems (Snyder et al., 2000).

Operationally, this suggests that clients who have low levels of hope will be more likely to experience more severe relapse episodes than clients with high levels of hope, since they would be more likely to ruminate unproductively (Snyder et al., 1999), believe that they would have more limited choices (Fredrickson, 2009), and fail to learn lessons from their own history or from lessons about which they have seen, read, or heard (Snyder et al., 2000).

Self-Determination Theory

Hopes and goals, and how intensely they are valued, predict how persistently individuals pursue those goals (Ryan, Sheldon, Kasser, & Deci, 1996). Self-determination theory (Ryan & Deci, 2000) supports the idea that people will naturally value, and are motivated to nourish, their psychological growth and physical health (Ryan & Deci, 2000). Indeed, nourishing one's physical health through personal growth and supportive relationships is aligned with intrinsic life goals (Deci & Ryan, 2000; Ryan & Deci, 2000). Neimiec, Ryan, Deci, and Williams (2009) found that an SDT-based intervention helped smokers to facilitate autonomous self-regulation for quitting, to maintain abstinence from smoking, and to maintain the value they placed on their physical health. Therefore, PRC includes several sessions where staff will elicit and discuss intrinsically valuable recovery-related hopes and goals, which may enhance client motivation to achieve them, thereby preventing relapse whilst forming good habits on the road of happiness in recovery.

Character Strengths

The strengths phase of PRC is based on the 24 character strengths that have been universally valued across cultures, religions, and philosophies over the past 2000 years (Peterson & Seligman, 2004). The PRC strengths exercises are modeled after existing research

on these strengths (Niemeic, 2013) as well as curricula (Harms, Herian, Krasikova, Vanhove, & Lester, 2013). The goals of the strengths phase are to boost clients' well-being by assessing their character strengths (e.g., gratitude, courage, prudence, wisdom), helping them to recognize strengths in others, and helping them to use their positive traits in a context-appropriate manner on a daily basis while at work, home, school, or leisure. Knowing one's strengths positively affects intrinsically-valued goal pursuit, strength-focused therapy increases therapy outcomes and trust, and strengths help mitigate the effects of negative traits such as perfectionism and learned helplessness (Niemeic, 2013).

Character strengths are stable personality traits but they can be changed, developed, and are expressed in different amounts in different contexts (Niemeic, 2013). In that way, character strengths are formed from who we are and what we do, but are different from our raw talents. Raw talent is what comes naturally to us and is an innate capability that we are born with and build easily, while character strengths are something we can practice and nurture to improve over time (Peterson, 2006). In other words, character strengths help determine how individuals think, feel, and behave (Park & Peterson, 2009). Hence, a client's character is a valuable resource to flourish in recovery. Niemeic (2013) argues that one's character helps determine how one reacts in certain situations and whether they will make an appropriate decision in that specific situation, which suggests that clients who invest time and energy into developing their character strengths may be less likely to relapse.

Character Strengths and Virtues (CSV), or "the manual of the sanities" (Peterson & Seligman, 2004, p. 4) is a classification system of what's right in people (a positive construction orientation), in contrast to the Diagnostic & Statistical Manual (DSM) (American

Psychiatric Association, 2013), which catalogs only disorders (a negative ameliorative orientation). Strengths building can help restore some balance to our approach to optimal wellness that has disproportionately relied on the negative approach. There is good empirical evidence that the balanced use of character strengths in life leads to improvements in well-being (Seligman et al., 2005). In addition, the more intensely individuals endorse any one particular strength, the higher the boost on well-being (Seligman, et al., 2006).

Lambert (1992) discovered that approximately 40% of improvement that happens in therapy is due to patient factors, such as self-efficacy, which suggests that a therapy designed to maximize patient factors may improve treatment outcomes. Research demonstrates that character strengths contribute to optimal human development and well-being (Park & Peterson, 2009; Peterson & Seligman, 2004) and that specific strengths of character (hope, kindness, social intelligence, self-control, and perspective) help to buffer people against the negative outcomes caused by stress and trauma in their lives (Park & Peterson, 2009). In addition, using one's strengths in novel ways can increase happiness and decrease depression for six months (Niemeic, 2013), and using one's most valued strength at work) increases work satisfaction, well-being, and meaning in life (Niemeic, 2013). Using strengths also makes it possible to enter the state of flow, which could also improve outcomes: flow can increase self-efficacy (Csikszentmihalyi, 1990), thereby helping prevent relapse (Condiotte & Lichtenstein, 1981; Shiffman et al., 2000) since self-efficacy mediates goal-attainment (Deci & Ryan, 2000). The life satisfaction gains that result from increased character strengths may serve to build long-term personal resources that enhance our clients' abilities to enjoy a flourishing life (Gillham, et al., 2012; Park & Peterson, 2009; Peterson & Seligman, 2004).

The Values In Action Classification of Strengths (VIA) (Peterson & Seligman, 2004), a validated categorization of strengths, was developed to unearth the best thinking on virtue and positive human qualities by researchers that reviewed and analyzed various tenets and works from major world religions, Aristotle, Benjamin Franklin, and Dr. Seuss, just to name a few. VIA quantifies strengths, serving as a foundation for a positive approach to health, and provides a meaningful and scientific resource for well-being application and research. Thus far, VIA-inspired interventions helped individuals meet psychological needs, improve well-being, decrease depression, increase job satisfaction, and enhance life meaning (Peterson, 2012).

The final 24 universal strengths, which are the most general and easily recognized, used the following criteria: the strength: 1) contributes to the good life above and beyond mitigating weakness or problems; 2) is intrinsically good; 3) is not zero-sum (the strength can help others in their strength); 4) is not simply the opposite of a weakness; 5) is stable across situations, domains, and time; 6) is distinct and not a derivative of combination of other strengths; 7) is embodied in paragons; 8) might have prodigies; 9) might have imbeciles; 10) or has reinforcing societal institutions. Additionally, VIA divides the 24 main human character strengths into six chief virtues: wisdom and knowledge, courage, humanity, justice, temperance and transcendence (Niemeic, 2013).

Relationships & Social Connections

Peterson's (2012) well-known signature phrase "other people matter" (p. 127) symbolizes how crucial relationships are in human happiness. Indeed, findings from research consistently demonstrate that supportive relationships (e.g., friends, neighbors, coworkers, etc.) can decrease sorrow and loneliness, elevate self-esteem (Cohen & Wills, 1985), improve

resilience, and contribute to overall well-being (Seligman, 2011). In addition, when people perceive others are there for them in times of stress, and when emotional support is given, people are buffered against the harmful effects of stress and relationships function better (Cohen & Wills, 1985; Reis & Franks, 1994; Uchino, Cacioppo, & Kiecolt-Glaser, 1996).

People also matter in recovery: supportive relationships help prevent relapse (Brown & Riley, 2005; Barrera, 2000). However, many addicts have less than optimal social support, which correlates with low self-regulation (Baumeister et al., 2005), psychological distress, morbidity, mortality, loneliness, and poor well-being (Phillipson, Allan, & Morgan, 2004; Veiel & Baumann, 1992). Even when clients do feel supported by others, they may also benefit: addicts who feel supported often perceive a smaller amount of support from their community than non-addicts (Brown & Riley, 2005).

The Relationships Phase stresses supportive relationships and helps clients develop skills that can help them be better friends and to place more trust in others. Life satisfaction gains that result from supportive relationships (Gillham et al., 2012; Park & Peterson, 2009) also may serve to build long-term personal resources to enable clients to enjoy a flourishing life (Peterson & Seligman, 2004). In addition to holding multi-family groups (in which patients and families receive education and have the opportunity to process some of their problems), PRC includes specific ‘positive’ elements that can foster skills to nurture better relationships. For example, clients explore what being “friendly” means, and learn listening skills through Active Constructive Responding (ACR) (Reivich & Shatte, 2002). Research on the subject of how we respond to other’s success indicates that people feel more supported, closer, more intimate, validated, and happy with relationships when their relations respond actively and

constructively to good news (Gable et al., 2004; Gable, Gonzaga, and Strachman, 2006). Four main types of response styles are:

1. **Active-Constructive** – enthusiastic support, positive and engaging body language, vibrant tone (Wow! Great! Tell me more! I bet you felt wonderful!)
2. **Passive-Constructive** – quiet, understated support, flat body language, quiet and dismissive delivery (mmm, that's nice. Good job.)
3. **Active-Destructive** – demeaning the event, pointing out the negative, engaged but dismissive (that's going to be very challenging. How are you going to manage everything? I bet it's a political thing. Anyone can win that.)
4. **Passive-Destructive** – ignoring the event, self-absorbed turning conversation towards themselves or unrelated topic (look, I broke a nail. Did I tell you what the dog did?)

Only one of these response styles, Active-Constructive, is beneficial. Active constructive responses increase intimacy, trust, relationship satisfaction, and relationship well-being (Gable et al., 2004) by demonstrating a mutual belief that the news is indeed good and valuable, that partners are indeed interested in each other's life, which increases familiarity and intimacy.

By examining the effects of social connectedness in over 12,000 individuals spanning over 30 years, Fowler and Christakis (2008) discovered that not only is happiness contagious, happiness is highly contagious: happiness is infectious up to three degrees of separation (Christakis & Fowler, 2012). Remarkably, an individual's emotional experience extends out and back from as far out in their social network as the friends of their friends' friends. These findings demonstrate that humans are interconnected in profound ways. Humans are social

organisms, not islands: individual happiness does not appear to result solely from one's personal experience (Fowler & Christakis, 2008; Smith & Christakis, 2008), which confirm: "happiness is best predicated by the breadth and depth of one's social connection" (Putnam, 2001, p. 332).

Recovery Fellowships

We support 12-Step fellowships, such as Alcoholics Anonymous (AA), simply because they are effective treatment options. Among six identified factors that predicted the pathway from relapse to abstinence, the only factor that consistently predicted a transition to and staying in abstinence was sober friends (Scott, Foss, & Dennis, 2005). Enough valid research consistently points out AA works, although how it works, remains elusive (Vaillant, 2008). Nonetheless, despite hundreds of published studies (many in top scientific journals) that reveal AA's benefits (Emrick, Tonigan, Montgomery, & Little, 1993; Humphreys et al., 2004; Kaskutas, 2009; White, 2007), 12-Step groups continue to earn considerable amounts of public and scientific scrutiny (Ferri, Amato, & Davoli, 2006; McCrady & Miller, 1993).

Mutual self-help groups facilitate the same constructive behavior changes, such as increasing self-efficacy (Bogenschutz, Geppert, & George, 2006), that help people maintain recovery as treatments that are led by trained professionals (Humphreys & Moos, 2007; Timko, Moos, Finney, & Lesar, 2000; Timko, Sempel, & Moos, 2003). For example, addicts who used 12-Step recovery fellowships were more likely to have achieved abstinence and were 70% less likely to use mental health services, resulting in 64% lowered mental health care costs than addicts who used CBT (Humphreys & Moos, 2007).

Furthermore, AA members who serve as mentors for new members protect themselves

from relapse (Zemore & Kaskutas, 2004; Pagano, Friend, Tonigan, & Stout, 2004). This finding is consistent with other research demonstrating that giving help can be more significantly associated with better mental health than receiving help (Post, 2005) and is “associated with higher levels of mental health, above and beyond the benefits of receiving help and other known psychospiritual, stress, and demographic factors” (Schwartz, Meisenhelder, & Reed, 2003, p.782). AA itself is clear on this subject, “[o]ur very lives, as ex-problem drinkers, depend upon our constant thought of others and how we may help meet their needs” (AA Services, 2001, p 20).

These points clearly show that in recovery, other people really do matter. However, addiction makes it very challenging for addicts to reap the benefits of social resources because addiction leads to isolation (Carroll & Miller, 2006), which can increase rates of mental illness (Uchino et al., 1996) and lower levels of self-regulation (Baumeister et al., 2005). Therefore, instead of stimulating the seemingly adaptive and socially desirable response of better self-regulation, social isolation seems to elicit the opposite (Baumeister et al, 2005). Recovery fellowships are safe social groups where members interact (Magura et al., 2004) that may prevent the negative effects social isolation cause on self-regulation and mental illness (Baumeister et al, 2005).

In addition, fellowships are also strong social communities that can help addicts maintain recovery, experience elements of PERMA, and increase well-being (Vaillant, 2008). Members do not encounter shame or contingencies: the only requirement for membership is the desire to stop using and acting out (AA Services, 2001). Everyone is welcome: 12-Step groups are not aligned with any political group or religious affiliation, holds no opinions on outside issues,

and place principles before personalities (AA Services, 2001). Indeed, *we*, not *I*, describe how members work through the steps; *we*, not *I*, are how members participate together, united in a common altruistic purpose that includes joy (Vaillant, 2008). As AA boasts, ‘...we aren’t a glum lot... We absolutely insist on enjoying life’ (AA Services, 2001, p.132), and “[l]ife will take on new meaning. To watch people recover, to see them help others, to watch loneliness vanish, to see a fellowship grow up about you, to have a host of friends—this is an experience you must not miss. We know you will not want to miss it. Frequent contact with newcomers and with each other is the bright spot of our lives” (p. 89).

Meaning & Purpose

Some suggest that addiction results from a misguided search for meaning and purpose in life (Burrell, 1999; Klion, 1993) and that success in recovery is mediated by discovering new meaning (Galanter, 2007). Today, we know that meaning in life is correlated with several mental and physical benefits (Baumeister & Vohs, 2005) but unfortunately addicts are an especially vulnerable population. Addicts have less meaning and purpose than age matched controls (Nicholson et al., 1994; Klion, 1993). Lack of purpose is similarly detrimental, serving as a mediating factor in both substance abuse and suicide (Harlow et al., 1986; Heisel & Flett, 2004). Again, addicts are an especially vulnerable population here, too: suicide rates in addicts can be up to 200 times greater than that of the general population (Murphy & Wetzel, 1990). Among other reasons, interventions that mitigate suicidal behaviors, such as helping to discover meaning, are therefore crucial to specifically address in treatment (Sher, 2012).

Leading modern researchers define meaning in two main parts: *purpose* – motivating us to discover connections and stability in rapidly changing conditions of life and between past

and *comprehension* – making sense of the self and the world coherently (Ryff & Singer, 1998; Baumeister & Vohs, 2005; Emmons, 2003). Comprehension and motivation contribute to well-being when they are aligned in the pursuit of the good life and effectively integrate personal, environmental, and temporal ideas, interactions, and values in rewarding ways (Steger, 2009).

Simply stated, meaning and purpose can make human lives better. Meaning can increase happiness, control, and engagement at work; and meaning can decrease depression, anxiety, substance abuse, suicidality, and need for therapy (Steger, 2009). Purpose is strong predictor of life satisfaction (Diener, et al., 2012), improves our overall well-being, physical and mental health (Reker et al., 1987), resiliency (Steger & Park, 2012), optimism (Comptom, 2004), self-esteem (Steger, 2009), decreases depression and anxiety (Steger, 2009), and increases vocational commitment and well-being at work (Steger et al., 2012).

Paths to Meaning & Purpose: Spirituality/Religion

Alcoholics Anonymous was created because a famous European psychiatrist, Carl Jung, concluded that the best, and perhaps only, remedy for hopeless alcoholics was for them to have a spiritual experience (AA Services, 2001; Finlay, 2000). Jung attracted patients from all over the world, such as Rowland Hazard, a former Rhode Island state senator.

Some time during 1930, Hazard...found himself slipping ever deeper into despair over problems associated with his uncontrollable drinking (Pittman, 1988). Having tried several methods to overcome his problem with no success, Hazard...placed himself under the care of...Carl Jung. Jung worked with Hazard for more than a year during which Hazard came to believe he was cured of his obsession. Hazard left Zurich and returned to the United States, but within a few weeks he had relapsed into his old

destructive patterns of drinking. On his return to Zurich, Hazard was told by Jung that there was nothing more that psychiatry or medicine could do for him. The only hope that Jung gave him was telling him that he had occasionally seen alcoholics recover after experiencing some type of religious conversion, but he cautioned that these recoveries were relatively rare (Finlay, 2000, p. 3).

Spirituality

Spirituality (including religion) is likely the most common means by way of which people discover meaning in their lives. Religion can be a divisive topic among the typical heterogeneous groups that are found in most treatments; we explore religion in as broad a way as possible with the hopes of minimizing conflict over the beliefs that underpin various religions, and focusing on the benefits of spiritual practice that individuals may realize. This session will require leaders who possess a high degree of emotional intelligence and verbal skills.

Despite criticisms comparing AA to cults that rely on God, AA offers its members a broad and minimally divisive spiritual option (Kaskutas, 2009). AA encourages that each member define God in his or her own way, *sans* dogma or cultishness. Recovery fellowships are not religions but they are spiritual (Kaskutas, 2009) groups, and 12-step programs are frequently called ‘spiritual fellowships’ (Galanter, 2007). *The Big Book of Alcoholics Anonymous* (A.a., 1948) adorns recovery with such terms as ‘spiritual experiences’ and ‘spiritual awakenings,’ and God is mentioned in four of the twelve steps (Galanter, 2007; Powers, 2012). Recovery fellowships encourage a noncompetitive approach to life that promotes well-being in its members bound by a common purpose and unified in altruism.

Here, God, referred to as the *Higher Power*, is democratic, all-accepting, and guided by the same noncompetitive approach to life as the program of recovery itself (Bateson, 2000).

Indeed, “AA provides a concrete example of spirituality being made safe for human consumption” (Vaillant, 2008, p.194).

Science-based approaches to wellness have traditionally excluded spirituality even though many scientists and therapists are often as emotional about religion and spirituality as everyone else (Pargament, 2002). For instance, Freud derisively describes religion as an infantile delusion (Segal, 2005), but Jung feels strongly “that the evil principle prevailing in this world leads the unrecognized spiritual need into perdition, if it is not counteracted either by a real religious insight or by the protective wall of human community” (Finlay, 2000, p.8).

Science’s inability to detect the afterlife, measure faith, or prove god’s existence may simply indicate that such issues are outside of the scope of science (Pargament, 2002). Pargament notes that although we can’t measure god or faith (‘roots’), we can measure how such issues contribute to elements of well-being and other outcomes (‘fruits’). According to Pargament’s extensive literature review on the subject (2002), internalized and intrinsically motivated religious beliefs that are based upon a greater meaning in life, feelings of spiritual connections with others, and secure relationships with God are positively correlated with well-being. On the other hand, unexamined, extrinsically motivated, and tenuous relationships with God can diminish well-being. Furthermore, religious beliefs can also help buffer against stress, especially when personal and social resources are scarce or exhausted.

Findings suggest that therapy augmented with spirituality may be more effective than CBT in activating feelings of hope and life satisfaction (D’Souza & Rodrigo, 2004; Frankl,

1978). In addition, randomized controlled trials demonstrate that spirituality may reduce relapse rates and enhance the quality of recovery (D'Souza & Rodrigo, 2004). In one study of recovering addicts, strength from religion and spirituality was cited as a cause of highly favorable outcomes, such as negative urine and hair toxicology results, no self-reported drug use, less than daily alcohol use, and no illegal activity or arrests during the past year (Flynn, Joe, Broome, Simpson, & Brown, 2003).

Reductionist views of the material world necessarily exclude what it cannot measure. Yet, in my view, refusing to acknowledge an arena of life that is so integral to human experience and well-being is a grave error - albeit not as extreme a mistake as to call it a form of perdition, as Jung claimed (Finlay, 2000). Indeed, human beings are more often spiritual than physical, even reproducing: humans spend more time in prayer or meditation than they do fornicating (Gallup, 2006).

Richards and colleagues' (2006) study on spiritual group interventions for inpatients with eating disorders (a process addiction) is also promising. Spirituality group participants demonstrated significant improvements more quickly on weekly outcome measures (lower psychological disturbance and eating disorder symptoms, and higher spiritual well-being) during the first four weeks of treatment. Considering again how much stress and unwanted emotional states trigger relapse and interpersonal conflicts, this study implies spiritual components in addiction (inpatient) treatment have the potential to reduce unwanted emotional states, decrease social conflict and relationship stress, and help prevent relapse.

Alcoholics Anonymous, Rowland Hazard, and Carl Jung Continues...

Jung did not become aware of his connection to AA until just months before his death,

when Wilson wrote him on January 23, 1961. Portions of Wilson's long letter follow. 'I doubt if you are aware that a conversation you once had with one of your patients, a Mr. Roland [sic] H___, did play a crucial role in the founding of our fellowship. Having exhausted other means of recovery from his alcoholism, it was about 1931 that he became your patient. I believe he remained under your care for perhaps a year. His admiration for you was boundless, and he left you with a feeling of much confidence. To his great consternation, he soon relapsed into intoxication. Certain that you were the "court of his last resort," he again returned to your care. Then followed the conversation between you that was to become the first link in the chain of events that led to the founding of Alcoholics Anonymous (Finlay, 2000, p. 7).'

Wilson went on to tell Jung the subsequent events that led to the founding of AA. Jung replied to Wilson's letter promptly. In his reply, dated January 30, 1961, Jung wrote, 'His craving for alcohol was the equivalent on a low level of the spiritual thirst of our being for wholeness, expressed in medieval language: the union with God.... alcohol in Latin is *spiritus* and you use the same word for the highest religious experience as well as for the most depraving poison. The helpful formula here is: *spiritus contra spiritum*. [Thank] you again for your kind letter'" (Finlay, 2000, p. 8).

Journaling

Writing is simply an effective tool for expressing and processing the full range of emotions. Multiple studies prove that disclosing emotions through journaling is beneficial (Smyth, 1998). Journaling is a healthy exercise that can improve physical health and emotional adjustment (King, 2001), and enhance positive affect and optimism (Taylor & Brown, 1988).

Journaling about past negative events can create positive outcomes for many populations with some exceptions (Sbarra, Boals, Mason, Larson, & Mehl, 2013); overall, journaling improves immune system function, reduces health problems, improves college students' adjustment to a new environment and workload, and helps find employment faster after losing one's job (King, 2001). Journaling appears to increase self-regulation when journaling increases self-awareness (King, 2001). We aim to capitalize on this possibility by including pre- and post-assignment journaling activities that prompt clients to spend time in reflection, dig deeper, think about topics on their own and in new ways, and reflect about what has been most meaningful to them. In addition, journaling enhances learning when writing prompts ask reflective questions about participant's learning progress, rather than asking about course content (Bangert-Drowns, Hurley, & Wilkinson, 2004).

Journaling is an inexpensive and easily disseminated activity with a favorable risk-benefit ratio. Clients already receive pens, workbooks, and notebooks and journaling is arguably a very safe activity. In the event that a particular client toils with literacy, we can discreetly intervene. In addition, we will not suggest that any assignments which involve journaling have specific ends, such as to discover meaning from past traumatic events or to enhance learning. Sbarra and colleagues' (2013) study suggests that when people are actively engaged in a search for meaning, expressing writing may have unintended harmful consequences. Clients will write for their *own* benefit and consumption: sharing is voluntary, their work will not be critiqued on either writing style or content, staff will reinforce the idea that journaling assignments are not intended to "fix" a problem or to "discover meaning."

Business Value

Implementing PRC, with its comprehensive and diverse material, staff training, and so forth will certainly be a massive and challenging project that requires a high degree of commitment in order to ensure its operational success. The return on investment should be worthwhile: well-being in the workplace can positively forecast a company's bottom line (Rath & Conchie, 2009). Several outcomes, including employee engagement and financial success are associated with higher employee well-being (Diener & Seligman, 2004). Moreover, by leading and training staff in the same processes we will use for our clients, we hope to improve the overall well-being of our staff. Perhaps then the contagion effect (Fowler & Christakis, 2008) may facilitate the spread of happiness and other positive emotions and behaviors throughout both staff and clients.

Engagement is essential to every company's customer satisfaction, employee productivity and helpfulness, and organizational profitability (Sorensen & Garman, 2013). Exceptional companies enjoy more than 63% engaged employees and earn nearly four times as much as most other companies, who languish with a 30% employee engagement level. Gallup (2006) also quantifies the degree to which actively disengaged employees lose companies billions of dollars per year due to lost productivity: companies lose approximately \$30,000 in lost productivity for each worker, with the lowest well-being scores due to sick days alone each year. In comparison, companies lose only \$840 in lost productivity for sick days for workers with the highest well-being scores. These numbers do not account for lost productivity while at work.

Most adults spend most waking hours at work, laboring under a structure designed

strictly to maximize financial well-being. Employers generally are amenable to structural additions that align employee well-being with the company's financial well-being (Diener & Seligman, 2004). Job crafting, a process of aligning and grouping work tasks with personal strengths and values, can boost engagement, reward, and meaning at work (Wrzesniewski, Berg, & Dutton, 2010). Using signature strengths improves well-being, engagement, work satisfaction, and finding higher meaning in life (Harter, Schmidt, & Hayes, 2002; Peterson, Stephens, Park, Lee, & Seligman, 2009). Although companies often dismiss policies that are not primarily directed at financial ROI, it is difficult to deny the correlations between worker well-being and the bottom-line.

Positive interventions are also valuable for treatment administrators, institutions, and owners. In general, they are efficient, inexpensive, and effective. Many validated PIs are self-directed (Lyubomirsky et al., 2005) and many validated studies were conducted over the Internet (Seligman et al., 2005), indicating that the PIs themselves, rather than intense face-to-face sessions, are valuable. Validated research demonstrates that these intentional activities effectively enhance well-being and decrease depressive symptoms (Boehm & Lyubomirsky, 2009). Without undervaluing the crucial role of clinical staff, PIs are cost-effective methods for clients to use both in conjunction with professionally-guided treatment as well as during the self-guided Maintenance Phase. Positive activities such as the regular practice of gratitude, optimism, kindness, and meditation are but a few examples of positive activities throughout PRC, which are all relatively brief, nonstigmatizing, and self-administered activities that foster positive feelings, thoughts, and/or behaviors.

Conclusion

Addiction is a complex, chronic, and harmful disease that robs individuals of agency. It is amenable to treatment, but relapse rates during and soon after treatment remain high. Additionally, our medical-model short-term approach is inappropriate. It is effective for initiating abstinence and reducing symptoms in the short-term, but it does not promote ‘recovery,’ which is a rich and full lifestyle that includes abstinence but is not limited to it. Interrupting addiction in the short term breaks its self-perpetuation and restores individual free will, but it leaves people void by focusing solely on crisis stabilization instead of adding resource building as well. Moreover, relapse rates during and soon after treatment remain high.

Insights from positive psychology can fill these gaps, possibly increasing completion rates, efficacy, and effectiveness of addiction treatment by helping people to establish lifelong skills to pursue happier, more meaningful lives so that addiction is less tempting and relapse is less likely. For the purposes of this Capstone, we have highlighted more strength-centric ideas (e.g., optimistic explanatory style, resilience, healthy physical habits, etc.) than illness-focused ones. However, we will continue those effective practices (e.g., identifying and treating co-occurring disorders, assisting with trauma resolution, using psychotropic medications, etc.) that enable clients to also live full, rich lives in recovery because both approaches are necessary to create a balanced program. Currently, research that specifically applies positive psychology in addiction treatment is scarce. PRC is not the first attempt to apply positive psychology to addiction treatment; however only a handful of studies doing so have been published and thus far, this is the first comprehensive academic argument and structured curriculum of its kind.

This capstone discusses the rationale and evidence for a balanced addiction curriculum

that integrates existing effective approaches with interventions that account for individual differences and values to enhance well-being through positive emotions, engagement, relationships, meaning, and achievement. We plan to continue hiring and training staff with authentic and accurate empathic styles who will foster positive expectations that clients will (eventually) thrive in recovery. Furthermore, we use extended and explicit relapse prevention strategies; encourage personal responsibility in the formation of habit, character, and destiny; strive to create a positive institution and add value to our business.

Addiction results when people try (a) to feel better (increase positive emotions), (b) to generate flow-like experiences (increase engagement), (c) to be accepted and connect with others (improve relationships), (d) to discover meaning in life (find a sense of meaning and purpose), and (e) to achieve more (increase accomplishment). Addicts are chasing the elements of the PERMA model of well-being. Positive Recovery is designed to guide clients in pursuing happiness along the right pathways: building people's abilities to not just abstain from addictive substances and/or behaviors, but to also use positive, evidence-based interventions to enhance well-being. This is the foundation of the Positive Recovery Curriculum.

References

- AA Services, (2001). *Alcoholics Anonymous: the story of how many thousands of men and women have recovered from alcoholism*. Minnesota: Hazelden.
- Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. (1978) Learned helplessness in humans: Critique and re-formulation. *Journal of Abnormal Psychology*, 87, 32–48.
- Akhtar, M., & Boniwell, I. (2010). Applying positive psychology to alcohol-misusing adolescents: A group intervention. *Groupwork*, 20, 6–31.
- American Psychiatric Association, (2013). Diagnostic and statistical manual of mental disorders fifth edition (DSM-5). *American Psychiatric Association, Arlington*.
- American Society of Addiction Medicine. (2011). Public policy statement: definition of addiction. Retrieved from <http://www.asam.org/DefinitionofAddiction-LongVersion.html>.
- Andrade, A. M., Greene, G. W., & Melanson, K. J. (2008). Eating slowly led to decreases in energy intake within meals in healthy women. *Journal of the American Dietetic Association*, 108(7), 1186-1191.
- Anton, S. D., & Miller, P. M. (2005). Do negative emotions predict alcohol consumption, saturated fat intake, and physical activity in older adults? *Behavior Modification*, 29(4), 677-688.
- Babyak, M., Blumenthal, J. A., Herman, S., Khatri, P., Doraiswamy, M., Moore, K., ... & Krishnan, K. R. (2000). Exercise treatment for major depression: maintenance of therapeutic benefit at 10 months. *Psychosomatic Medicine*, 62(5), 633-638.
- Bailey, C. (1991). *The new fit or fat*. Boston: Houghton Mifflin.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*(2), 122.

Bandura, A. (1991) Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, *50*, 248–287.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman.

Bangert-Drowns, R. L., Hurley, M. M., & Wilkinson, B. (2004). The effects of school-based writing-to-learn interventions on academic achievement: A meta-analysis. *Review of educational research*, *74*(1), 29-58.

Barrera, M. (2000). *Social support research in community psychology*. Dordrecht, Netherlands: Kluwer Academic Publishers.

Bateson, G. (2000). *Steps to an Ecology of Mind: Collected essays in anthropology, psychiatry, evolution, and epistemology*. Chicago: Chicago University Press.

Baumeister, Roy F. (2002). Yielding to temptation: Self-Control failure, impulsive purchasing and consumer behavior. *Journal of Consumer Research*, *28*, 670–76.

Baumeister, R. F., Bratslavsky, E., Finkenauer, C., & Vohs, K. D. (2001). Bad is stronger than good. *Review of General Psychology*, *5*, 323–370.

Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. T. (1998). Ego Depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology*, *74*, 1252-1265.

Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Twenge, J. M. (2005). Social exclusion impairs self-regulation. *Journal of Personality and Social Psychology*, *88*, 589-604.

- Baumeister, R. F., Gailliot, M., DeWall, C. N., & Oaten, M. (2006). Self-regulation and personality: How interventions increase regulatory success, and how depletion moderates the effects of traits on behavior. *Journal of Personality, 74*, 1773-1801.
- Baumeister, R. F. & Vohs, K. D. (2005). The Pursuit of Meaningfulness in Life. In Snyder, C. R., & Lopez, S. J. (Eds.), *Handbook of positive psychology* (p. 608 - 618). New York, NY: Oxford University Press, Inc.
- Bechara, A., Dolan, S., Denburg, N., Hindes, A., Anderson, S. W., & Nathan, P. E., (2001). Decision-making deficits, linked to a dysfunctional ventromedial prefrontal cortex, revealed in alcohol and stimulant abusers. *Neuropsychologia, 39*(4), 376-389.
- Beck, A. T. (2005). The current state of cognitive therapy: a 40-year retrospective. *Archives of General Psychiatry, 62*(9), 953.
- Begbie, H. (1909). *Twice-born men: A clinic in regeneration*. New York: Fleming H. Revell.
- Bennett, G. G., & Glasgow, R. E. (2009). The delivery of public health interventions via the Internet: actualizing their potential. *Annual review of public health, 30*, 273-292.
- Benson, H. & Stuart, E. M. (1992). *The wellness book: the comprehensive guide to maintain health and treating stress-related illness*. New York: Simon & Schuster, Inc.
- Best, D. W., Best, D. W., Ghufran, S., Best, D. W., Ghufran, S., Day, E., ... & Loaring, J. (2008). Breaking the habit: a retrospective analysis of desistance factors among formerly problematic heroin users. *Drug and Alcohol Review, 27*(6), 619-624.
- Black, P. H., & Garbutt, L. D. (2002). Stress, inflammation and cardiovascular disease. *Journal of Psychosomatics Research, 52*, 1-23.

- Blair, S. N., Kohl, H. W., Barlow, C. E., Paffenbarger, R. S., Gibbons, L. W., & Macera, C. A. (1995). Changes in physical fitness and all-cause mortality. *Jama*, *273*(14), 1093-1098.
- Blednov, Y. A., Ponomarev, I., Geil, C., Bergeson, S., Koob, G. F., & Harris, R. A. (2012). Neuroimmune regulation of alcohol consumption: behavioral validation of genes obtained from genomic studies. *Addiction Biology*, *17*(1), 108-120.
- Blumenthal, D. M., & Gold, M. S. (2010). Neurobiology of food addiction. *Current Opinion in Clinical Nutrition & Metabolic Care*, *13*(4), 359-365.
- Boehm, J. K., & Lyubomirsky, S. (2009). The promise of sustainable happiness. *Handbook of positive psychology*, 667-677.
- Bogenschutz, M. P., Geppert, C., & George, J. (2006). The Role of Twelve-Step Approaches in Dual Diagnosis Treatment and Recovery. *The American Journal on Addictions*, *15*(1), 50-60.
- Braunholtz, D. A., Edwards, S. J., & Lilford, R. J. (2001). Are randomized clinical trials good for us (in the short term)? Evidence for a "trial effect". *Journal of Clinical Epidemiology*, *54*, 217-224.
- Breslin, F. C., Zack, M., & McMain, S. (2002). An information-processing analysis of mindfulness: Implications for relapse prevention in the treatment of substance abuse. *Clinical Psychology: Science and Practice*, *9*(3), 275-299.
- Brower, K. J. (2001). Alcohol's effects on sleep in alcoholics. *Alcohol research & health: the journal of the National Institute on Alcohol Abuse and Alcoholism*, *25*(2), 110.

- Brower, K. J., & Perron, B. E. (2010). Sleep disturbance as a universal risk factor for relapse in addictions to psychoactive substances. *Medical Hypotheses*, *74*, 928-933.
- Brown, K. W., & Ryan, R. M. (2004). Fostering healthy self-regulation from within and without: A self-determination theory perspective. In P. A. Linley & S. Joseph (Eds.), *Positive psychology in practice* (pp. 105-124). Hoboken, NJ: Wiley.
- Brown, R. A., Abrantes, A. M., Read, J. P., Marcus, B. H., Jakicic, J., Strong, D. R., ... & Gordon, A. A. (2009). Aerobic Exercise for Alcohol Recovery Rationale, Program Description, and Preliminary Findings. *Behavior Modification*, *33*(2), 220-249.
- Brown, V. L., & Riley, M. A. (2005). Social support, drug use, and employment among low-income women. *The American Journal of Drug and Alcohol Abuse*, *31*(2), 203-223.
- Bryant, F. B. (2003). Savoring beliefs inventory (SBI): A scale for measuring beliefs about savoring. *Journal of Mental Health*, *12*(2), 175-196.
- Burrell, M. J. (1999): personal meaning, drug use, and addiction: an evolutionary constructivist perspective, *Journal of Constructivist Psychology*, *12*(1), 41-63.
- Cabeza, R., & Nyberg, L. (2000). Imaging cognition II: An empirical review of 275 PET and fMRI studies. *Journal of cognitive neuroscience*, *12*(1), 1-47.
- Cala, L. A., Jones, B., Burns, P., Davis, R. E., Stenhouse, N., & Mastaglia, F. L. (1983). Results of computerized tomography, psychometric testing and dietary studies in social drinkers, with emphasis on reversibility after abstinence. *Medical journal of Australia*, *2*(6), 264-269.
- Carnes, P. (2001). *Out of the shadows: Understanding sexual addiction*. Hazelden.

- Carroll, K. M., & Miller, W. R. (2006). Drawing the science together: Ten principles, ten recommendations. In K. M. Carroll & W. R. Miller (Eds.) *Rethinking substance abuse: What the science shows, and what we should do about it* (pp. 293-311). New York: Guilford Publications.
- Carroll, K. M., & Onken, L. S. (2005). Behavioral therapies for drug abuse. *American Journal of Psychiatry*, *162*, 1452-1460.
- Carter, A., & Hall, W. (2011). *Addiction neuroethics: The promises and perils of neuroscience research on addiction*. Cambridge University Press.
- Cheavens, J., Gum, A., Feldman, D. B., Michael, S. T., & Snyder, C. R. (2001). A group intervention to increase hope in community sample. In *Poster presented at the annual convention of the American Psychological Association, San Francisco*.
- Chellappa, S. L., Steiner, R., Blattner, P., Oelhafen, P., Götz, T., & Cajochen, C. (2011). Non-visual effects of light on melatonin, alertness and cognitive performance: can blue-enriched light keep us alert?. *PloS one*, *6*(1), e16429.
- Childress, A. R., Hole, A. V., Ehrman, R. N., Robbins, S. J., McLellan, A. T., & O'Brien, C. P. (1993). Cue reactivity and cue reactivity interventions in drug dependence. *NIDA Research Monograph*, *137*, 73-73.
- Chou, T. J., & Ting, C. C. (2003). The role of flow experience in cyber-game addiction. *CyberPsychology & Behavior*, *6*(6), 663-675.17-35.
- Christakis, N. A., & Fowler, J. H. (2012). Social contagion theory: examining dynamic social networks and human behavior. *Statistics in Medicine*, *32*, 556-577.

- Chwastiak, L., Ehde, D. M., Gibbons, L. E., Sullivan, M., Bowen, J. D., and Kraft, G. H. (2002). Depressive symptoms and severity of illness in multiple sclerosis: Epidemiologic study of a large community sample. *American Journal of Psychiatry*, *159*, pp. 1862–1868.
- Ciesla, J. A., & Roberts, J. E. (2007). Rumination, negative cognition, and their interactive effects on depressed mood. *Emotion*, *7*(3), 555-565.
- Cohen, S., Doyle, W. J., Alper, C. M., Janicki-Deverts, D., & Turner, R. B. (2009). Sleep habits and susceptibility to the common cold. *Archives of Internal Medicine*, *169*(1), 62-87.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, *98*(2), 310-357.
- Compton, W. C. (2005). Positive psychology interventions. In *An introduction to positive psychology* (pp. 182-195). Belmont, CA: Wadsworth.
- Conditte, M. M. & Lichtenstein, E., (1981). Self-efficacy and relapse in smoking cessation programs. *Journal of Consulting and Clinical Psychology*. *49*, 648–58.
- Cramer, S. C., Sur, M., Dobkin, B. H., O'Brien, C., Sanger, T. D., Trojanowski, J. Q., ... & Vinogradov, S. (2011). Harnessing neuroplasticity for clinical applications. *Brain*, *134*, 1591-1609.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper Perennial.
- Csikszentmihalyi, M. (2002, October 3). *Opening remarks. First International Positive Psychology Summit*. Washington, D.C.

- Danner, D. D., Snowdon, D. A., & Friesen, W. V., (2001). Positive emotions in early life and longevity: Findings from the Nun Study. *Journal of Personality and Social Psychology*, *80*, 804–813.
- Davidson, R. J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., Santorelli, S. F., ... & Sheridan, J. F. (2003). Alterations in brain and immune function produced by mindfulness meditation. *Psychosomatic Medicine*, *65*, 564-570.
- Deci, E. L., & Ryan, R. M. (2000). The " what" and " why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227-268.
- Demirakca, T., Ende, G., Kämmerer, N., Welzel-Marquez, H., Hermann, D., Heinz, A., & Mann, K. (2011). Effects of alcoholism and continued abstinence on brain volumes in both genders. *Alcoholism: Clinical and Experimental Research*, *35*, 1678-1685.
- Dennis, M. L., Foss, M. A., & Scott, C. K. (2007). An eight-year perspective on the relationship between the duration of abstinence and other aspects of recovery. *Evaluation Review*, *31*(6), 585-612.
- DiClemente, C. C. (2006). *Addiction and change: How addictions develop and addicted people recover*. New York: Guilford Press.
- Diener, E., Fujita, F., Tay, L., & Biswas-Diener, R. (2012). Purpose, mood, and pleasure in predicting satisfaction judgments. *Social Indicators Research*, *105*(3), 333-341.
- Diener, E., & Seligman, M. E. (2004). Beyond money toward an economy of well-being. *Psychological science in the public interest*, *5*(1), 1-31.

Do, R., Xie, C., Zhang, X., Männistö, S., Harald, K., Islam, S., ... & Anand, S. S. (2011). The effect of chromosome 9p21 variants on cardiovascular disease may be modified by dietary intake: evidence from a case/control and a prospective study. *PLoS medicine*, 8(10), e1001106.

Dobkin, B. H. (1993). Neuroplasticity. Key to recovery after central nervous system injury. *Western Journal of Medicine*, 159(1), 56-60.

Doweiko, H. E. (2002). *Concepts of chemical dependency*. Pacific Grove, CA: Brooks/Cole.

D'Souza, R. F., & Rodrigo, A. (2004). Spiritually augmented cognitive behavioral therapy. *Australasian Psychiatry*, 12, 148-52.

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92, 1087-1101.

Duckworth, A. L., & Quinn, P. D. (2009). Development and validation of the Short Grit Scale (GRIT-S). *Journal of Personality Assessment*, 91(2), 166-174.

Duckworth, A. L., Steen, T. A., & Seligman, M. E. (2005). Positive psychology in clinical practice. *Annual Review of Clinical Psychology*, 1, 629-651.

Duhigg, C. (2012). *The power of habit: Why we do what we do in life and business*. New York: Random House.

Duvall, J., Locke, B. Z., & Brill, L. (1963). Follow up study of narcotic drug addicts five years after hospitalization. *Public Health Reports*, 78, 185-193.

Dweck, C. (2007). *Mindset: The new Psychology of success*. New York: Ballantine.

- Dwyer, T., Ponsonby, A. L., Ukoumunne, O. C., Pezic, A., Venn, A., Dunstan, D., ... & Shaw, J. (2011). Association of change in daily step count over five years with insulin sensitivity and adiposity: Population based cohort study. *British Medical Journal*, *342*:c7249.
- Emmelkamp, P. M., & Vedel, E. (2012). *Evidence-based treatments for alcohol and drug abuse: a practitioner's guide to theory, methods, and practice*. Routledge.
- Emmons, R. A. (2003). Personal goals, life meaning, and virtue: Wellsprings of a positive life. *Flourishing: Positive psychology and the life well-lived*, 105-128.
- Emrick, C. D., Tonigan, J. S., Montgomery, H., & Little, L. (1993). Alcoholics Anonymous: What is currently known? In B. S. McCrady & W. R. Miller (Eds.), *Research on Alcoholics Anonymous: Opportunities and alternatives* (pp. 41–76). Piscataway, NJ: Rutgers Center of Alcohol Studies.
- Engel, G. L. (1977). The need for a new medical model: a challenge for biomedicine. *Science*, *196*(4286), 129-136.
- Erickson, C. K. (2007). *The science of addiction: From neurobiology to treatment*. New York: WW Norton.
- Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, *100*(3), 363-406.
- Esch, T., & Stefano, G. B. (2004). The neurobiology of pleasure, reward processes, addiction and their health implications. *Neuroendocrinology Letters*, *25*(4), 235-251.

- Estrada, C. A., Isen, A. M., & Young, M. J. (1994). Positive affect improves creative problem solving and influences reported source of practice satisfaction in physicians. *Motivation and Emotion, 18*, 285-299.
- Estruch, R., Nicolás, J. M., Villegas, E., Junqué, A., & Urbano-Márquez, A. (1993). Relationship between ethanol-related disease and nutritional status in chronically alcoholic men. *Alcohol and Alcoholism, 28*(5), 543-550.
- Febbraro, G. A. R. & Clum, G. A. (1998) Meta-analytic investigation of the effectiveness of self-regulatory components in the treatment of adult problem behaviors. *Clinical Psychology Review, 18*, 143–161.
- Ferri, M., Amato, L., & Davoli, M. (2006). Alcoholics Anonymous and other 12-step programmes for alcohol dependence. *Cochrane database of systematic reviews, 3*(2).
- Feudtner, C. (2009). The breadth of hopes. *New England Journal of Medicine, 361*, 2306-2307.
- Fillmore, M.T., (2003). Drug abuse as a problem of impaired control: Current approaches and findings. *Behavioral Cognitive Neuroscience Review, 2*, 179-197.
- Finlay, S. W. (2000). Influence of Carl Jung and William James on the origin of Alcoholics Anonymous. *Review of General Psychology, 4*(1), 3-12.
- Flynn, P. M., Joe, G. W., Broome, K. M., Simpson, D., Brown, B. S. (2003). Looking back on cocaine dependence: Reasons for recovery. *American Journal on Addictions, 12*, 398–411.

- Fowler, J. H., & Christakis, N. A. (2008). Dynamic spread of happiness in a large social network: longitudinal analysis over 20 years in the Framingham Heart Study. *BMJ: British medical journal*, 337.
- Frankl, V. E. (1978). *The unheard cry for meaning: psychotherapy and humanism*. New York: Pocket Books.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56, 218–226.
- Fredrickson, B. L. (2008). Promoting positive affect. In M. Eid & R.J. Larsen (Eds.), *The science of subjective well-being* (pp. 449–468). New York: Guilford Press.
- Fredrickson, B. (2009). *Positivity: Groundbreaking research reveals how to embrace the hidden strength of positive emotions, overcome negativity, and thrive*. New York: Random House.
- Fredrickson, B. L., & Branigan, C. (2005). Positive emotions broaden the scope of attention and thought–action repertoires. *Cognition and Emotion*, 19, 313–332.
- Fredrickson B. L. & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science*, 13, 172–175.
- Fredrickson, B. L., Mancuso, R. A., Branigan, C., & Tugade, M. M. (2000). The undoing effect of positive emotions. *Motivation and Emotion*, 24, 237–258.
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crisis? A prospective study of resilience and emotions following the

- terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, 84(2), 365-376.
- Führer, D., Zysset, S., & Stumvoll, M. (2008). Brain activity in hunger and satiety: an exploratory visually stimulated fMRI study. *Obesity*, 16(5), 945-950.
- Gable, S. L., Gonzaga, G. C., & Strachman, A. (2006). Will you be there for me when things go right? Supportive responses to positive event disclosures. *Journal of Personality and Social Psychology*, 91(5), 904-917.
- Gable, S. L., Reis, H. T., Impett, E. A., & Asher, E. R. (2004). What do you do when things go right? The intrapersonal and interpersonal benefits of sharing positive events. *Journal of Personality and Social Psychology*, 87(2), 228-245.
- Galanter, M. (2007). Spirituality and recovery in 12-step programs: An empirical model. *Journal of Substance Abuse Treatment*, 33(3), 265-272.
- Gallup, G. (2006). *The Gallup Poll: Public opinion 2006*. Wilmington, DE: Scholarly Resources.
- Gearhardt, A. N., Yokum, S., Orr, P. T., Stice, E., Corbin, W. R., & Brownell, K. D. (2011). Neural correlates of food addiction. *Archives of General Psychiatry*, 68(8), 808-816.
- Gillham, J.E., Abenavoli, R.M., Brunwasser, S.M., Reivich, K.J. & Seligman, M.E.P. (2012). Resilience education. In S. David, I. Boniwell & A. Conley Ayers (Eds.), *The Oxford Handbook of Happiness* (Section 6, Chapter 46). Oxford: Oxford University Press.
- Goldstein, R. Z. & Volkow, N. D., (2002). Drug addiction and its underlying neurobiological basis: neuroimaging evidence for the involvement of the frontal cortex. *American Journal of Psychiatry*, 159, 1642-1652.

- Goleman, D. (1995). *Emotional intelligence*. New York: Bantam Books.
- Goethe, N., Pontifex, M. B., Hillman, C., & McAuley, E. (2013). The acute effects of yoga on executive function. *Journal of Physical Activity and Health, 10*, 488-495.
- Gottman, J. M. (1994). *What predicts divorce? The relationship between marital processes and marital outcomes*. Hillsdale, NJ: Erlbaum.
- Grant, A. M. (2013). *Give and take: A revolutionary approach to success*. Viking Adult.
- Grant, L. P., Haughton, B., & Sachan, D. S. (2004). Nutrition education is positively associated with substance abuse treatment program outcomes. *Journal of the American Dietetic Association, 104*(4), 604–610.
- Harlow, L. L., Newcomb, M. D., & Bentler, P. M. (1986). Depression, self-derogation, substance use, and suicide ideation: Lack of purpose in life as a mediational factor. *Journal of Clinical Psychology, 42*(1), 5-21.
- Harms, P. D., Herian, M. N., Krasikova, D. V., Vanhove, A., Lester, P. B. (2013). The Comprehensive Soldier Fitness Program Evaluation Report #4: Evaluation of Resilience Training and Mental and Behavioral Health Outcomes. Washington DC: Department of the Army, April.
- Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: a meta-analysis. *Journal of Applied Psychology, 87*(2), 268-279.
- Hattie, J. A., Myers, J. E., & Sweeney, T. J. (2004). A factor structure of wellness: Theory, assessment, analysis, practice. *Journal of Counseling and Development, 82*, 354-364.

- Haybron, D. M. (2008). *The pursuit of unhappiness: The elusive psychology of well-being: the elusive psychology of well-being*. Oxford University Press.
- Heisel, M. J., & Flett, G. L. (2004). Purpose in life, satisfaction with life, and suicide ideation in a clinical sample. *Journal of Psychopathology and Behavioral Assessment*, 26(2), 127-135. doi:<http://dx.doi.org/10.1023/B:JOBA.0000013660.22413.e0>
- Heyman, G. M. (2013). Addiction and choice: theory and new data. *Frontiers in Psychiatry*, 4.
- Ho, V. W., Leung, K., Hsu, A., Luk, B., Lai, J., Shen, S. Y., ... & Krystal, G. (2011). A low carbohydrate, high protein diet slows tumor growth and prevents cancer initiation. *Cancer Research*, 71(13), 4484-4493.
- Humphreys, K., & Moos, R. H. (2007). Encouraging posttreatment self-help group involvement to reduce demand for continuing care services: two-year clinical and utilization outcomes. *Alcoholism: Clinical and Experimental Research*, 31(1), 64-68.
- Humphreys, K., Wing, S., McCarty, D., Chappel, J., Gallant, L., Haberle, B., ... & Weiss, R. (2004). Self-help organizations for alcohol and drug problems: Toward evidence-based practice and policy. *Journal of Substance Abuse Treatment*, 26(3), 151-158.
- Jackson, S. A., & Marsh, H. W. (1996). Development and validation of a scale to measure optimal experience: The flow state scale. *Journal of Sport & Exercise Psychology*, 18, 17-35.
- James, W. (1890). *Habit*. Holt: U.S.
- James, W. (1902), *The Varieties of religious experience*. London: Longmans, Green & Co.

- Janes, A. C., Pizzagalli, D. A., Richardt, S., de B Frederick, B., Holmes, A. J., Sousa, J., ... & Kaufman, M. J. (2010). Neural substrates of attentional bias for smoking-related cues: an fMRI study. *Neuropsychopharmacology*, *35*(12), 2339-2345.
- Jansen, A. (1998). A learning model of binge eating: Cue reactivity and cue exposure. *Behaviour Research and Therapy*, *36*(3), 257-272.
- Jarden, A. (2012). Positive Psychologists on Positive Psychology: Barbara Fredrickson, *International Journal of Wellbeing*, *2*(2), 116–118.
- Jung, C. G. (1969). Psychology and religion. In *Collected works* (2nd ed., Vol. 11, pp. 3-105). New York: Pantheon. (Original work published 1938).
- Kaskutas, L. A. (2009). Alcoholics anonymous effectiveness: Faith meets science. *Journal of Addictive Diseases*, *28*(2), 145-157.
- Kessler, R. C., Nelson, C. B., McGonagle, K. A., Edlund, M. J., Frank, R. G., & Leaf, P. J. (1996). The Epidemiology of co-occurring addictive and mental disorders: implications for prevention and service utilization. *American Journal of Orthopsychiatry*, *66*(1), 17-31.
- Kim, S., & Kim, J. (2007). Mood after various brief exercise and sport modes: Aerobics, hip-hop, ice skating, and body conditioning. *Perceptual and motor skills*, *104*(3c), 1265-1270.
- King, L. A. (2001). The health benefits of writing about life goals. *Personality and Social Psychology Bulletin*, *27*, 798-807.

Klion, R. E. (1993). Chemical dependency: A personal construct theory approach. In L. Leitner & G. Dunnett (Eds.), *Critical issues in personal construct psychotherapy* (pp. 279–302).

Malabar, FL: Krieger.

Knab, A. M., Shanely, R. A., Corbin, K. D., Jin, F., Sha, W., & Nieman, D. C. (2011). A 45-minute vigorous exercise bout increases metabolic rate for 14 hours. *Medicine and Science in Sports and Exercise*, *43*(9), 1643-1648.

Krentzman, A. R. (2013). Review of the application of positive psychology to substance use, addiction, and recovery research. *Psychology of Addictive Behaviors*, *27*(1), 151-165.

Kristenson, H., Ohlin, H., Hulten-Nosslin, M. B., Trelle, E. & Hood, B. (1983) Identification and intervention of heavy drinking in middle-aged men: results and follow-up of 24–60 months of long-term study with randomized controls. *Alcoholism: Clinical and Experimental Research*, *7*, 203–209.

Kristenson, H., Osterling, A., Nilsson, J. A. & Lindgarde, F. (2002) Prevention of alcohol-related deaths in middle-aged heavy drinkers. *Alcoholism: Clinical and Experimental Research*, *26*, 478–484.

Kubzansky, L. D., Sparrow, D., Vokonas, P., & Kawachi, I. (2001). Is the glass half empty or half full? A prospective study of optimism and coronary heart disease in the normative aging study. *Psychosomatic Medicine: Journal of Biobehavioral Medicine*, *63*(6), 910-916.

Larimer, M. E., Palmer, R. S., & Marlatt, G. A. (1999). Relapse prevention: An overview of Marlatt's cognitive-behavioral model. *Alcohol Research & Health*, *23*(2), 151-160.

- Larsen, R. J., & Sinnett, L. M. (1991). Meta-analysis of experimental manipulations: Some factors affecting the Velten mood induction procedure. *Personality and Social Psychology Bulletin*, *17*(3), 323-334.
- Laudet, A., Becker, J. B., & White, W. L. (2009). Don't wanna go through that madness no more: Quality of life satisfaction as predictor of sustained remission from illicit drug misuse. *Substance Use and Misuse*, *44*, 227-252.
- Layous, K., Chancellor, J., Lyubomirsky, S., Wang, L., & Doraiswamy, P. M. (2011). Delivering happiness: Translating positive psychology intervention research for treating major and minor depressive disorders. *The Journal of Alternative and Complementary Medicine*, *17*(8), 675-683.
- Lee, D. C., Sui, X., Artero, E. G., Lee, I. M., Church, T. S., McAuley, P. A., ... & Blair, S. N. (2011). Long-Term Effects of Changes in Cardiorespiratory Fitness and Body Mass Index on All-Cause and Cardiovascular Disease Mortality in Men. Clinical perspective the aerobics center longitudinal study. *Circulation*, *124*(23), 2483-2490.
- Le Foll, B., & Goldberg, S. R. (2005). Control of the reinforcing effects of nicotine by associated environmental stimuli in animals and humans. *Trends in pharmacological sciences*, *26*(6), 287-293.
- Levenson, R. W., Ekman, P., & Friesen, W. V. (1990). Voluntary facial action generates emotion-specific autonomic nervous system activity. *Psychophysiology*, *27*(4), 363-384.
- Levy, B.R., Slade, M. D., Kunkel, S. R., & Kasl, S.V. (2002). Longevity increased by positive self-perceptions of aging. *Journal of Personality and Social Psychology*, *83*, 261-270.

Li, C. S., Yan, P., Chao, H. A., Sinha, R., Paliwal, P., Constable, R. T., ... & Lee, T. W. (2008).

Error-specific medial cortical and subcortical activity during the stop signal task: a functional magnetic resonance imaging study. *Neuroscience*, *155*(4), 1142-1151.

Linley, P. A., Maltby, J., Wood, A. M., Osborne, G., & Hurling, R. (2009). Measuring happiness:

The higher order factor structure of subjective and psychological well-being measures. *Personality and Individual Differences*, *47*(8), 878-884.

Locke, E. A. (1996). Motivation through conscious goal-setting. *Applied & Preventive*

Psychology, *5*, 117-124.

Locke, E. A., Alavi, M., & Wagner III, J. A. (1997). Participation in decision making: An information exchange perspective.

Locke, E. A. & Latham, G. P., (2002). Building a practically useful theory of goal setting and task motivation. *American Psychologist*, *57*, 705-717.

Lopez, S. J., Snyder, C. R., Magar-Moe, J. L., Edwards, L. M., Pedrotti, J. T., Janowski, K., Pressgrove, C. (2004). Strategies for accentuating hope. In P. A. Linley, & S. Joseph (Eds.) (Ed.), *Positive psychology in practice* (pp. 388-404). Hoboken, NJ: Wiley.

Lowman, C., Allen, J., & Stout, R. L. (1996). Replication and extension of Marlatt's taxonomy of relapse precipitants: Overview of procedures and results. *Addiction*, *91*(12s1), 51-72.

Ludwig, A. M. (1986). Pavlov's "bells" and alcohol craving. *Addictive Behaviors*, *11*, 87-91.

Lustig, R. H., Schmidt, L. A., & Brindis, C. D. (2012). Public health: The toxic truth about sugar. *Nature*, *482*(7383), 27-29.

- Lykken, D., & Tellegen, A. (1996). Happiness is a stochastic phenomenon. *Psychological Science*, 7(3), 186-189.
- Lyubomirsky, S. (2008). *The how of happiness: A scientific approach to getting the life you want*. USA: Penguin Press.
- Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, 131(6), 803-855.
- MacPherson, L., Tull, M. T., Matusiewicz, A. K., Rodman, S., Strong, D. R., Kahler, C. W., . . . & Lejuez, C. W. (2010). Randomized controlled trial of behavioral activation smoking cessation treatment for smokers with elevated depressive symptoms. *Journal of Consulting and Clinical Psychology*, 78, 55–61.
- Maddux, J. E. (2009). Self-efficacy: The power of believing you can. In C. R. Snyder & S. J. Lopez (Eds.), *Oxford handbook of positive psychology, 2nd ed.* (pp. 335-343). New York: Oxford University Press.
- Maddux, J. F., & Desmond, D. P. (1986). Relapse and recovery in substance abuse careers. In Tims, F. M. & Leukefeld, C. G. (Eds.), *Relapse and Recovery in Drug Abuse* (pp. 49-72). NIDA Research Monograph 72.
- Magura, S., Staines, G. L., Blankertz, L., & Madison, E. M. (2004). The effectiveness of vocational services for substance users in treatment. *Substance Use & Misuse*, 39(13-14), 2165-2213.
- Marlatt, G. A., & Gordon, J. R. (1985). *Relapse prevention: Maintenance strategies in addictive behavior change*. New York: Guilford.

- McCrary, B. S., & Miller, W. R. (1993). *Research on Alcoholics Anonymous: Opportunities and alternatives*. Rutgers Center of Alcohol Studies.
- McGlynn, E. A., Asch, S. M., Adams, J., Keeseey, J., Hicks, J., DeCristofaro, A., & Kerr, E. A. (2003). The quality of health care delivered to adults in the United States. *New England Journal of Medicine*, *348*(26), 2635-2645.
- McHugh, R. K., Kaufman, J. S., Frost, K. H., Fitzmaurice, M. G., & Weiss, R.D. (2013). Positive affect and stress reactivity in alcohol-dependent outpatients. *Journal of the Studies on Alcohol and Drugs*, *74*, 152–157.
- McLellan, A. T., (2006). What we need is a system: creating a responsive and effective substance abuse treatment system. (pp. 275-292). In K. M. Carroll & W. R. Miller (Eds.) *Rethinking substance abuse: What the science shows and what we should do about it*. New York: Guilford.
- McLellan, A. T., Arndt, I. O., Metzger, D. S., Woody, G. E., & O'Brien, C. P. (1993). The effects of psychosocial services in substance abuse treatment. *Journal of Addictions Nursing*, *5*(2), 38-47.
- McLellan, A. T., Lewis, D. C., O'Brien, C. P., & Kleber, H. D. (2000). Drug dependence, a chronic medical illness. *JAMA: The journal of the American Medical Association*, *284*(13), 1689-1695.
- McLellan, A. T., McKay, J. R., Forman, R., Cacciola, J., & Kemp, J. (2005). Reconsidering the evaluation of addiction treatment: from retrospective follow-up to concurrent recovery monitoring. *Addiction*, *100*(4), 447-458.

Medina, J. L., Vujanovic, A. A., Smits, J. A., Irons, J. G., Zvolensky, M. J., & Bonn-Miller, M.

O. (2011). Exercise and coping-oriented alcohol use among a trauma-exposed sample.

Addictive Behaviors, 36(3), 274-277.

Mellody, P. (1988). *Roots of codependency*. Pia Mellody.

Messina, N., Wish, E., & Nemes, S. (2000). Predictors of treatment outcomes in men and women

admitted to a therapeutic community. *The American Journal of Drug and Alcohol Abuse,*

26(2), 207-227.

Miller, G. (2010). The seductive allure of behavioral epigenetics. *Science, 329*(5987), 24-27.

Miller, W. R., & Brown, S. A. (1997). Why psychologists should treat alcohol and drug

problems. *American Psychologist, 52*(12), 1269-1279.

Miller, P. G., & Miller, W. R. (2009). What should we be aiming for in the treatment of

addiction? *Addiction, 104*(5), 685-686.

Miller, W. R., Zweben, J., & Johnson, W. R. (2005). Evidence-based treatment: Why, what,

where, when, and how? *Journal of Substance Abuse Treatment, 29*(4), 267-276.

Moses, J., Steptoe, A., Mathews, A. and Edwards, S. (1989). The effects of exercise training on

mental well-being in the normal population: A controlled trial. *Journal of Psychosomatic*

Research, 33, 47-61.

Muraven, M., Collins, R. L., & Nienhaus, K. (2002). Self-control and alcohol restraint: an initial

application of the self-control strength model. *Psychology of Addictive Behaviors, 16*(2),

113-120.

- Murphy, G. E., & Wetzel, R. D. (1990). The lifetime risk of suicide in alcoholism. *Archives of General Psychiatry*, 47(4), 383-392.
- Mutrie, N., & Faulkner, G. (2004). Physical activity: Positive psychology in motion.
- National Institute on Drug Abuse. (2009). *Principles of effective treatment: A research based guide* (2nd ed.).
- Nicholson, T., Higgins, W., Turner, P., James, S., Stickle, F., & Pruitt, T. (1994). The relation between meaning in life and the occurrence of drug abuse: A retrospective study. *Psychology of Addictive Behaviors*, 8(1), 24-28.
- Niemiec, C. P., Ryan, R. M., Deci, E. L., & Williams, G. C. (2009). Aspiring to physical health: The role of aspirations for physical health in facilitating long-term tobacco abstinence. *Patient education and counseling*, 74(2), 250-257.
- Niemeic, R. M. (2013). VIA character strengths: Research and practice (The first 10 years). In H. Knoop & A. D. Fave (Eds.), *Well-being and cultures: Perspectives on positive psychology* (pp. 11-30). New York: Springer.
- Noël, X., Van der Linden, M., d'Acremont, M., Bechara, A., Dan, B., Hanak, C., & Verbanck, P. (2007). Alcohol cues increase cognitive impulsivity in individuals with alcoholism. *Psychopharmacology*, 192(2), 291-298.
- Norcross, J. C., Krebs, P. M., & Prochaska, J. O. (2011). Stages of change. *Journal of Clinical Psychology*, 67(2), 143-154.
- Nozick, R. (1974). *Anarchy, state, and utopia*. New York, NY: Basic Books.

- Öhman, A., Lundqvist, D., & Esteves, F. (2001). The face in the crowd revisited: a threat advantage with schematic stimuli. *Journal of Personality and Social Psychology*, *80*(3), 381-396.
- Orzeł-Gryglewska, J. (2010). Consequences of sleep deprivation. *International Journal Of Occupational Medicine And Environmental Health*, *23*(1), 95-114.
- Pagano, M. E., Friend, K. B., Tonigan, J. S., & Stout, R. L. (2004) Helping other alcoholics in Alcoholics Anonymous and drinking outcomes: findings from Project MATCH. *Journal of the Study on Alcoholism*, *65*, 766-773.
- Pargament, K. I. (2002). The bitter and the sweet: An evaluation of the costs and benefits of religiousness. *Psychological Inquiry*, *13*(3), 168-181.
- Pargament, K. I. (2007). *Spiritually integrated psychotherapy*. New York: Guilford.
- Park, N., & Peterson, C. (2009). Strengths of character in schools. In M.J. Furlong, R. Gilman, & E.S. Huebner (Eds.), *Handbook of positive psychology in schools*. New York: Routledge, Taylor & Francis Group.
- Park, R. J. (2005). Of the greatest possible worth: The research quarterly in historical contexts. *Research Quarterly for Exercise and Sport*, *76*(sup2), S5-S26.
- Pawelski, J. (2003). Character as ethical democracy: Definitions and measures. *Journal of College and Character*. *5*(9), 1940-1639.
- Payne, T. J., Smith, P. O., Adams, S. G., & Diefenbach, L. (2006). Pretreatment cue reactivity predicts end-of-treatment smoking. *Addictive Behaviors*, *31*(4), 702-710.

- Pelletier, L. G., Dion, S. C., Slovinec-D'Angelo, M., & Reid, R. (2004). Why do you regulate what you eat? Relationships between forms of regulation, eating behaviors, sustained dietary behavior change, and psychological adjustment. *Motivation and Emotion, 28*(3), 245-277.
- Peppercorn, J. M., Weeks, J. C., Cook, E. F., & Joffe, S. (2004). Comparison of outcomes in cancer patients treated within and outside clinical trials: conceptual framework and structured review. *Lancet, 363*, 263-270.
- Peterson, C. (2006). *A primer in positive psychology*. USA: Oxford University Press.
- Peterson, C. (2012). *Pursuing the good life: 100 Reflections on positive psychology*. USA: Oxford University Press.
- Peterson, C., & Barrett, L. C. (1987). Explanatory style and academic performance among university freshman. *Journal of Personality and Social Psychology, 53*(3), 603-607.
- Peterson, C., & Seligman, M. E. (2004). *Character strengths and virtues: A handbook and classification*. USA: Oxford University Press.
- Peterson, C., & Seligman, M. E. P. (1984). Causal explanations as a risk factor for depression: *Theory and evidence. Psychological Review, 91*(3), 347-374.
- Peterson, C., Stephens, J. P., Park, N., Lee, F., & Seligman, M. E. P. (2009). Strengths of character and work. In P. A. Linley, S. Harrington, & N. Garcea (Eds.), *Oxford handbook of positive psychology and work* (pp. 221-234). Oxford, UK: Oxford University Press.
- Phillipson, C., Allan, G., & Morgan, D. H. J. (2004). *Social networks and social exclusion: sociological and policy perspectives*. Great Britain: Ashgate Publishing Limited.

- Post, S. G. (2005). Altruism, happiness, and health: It's good to be good. *International Journal of Behavioral Medicine, 12*(2), 66-77.
- Powers, J. (2012). *When the servant becomes the master*. Las Vegas: Central Recovery Press.
- Prendergast, M. L., Podus, D., Chang, E., & Urada, D. (2002). The effectiveness of drug abuse treatment: a meta-analysis of comparison group studies. *Drug and Alcohol Dependence, 67*(1), 53-72.
- Price, R. K., Risk, N. K., & Spitznagel, E. L. (2001). Remission from drug abuse over a 25-year period: patterns of remission and treatment use. *American Journal of Public Health, 91*(7), 1107-1113.
- Puterman, E., O'Donovan, A., Adler, N. E., Tomiyama, A. J., Kemeny, M., Wolkowitz, O. M., & Epel, E. (2011). Physical activity moderates effects of stressor-induced rumination on cortisol reactivity. *Psychosomatic Medicine, 73*(7), 604-611.
- Putnam, R. (2001). Bowling alone: The collapse and revival of American community. *American Sociological Review, 71*, 353-375.
- Rath, T., (2013). *Eat, move, sleep*. Manuscript in preparation.
- Rath, T., & Conchie, B. (2009). *Strengths based leadership*. New York: Gallup Press.
- Reis, H. T., & Franks, P. (1994). The role of intimacy and social support in health outcomes: Two processes or one? *Personal Relationships, 1*, 185-197.
- Reivich, K., & Shatté, A. (2002). *The resilience factor*. New York: Broadway.
- Reivich, K. J., Seligman, M. E., & McBride, S. (2011). Master resilience training in the US Army. *American Psychologist, 66*(1), 25-34.

- Reker, G. T., Peacock, E. J., & Wong, P. T. (1987). Meaning and purpose in life and well-being: A life-span perspective. *Journal of Gerontology, 42*(1), 44-49.
- Rhodes, J. S. & Crabbe, J. C. (2005). Gene expression induced by drugs of abuse. *Current Opinion in Pharmacology, 5*(1) 26-33.
- Richards, S. P., Berrett, M. E., Hardman, R. K., & Eggett, D. L. (2006). Comparative efficacy of spirituality, cognitive, and emotional support groups for treating eating disorder inpatients. *Eating Disorders, 14*(5), 401-415.
- Robinson, T. E., & Berridge, K. C. (1993). The neural basis of drug craving: an incentive sensitization theory of addiction. *Brain Research Reviews, 18*(3), 247-291.
- Room, R., Babor, T., & Rehm, J. (2005). Alcohol and public health. *Lancet, 365*(9458), 519-530.
- Rozin, P. & Royzman, E. B. (2001). Negativity bias, negativity dominance, and contagion. *Personality and Social Psychology Review, 5*, 296–320.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78.
- Ryan, R. M., Sheldon, K. M., Kasser, T., & Deci, E. L. (1996). All goals are not created equal: An organismic perspective on the nature of goals and their regulation. In J. A. Bargh (Ed.), *The psychology of action: Linking cognition and motivation to behavior* (pp. 7-26). New York, NY: Guilford Press.
- Rust, T., Diessner, R., & Reade, L. (2009). Strengths only or strengths and relative weaknesses? A preliminary study. *The Journal of Psychology: Interdisciplinary and Applied, 143*(5), 465-476.

- Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological Inquiry*, 9(1), 1-28.
- Salovey, P., Caruso, D., & Mayer, J. D. (2004). Emotional intelligence in practice. In P. A. Linley & S. Joseph (Eds.), *Positive psychology in practice* (pp. 447-463). NJ: Wiley.
- Sbarra, D. A., Boals, A., Mason, A. E., Larson, G. M., & Mehl, M. R. (2013). Expressive writing can impede emotional recovery following marital separation. *Clinical Psychological Science*, 1(2), 120-134.
- Schierenbeck, T., Riemann, D., Berger, M., & Hornyak, M. (2008). Effect of illicit recreational drugs upon sleep: cocaine, ecstasy and marijuana. *Sleep Medicine Reviews*, 12(5), 381-389.
- Schneider, F., Elbert, T., Heimann, H., Welker, A., Stetter, F., Mattes, R., . . . Mann, K. (1993). Self-regulation of slow cortical potentials in psychiatric patients: Alcohol dependency. *Biofeedback & Self Regulation*, 18(1), 23-32.
- Schneider, S. L. (2001). In search of realistic optimism. *American Psychologist*, 56(3), 250-263.
- Scott, C. K., Foss, M. A., & Dennis, M. L. (2005). Pathways in the relapse—treatment—recovery cycle over 3 years. *Journal of Substance Abuse Treatment*, 28(2), S63-S72.
- Scott, J. C., Woods, S. P., Matt, G. E., Meyer, R. A., Heaton, R. K., Atkinson, J. H., & Grant, I. (2007). Neurocognitive effects of methamphetamine: a critical review and meta-analysis. *Neuropsychology Review*, 17(3), 275-297.
- Schulman, P. (1999). Applying Learned Optimism to Increase Sales Productivity. *Journal of Personal Selling and Sales Management*. Volume XIX, Number 1, Winter. P. 31–37.

- Schwartz, B. (2009). *The paradox of choice*. Harper Collins: New York.
- Schwartz, C., Meisenhelder, J. B., Ma, Y., & Reed, G. (2003). Altruistic social interest behaviors are associated with better mental health. *Psychosomatic Medicine*, *65*, 778–785.
- Segal, R. (2005). *James and Freud on mysticism*. Routledge: London.
- Seligman, M. E. P. (1991). *Learned optimism: How to change your mind and your life*. New York: Free Press.
- Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York: Free Press.
- Seligman, M., & Csikszentmihalyi, M. (2000). Positive psychology: an introduction. *American Psychologist*, *55*(1), 5-14.
- Seligman, M. E. P., Rashid, T., & Parks, A.C. (2006). Positive psychotherapy. *American Psychologist*, *61*, 774–788.
- Seligman, M. E. P., Reivich, K., Jaycox, L., & Gillham, J. (1995). *The optimistic child*. New York: Harper Perennial.
- Seligman, M. E. P., Steen, T.A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, *60*, 410–421.
- Sellman, D. (2010). The 10 most important things known about addiction. *Addiction*, *105*(1), 6-13.
- Sellman, J. D., Baker, M. P., Adamson, S. J., & Geering, L. G. (2007). Future of God in recovery from drug addiction. *Australian and New Zealand Journal of Psychiatry*, *41*(10), 800-808.

- Sexton, J. D., & Pennebaker, J. W. (2009). The healing powers of expressive writing. *The Psychology of Creative Writing*, 264-276.
- Sheldon, K. M., & Lyubomirsky, S. (2006). How to increase and sustain positive emotion: The effects of expressing gratitude and visualizing best possible selves. *The Journal of Positive Psychology*, 1(2), 73-82.
- Sher, L. (2012). Suicidal behavior in alcohol and drug abuse. In *Drug abuse and addiction in medical illness: Causes, consequences and treatment*. (pp. 479-487). N.Y.: Springer.
- Sherbourne, C. D., & Stewart, A. L. (1991). The MOS social support survey. *Social Science & Medicine*, 32(6), 705-714.
- Shiffman, S., Balabanis, M. H., Paty, J. A., Engberg, J., Gwaltney, C. J., Liu, K. S., ... & Paton, S. M. (2000). Dynamic effects of self-efficacy on smoking lapse and relapse. *Health Psychology*, 19(4), 315-323.
- Shiffman, S., Gwaltney, C. J., Balabanis, M. H., Liu, K. S., Paty, J. A., Kassel, J. D., ... & Gnys, M. (2002). Immediate antecedents of cigarette smoking: an analysis from ecological momentary assessment. *Journal of Abnormal Psychology*, 111(4), 531-545.
- Sibold, I. S., & Berg, K. M. (2010). Mood enhancement persists for up to 12 hours following aerobic exercise: A pilot study. *Perceptual and Motor Skills*, 111(2), 333-342.
- Sinha, R. (2001). How does stress increase risk of drug abuse and relapse?. *Psychopharmacology*, 158(4), 343-359.
- Slade, M. (2010). Mental illness and well-being: the central importance of positive psychology and recovery approaches. *BMC Health Services Research*, 10:26.

- Smith, K. P., & Christakis, N. A. (2008). Social networks and health. *Annual Review of Sociology, 34*, 405-429.
- Smyth, J. M. (1998). Written emotional expression: Effect sizes, outcome types, and moderating variables. *Journal of Consulting and Clinical Psychology, 66*, 174-184.
- Snir, R., & Harpaz, I. (2012). Beyond workaholism: Towards a general model of heavy work investment. *Human Resource Management Review, 22*(3), 232-243.
- Snyder, C. R., Cheavens, J., & Michael, S. T. (1999). Hoping. In C. R. Snyder (Ed.), *Coping: The psychology of what works* (pp. 205-231). New York: Oxford University Press.
- Snyder, C. R., Feldman, D. B., Taylor, J. D., Schroeder, L. L., & Adams III, V. (2000). The roles of hopeful thinking in preventing problems and promoting strengths. *Applied & Preventive Psychology: Current Scientific Perspectives, 9*, 249-269.
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., ... & Harney, P. (1991). The will and the ways: development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*, 570-585.
- Sorensen, S. & Garman, K. (2013). How to tackle U.S. employees' stagnating engagement. *Gallup Business Journal*, June 11. Retrieved from <http://businessjournal.gallup.com/content/162953/tackle-employees-stagnating-engagement.aspx>
- Steger, M. F. (2009). Meaning in life. In *Oxford handbook of positive psychology* (2nd ed.). (pp. 679-687). New York, NY, US: Oxford University Press.
- Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The work and meaning inventory (WAMI). *Journal of Career Assessment, 20*(3), 322-337.

- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*(1), 80-93.
- Steger, M. F., & Park, C. L. (2012). The creation of meaning following trauma: Meaning making and trajectories of distress and recovery. In *Trauma therapy in context: The science and craft of evidence-based practice*. (pp. 171-191). Washington, DC, US: American Psychological Association, Washington, DC. Doi: <http://dx.doi.org/10.1037/13746-008>
- Stephens, A., Wardle, J., & Marmot, M. (2005). Positive affect and health-related neuroendocrine, cardiovascular, and inflammatory processes. *Proceedings of the National Academy of Sciences of the United States of America, 102*(18), 6508-6512.
- Substance Abuse and Mental Health Services Administration. (2010). *Results from the 2009 National Survey on Drug Use and Health: Volume I. Summary of National Findings* (Office of Applied Studies, NSDUH Series H-38A, HHS Publication No. SMA 10 4856 Findings). Rockville, MD.
- Sweeney, P. D., Anderson, K., & Bailey, S. (1986). Attributional style in depression: A meta-analytic review. *Journal of Personality and Social Psychology, 50*, 5, 974-991.
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin, 103*, 193-210.
- Teresi, L., & Haroutunian, H. (2012). Hijacking the brain. How drug and alcohol addiction hijacks our brains. The science behind Twelve-Step recovery. *Journal of Alcohol and Drug Education, 56*(2), 88.

- Tiffany, S. T. (1990). A cognitive model of drug urges and drug-use behavior: role of automatic and nonautomatic processes. *Psychological Review*, 97(2), 147-168.
- Timko, C., Moos, R. H., Finney, J. W., & Lesar, M. D. (2000). Long-term outcomes of alcohol use disorders: Comparing untreated individuals with those in alcoholics anonymous and formal treatment. *Journal of Studies on Alcohol*, 61(4), 529-540.
- Timko, C., Sempel, J. M., & Moos, R. H. (2003). Models of standard and intensive outpatient care in substance abuse and psychiatric treatment. *Administration and Policy in Mental Health and Mental Health Services Research*, 30(5), 417-436.
- Tudor-Locke, C. (2002). Taking steps toward increased physical activity: Using pedometers to measure and motivate. *President's Council on Physical Fitness and Sports Research Digest*, Series 3, No. 17.
- Uchino, B. N., Cacioppo, J. T., & Kiecolt-Glaser, J. K. (1996). The relationship between social support and physiological processes: A review with emphasis on underlying mechanisms and implications for health. *Psychological Bulletin*, 119, 488-531.
- Ussher, M. H., Taylor, A., & Faulkner, G. (2012). Exercise interventions for smoking cessation. *Cochrane Database Syst. Rev.*, 1. Retrieved July 2013 from <http://www.michael-ussher.com/publications/2012-Ussher-Cochrane-Exercise-interventions-smoking-cessation.pdf>
- Vaillant, G. E. (1995). *The natural history of alcoholism revisited*. Cambridge: Harvard University Press.

- Vaillant, G. (2008). *Spiritual evolution: How we are wired for faith, hope, and love*. NY: Broadway Books.
- Valle, M. F., Huebner, E. S., & Suldo, S. M. (2006). An analysis of hope as a psychological strength. *Journal of School Psychology, 44*(5), 393-406. doi:10.1016/j.jsp.2006.03.005
- Van Ittersum, K., & Wansink, B. (2012). Plate size and color suggestibility: The Delboeuf illusion's bias on serving and eating behavior. *Journal of Consumer Research, 39*(2), 215-228.
- Van Someren, E. J. (2004). Sleep propensity is modulated by circadian and behavior-induced changes in cutaneous temperature. *Journal of Thermal Biology, 29*(7), 437-444.
- Veiel, H. O. F. & Baumann, U. (1992). *The many meanings of social support*. London: Hemisphere Publishing.
- Wagner, E. H., Austin, B. T., Davis, C., Hindmarsh, M., Schaefer, J. & Bonomi, A. (2001) Improving chronic illness care: Translating evidence into action. *Health Affairs, 20*, 64–78.
- Wansink, B. (2012). Package size, portion size, serving size...market size: the unconventional case for half size servings. *Marketing Science, 31*, 54-57.
- Watson, D., Clark, L., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92*(4), 548-573.

- Welberg, L. (2011). Addiction: from mechanisms to treatment. *Nature Reviews Neuroscience*, *12*, 621.
- Wells, R., Lemak, C. H., & D'Aunno, T. A. (2006). Insights from a national survey into why substance abuse treatment units add prevention and outreach services. *Substance Abuse Treatment, Prevention, and Policy*, *1*(1), 21-30.
- White, W. L. (1996). *Pathways: From the culture of addiction to the culture of recovery: a travel guide for addiction professionals*. Hazelden Publishing.
- White, W. L. (2007). Addiction recovery: Its definition and conceptual boundaries. *Journal of Substance Abuse Treatment*, *33*(3), 229-241.
- Wood, W., Quinn, J. M., & Kashy, D. A. (2002). Habits in everyday life: thought, emotion, and action. *Journal of Personality and Social Psychology*, *83*(6), 1281-1297.
- Wrzesniewski, A., Berg, J. M., & Dutton, J. E. (2010). Turn the job you have into the job you want. *Harvard Business Review*, June, 114-117.
- Wu, T. C., Scott, D., & Yang, C. C. (2013). Advanced or addicted? Exploring the relationship of recreation specialization to flow experiences and online game addiction. *Leisure Sciences*, *35*(3), 203-217.
- Yücel, M., Lubman, D. I., Solowij, N., & Brewer, W. J., (2007). Understanding drug addiction: A neuropsychological perspective. *Australian and New Zealand Journal of Psychiatry*, *41*(12), 957-968.
- Zemore, S. E. & Kaskutas, L. A. (2004). Helping, spirituality, and Alcoholics Anonymous in recovery. *Journal of the Study on Alcoholism*, *65*, 383-391.

Zschucke, E., Heinz, A., & Ströhle, A. (2012). Exercise and physical activity in the therapy of substance use disorders. *The Scientific World Journal*. Volume 2012 (2012), Article ID 901741, 19 pages. doi:10.1100/2012/901741

Zywiak, W. H., Connors, G. J., Maisto, S. A., & Westerberg, V. S. (1996). Relapse research and the Reasons for Drinking Questionnaire: A factor analysis of Marlatt's relapse taxonomy. *Addiction*, *91*(12s1), 121-130.

Gratitude

*First and foremost this Capstone is dedicated to the memory of **Anahiid Rice**. “Ana,” my Nurse Practitioner, a mother and wife, friend, and as good a clinician as they come. Quite simply, without her – no MAPP8 – she made this possible but she passed away during the last days of writing this, and her memory will live on through our work.*

Amy, my first and last wife, thank you for enduring the strain of this year like a champion. Ironically having the exact but polar opposite experience that I did (her PANAS tanked), I also could not have done this without you. I love you.

Leona, you deserve more praise than God. **LB**, if I was God and I had to create the perfect MAPP professor, assistant, or just presence, I would make a **Leona Brandwene**. Thank you, thank you, and thank you. I knew as early as the second onsite that I wanted YOU to be my advisor even though your addiction experience, gratefully, is limited. Thanks for saying yes, for helping me with my daughter, and putting up with the way I start writing by throwing everything but the sink in a paper before reducing it. You are a blessing to MAPP and the world, a rock star in the truest sense of the word. Soup for you!!! More soup!!!

Judy & James - I came to MAPP because, as I joked, I loved Marty and wanted to have his baby. After arriving, I quickly realized that you two are at least his equals in excellence - and now I realize that I want to mother your children, too. I use humor (I hope) to hide my feelings. Truth is, I am very sad that I'm done, however, I stand in admiration of two leaders Marty can't possibly replace or improve upon. **Judy**, you are a walking high set point wrapped around a brilliant clinician. If I could just breathe next to you, I would improve by osmosis. Thanks for being part of this process. Pine Forest & Wicked rule! (**James** already saw his part.)

George Vaillant, thank you for the help getting started and for the wisdom. **Dan “The Man” Lerner** - thanks! You are a magical and musical dude. Our walks and talks were so enriching, I still feel good thinking about them. But, from now on, *I* pick the restaurants! **Gloria** – thank you for being part of this process. To my AF's: **Andrew “My arms are” Soren**, **Jennifer “Sasha-Baron” Cohen**, **Katie “Did We Even Speak?” Conlon**, **Jennifer “Hoo-Haa” Marino**, **“Father” Patrick O'Brien**, and **Zach “Attack” Helms** - Thanks for the feedback, support, and calls!

This is the true joy in life, the being used for a purpose recognized by yourself as a mighty one; the being thoroughly worn out before you are thrown on the scrap heap; the being a force of Nature instead of a feverish selfish little clod of ailments and grievances complaining that the world will not devote itself to making you happy. And also the only real tragedy in life is the being used by personally minded men for purposes which you recognize to be base. All the rest is at worst mere misfortune or mortality: this alone is misery, slavery, hell on earth - George Bernard Shaw