

A Positive Psychology Framework for Adolescent Substance Use Disorder Treatment

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Abstract

Positive psychology has emerged as a comprehensive and transformative approach, highlighting concepts such as subjective well-being, psychological well-being, flourishing, happiness, and meaning. In contrast to traditional psychology, positive psychology places emphasis on the presence of well-being rather than the absence of ill-being. Substance use disorders (SUDs) and their treatment efforts have historically been implemented through deficit-based lenses and are associated with suboptimal treatment outcomes. With increasing rates of SUDs and their adverse outcomes, particularly among adolescents, there is a pressing need to address this concern and improve existing treatment models.

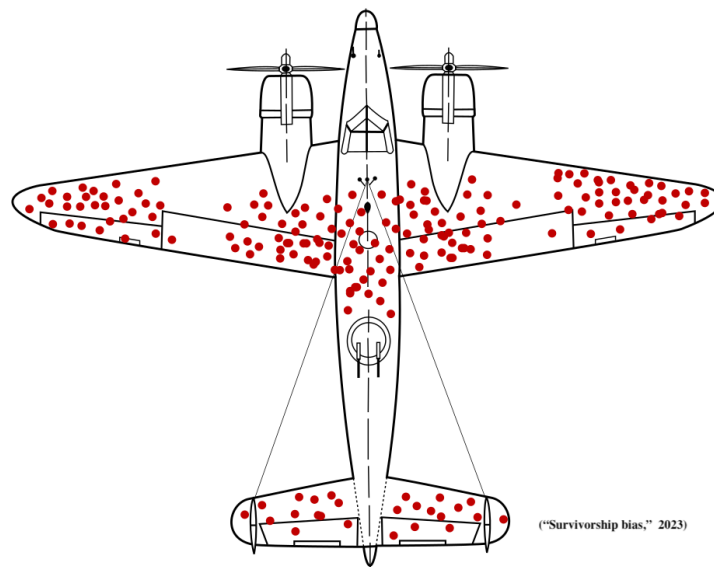
This paper aims to fill the gap in innovative and effective methodologies in this area. It pursues four primary objectives: firstly, to provide a comprehensive review of positive psychology and its core components; secondly, to explore SUDs and the key components of addiction; thirdly, to critically examine current treatment models, identifying potential sources of harm; and finally, to propose alternative treatment and intervention methodologies rooted in positive psychology.

This paper will create a treatment framework using concepts of well-being, strengths, flourishing, solution-focused approaches, empathy, and motivation. By integrating positive psychology into substance use disorder treatment, it aims to improve approaches and address the urgent need for more effective solutions to improve SUD treatment and related outcomes.

Keywords: Addiction, Adolescents, Empathy, Innovation, Positive Psychology, Strengths-Based, Treatment, Hope, Engagement, Well-Being

An Introduction to Positive Psychology

In the intro to Ellenberg's (2014) book, *How Not to Be Wrong, The Power of Mathematical Thinking*, Ellenberg tells the story of Abraham Wald and his paradigm-shifting approach to armoring fighter planes in World War II. In 1943 the American military was in need of a distinct advantage in the war effort. Often, victory in battles and wars comes down to small mathematical advantages—a few percentage points more fuel, soldiers, rations, bullets, and other strategic details. The military tasked the Statistical Research Group (SRG) which included Abraham Wald, with finding opportunities for such strategic mathematical advantages. The military provided Wald data similar to the image below, comprised of the fighter planes returning and then mapping out the exact placement of the bullet holes of the fighter planes that successfully returned from battle:



Wald's mission was to place the right amount of armor in the most strategic spots such that the planes would successfully defend against the enemy's attempts to shoot them down, but not too much as to slow the planes down, burn through excess fuel, and use up precious resources for the armor itself. In contradiction to how many viewed the assignment, Wald advised armor to be

placed where the bullet holes were not located. Wald's logic was that the military had fallen victim to a bias they were unaware of—their sample of fighter planes was comprised only of planes that had been shot but were still able to successfully stay in the air and fly back. The military thought they had a map of the problem but in actuality, they had a map of the plane's resiliency and strengths. By further reinforcing and building up the resilient areas of the fighter planes, Wald helped significantly increase the number of planes that remained airborne, returned from battle, and ultimately made a significant contribution to the allies' victory in WWII.

This problem-focused paradigm is a problem we continue to make and exacerbate within the field of addiction treatment. We believe we have an understanding of the problem and thus have gone applying heavier and heavier armor and interventions in all the wrong places, however, not only are we not helping, but we are in some ways being actively harmful to the very issues we are trying to heal. We are effectively slowing the plane down, making it more susceptible to the harms it is actively trying to avoid. Wald's WWII fighter planes represent the exact change in our lens for viewing the world that Positive Psychology seeks to provide; it is a change in thinking from a deficit-based perspective into a focus on and study of the strengths, resiliency factors, wellbeing, and flourishing, of individuals, groups, and communities (Seligman & Csikszentmihalyi, 2000). Positive Psychology is consistent with a solution focused lens, which seeks to identify and expand what is right and already working instead of minimizing or removing what is bad, wrong, or not working (De Shazer et al., 2021).

Existing concepts of integration of positive psychology into mental health treatment have been outlined through the approach of *Positive Psychotherapy* (Seligman, Rashid, & Parks, 2006). Within this model there is a critical emphasis on *therapeutic alliance* (rapport) and *empathy* (Seligman, 2011); whereas many existing models focus on problem identification and

punishment-based behavior modification. Seligman and Csikszentmihalyi (2000) argue that psychology has historically excessively fixated on a deficit-based lens and model, relegating individuals to diagnoses and prognoses centered around suffering and ill-being. They firmly believe that an exclusive emphasis on pathology hampers our understanding of the diverse aspects of well-being and the elements that contribute to a truly fulfilling life (Seligman & Csikszentmihalyi, 2000, pg. 5). Seligman and Csikszentmihalyi (2000) emphasize that we must continue to research and intervene on factors that allow individuals and communities at large to thrive and *flourish*, while switching our entire focus from ill-being to that of well-being. Through these lenses an emphasis on problems and illness will contribute only to exacerbation of those very issues. But first, it is important to operationalize our understanding of “well-being”.

Subjective Well-Being

Well-being is a concept that is often associated with the concept of *happiness*. However, it has been argued that the notion that *being happy* and *feeling happy* are two distinct concepts, and that neither of which are synonymous with *pleasure* (Melchert, 2002). Diener (1984) established a measure of subjective well-being, focused on positive emotional experiences in life as influenced by cognitive judgement and reactions of affect. Through Diener’s (1984) definition of SWB, three core components were detailed:

- (1) Happiness
- (2) Life Satisfaction, and
- (3) Positive Affect

Diener (1984) emphasizes the importance of the individualized *subjectivity* of the experience, measurement of multiple and holistic life areas for assessment, and again an emphasis on the presence of positive measures (not the absence of negative ones).

Diener (1984) published a review and evaluation of the various happiness/well-being measures available and the evolution of their underlying theories, introducing two major *telic theories* (end goals): Hedonic and Eudemonic. Although there is overlap between these two theories to happiness and well-being, they have important distinctions (Baumeister et al., 2013). These two perspectives on well-being can be generalized as follows: (1) Hedonic: happiness as the point of emphasis with a focus on pleasure attainment and pain avoidance (2) Eudaimonic: purpose, meaning, and self-realization of an individual (Ryan & Deci, 2001). Modern approaches and concepts such as *psychological richness* strive to reduce the dichotomy between hedonic and eudaimonic theories and lenses (Westgate & Oishi, 2022).

Lyubomirsky and colleagues (2005) agree that happiness and subjective well-being are critical to the enhancement of mental (and even physical) health in individuals. Lyubomirsky et al.'s (2005) definition of happiness is consistent with the works of Diener (1984) and also emphasized three core components:

- (1) Subjective Well-Being (SWB) and life satisfaction
- (2) The presence of positive affect, and
- (3) The absence of negative affect (again re-emphasizing that merely absence of negative alone does not imply the presence of positive)

Although Lyubomirsky still emphasized SWB and the presence of positive affect, she did note that the absence of negative affect was a component of happiness, but not enough by itself.

Psychological Well-Being

Measures of Psychological Well-Being (PWB), a related but distinct concept, have also become more commonplace. Foundational work in this domain includes the proposal from Jahoda (1958) defining mental health through inclusion of positive states. Jahoda (1958, pg. 23)

created a definition of “ideal mental health” that was inclusive of six core components or conditions:

- (1) Attitudes of an individual toward his own self - Positive and efficient self-perception: accurate understanding of one’s strengths, limitations, and the belief that the positive outweigh the negative.
- (2) Self-actualization - Motivation and internal belief for personal growth, use of strength-abilities, and future orientation
- (3) Integration - a unified outlook on life that promotes resistance to stress and cognitive adaptability.
- (4) Autonomy: self-determination, independence, and some degree of nonconformity to the norm.
- (5) Perception of Reality: a perception of reality free from distortion or negative filters. A presence of empathy.
- (6) Environmental Mastery - personal and interpersonal achievement, adaptability, and problem-solving skills.

From here, Ryff (1989) developed a model of Psychological Well-Being (PWB), which emphasized the theoretical lenses of Greek philosophy and psychological theories rooted in the humanities. Tay et al. (2018) have expanded upon this very premise finding brilliant correlations and connections between human flourishing and the humanities. Through this lens of PWB, Ryff (1989) proposed a six-dimension model of well-being.

- (1) Autonomy
- (2) Environmental Mastery
- (3) Positive Relations with Others

- (4) Self-Acceptance (redefinition of “self-actualization”)
- (5) Purpose in Life, and
- (6) Personal Growth

As adapted from Jahoda (1958), (1) *Autonomy* and (2) *Environmental Mastery* are utilized again, but environmental mastery now has an emphasis of external interaction and personal growth and achievement is defined through a new measure (6) *Personal Growth* and interpersonal relationships and achievement is measured as (3) *Positive Relationships with Others*. Self-actualization is re-labeled (not redefined) as (4) *Self-Acceptance*. A new measure of (5) *Purpose in life* is offered with an emphasis on meaning, intention, and life-direction.

In an attempt to effectively validate a measure of psychological well-being, Su, Tay, and Diener (2014) redefined psychological well-being and created the following 7 dimensions:

- (1) Subjective well-being (SWB) in the form of high life satisfaction and positive feelings
- (2) Supportive and enriching relationships
- (3) Interest and engagement in daily activities
- (4) Meaning and purpose in life,
- (5) A sense of mastery and accomplishment,
- (6) Feelings of control and autonomy, and
- (7) Optimism.

We see a continued theme, beyond the SWB model, with PWB that emphasizes purpose, meaning, autonomy, achievement, growth, and other related concepts alongside an individual’s view of themselves and the world around them (i.e., perspective).

Two-Continua Model

Westerhof and Keyes (2009) propose a two continua model asserting that mental health and mental illness are related constructs, but independent. This independence stated by Westerhof and Keyes (2009) reaffirms that the absence of ill-being does not imply the presence or achievement of well-being, and this has remained consistent in the definitions of SWB and PWB previously detailed. With an emphasis on *positive mental health*, Westerhof and Keyes (2009) utilize three main components in their definition:

- (1) Feelings of happiness and satisfaction with life (emotional well-being)
- (2) Positive individual functioning in terms of self-realization (psychological well-being), and
- (3) Positive societal functioning in terms of being of social value (social well-being)

Authentic Happiness and PERMA

A more contemporary theory of well-being is established through the work of Dr. Seligman. Seligman (2002) originally theorized that there were three “paths” to happiness:

- (1) The Pleasant Life – positive feelings and experiences.
- (2) The Good Life – engagement and “flow” with one’s strengths in activities
- (3) The Meaningful Life – sense of belonging, purpose, and beliefs

From here Seligman (2011) expanded *meaning* to include relationships as well as accomplishments in a more comprehensive model of well-being. From this redefinition he crafted a three-part criterium that well-being elements were required to meet.

- (1) The element contributes to well-being.
- (2) Many people pursue the element for its own sake, not merely to get any of the other elements.

- (3) The element is defined and measured independently of the other elements (exclusivity).

Built upon the theories of *Authentic Happiness* and well-being criterion, a model known as PERMA was developed consisting of five distinct and measurable elements:

P – Positive Emotion – *variety of positive emotions (i.e., pride, awe, joy, happiness...etc.)*

E – Engagement – *Activities of one’s interests and passions, most achieved in a state of flow. Balance of challenge and skillset.*

R – Relationships – *Inclusive of leisure, vocational, romantic...etc. Positivity, and its relationship, with these relationships.*

M – Meaning – *Purpose, the “why”. A driving force for action and effort.*

A – Accomplishment – *Mastery, achievement, and success across contexts.*

At first glance it is apparent that this model captures many of the major themes throughout the various models of well-being reviewed thus far. Additionally, Seligman (2011) asserts that this model of well-being effectively integrates *both* hedonia (SWB, positive emotional states, pleasure...etc.) as well as eudaimonia (PWB, meaning, achievement...etc.). The intent here was not to establish a new measure of SWB, but rather define the core elements and makeup of what creates and contributes to SWB and flourishing. Goodman et al. (2017) found a strong latent correlation ($r = 0.98$) between SWB and the PERMA model, as well as a moderately high correlation between SWB and each of the PERMA elements individually.

Character Strengths

When we discuss concepts of engagement and use of *strengths* (or being “strengths-based”), it is important we utilize a standardized and specified methodology for identification

and labeling of strengths (Niemiec & Pearce, 2021). Peterson and Seligman (2004) developed a categorization of a scientifically based theoretical framework for measurement and classification of strengths and virtues of individuals. These strengths and virtues lead to self-fulfillment, well-being, are habitual, and observable (Peterson & Seligman, 2004). The virtue categories, with their correlated strengths, are as follows:

- 1) Wisdom and Knowledge
 - a. Creativity
 - b. Curiosity
 - c. Open-Mindedness
 - d. Love of Learning
 - e. Perspective
- 2) Courage
 - a. Bravery
 - b. Persistence
 - c. Integrity
 - d. Zest
- 3) Humanity
 - a. Love
 - b. Kindness
 - c. Social Intelligence
- 4) Justice
 - a. Teamwork
 - b. Fairness

- c. Leadership
- 5) Temperance
- a. Forgiveness
 - b. Humility
 - c. Prudence
 - d. Self Control
- 6) Transcendence
- a. Appreciation of Beauty and Excellence
 - b. Gratitude
 - c. Hope
 - d. Humor
 - e. Spirituality

Defining character strengths as “positive traits reflected in thoughts, feelings, and behaviors” (pg. 603) Park et al. (2004) review not only the correlations of specific character strength expressions to well-being and a centralized component of positive psychology as a whole and all that it hopes to encompass and represent. Each individual possesses 24 unique character strengths, with their top five representing their *signature strengths* (Seligman, 2002).

Positive Psychology: In Conclusion

Positive psychology is the “science of positive subjective experience” (Seligman & Csikszentmihalyi, 2000, pg. 5). With an emphasis on the utilizations of character strengths to create instances of flourishing and well-being, positive psychology offers a new perspective on treating pathology (Seligman & Csikszentmihalyi, 2000). Although the ultimate goal is a positive outcome within traditional treatment models for mental health, the means are often focused on

the negative and wrong (i.e., the diagnoses and the symptoms) in their approach. This deficit based lens leaves individuals with an absolute best outcome of being “not ill”. Su, Tay, and Diener (2014) share a similar concern stating that even though the field has begun to shift some emphasis to positive functioning “the focus of assessments in health and medical settings remains on ill-being” (pg. 252). We have made a poor assumption that the absence of ill-being equates to well-being, but these are by no means synonymous. We see industry trends that appear to grasp and apply these concepts, but they face great challenges in lagging progress, effective implementation of research, and general stigma around mental health. A field plagued with these negative approaches and substantially lacking in positive psychology integration is that of substance use disorders.

Defining Addiction

“Substance Use Disorders” are the standardized criterion-based diagnostic label for addiction and are specified by the specific substance type (i.e., cocaine, marijuana, alcohol, opioids...etc., American Psychiatric Association, 2022). Critical to this positive psychology integration proposal is a working definition of *addiction*. Defining addiction as a *chronically relapsing disorder*, Koob and Volkow (2010) characterize addiction by its three components:

- (1) Compulsion to seek and take the drug
- (2) Loss of control in limiting intake
- (3) Emergence of negative emotional state

Viewed as a “chronic disease”, the American Society of Addiction Medicine (2011) offers the following condensed definition:

Addiction is a primary, chronic disease of brain reward, motivation, memory and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological,

social and spiritual manifestations. This is reflected in an individual pathologically pursuing reward and/or relief by substance use and other behaviors.

Addiction is characterized by inability to consistently abstain, impairment in behavioral control, craving, diminished recognition of significant problems with one's behaviors and interpersonal relationships, and a dysfunctional emotional response. Like other chronic diseases, addiction often involves cycles of relapse and remission. Without treatment or engagement in recovery activities, addiction is progressive and can result in disability or premature death. (pg. 1)

Addiction is a brain disease, and a variety of the proposed criticisms of the treatment industry stem from a critical lack of understanding that fact. Failure to understand and apply the knowledge of the related brain functioning and changes in neurological processes that take place during active addiction leads to ineffective interventions and perpetuates stigma. Additionally, many positive psychology principles stem from hedonic pleasures, reward systems within the brain, and principles of motivation. Assuming neurotypical brain functioning, or not understanding the key changes in the brain, may serve as actively harmful to patients even in a positive psychology model without these considerations.

Reward System Hijacking and Hypofrontality

Key areas of the brain become “hijacked” by substance use and the reward system will no longer operate as normal during active addiction (HHS, 2018). The pursuit and use of continued substances becomes *involuntary* and is triggered by the substances providing rewards not directly tied to a biological function (HHS, 2018; Lewis et al., 2021). Since drugs act directly on the dopamine /reward system we see substances take over effects such as driving attention, arousal, conditioned learning, and even motivation (Volkow et al., 2004). The chronic usage of various

substances with addiction potential leads to a wide range of enduring changes in the brain's reward and motor systems, which are believed to contribute to long-lasting consequences linked to drug consumption and misuse. These consequences encompass tolerance, sensitization, dependence, and addiction (Goeders, 2003). Executive function is significantly impaired (ASAM, 2011) and prolonged substance use can cause dampened activity and functioning of one's prefrontal cortex (Sun & Rebec, 2006), the center for logic and reasoning within the brain.

Key decision-making areas of the brain are affected during substance use and addiction (Fowler et al., 2007). The very regions necessary to “make the right decisions” or think through the consequences of one's “choices” pertaining to continued use alter as the continued use of substances disrupts significant neurological processes relating to the prefrontal cortex and related circuitry. One main impact outlined by Goldstein & Volkow, (2011) is the hypoactive effects on the prefrontal cortex (commonly referred to as *Hypofrontality*). This **inability** to use one's prefrontal cortex results in continued drug seeking behaviors, continued (and often exacerbated) substance use, as well as a variety of anti-social, “criminal”, and other disadvantageous behaviors. The misconception that one can resolve their substance use issues by ‘thinking through their consequences’ or ‘making better choices’ is asking someone to utilize a part of the brain that is no longer fully active or functioning. It is imperative that those working with addiction understand there becomes an *inability* to use one's prefrontal cortex as normal, not an *unwillingness* to make “good” or “rational” choices by the individual.

Research on prolonged substance use has demonstrated that while the prefrontal cortex will be altered via induction of this hypofunction, when it comes to drug-seeking behaviors, a significant increase in response and functionality exists (Sun & Rebec, 2006). This means that addiction causes the part of the brain that can use logic, reasoning, and consequential thinking to

turn off in a means that would promote an individual electing to discontinue use, consider consequences, or act “rationally”; but can selectively turn the system back on with the intent of using it for pursuit of continued use.

The reward system is affected in a multitude of ways that keep individuals stuck in active addiction and continued substance use. As a malicious example, one study by Kim et al. (2017) demonstrated that addiction was able to reduce the reward response and positive emotions felt by mothers as they looked at their own infant child’s face. The idea that one should “be a responsible parent and stop” is not so straightforward as it might appear to the outsider looking in and judging. Additionally, Zilverstand et al., (2018) propose and review The Impaired Response Inhibition and Salience Attribution Model (iRISA) causing impairment to responses and inhibition as well as an ability to attribute salience when taking and pursuing drugs. They state that those with active substance use disorders experience decreased network activity responsible for reward, habit, salience, executive memory, and self-direction when cues for drug use and seeking become present as well as decision making, inhibitory control, and social and emotional processing (Zilverstand et al., 2018). The substances truly do hijack the brain to function to meet the outcome of continued use and continued relapse. Interventions and ideologies rooted in expectations for individuals to simply make more rational choices, think through their consequences, or not anticipate strong desires and urges to continue use are not taking into consideration everything we know about brain functioning during substance use.

Anhedonia, a Loss of Pleasure

Allostasis is the body’s attempt to promote stability through change, and continued substance use impacts this response in several key ways (George, Moal, & Koob; 2012). *Allostasis* has significant implications for both the effects of addiction and the associated

psychopathology (2004). One critical change is that the normal homeostasis level of hedonic (pleasure) response becomes muted and continues to decline throughout addiction; thus impairing an individual's overall mood, and the limits on the positive affect even possible (Koob & Moal, 2004). This lowers the ceiling of possible positive affect. This effect is so powerful it can produce what we observe as *anhedonia* (Destoop et al., 2019; Koob & Moal, 2005; Volkow & Morales, 2015). Anhedonia is a state in which the ceiling becomes so low, an individual loses the ability to perceive *any* pleasure at all (NIDA, 2014). This can make an individual's experience without drugs, and in early recovery efforts, quite miserable. Normal activities that would trigger a pleasure response will not do so as expected, and motivation is directly affected as a result.

In addition to this reduced capacity to experience pleasure, the physical withdrawal associated with cessation of substance use can engender heightened stress, dysphoria, pain, depression, anxiety, and panic attacks (Koob et al., 2001). The withdrawal period following substance cessation carries a risk of fatal consequences (Gupta et al., 2023). In addition to requiring medical management for these risks, individuals undergoing withdrawal experience intense negative emotions and strong cravings as well (George et al., 2012; Goeders, 2003). Understanding the anticipated emotional affect and other related challenges of someone in early remission from substance use is critical to establishing accurate empathy and fostering effective interventions.

Stress and Chronic Relapse Risk

For those in recovery, stress serves as a, if not the, leading barrier to continued addiction remission, as it is associated with increased cravings, drug seeking behaviors, and susceptibility to relapse (Sinha, 2000; Sinha, 2007). Lazarus and Folkman (1984) describe stress as a multi-

step process that includes perceiving, interpreting, responding, and adapting to events that are harmful, threatening, or challenging. It revolves around the connection between an individual and their environment, where the events are seen as personally important and requiring coping resources that may be strained or insufficient (Lazarus and Folkman 1984). Koob and Schulkin, (2019) view stress as a key component throughout all phases of addiction as a part of the allostatic model (mind and body's attempts to regulate through change). This allostatic dysregulation contributes to withdrawal, demotivation, and negative emotional states (Koob & Moal, 2005). These effects persist into longer term abstinence in which allostatic dysregulation also contributes to drug priming, drug cues, and acute stressors gaining increased potency, thus triggering drug-seeking behavior (Koob & Moal, 2005). This allostasis and craving combination effect make individuals exceptionally prone to relapse, even long after substance use has been stopped (Koob & Moal, 2001). A failure to consider this risk has enabled programs and providers to create stressful environments and intervention tactics in which recovery is supposed to occur. Without an understanding of the increased relapse risk with stress, we may be again adding armor in the wrong places and worsening the condition we are attempting to treat.

Heightened Risks in Adolescence

The adolescent brain is extremely susceptible to addiction for a multitude of reasons. Firstly, there are key changes and developments in neurological structures and processes as it pertains to reward response, motivation systems, stress, and cognitive control systems (Hammond et al., 2014). Secondly, the adolescent brain is highly adaptable and neuroplastic (Perica et al., 2022), meaning it can more easily restructure and reorganize itself, systems, and connections. This makes it highly susceptible to the “hijacking” of key brain systems in active addiction and substance use previously reviewed.

Adolescent brains by (neurotypical) default lack overall control functions in addition to neurological systems resulting in inconsistent and incorrect anticipation of rewards and risks (Van Leijenhorst, 2009). Other relevant dynamics include an adolescent phenotype with two main effects: (1) *increased reward response*, making the reward receipt from substance use higher, and the adolescent more likely to seek out pleasurable stimuli, and (2) *attenuated aversions*, which effectively dampen or mute out the aversive affects caused by substances of use and misuse (such as family conflict, failing grades, legal interventions, or even an overdose; Doremus-Fitzwater & Spear, 2016). The increased reward response is highly susceptible to substance use, which acts directly on reward systems and causes intense pleasure producing experiences of euphoria for individuals (HHS, 2016). We often think of these attenuated aversions through the lens of *resiliency*, that is, an adolescent's ability to 'bounce back' after significant trauma, hardship, or other obstacles. While often discussed as a "protective factor" against adverse outcomes, it can also function as a "risk factor" of high-risk behavior. For instance, the adolescent's attenuated aversion could make the consequences of an action seem less important, impactful, or meaningful, thus resulting in an adolescent being more likely to continue engagement in a behavior or pattern despite the negative outcomes (i.e., "it's not so bad"). Adolescents' increased reward response and aversion attenuation when compared to adults makes them highly susceptible to both initial substance use and continued addiction (Spear, 2011). The American Society of Addiction Medicine (ASAM, 2011) widely acknowledges that in addition to these developmental risk factors, adolescents are also more likely to relapse if they are exposed to high levels of stress. It is critical to understand (and apply the knowledge in practice) the impairment that is taking place within the brain caused by substance use, and the disadvantage an otherwise "healthy" adolescent brain unaffected by

substance use would be by default as its natural developmental state is prone to impulsivity, high risk behaviors, temporal discounting, and consequential thinking (Hartley & Somerville, 2015). Posing further challenges to the recovery process from substance use disorders, adolescence is an age range that struggles with setting and striving for challenging goals, especially when they require sustained effort and discipline (Duckworth et al., 2011).

In addition to an adolescent's response to rewards, the *timing* of rewards also serves as an important consideration. Adolescents are more strongly affected by *temporal discounting*, a phenomenon causing a higher value on immediate rewards over future rewards (Hershfield, Wimmer, & Knutson, 2008). This has important implications for substance use disorder treatment in which an individual in early stages may be facing a substantial number of negative experiences early on via withdrawals, anhedonia, and the various other manifestations of addiction; while many of the positive emotions, goals, or even the return of normalized brain functioning may be a *delayed gratification*. An adolescent will perceive future rewards as less significant or valuable as a result.

Problems with Traditional and Current Treatment Models

Viewing Substance Use as a Moral Failing

Before we had access to neuroimaging and brain science to the extent we have to today, many were left baffled by addiction and its associated behaviors and patterns. In an effort to explain the compulsive, drug seeking, and related behaviors in certain individuals not experienced by others, the etiology of the *moral model* was introduced as an explanation that viewed individuals with substance use disorders as lacking *values*, containing *weakness* and *character defects*, and ultimately lacking *morality* (Brust, 2004; Doweiko, 2018). Despite well over half a century of research and efforts that demonstrate that substance use disorders and their

associated patterns of thinking and behavior should be viewed through a medical/disease-based lens (Jellinek, 1960), the prevalence of the moral model is still widely accepted by the public and still commonly incorporated into our addiction treatment models (Brust, 2004).

The very language we use to discuss basic components of addiction assessment and treatment is problem-focused and charged with stigma. For instance, when a urine sample for drug testing reveals a substance is present we don't call them "positive" as is standard with other testing, we say things the test was "dirty" (NIDA, 2021). Individuals are referred to as "junkies", "dope-heads", and words like "use" are changed to "abuse" within the context of substances (NIDA, 2021). These biases extend to the very practitioners licensed to help treat substance use disorders as well. The strength of the therapeutic alliance between the clinician and the patient can be negatively influenced by the problem type of the patient (i.e., substance use disorder vs. general mental health diagnoses; McLeod, 2011).

Additionally, there has been an overall lack of emphasis and interest from the clinical field in substance use disorder treatment, affecting both individual participation and systemic integration of substance use services into mental health (Najavits et al., 2000). Some states have gone as far to take this outdated and misinformed understanding of addiction and legislate the requirement of problem-focused approaches to the substance use disorders. Below are excerpts from the currently active Texas Administrative Code (2004) pertaining to best practices for adolescent substance use treatment centers (despite being in complete contradiction to the field's current research and understanding of the neuroscience of addiction and effective treatment of substance use and related mental health disorders):

"Intended to treat criminal and antisocial behaviors"

"The social and psychological characteristics of the client must be changed to one of 'right living' and the client must adopt appropriate morals and values"

"Confrontation amongst clients"

"Counselors act primarily as role models and rational authorities rather than as counselors or therapists"

(Texas Administrative Code, 2004)

Within these regulations we see guidelines and requirements that are not only woefully outdated but actively harmful to the ethical and effective treatment of substance use and mental health concerns. For example, the approach outlined in the TAC actively promote stress, which is a core identified relapse risk, via “confrontation”. These guidelines seem to propose models in direct contradiction to the disease model, understanding of stress, or concepts of empathy and alliance. Treatment approaches based on ill-being, the moral model, and substance use as (bad) choice significantly contribute to the stigmatization of addiction and mental health concerns and their assumptions disregard the chronic relapsing nature of addiction and substance use disorders (Frank & Nagel, 2017), resulting in at best hindering and at worst actively harming treatment and recovery efforts at the critical stages of seeking treatment undergoing treatment, and aftercare and ongoing maintenance.

Clinician Bias

The influence of confirmation bias is both observable and can be quite harmful; in clinical practice this bias can influence a clinician’s evaluation, outcomes, assessment, and even court testimony (Larivée et al., 2018). Despite our *intentions*, individuals will *automatically* filter information to support their own beliefs and viewpoints, rather than remaining neutral or unbiased to the patient and details provided (Larivée et al., 2018). Rosenhan’s (1974) study

revealed just how powerful this bias can be in a 1974 study utilizing acute psychiatric care facilities. Rosenhan found that individuals with no symptoms of any mental health concerns or issues remained held in acute psychiatric care, some for weeks on end, due to a preconceived bias obtained at initial onset of assessment that seemed to block out any and all clinical judgement or effective evaluation of patients across staff, shifts, and even state lines (Rosenhan, 1974). This demonstrated that practitioners can become unable to see current progress or conditions once a predetermined assessment has been made or bias exists. This bias at the clinician level is known as *countertransference*, an ongoing risk with known negative therapeutic impacts harming the treatment process in a variety of ways (Abargil & Tishby, 2022). *Countertransference* is defined by Heimann (1950) as the conscious and unconscious reactions of the therapist during treatment.

When we have constructed a diagnostic framework rooted in illness and disease, illness and disease is what will find. Perpetuated by stigma, substance use disorders become prime territory for biased assessment and intervention. Comprehensive assessment tools are used throughout psychology and substance use disorder treatment (Doweiko, 2018) that overwhelmingly focus on problem identification, diagnostic labeling, and categorization of negative symptoms. The impact of labels is not to be ignored, and especially towards vulnerable adolescents. It is noted that diagnosing someone in adolescence can have substantial risks and cause harm to an individual's self-concept and social identity (O'Connor et al., 2018). O'Connor et al. (2018) also discuss that adolescents can experience decreased self-esteem, self-devaluation, social alienation, and stigmatization. Rosenfield (1997) reviews labeling theory and the assertion that labeling mental illness and stigma can contribute to further harm of one's self-identify, self-concept, and overall well-being.

Clinician Education

Roughly half of all states in the US do not require a college degree for obtainment of a substance use counseling credential/license (Kerwin et al., 2006). Whereas 98% of all states require (at minimum) a master's degree level education for mental health counseling (Kerwin et al., 2006). These lowered standard for substance use credentialing resulted from clinical shortages in the 1940's, alongside a belief that addictions could best be treated by those having personally recovered from addiction, essentially creating a *shortcut* for other clinical credentialing practices (Doukas & Cullen, 2009). Kerwin et al. (2006) reviewed the separation of SUD and mental health treatment, citing a history of mental health practitioners with disinterest in addictions, and many individuals having personally suffered from SUDs entering the field as practitioners themselves after their own treatment/recovery experiences and efforts. This creates a unique practitioner population, with its own benefits and risks.

In line with the prevailing negative attitudes and stigma towards addiction, there is a noticeable division based on the willingness of practitioners to treat it and the requirements for their credentials. This division persists in trying to distinguish substance use disorders (SUDs) from other, more commonly recognized mental health conditions. This separation is incredibly dangerous. Of all adults with a substance use disorder, approximately half have a co-occurring mental health diagnosis (SAMHSA, 2022b). For instance, adolescents with an SUD face a prevalence of approximately 50% comorbidity (SAMHSA, 2022b). Additionally, this assumes that the facilities responsible for making the SUD diagnosis employ master's level clinicians who are qualified to diagnose co-occurring disorders. It's worth noting that the number of patients with co-occurring disorders might be much higher than reported as a result. For instance, Mullen (2018) highlights that specifically major depressive disorders in general often are

underdiagnosed. Supportive of this assertion, research revealed that co-occurring diagnosis rates affect nearly two thirds of all adolescent patients across the US (Hser et al., 2001). One study by Lichtenstein et al. (2009) revealed that substance use treatment providers specific to adolescents had a rate of co-occurring patients of 93%. Despite this *nearly all* figure, as few as 23% used a formal assessment practice and only 10% had any form of protocol for treating co-occurrence (Lichtenstein et al., 2009). This gap speaks to a tremendous area of concern for effective engagement, with a foundation of treatment utilizing counselors without the professional training or education to effectively treat anywhere from 50% to 93% of the very adolescent population they set out to serve.

In addition to co-occurring disorders, trauma is also shown to be highly prevalent with this population. A study by Khoury et al., (2010) reviewed that 59% of individuals with trauma subsequently develop a substance use disorder, and within their own sample as many as 45% had a *lifetime* dependence on a particular substance. Clinical training and associated skills are imperative. Valle (1981) demonstrated that the clinician's interpersonal skillset was the predominant determinant of clinical outcomes with substance use disorders, so much so that low interpersonal skill counselors had multiple-relapse rates over five times more frequently than highly skilled interpersonal counselors. Valle (1981) found that interpersonal skills correlate more accurately to patient success than did clinical background or counselor characteristics, including personal experience with substance use disorders. Despite the known positive impacts of empathy on client outcomes, Horn-Charnesky (2019) reviews a comprehensive collection of research demonstrating that it remains neglected in clinical training and education of counselors.

Reliance on Personal Experience

Utilizing the Affective and Cognitive Measure of Empathy (Vachon & Lynam, 2016), Horn-Charnesky (2019) assessed clinician empathy across varying levels of education for clinicians with and without personal experience with addiction and recovery. Horn-Charnesky (2019) found that there was no significant correlation between one's personal experience with addiction to their perceived empathy, but that higher levels of education were associated with higher levels of empathy assessments. This pointed again to the vital need for appropriate education, and the potential misinformed approach that *personal experience* may not be appropriate to prioritize above training in evidence-based practices. Despite this, White & Sanders (2008) share a common belief with the SUD treatment field that experiential knowledge and expertise simply cannot be acquired through a university and must come from first-hand experience; differentiating that personal experience in recovery is not a mandatory means of achievement, and that close proximity learning or direct participation in the addiction or recovery of another individual can be sufficient (yet essential). There may not be sufficient research to support treatment providers with personal experience benefit patient outcomes, yet this serves as a standard practice in the field.

Within personal experience models, overidentification and countertransference are of great concern. Ham et al., (2013) warns of a commonplace self-discloser practice from those with personal experience in recovery; these practices pose risk for patients and have ethical implications when the focus is taken off of the client's issues and transferred to that of the therapist/self-discloser, negatively affecting the therapeutic process. Barrett-Lennard (1962) discusses that empathic understanding can be reduced via countertransference of one's own

experiences onto the patient; this is of exceptionally high risk for clinicians with personal experience in the substance use treatment field.

Lack of Empathy

Lack of understanding of the expected brain functioning, the chronic nature of relapse, or stigmatized bias can lead providers to lack accurate empathy for their patients. The dangers of low empathy are severe. In review of Valle's (1981) research, Moyers and Miller (2013) found that counselors scoring low in empathy had worse results and clinical outcomes than those receiving no treatment at all. While empathic skill has tremendous benefit, low empathic skill is *actively harmful* to patients.

Punitive Approaches

Routine service elements within the acute care model lack scientific evidence of their effectiveness, and some have even been shown to do harm—specifically, confrontation (White, 2010). Despite this, many substance use interventions encourage or utilize punitive and confrontational approaches as a core means of intervention.

There are a multitude of known risks and detrimental harms to youth as a result of physical punishment. Physical punishment and its cause of *stress* is linked to negative impacts on physical health, mental health, academic performance, relationships, brain development, and a variety of other areas (Alla, 2021). Even when attempting to modify behavior through this means it tends to promote aggression and violence while also not promoting long term positive behaviors (Alla, 2021). Traditional treatment approaches, as well as much other behavior modification approaches, are often highly confrontational, punitive, and even shame-based in nature and principle. As reviewed, the Texas Administrative Code (2004) suggests to providers a model that utilizes “confrontation amongst clients”, emphasizing for support staff to serve as

“...rational authorities rather than as counselors or therapists”. Even outside of substance use specific applications when combatting other more generalized behaviors (i.e., onychophagia) researchers have found that...

Oral or physical punishment, ridicule, nagging, and threats are not helpful and often compound the problem or replace it with more serious psychological disorders, and might cause social conflicts and feelings of guilt (Tanaka et al., 2008, pg. 306).

Punitive parenting approaches that are non-physical but include yelling or other punitive interactions are associated with increased disruptive, oppositional, and aggressive behaviors in children (Stomshak et al., 2010). The very behaviors individuals are seeking to address are being directly exacerbated by these approaches, creating a dangerous recursion of increasing problem-behavior and applied punitive-intervention (think back to armoring Wald’s plane in the wrong spots). The research is again telling us that what we are doing is not only unhelpful, but actively harmful. Child research by Leonard et al. (2021) shows that even instruction alone, when compared to praise, negatively impacts the persistence and effort of individuals pursuing a task; supportive approaches are paramount for promoting change with youth. Consistent with Khantzian’s (2012) *essential* elements for clinicians which included empathy is the additional element of *avoiding confrontation*.

Another common, yet misguided, punitive intervention of choice is that of “behavior contracts”. That is, essentially an ultimatum of threatened consequences towards and individual if they do not change their behavior. Additionally, these are often worded in negative-based language of undesired behaviors vs. desired (i.e., “do **not** be disruptive”, “do **not** use drugs”). They are typically followed by a list of potential consequences or punishments should the

behavior not change or meet set expectations. These interventions are believed to be highly ineffective and based in a faulty assumption that one can “threaten” someone out of mental illness or other various diagnoses, or that individuals are receptive in constructive means to being threatened (Dobbs, 2015). Ryan and Deci (2000) discuss that motivators that utilize threatening language, are demanding, or rely on external evaluations or deadlines actually diminish intrinsic motivation in individuals. Despite what research demonstrates about the ineffectiveness of these approaches, they remain widespread.

Treatment Outcomes

So how are these approaches working and what are the current outcomes of the existing treatment models in place? The National Survey on Drug Use and Health revealed that 46.3 million individuals in the United States aged 12 and older met criteria for substance use disorder in 2021, with over 161 million Americans having used a substance in the past 30 days (SAMHSA, 2022b). In just two years, the number of individuals (12 and older) with substance use disorders has more than doubled since 2019 (SAMHSA, 2020). Substance use and related substance use disorders have increasingly fatal consequences, with nearly 110,000 individuals dying of a drug-related overdose in 2022 (Ahmad et al., 2023), this represents a 162% increase in deaths since 2012 (Warner, Hedegaard, & Chen, 2014). Broken down, this statistic equates to over 300 Americans that are dying *every single day* from SUDs elevating drug related overdose deaths to *the* leading cause of death in the United States (WONDER, 2021). However, despite the overwhelming need, less than 6.8% of those meeting criteria for a substance use disorder received any form of specialized treatment during that same year. Many individuals were forced to try to take their need for help into their own hands as “self-help” was the largest category of

any form of treatment received (SAMHSA, 2022b), leaving Americans to try and save their own lives without the help of a clinical or treatment professional.

While this has remained an escalating issue for individuals of all ages, we will focus on an adolescent specific impact. While overdose deaths for all ages have been on a rampant rise, adolescents have been disproportionately affected with over a 163% (2.33x) increase in adolescent-specific deaths from 2019-2021 (Friedman et al., 2022). The hope of earlier and more effective interventions at this age range can aim to prevent these fatal consequences as well as curtail the longer term and more devastating effects of substance use disorders into adulthood. Approximately 2 million adolescents met criteria for a substance use disorder in 2021 (SAMHSA, 2022b). This represents a 25% increase from just one year prior (SAMHSA, 2021). Over 25% of adolescents in the 12th grade have used a substance in the last 30 days, 47% in the last year, and over 54% in their lifetime (Monitoring the Future, 2023). Of those adolescents meeting criteria for treatment during the year 2021, only 3.5% received specialized substance use services during the same year (SAMHSA, 2022b). If we look at standard completion rates using SAMHSA's Treatment Episode Data Set (TEDS; 2021) we find that nationally only 35.9% of adolescents complete the treatment episode they start, with some states having completion rates for adolescents as low as 5% (SAMHSA, 2022a). Relapse rates for substance use disorders are estimated to be as high as 60% (McLellan et al., 2000). We have some alarming drop offs and inefficiencies, so let's take a moment to put this all together:

Statistic	Number of Adolescents
Meet criteria for a substance use disorder	2 million
3.5% receive specialized treatment	70,000
35.9% complete their treatment	25,130

40% do not relapse	10,052
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Ideally an adolescent who needs treatment for a substance use disorder is able to access specialized treatment and complete that program; a program that was effective and aided them in maintaining continued abstinence without relapse post-effort. If we define these steps as success and follow the statistics above, we find that we have a success rate for adolescents of a diminutive ~0.5%.

There is Hope

Despite the challenges of clinician bias and societal stigma against substance use disorders and their related treatment, research has found that funding for addiction treatment has a return on investment of \$12 for every \$1 invested (NIDA, 2018). Additional research also reveals when individuals are able to access *effective* care, the vast majority of those with substance use disorders are in long term recovery (Jones et al., 2020). Effective programs can provide better completion rates, reduced relapse rates, and contribute to overall support for increasing access to care at large. These financial returns are critical for a fatal issue that results in an annual cost to the US of over half a trillion dollars when just looking at the financial impact opioids alone (HHS, 2018). The end goal are effective and accessible treatment options that can prevent the costly and fatal consequences of both untreated substance use disorders, and those treated ineffectively.

The number of individuals faced with substance use disorders and related overdose deaths are continuing to increase alongside existing treatment approaches. This highlights that there exists a clear need for a radical new approach and methodology, the answer: rebuilding the

underlying assumptions and framework of adolescent addiction treatment through the lens of positive psychology to create more effective treatment models and interventions.

Applying a New Lens

Through the lens of positive psychology, we find that individuals have the ability to thrive and flourish with intentional activity (targeted behavior efforts) and adaptations to thinking styles (Lyubomirsky et al., 2005; Sheldon & Lyubomirsky, 2021). In fact, after genetics, it is found that the most impactful influence on happiness within our control are these very elements of intentional activity as they pertain to effort applied to behavioral, cognitive, and volitional efforts (Lyubomirsky et al., 2005). Happiness is posed as something that must be actively sought and achieved, not something that can be passively accomplished facilely (Melchert, 2002). Lyubomirsky, Sheldon, and Schkade (2005) reveal that from within the realms of which we have control (i.e., not our genetic makeup) there is an estimation that as much as four times the variance (40% when compared to 10%) of happiness in the examined population was attributed to intentional activity and cognitive efforts when compared to our actual life circumstances. So much of the effort is then misplaced into circumstantial changes and the endless pursuit of hedonic pleasures, both of which have shown to have diminishing returns and ceiling effects (Sheldon & Lyubomirsky, 2012; Sheldon, Boehm, & Lyubomirsky, 2013). Taking what we know from positive psychology we can begin to craft a framework and series of *intentional activities* via interventions and considerations for effective treatment of substance use disorders. The framework will consist of: Methodologies for countering deficit-based approaches, methods that incorporate one (or more) PERMA elements, strengths-based approaches, and the therapeutic skill of empathy. The goal will be *well-being*.

Instilling Hope

The task of taking on a brain disease through intentional activity and restructuring of thoughts can serve as an overwhelming task. Many may assert this is why additional non-talk therapy options must also be utilized (i.e., medication for opioid use disorder). While medication interventions exist, they are not intended to replace treatment (Deyo-Svendsen et al., 2020). A proposed essential ingredient for overcoming the overwhelming nature of addiction, is *hope*. What generates hope? Is this a learned skill or inherent? Can it be replenished or enhanced? There are so many variables shaping and impacting the internal drive of an individual; how can we best work to determine the most meaningful and impactful intervention levers to pull, or if they even exist? The underlying belief that one can achieve desired results through a behavior of their actions is known as *self-efficacy* and is a driving factor in the behaviors and changes we select to engage in or attempt, as well as the perceived outcome of our efforts (Maddux & Kleiman, 2021). There are countless benefits (Brown & Ryan, 2015) to internal motivation and autonomy as a driving force for generation of self-efficacy and positive behavioral outcomes, with autonomy as a direct *active ingredient* in the process. There is also substantial data to support the varying benefits (from physical health to mental well-being) of a strong and active self-efficacy (Maddux & Kleiman, 2021). Brown and Ryan (2015) demonstrate that as autonomy increases towards positive regulatory processes it is associated with intrinsic and internal motivation and regulation. An individual can create a positive spiral of increasing hope alongside competency and self-efficacy. Reivich and Shatté (2003) demonstrate that research points to self-efficacy as the “essential ingredient” (pg. 33) in steering through chronic stress. All of this momentum can be brought, with significant influence, into the start of a positive intervention. Locke (1996) also states that all beings engage in goal-oriented actions and behaviors, albeit due to unique and individualized drivers and influences. Our perception of goals and associated

confidence within ourselves for achievement are represented in Magyar-Moe and Lopez's (2015) *Hope Theory*. Tied to our internal beliefs around self-efficacy, *hope* provides a sense that a goal is *attainable* (Locke, 1996). We are driven not only by the subjective value we place on our goals, but the perceived success we will have in achieving them (Davis et al., 2015). Our belief in our capabilities in accomplishing goals as a driving force is the key determinant in willingness to engage through the lens of self-efficacy theory (Maddux, 2009). There is also substantial support and evidence that self-efficacy is an effective predictor and mediator of treatment outcomes for substance use; sadly, it is noted that attempts to further research or implement these findings is limited (Kadden & Litt, 2011). An individual's perceived competence directly affects their intrinsic motivation (Vallerand & Reid, 1984). All these variables will impact perception of capability, effective and positive process and progress evaluation, and self-satisfaction; allowing the individual to experience and create a self-sustaining positive *recursion* of engagement (Locke, 1996), and foster the fullest state of alignment. Without instilling hope and confidence in individuals and their abilities to participate in new behaviors we are at great risk of individuals simply not making an effort to change.

Within the model of *Hope Theory* (Magyar-Moe & Lopez, 2015), a direct relationship between goal setting ability as (hope) confidence in one's abilities and evidence of observed progress grows. A feedback loop of our previous performance and outcomes either dampens or generates our hope for setting of continued goals. This fosters within individuals an *intrinsic motivation*, which can serve as a key component of substance use treatment (Miller, 1985). Csikszentmihalyi (2008) highlights the importance and refers to this internalized motivation as an individual's *autotelic experience* (p. 67) and emphasizes the process over the outcome in regard to significance for behavior engagement (new or existing). The idea of fostering a

community an environment of hope within the treatment culture may serve as a critical context as external influence has a tremendous impact on the instillation of hope (Brown and Ryan, 2015). Gable and Gosnell (2011) that sharing positive experiences with others has the ability to both enhance positive emotions and decrease negative emotions beyond what would be capable from just the event alone, and that the *belief* (regardless of veracity) that others are there to support them can even be more beneficial than the actual support itself. Maddux and Kleiman, 2021 assert that individuals are *change agents* in the lives of others. When not dependent on external individuals, we still turn to *tangible* evidence of performance; (Maddux & Kleiman, 2021) state we must *see to believe*. Social systems that either promote or undermine our intrinsic beliefs will strengthen or weaken them accordingly. For instance, one can provide autonomous choice and variety to promote an individual's motivation or use punitive and threatening tactics to dissolve it (Brown & Ryan, 2015). This speaks to the continued value of strengths-based rather than deficit-based mindsets and approaches. It should now serve as no surprise that we are seeing such high levels of disengagement when the treatment environment was intentionally crafted to be undesirable. The believe that we can shame, ridicule, or punish out "bad" behaviors is both contraindicated by research and unethical in practice. The belief that one can be motivated to change by "bottoming them out" has no evidence-base to stand on. What we do know, is that individuals can be taught hope, and can learn to find optimism and belief that change and success are possible (Seligman, 2019). Upon revisiting the research of learned helplessness (Seligman & Maier, 1967), Seligman (2019) discovered the original insights and theories were misinformed. Helplessness was not learned, but was rather the default; it was in fact, hope that could be learned and was activated through what he appropriately names *The Hope Circuit* (Seligman, 2019). Seligman (2019) highlights that this discovery changes the entire

landscape around work with trauma and attempts to “undo” past harms and dwell on deficits, rather than utilization of a model more consistent with Solution Focused Brief Therapy that emphasizes planning for a better future as a more effective means of establishing well-being and healing from a neurological standpoint.

Solution-Focused Approach

The tenants of Solution Focused Brief Therapy (SFBT) present a well-researched therapeutic model that is consistent with the research and best practices of addiction treatment and positive psychology. Based on a foundation that that problem talk will lead to more problems, de Shazer et al. (2021) assert that the therapist’s role is centered around *solution talk*, emphasizing patient strengths, resiliencies, and creation of a positive future. This opportunity for *doing something different* and discussion of solutions (both past and future) (O'Hanlon & Rowan, 2003) is consistent with positive psychology in moving away from deficit-based psychology. One of the underlying mechanisms posited by positive psychology is *hope* (Seligman & Csikszentmihalyi), defined through a SFBT lens as the patient’s the ability to imagine their life without the existence of the said problem that has brought them into treatment (Jong & Berg, 2013). De Shazer (1988) constructed the original "miracle question", a rare intervention for solution focused practitioners that structures a scenario allowing for miraculous overnight solutions to begin creating and existing in a world in with the solutions are already present. Duckworth et al. (2011) demonstrated that utilization of mental contrasting techniques that engages individuals in creating a desired future (similar the miracle question in that regard) increased persistence (by 60% for the activity in study) despite the challenging goal the adolescent was tasked with. This same approach can be used within the realm of adolescent substance use disorders as a framework for validating and supporting a client’s values while

having them imagine a future free from their addiction, in a demonstrated means that empowers patients (da Roza, 2017). Additionally, despite the powerful effects of temporal discounting on reducing perceived future reward value (Hershfield, Wimmer, & Knutson, 2008), there is evidence that shows when vivid and positive visualizations are created the effects of temporal discounting can be actively offset, and an individual is more likely to engage in the associated behavior changes to achieve the outcome and related rewards (Hershfield, 2011). In addition to looking into the future, SFBT aims to engage a mindset oriented on not just believing that solutions are possible, but that they already exist, with an emphasis on pursuit of *exception finding*, a collection of evidence and times in which the problem was less pervasive or not present, noting that no problem exists “all the time” De Shazer et al., (2021). The model transcends past, present, and future positive focuses.

Somewhat unique to the field of substance use disorders and the associated stigma and implicit criminalization of the symptoms is that patients can be “mandated” to receive treatment by the criminal justice system. When done effectively, mandated treatment programs, such as The Drug Treatment Alternative-to-Prison program (DTAP) have shown the ability to decrease jail recidivism in individuals with substance use disorders by up to 42%, with a cost benefit ratio of 2.17 even when including the costs of treatment (Belenko, Hiller, & Hamilton, 2013). Solution focused therapy has not only presented itself as a valuable tool for working with mandated patients (Shafer & Jordan, 2015), but mandated patients have also shown the ability to have higher completion rates than non-mandated (or, *voluntary*) patients in the same services (Coviello et al., 2013). Within the context of juvenile diversion programs for offenders, program completion was significantly predicted by solution building with the youth (Belciug et al., 2016). Kim, Brook, and Akin (2016) demonstrated that solution focused brief therapy is an effective

tool for treatment of substance use disorders, as well as trauma, while allowing for a focus that is more strengths-based and less problem focused. The Solution Focused treatment model as a whole has key and important implications within the field of substance use disorders when compared to traditional models and approaches as solution focused therapy offers a constructive, client-centered, empowering, and alliance driven methodology for treatment of individuals (Shafer & Jordan, 2015). This has important implications for largely punitive and problem focused systems such as addictions and the criminal justice system, and there is substantial support for mandating treatment over incarceration as a result.

Motivational Interviewing

Often clinicians will label negative responses to clinical interventions as client resistance, and an attribute of the patient alone, rather than as a product of the patient – clinician relationship (De Shazer, 1999). Too often, patients are deemed “too resistant”, and it is used as an excuse for lack of change or even as an *inability* to change. Research has demonstrated variance in counseling style and improvement to alliance can have a significant impact on this perceived *resistance* (Miller and Rollnick, 2002), thus placing the responsibility for combatting the resistance on the clinician (*not* the patient). Miller and Rollnick (2002) echo this clinician responsibility for resistance and view resistance as a signal that the approach or relationship is currently ineffective and needs clinical adjustment and improvement. De Shazer (1999) depicts homeostasis as a misguided label while asserting that change is inevitable, thus ensuring the proper direction and engagement during the change process becomes all the more critical (as we have seen clinicians can make outcomes even worse). An applicable alternative is that of Motivational Interviewing, through this approach we are offered a simple acronym as guiding principles.

R: Resist telling patients what to do (i.e., confrontation)

U: Understand patient motivations

L: Listen with empathy

E: Empower the patient

(Hall, Gibbie, & Lubman, 2012)

Empathy

Carl Rogers identified *accurate empathy* as a critical condition for effective practitioners alongside *unconditional positive regard*, and *genuineness* (Rogers and Koch, 1959) with an emphasis on being able to understand the client experience as if it was the therapist's own. Through this same clinical context, empathy can be described as "the extent to which one person is conscious of the immediate awareness of another" (Barrett-Lennard, 1962). Also described as a key component of *emotional intelligence*, empathy has been proven important and influential throughout a variety of contexts influencing the quality of relationships and various life outcomes (Salovey & Grewal, 2005). Specific to adolescents, emotional intelligence is associated with higher levels of resiliency (Collado-Soler et al., 2023), our ability to maintain positive outlook in challenging circumstances, "bounce back", challenge harmful beliefs, and demonstrate productive action in the face of adversity (Reivich and Shatté, 2003). Empathy is a strong and important correlate with patient outcomes in mental health and psychotherapy treatment (Elliot et al., 2011). The use of empathy through interpersonal relationships has the power to rewire neural networks and restructure the brain to cure a variety of other psychological disorders (Coutinho, 2014). In the treatment literature, empathy comprises a core component of the *therapeutic alliance*, or perceived collaboration of the client-therapist relationship -the strongest predictor of patient-level mental health treatment outcomes (Hovarth and Luborsky,

1993). Upwards of a thousand studies substantiate that the higher the perceived quality of relationship between client and therapist is the strongest predictor of positive patient-level mental health outcomes (e.g., Lambert et al., 2004).

In addition to outcomes, alliance has implications for in-treatment process outcomes, such as engagement in substance use treatment, specifically (Campbell et al., 2015; Brownlee et al., 2017). Listed as one of Khantzian's (2012) *essential* clinical treatment elements for treating substance use disorders, the clinical skill of accurate empathy is arguably the top predictor of effectiveness in treating individuals with substance use disorders (Miller et al., 2019). There exists observable and substantial differences in effectiveness between clinicians treating substance use disorders, with empathy and those who do not (Najavits et al., 2000; Najavits & Weiss, 1994).

In an attempt to measure the varying effectiveness of alternate approaches to substance use treatment modalities, the results of Project MATCH as reviewed by Babor and Del Boca, (2002) revealed no significant differences in outcomes for therapeutic approaches used, but did uncover substantial variation in outcomes by the individual clinicians that worked with the patients in the study. This emphasized the idea that the clinician and their approach, is arguably more influential than the treatment modality used, and across a variety of different modalities. Consistent with this notion, when Miller et al., (1980) examined four approaches comparing focused versus broad-spectrum behavior therapy with alcohol use disorders in adults, there were minimal significant differences noted between the various approaches to drinking behaviors. However, their findings found that 67% of the variance observed in patient success was attributed to the ratings of accurate empathy (as adapted from Truax and Carkuff, 1967) with each individual clinician (Miller et al., 1980). The highest-scoring clinician in empathy had a

100% success rate with their patients, while the lowest had only 25% percent success rate (Miller et al., 1980). Valle (1981) also demonstrated that the clinician's interpersonal skillset was the predominant determinant of clinical outcomes with substance use disorders, so much so that low interpersonal skill counselors had multiple-relapse rates over five (5) times more frequently than highly skilled interpersonal counselors. Valle (1981) found that interpersonal skills correlate more accurately to patient success than did clinical background or counselor characteristics, including personal experience with substance use disorders. Moyers et al. (2016) reviewed and expanded upon this research corroborating that clinicians' individual characteristics, training, and professional backgrounds have shown little correlation with client outcomes; however their interpersonal skills and the ability to build alliances do. Their findings suggest clinician empathy was again a better indicator of client success in substance use disorder treatment, and these findings are consistent with not just immediate success rates, but long-term outcomes as well. Barrett-Lennard (1962) demonstrated that over a 2-year follow-up period relapse rates for low-scoring interpersonal counselor skills had roughly 6 times the number of patients with two or more relapses during the follow-up period. Miller and Baca (1983) found again a correlation that accurate empathy was correlated with the achievement of successful outcomes ($r = 0.82$) and that this correlation was maintained with significant strength for 12-month ($r = 0.71$) and 24-month (0.51) follow-ups. It is crucial to measure clinician empathy "in practice," meaning not just relying on their skills on paper or in role-playing scenarios but by observing their interactions with actual patients. A clinician who appears highly empathic on the surface may actually be perceived poorly by their patients if they have biases or countertransference towards individuals with substance use disorders (SUDs)

Use cases

One setting that we see attempts to modify adolescent behavior most frequently is within school settings. A major challenge posed from schools is that of classroom redirection and associated consequences for misbehavior. A common “solution” (result) of student misbehavior redirection is often suspension of the student. As it turns out, empathy can serve as the key change agent in these settings as well. Okonofua, Paunesku, and Walton (2016) demonstrated that schools were able to cut their suspension rates in half by applying empathy-based interventions vs. traditional punitive approaches towards students within the classrooms. Another devastating issue is the recidivism rate of juveniles attempting to re-enter the educational system after incarceration successfully.

A study by Walton et al., (2021) revealed a tragic baseline recidivism rate of 69%. This same study demonstrated that when orienting teachers towards positive relationships and prosocial hope, juveniles reentering the school system saw a reduction of jail recidivism by 58%.

This same methodology was also applied directly to the juvenile justice system; when empathic supervision was used by parole and probation officers (PPOs) with adults, a 13% reduction in recidivism was observed (Walton et al., 2021). This has critical implications for substance use disorder treatment where the barriers of stigma, misinformed moral models, or countertransference have the means to reduce empathy and alliance drastically with a clinician despite their ‘on paper’ empathic skills, or ability to execute this empathic listening in settings outside of addictions. It is critical to ensure treatment modalities have the ability to identify, recruit, and retain accurately empathic counselors with the ability to consistently apply these skills directly within the context of substance use disorder treatment specifically, or with an adolescent population for that matter.

Practice integration

Miller et al. (2005) conducted a study that showed empathy can be effectively assessed during the screening and hiring process. One extensively validated tool used for this purpose is the Working Alliance Inventory (WAI) developed by Horvath and Greenberg in 1989. Horvath and Greenberg (1989) were able to establish a link between patient outcomes and the scores obtained from the Working Alliance Inventory, demonstrating its usefulness. Furthermore, the study found correlations between the bond component of the Working Alliance Inventory (which measures goal, task, and bond) and empathy scales, specifically using the Empathy Scale from the Barrett-Lennard Relationship Inventory (BLRI; 1962) for comparison.

The Barrett-Lennard (1962) inventory consists of the following measures:

R: Level of Regard

E: Empathic Understanding

C: Congruence

U: Unconditionality of Regard

W: Willingness to be Known

Another additional resource for implementation is the Session Rating Scale (SRS), as researched and validated by Duncan et al. (2003). This research reiterated that a positive working alliance is one of the best predictors of clinical outcomes, incorporating the Working Alliance Inventory (Horvath & Greenberg, 1989), the Session Evaluation Questionnaire (SEQ) (Stiles & Snow, 1984), and the Empathy Scale (Burns & Nolen-Hoeksema, 1992). Specific to an adolescent population, there is a comprehensive review of alliance measures for youth as compiled and reviewed by Mcleod (2011). While many of these studies have demonstrated an effectiveness at capturing and measuring empathy from a 3rd party observer, the critical component and desired

end result is *perceived empathy* by the patient. A client's perception of the therapeutic relationship has significant predictive value and perhaps causal implications to patient outcomes (Ford, 1978). For that reason, it is imperative to ensure measures that include and incorporate "self-report", (Neumann et al., 2015) have reviewed the commonly used and highly validated nature of these measures, and a variety of applicable tools for use in practice. The effects of empathy are also scalable, as research suggests that increasing empathy towards a member of a stigmatized group can have benefits for the entire group (Baston et al., 2002).

PERMA-profiler, Measures of Well-Being

For measurement and tracking of the PERMA element model directly, there is a comprehensively reviewed and validated model for assessing the PERMA elements via the PERMA-Profiler (Butler & Kern, 2016). If a treatment program wishes to adopt and measure indicators of well-being directly, there are a variety of established and reviewed measures of subjective well-being (Krueger & Schkade, 2008), as well as comprehensive and brief inventories for individual thriving (Su et al., 2014). Despite the lack of research and application of positive psychology to substance use disorders, Krentzman (2013) finds that it is primed for the treatment of substance use disorders and overall recovery movement as a result of shifting in the modern recovery culture and applicability to macrosystems such as addictions.

Utilization of Character Strengths

As we have reviewed with the substance use field, and mental health as a whole, the industry places too much emphasis on *what is wrong*. By tapping into "what is right" we can tie in Fredrickson's (2013a) *Broaden and Build* theory, emphasizing growth and development, fostering an upward spiral of resource acquisition, thinking styles, and applications via focus on positive emotions. The work of Fredrickson and Losada (2005) proposed that the presence of at

least 3 positive experiences to each negative experience is the critical ratio and tipping point for individuals to flourish. Despite challenges to the specifics of this ratio, or attacks against using mathematical ratios as a source of well-being assessment as a whole (Brown et al., 2013), Fredrickson (2013b) remains adamant in her assertions and research that (within bounds) *more is better* with regards to the influence of positive experiences on subjective well-being. With the evidence so clearly refuting the efficacy of punitive and negative assessments and interventions, an alternative, more positive *right-oriented* approach must be identified.

With such an apparent need for positive interventions and experiences, a methodology for positive assessment and interventions is needed. Early substance use treatment efforts typically consist of assessment and diagnosis, efforts that although relevant to understand outlining the problem are also vulnerable to stigmatized labeling. Adolescents may have entered treatment with a slew of negative labels: junkie, addict, problem child, delinquent, criminal, gang banger...etc. In order to build hope, resiliency, and positive change, we must generate and implement a positive assessment and identification tool for these adolescents. We can utilize a strengths assessment to capture what is best or “strong” in these individuals, rather than their flaws and deficits alone. The VIA Character Strengths Survey has been made readily available, along with a variety of other tools, for both adolescents and adults through the VIA (Values in Action) Institute on Character (2023). This tool is both accessible and valuable for practitioners wishing to use a positive assessment tool within the context of substance use disorder treatment, and it is cited as “the only strengths survey in the world that is free, online, and psychometrically valid” (Niemic, 2015). It is imperative to utilize consistent and validated “strengths-based” measures and methodologies, as the “buzzword” effect of “strengths-based” has led to overclassifying unrelated or unvalidated means of integration and intervention (Niemic &

Pearce, 2021). Through comprehensive clinical guides, Niemiec and Pearce (2021) offer a seven-element model for practitioners planning to utilize strengths in a clinical setting, as well as four means of practicing character strengths in a clinical setting.

Seligman (2002) reveals that application and experiences of these strengths leads to positive emotion, efficacy, and well-being. They are primed for use in directly addressing substance use disorders, as they have demonstrated ability to offset negative life outcomes and thrive through difficulty, trauma, and promoting an overall problem limitation (which all confounding factors in substance use disorders, as well as relapse) (Park & Peterson, 2009). Specific character strengths are directly tied to the reduction of stress (which as previously detailed, is a leading factor for risk of relapse) (Avey et al., 2011). These varying character strengths have incredible depth in the ways by which they connect and interrelate to our well-being (Donaldson et al., 2011). These interrelations cross various contexts such as school, workplace, physical health, family...etc.

We have a unique opportunity to utilize this framework as a basis for assessment and intervention with individuals within the substance use disorder treatment setting. Consistent with positive reinforcement models such as contingency management, we can utilize character strengths as a means for additional positive reinforcement, and the uniqueness of one's strengths allows for a customized and individualized experience for the recipient.

Strengths Spotting

When we decide to look for something positive our bias can influence things into a positive direction as well. A famous study by Rosenthal and Jacobson (1966) was conducted by informing classroom instructors that a group of their students (randomized) were on the verge of a major mental and cognitive breakthrough, creating a positive bias from the instructor towards

those specific students. In the follow-up 8 months later, the students that had been randomly assigned this positive bias all had substantially higher IQ growth when compared to the other students. Simply labeling someone as having strengths, brought related change to life, even though the selected students were simply a random sample. We can utilize the emphasis on pointing out and identifying the positive as a key component of this new framework, but we do not have to randomize the positive attributions, we can utilize the scientifically validated *VIA Character Strengths* survey.

Consistent with what we have learned about the benefits resiliency and well-being, and the downfalls of confrontation and punitive approaches, we have a formula for positive interventions known as *Strengths-Spotting* (Niemiec, 2018). Within this method a proposed formula exists based in an individual's *signature strengths* profile known as the SEA model (Niemiec, 2018; Niemiec & Pearce, 2021)

S: Spot/Label the strength that you see specifically

I noticed that you are using your strength of curiosity

E: Explain the evidence and observation of what you are seeing

By offering up an alternative perspective and asking for more clarification on today's group topic

A: Appreciate and recognize the use of values/expressions/efforts...etc

I appreciate you being willing to participate, vocalize your thoughts, and engage in conversation with me about this.

A more traditional approach to this same behavior might have, sadly, been “do not challenge and be resistant in group, you are always so argumentative, and you need to learn this content”. If “confrontation” (perhaps more appropriately described as “advocacy” or “prompt reflection”) is

ever necessary, it can be done in a supportive manner through the lens of over-use or under-use of one's strengths, rather than moral failings or lack of values (Niemic & Pearce, 2021). For instance, rather than an adolescent being reprimanded and confronted for drawing graffiti on a center's furniture, the adolescent's strength of creativity is acknowledged with an emphasis of potential overuse of one's strengths (Niemic, 2019), then the adolescent and clinician can explore alternative means for utilization of this desired strength. You are still able to "address" every behavior, as being strengths-based is not turning a blind eye to things that are occurring, it is merely addressing them through a positive, engaging, and strengths-based manner. Rather than scolding patients for "being bad", we can challenge underuse (Niemic, 2019) of strengths and empower patients to tap into signature strengths for real-time problem solving. As we reviewed previously, addiction terminology is riddled with negative labels and stigma (i.e., dirty, junkie, abuse...etc.), strengths-based language offers a positive charged vocabulary for working with the same dynamics and individuals, helping to rebuild an identity around something positive and constructive.

Building upon this framework we can begin to tie their identify, and related interventions to their strengths, rather than perceived deficits. This can become a common language by which their treatment planning, clinical interventions, and individualized assignments can be tailored and integrated. A proposed framework would include the use of contingency management for a reward-based system incorporating strengths-spotting in individuals. A sample *Strengths Ticket* is detailed below:

Figure 1.



Resiliency

What if this same lens was applied to their “problem behaviors”? For instance, what if instead of viewing an individual as a daily drug addict that manipulated others to get their way, we reframed these observations to a persistent and committed individual with inherent social skills and ambition? We could even tie in the use of that individual’s signature strengths to the behaviors. If we can reframe what traditional treatment states we need to “break down”, we don’t have to start from a place of deficit, and consistent with Solution Focused Brief Therapy (Berg, 1994), the solutions already exist. We can reframe the challenges that they have gone to into evidence of built resiliency and an ability to overcome anything. Although Lukianoff and Haidt (2019) do not advocate for chronic stress, they assert that stressors can be beneficial to an individual. They continue to reiterate how we can become overly prescriptive and deterministic with deficit-based diagnoses and labels that we assign to patients. When not kept in check, this can have a deterministic effect in which patients are prescribed the symptoms via countertransference from a clinician or clinical team misinformed about the damages of *safetyism* (Lukianoff & Haidt, 2019). Bloom (2022) reviews the incredible human capacity to interpret and respond to events and experiences; either assigning (or even *made* to feel positive

or negative emotions and associations). When these negative associations are made, such as deficit-based diagnosing, shame, and stigma, we are assigning negative values to items that could in fact be positive (i.e., seeking out treatment) in a form of reverse resiliency (Bloom, 2022). Bloom (2022) reviews that this is so powerful one can reappraise positive experiences into negative ones, and we can even become unable/unwilling to experience positive emotions as a result. Reivich and Shatté (2003) assert that resiliency is not fixed, it can in fact be learned, controlled and grown. In doing so, Reivich and Shatté (2003) state that one can achieve incredible accomplishments and well-being otherwise not possible. Reivich and Shatté (2003) define resiliency as having three main characteristics, all of which are consistent with this proposed framework:

- 1) A task-oriented coping style,
- 2) A belief in ability to change outcomes, and
- 3) Incremental, purposeful action.

This purposeful action is consistent with the *intentional activity* effectiveness with effective SWB interventions (Lyubomirsky et al., 2005), thus having potential for synergistic positive effects in application. Through utilization and reference to one's character strengths, we can begin to identify means that individuals can be active and productive activators and change agents within their own lives and recovery efforts. Rather than a victimized and deficit-based approach, youth can be empowered via this lens, as well as that of their strengths to identify solution-oriented approaches to overcoming the challenges that brought them into the treatment setting. Groups and individual work can focus on resiliency building, as well as the discussed Solution Focused Brief Therapy concepts such as exception finding, where an individual looks

for evidence of times the setback/problem did not exist or was not as prevalent for evidence that future successful outcomes are indeed possible (Turnell & Edward, 1993).

Active Constructive Responding (ACR)

Oftentimes with adolescents we dismiss positive sharing or even accomplishment due to an underlying bias that *they should be doing that anyways*. This bias can result in destructive response-styles and engagement with adolescents. Gable et al. (2004) demonstrated that through *Active Constructive Responding* we can increase the overall positive impact, positive emotions experienced, and well-being of an individual when responding with this particular style. Through Gabel et al.'s (2004) model there are 4 distinct forms of responding that contain either an active or passive involvement, and are constructive or destructive in nature:

Active Constructive: Enthusiasm, support, validation, positive empathy. Asking for additional details, working to relive/reexperience the positive emotions. *Wow that is so amazing that you were able to remain sober through the weekend and your mother was proud of you! What did that feel like having her compliment you after that hard work?*

Passive Constructive: subdued, restrained, conversation “killer”. Makes person feel unprioritized, unimportant, demonstrates disinterest. *That is neat, what do you want to talk about in session today?*

Active Destructive: Minimizing and attacking the event or experience. Making the person feel shame, remorse for sharing, or saddened. *It is about time you spent 2 days sober, that should be every weekend, don't get too excited.*

Passive Destructive: Ignore or fail to participate in conversation or address specific event/experience. Making person feel defeated, confused, or ignored. *Sober through the weekend I hear, hey did you bring your discharge plan to session today?*

The end goal is to maximize ACR and minimize all of the other 3 categorizations. These practices are critical to positive psychology implementations, as they directly target the advancement of the positive, rather than reduction of negative.

Rewards in Place of Punishment

While there is little evidence to suggest positive or long-lasting benefits from the negative behavior contracting approach reviewed as a problem with current substance use approaches, there is evidence to support that contracts that offer rewards or incentives for *desired* behaviors can be effective for adolescents in a variety of settings (Edgemon et al., 2020). This positive-oriented model of reward-based intervention for achievement of a recovery related goal is known as *contingency management*. Contingency management has been proven to be highly effective, yet remains widely underutilized and unused in programs and intervention attempts in which it could be beneficial (Proctor, 2022). There is additional promise and demonstration of efficient practitioner and patient adoption of these interventions specifically with adolescents (Stanger & Budney, 2010). When researching the effectiveness of contingency management on treatment readmission and criminality, Palacio-Gonzalez et al. (2022) demonstrated longer periods of time prior to a readmission (sustain) and reduced criminal convictions. Within this study the population was 50% co-occurring as well (Palacio-Gonzalez, 2022).

There are a healthy variety of innovative, reliable, cost-efficient, and validated means for executing contingency management interventions with adolescents and substance use disorder populations as well (Petry & Bohn, 2003). When compared with other treatment approaches, contingency management demonstrated a rate of patient substance use abstinence at 12-weeks that was better than Psychodynamic therapy, Cognitive Behavior Therapy, 12-Step Programs, and other models; in fact, it was 2.29x more effective when comparing abstinence rates than

treatment “as usual” (De Crescenzo et al., 2018). De Crescenzo et al. (2018) also discovered that when paring contingency management with The Community Reinforcement Approach (CRA) and comparing outcomes to treatment “as usual”, the outcomes were:

3.92x more likely to retain in treatment through 12 weeks

7.6x more like to be abstinent at 12 weeks

3.63x more likely to be retained through the end of treatment

2.84x more likely to be abstinent at the end of treatment

Consistent with Positive Psychology, The Community Reinforcement Approach starts with an assessment of an individual’s happiness and seeks to accomplish the goal of helping a patient identify and achieve a pleasurable and enjoyable lifestyle, one that is more rewarding than the use of drugs (Meyers et al., 2011). Not only has this model been proven effective, but it was also the most cost-effective intervention reviewed, and the has proven efficacy with co-occurring adolescents as well (70% had a co-occurring diagnosis in the study) (Meyers et al., 2011).

The proposal is that a more effective intervention may lie within a concept of reward-based *Engagement Contacts*. Rather than an emphasis on what patients are doing *wrong* and the threats for lack of adherence to the *clinician’s* desired change, and alternative formula could be introduced:

1. Create an agreement tied to the patient’s motivations and goals.
2. Focus on the presence of something positive, rather than the absence of something negative.
3. Create intentional activities towards the goals and well-being of the patient.
4. Emphasize patient strengths and solutions.

5. Incentivize and reward the achievement of the goal promptly.

(1) As previously reviewed, understanding the patient's motivation is a key tenant of motivational interviewing, but is critical to finding alliance and an effective outcome. One simply cannot effectively create effective change or intervene without a true understanding of what the patient is pursuing and its importance (i.e., an unmet need).

(2) In addition to the positive psychology movement leading us away from a deficit focus (Seligman & Csikszentmihalyi, 2000), De Shazer et al., (2021) review key tenants of Solution Focused counseling, in which problem talk is openly discouraged and is asserted as an intervention and process which results in an increase problematic symptoms and behaviors. An emphasis on solutions and related talk is critical to achievement of desired change (De Shazer et al., 2021).

(3) Even when rigorously challenging *the Sustainable Happiness Model* (Lyubomirsky, Sheldon, & Schkade, 2005), Sheldon and Lyubomirsky (2021) still concluded that intentional activity and effort has notable ability to influence one's happiness and well-being and create change.

(4) Consistent again with the work of De Shazer et al., (2021) is the practice of solution finding, exception finding (looking for past examples of success, rather than times the problem 'was present'), and creation of *hope*. This framework pairs perfectly with a strengths-based approach in which a patient's character strengths (Peterson & Seligman, 2004) can be emphasized in a hope-generating method for individualized engagement and success planning. The individualization component of this methodology is also consistent with the reported need for variance within the updated research on the Sustainable Happiness Model (Sheldon & Lyubomirsky, 2021).

(5) Contingency management and its effectiveness with retention, substance use disorder treatment, and direct adolescent application demonstrates reward-based models can be highly effective and beneficial to patients. Be prompt to ensure the reward is associated with the targeted behavior.

There are countless opportunities to foster engagement over compliance via the introduction of contingency based rewards for engagement in positive change. The introduced *Strengths-ticket* concept itself is a form of positive reward, and could be utilized further via a *strengths store* or additional incentives. Offering a variety of prizes, rewards, and incentives to patients could help increase motivation as well as PERMA elements such as positive emotions, engagement, and offering a sense of achievement.

Engagement over Compliance

Confrontational interventions, such as the reviewed “behavior contract”, do little to engage individuals, relying on threats of consequences in an attempt to elicit behavior change. Additionally, these interventions are often centered around the goals of the counselor or treatment center (i.e., follow *our* rules), with little regard or interest in the goals or motivations of the patient. While these may foster some level of compliance, the emotional associations and internalization of the new behavior or task may be less than ideal (i.e., the threatening boss demanding you do a certain project vs, the engaging leader inspiring you to join in a project...both may look the same on the outside as one completes the task, but the internal feeling, dialogue, and associated outcomes will be much different). Also, remember, the brain is after dopamine, it is pleasure seeking, and we benefit from positive emotions and the very reward and motivation system it helps facilitate. With all of this in mind, why not strive for

meaningful interventions that actually *engage* adolescents in treatment and recovery efforts? We must ensure we have engagement at three main levels:

- (1) The motivation of our patients and their desired goals
- (2) The activity/intervention itself, and
- (3) The outcome and final result

The Why

Consistent with Motivational Interviewing (i.e., U from RULE) and empathy-oriented approaches, we must be certain we take time to understand the motivations of our patients and individuals we work with. So often we get caught up in the *means* that we neglect the *why*. For instance, is the adolescent being disrespectful, or having trouble coping on the anniversary of their father's death and lashing out at adult male staff that trigger these thoughts? Is the student truly disruptive, or can their family not afford corrective lenses and having to admit they cannot see or read the board in class is embarrassing for them, so they elect to disrupt until they can be removed from class vs. have this admission in front of their peers? In addition to motives for behavior (and what it is *attempting* to communicate), we must also factor in utilization of a patient's personal and individualized motives for change and *their* desired goals, vs. trying to force our (or the family's...etc.) goals and personal biases, especially when stigma is of concern.

Individuals are more likely engage better in, and achieve, goals fostered in self-concordance (Sheldon & Elliot, 1999). A sense of purpose has been noted to have significant implications for future drug misuse. A study by Kim et al. (2020) demonstrated that individuals with a *sense of purpose* in life had 50% less odds of misusing substances in a 9-10 year follow up. Of additional importance, they also reviewed that purpose is something that can be increased (Kim et al., 2020). Adolescence is a crucial period for exploring and developing a sense of

purpose and meaning, as these concepts hold significant importance during this stage of life (Damon, Menon, & Bronk, 2003). Davis et al. (2015) found that across meaningfulness, self-concordance, and motivation, the *why* of a goal had a greater effect than the *how* across all measures. This alignment with one's internal motivators is often recognized as *passion* from an external standpoint. This same perseverance and passion will serve as greater indicator of an individual's success than one's IQ or other common measures (Duckworth et al., 2007). This same attentiveness to *the why* can also be used to create empathy and meaning for the actions associated with those in active addiction. Too often we become overly focused on the symptoms and the *means* by which individuals are pursuing something, that we fail to examine, empathize with, and respond to, the *why*. The *telos* is the final desired end result or goal of the activity (Swartz, 2022). From an outside perspective, the perpetual and continued substance use of this individual might indicate what Gallegos (2022) refers to as "inappropriately adapted preferences" (IAPs). When viewed through the means, this is consistent; we see the individual perpetuating their own hardship, engaging in continued behaviors with negative outcomes, and negatively influencing continued deprivation meeting the IAP criteria as defined by Gallegos (2022). However, what about through the lens of the *telos*? What if we dig a little deeper into the underlying motivations and goals of the individual. The drug use, the stealing, the manipulation is not the end goal; so, what is? Perhaps it is the pain relief, the positive feelings, or working to meet one's basic needs of survival in late stages of addiction are the true end sought after. Other examples include a teenager trying to fit in with a social group, wanting to have fun at a party, or study thoroughly for an exam? Reduced to the goal, these teenagers want to have a social support group, have fun and positive emotions, and do well in school. They may very well be after the elements of PERMA. Are these truly unethical pursuits and desires? I argue that these goals are

not radically different than so many other ‘ethical’ actions, but we have lost our ability to appropriately assess, and therefore assist, due to being distracted by the anti-social or ethically-muddy means by which they are being achieved (or attempted). We must take the time to understand the motivations of our patients and their priorities (Hall, Gibbie, & Lubman, 2012). Assuming we know what’s best for our patient, or assuming motives of our patients is what led to the highly destructive moral-model and all of its punitive approach results.

The understanding of one’s motivation for their engagements is critical in the moral and ethical theory (Swartz, 2022). We must work to understand the *end result* and true motivation for individuals and their behaviors. As previously reviewed, a brilliant approach to this method is that of *Motivational Interviewing*. Through this model we align with self-determination theory, acceptance, and autonomy for an effective approach to resolving ambivalence, enhancing motivation, and uncovering telos in individuals (Miller et al., 2019). This approach, as defined by Miller et al. (2019), requires the resistance of telling others what to do, passing judgments and countertransference on behaviors and actions, and requires collaboration with the individual. If personal ethical countertransference occurs (i.e., the personal thoughts that this individual is unethical, immoral, or just “bad”) there are limitations to the available and effective “compassion” required by this theoretical lens. An emphasis on discovery of motivation, goals, and telos is likely to promote a space of ethical-principle-alignment between the two individuals.

The concept of *empathy* becomes a critical tool in this telos discovery. Without accurate empathy, we see that outcomes for individuals can suffer drastically in a multitude of clinical settings (Miller et al., 2019). Without the ability to truly understand and empathize with individuals, we lack the ability to effectively diagnose where a positive psychology application might be most beneficial, or what the intended target even is. Furthermore, when we erroneously

deduce that the individual is simply one of bad character or ethics due to countertransference towards the means, we lose the ability to connect or apply anything congruent or beneficial altogether.

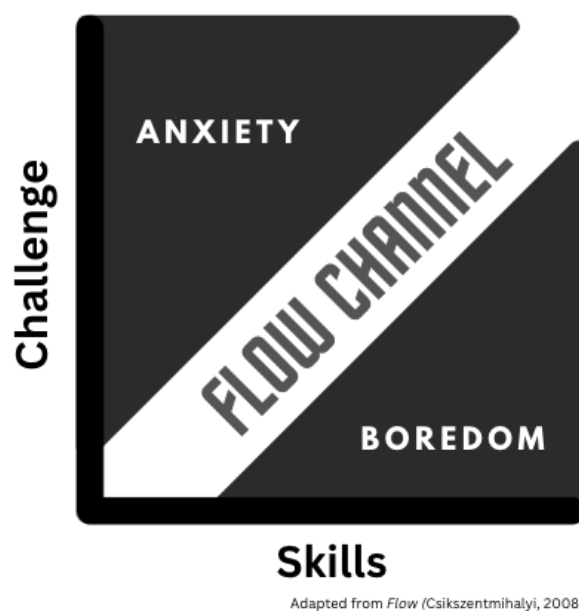
The How

This emphasis on the *why* is not to say that the *how* is irrelevant, however. Wood and Neal (2016) found that we are far more likely to develop an activity into a “healthy habit” when we find that activity *engaging*, and in doing so are also far more likely to achieve the longer-term goal. The process is a critical component, Segar et al. (2011) review that individuals will be more motivated by the enjoyment of the activity itself than they will be by the long-term improvement to their quality of life, stating that the immediate quality of life benefits become of more subjective importance than the long-term health-benefits (Segar et al., 2008). Brown and Ryan (2015) states that when an activity provides interest and enjoyment, it fosters our *intrinsic* motivation; whereas extrinsic motivators (i.e., compliance) are passive, have different effect on well-being, and are performed as a means to a separable end. Brown and Ryan (2015) also emphasize the importance of autonomy and allowing for individual (patient) choice on the engagement and associated motivations with completion of the related tasks. Ensuring that we create engaging and autonomous means for our patients to achieve their goals and complete task will allow for higher engagement and successful completion of those goals. We must be willing and able to prioritize patients enjoying their treatment process and related work. Csikszentmihalyi (2008) amplifies this notion that our enjoyment of the process will exceed the outcomes of the final achievement and we remain engaged due to stimulating challenge and balance of skill and complexity. This is accomplished through what Csikszentmihalyi referred to as *Flow*.

Flow

Flow is an experience that is achieved when there is an appropriate balance of complexity and challenge against one's skillsets and strengths that brings about enhanced levels of focus, attention, mastery, and enjoyment (Csikszentmihalyi, 2008).

Figure 2.



This balance point is critical: too little and we create boredom and disinterest (i.e., a professional athlete competing against a toddler, reading book after book at an educational level vastly below your own...etc.), but too much and we create anxiety (i.e., that same toddler's experience in trying to win the game, reading dense research full of jargon in an intensely unfamiliar field...etc.). We can see where overly combative and punitive programming could be anxiety provoking, especially when paired with the inherent neurological challenges that present themselves in early recovery (i.e., anhedonia). Additionally, little done on the part of the staff to make an educational session or group engaging, would foster boredom and disinterest, and the data shows exactly this outcome. A study of 48 different treatment approaches and their

effectiveness with treating substance use disorders found didactic educational lecture to be the *least effective* of every single method that was evaluated (Hester & Miller, 2003). Huppert and So (2011) review that there are a multitude of flourishing features that range from meaning and vitality, to positive emotions and competence. These variations are key indicators of the individualized routes in which one can achieve flow and flourishing. This leads way to a seemingly endless arsenal of activities, interventions, and unique engagements for cultivation of flow in a treatment setting.

If the expectation is that we want individuals to *participate actively* in treatment and recovery efforts and *sustain* these efforts as a means of preventing and reducing relapse, we must ensure that we have fostered and created an engaging treatment program. Deci and Ryan (1985) show that environments fostering this balanced challenge alongside positive feedback loops and actively avoid criticism foster more intrinsic motivation while negative performance feedback harms this same internal motivation. Interventions targeted at enhancement of self-efficacy are well established and validated and may also serve as a means to improve treatment related outcomes (Kadden & Litt, 2011). There isn't a simple "plug and play" formula here either; although common strategies may prove effective, we must take the time to find out how to individualize and customize treatment efforts to promote *alignment* for fostering engagement with each unique individual. An important consideration of this individualization and engagement, will be their unique signature strengths profile.

We can achieve incredible life development, enhancement, and states thriving when we are aligned with our strengths (Park & Peterson, 2009). Peterson (2006) elaborates that matching someone with their interests, passions, and strengths has shown high correlations with positive outcomes in a variety of contexts. However, we must recognize that what works for one may not

work for all (Csikszentmihalyi, 2008). Take for instance, the pro basketball star in the harp lesson, or the toddler at the chess tournament. Context is a vital consideration. Peterson (2006) reveals a correlation between leisure and life satisfaction. However, this result is dependent entirely upon spending leisure time doing something in *alignment* (context). Csikszentmihalyi & LeFevre (1989) revealed in their research that people were experiencing more states of flow in their workplace environment than they were in their leisure time. While we pursue this leisure time, almost endlessly at times, we often fail to incorporate the necessary complexity and challenge needed to create flow, whereas a challenging and engaging job can promote a long range and wide array of flow states and opportunities throughout the day. There must be an alignment with our goals, meaning, and strengths. This misunderstanding of alignment and what truly brings us happiness can cause endless pursuit of activities (or lack thereof in the case of modern leisure aka *time off*) that does not result in positive states of flow. The original Sustainable Happiness Model (Lyubomirsky, Sheldon, and Schkade, 2005) asserted directly that circumstances were of the least identified importance to happiness.

When these individual meanings align with others around us, we see that it can provide an enhanced personal identity and helps foster supportive environment with a sense of *we* (Myers & Diener, 1995). We should also see the same emotional contagion, mirror neuron, and social spread effects previously reviewed. When groups and individuals are within this state of engagement, we can demonstrate profound competence across a variety of contexts beyond the traditional constructs: realistic, investigative, artistic, social, enterprising, conventional, and ability (Holland, 1966). Holland (1966) referred to these as our *Personality Types*.

Positive Peer Pressure

Viewing through the lens of social cognitive theory we see that external elements of vicarious experience and verbal persuasion are critical influences on self-efficacy (Maddux & Kleiman, 2021). Group goals are best achieved through the identification and collaboration of multiple individual's common beliefs and unique skillsets. The mere observation of others' behaviors and the associated consequences is a highly influential factor in our internal beliefs about our own efficacy and perceived outcomes (Maddux & Kleiman, 2021). Many neuroscientists credit the replication of these social influences and observations to the impact of our mirror neurons. This incredible brain system allows us to imitate and adopt observed behavior, interpreting both the "what" and the "why" of other individuals' actions, and is additionally associated with the experience of empathy (Acharya & Shukla, 2012; Rizzolatti & Fabbri-Destro, 2009). There are decades of research fascinated with the study of mirror neurons and their mimicking responses to the actions of others observed; these mirror neurons represent up to 50% of the neurons present in certain parts of the brain (Kilner & Lemon, 2013). These social impacts are key, emphasizing the importance of a positive and productive treatment environment and equipping the clinical practitioner critical influence with seemingly hopeless individuals in need of positive intervention. Research by Fowler and Christakis (2008) demonstrates strong social impacts and correlations to happiness and well-being, strong enough to hint at implications of causality. This sort of *emotional contagion* (Hatfield et al., 1993) provides a precursor intervention, setting the stage for the foundation of a strong positive intervention. Although a causal relation interpretation is cautioned, the work of Fowler and Christakis (2009) demonstrated an apparent spread of happiness throughout social networks, with happy people located towards the center.

This sense of support from a peer is incredibly powerful, and in unique ways. For instance, a study by Schnall et al. (2008) demonstrated that the perception of a hill when accompanied by a peer to climb with you, actually made the appearance of the hill less steep than when climbing it alone. This support should not be limited to the patients themselves, but the implications are important for the staff, families, and other supports as well. When family members are able to promote autonomy (a key driver of Self Determination Theory; Brown & Ryan, 2015) children demonstrate more extension of their capacities, esteem, mastery, and exploration when compared to controlling parents (Grolnick and Apostoleris, 2002). Although there are many pitfalls to interventions and treatment being applied from someone in a related substance use context (i.e., personal experience models), many of which we have reviewed, there is substantial evidence to the benefit and history of utilization of peer support as a means of substance use intervention (Myrick & del Vecchio, 2016; White, 2010). It is important to note that this is a formalized process, with *Peer Support* being a defined, and recommended, *part of* treatment in the US, not as a replacement for treatment as a whole (HHS, 2018). Highly consistent with this proposed framework, these peer support models are rooted in the belief in the power and importance of homogenous groupings, shared, meaning, empathy, and validation (Dennis, 2003). Consistent with the prioritization and synergy of shared meaning, support groups are shown to increase understanding and empathy and the overall mutual help received (Helgesson & Gotlib, 2000)

Mind, Body, and Spirit

Consistent with an engaged and integrated approach that strives to break free from siloed interventions and treatment methodologies, we will take some time to explore some core

components of holistic components to substance use disorder treatment and positive psychology. That is mind, body, and spirit.

Mind

Garland et al. (2015) review *mindfulness-to-meaning theory* alongside the various connections of mindfulness to eudaimonic well-being and what is referred to as *positive reappraisals*. That is, the act of intentional emotion regulation via adaptations and flexibility in thinking that allow for positive experiences and interpretations of events in a more positive and meaningful way, are facilitated by mindfulness (Garland et al., 2015). The potential critical ratio of 3 to 1 (Fredrickson & Losada, 2005) of positive and negative events/experiences should be highly obtainable with these reappraisals (Garland et al., 2015) as pleasant events actually do exist at a ratio of 3 to 1 when compared to negative ones (Oishi, Diener, Choi, Kim-Prieto, & Choi, 2007). Interrelated to our reviewed strengths-based approaches and incorporations, Niemiec and Pearce (2021) review the tremendous interest and interrelation between mindfulness and character strengths. Character strengths and mindfulness have demonstrated proven effectiveness in well-being improvement with models such as the *Mindfulness-Based Strengths Practice* (Niemiec, 2014). Additionally, there are direct practices incorporating the use of mindfulness to enhance strengths (*Strong Mindfulness*; Niemiec, Rashid, and Spinella (2012) and for the use of character strengths to improve mindfulness practices as well via complimentary synergies between established methodologies (*Mindful Strengths Use*; Niemiec, 2012). In Brown and Ryan's (2015) review of *Self Determination Theory*, the evidence for mindfulness' role in autonomous behavior regulation, present-mindedness, creation of opportunities for choice, and that mindfulness can be both effectively measured and trained upon. With evidence supporting the reduction of stress through mindfulness practices such as

Mindfulness Based Stress Reduction (MSBR; Grossman et al., 2010), and the known risks of stress as a leader in relapse risk (Sinha, 2007), the implications for application in substance use disorder treatment are direct. Very direct applications and implications exist as well. Brewer et al. (2010) reviews the benefits to treatment of substance use disorders, depression, as well as co-occurring disorders (a significant patient portion we have reviewed). Additionally, Witkiewitz et al. (2013) showed that mindfulness training and practice was also a positive means for reduction of cravings in a post treatment setting, thus reducing the risk of potential relapse in patients after treatment.

Body

Exercise and physical activity is viewed through positive psychology as an effective means for tremendous benefit to individuals as well as communities at large as we strive for improvements to well-being and flourishing; this was reviewed across mental health, physical health, social, educational, and other various contexts (Faulkner, Hefferon, & Mutrie, 2015). Exercise and physical activity is identified as a *positive health behavior* that can prevent or event reverse a variety of chronic conditions (Van Cappellen et al., 2017). While reviewing the importance of engagement (as thoroughly reviewed), Van Cappellen et al. (2017) discusses the various benefits exercise can provide in creating positive upward spirals and change in well-being and lifestyle. There are observed relationships between substance use, mental health, and physical activity. Brellenthin & Lee (2018) discusses that physical activity is associated with increases in stress management, executive function cognition, self-concept, self-esteem, self-efficacy, social integration, and other benefits including several neurobiological changes. These are noted alongside the reduction of depression, anxiety, and boredom (Brellenthin & Lee, 2018). A study by Babyak et al. (2000) examined the effects of exercise when compared to medication

alone, or in combination with exercise was performed on individuals with major depressive disorder (MDD), which half of all adolescents with a substance use disorder were reported as having an (often undiagnosed; Mullen, 2018) major depressive episode (SAMHSA, 2022b), that found the highest recovery rate (almost 90%), and lowest relapse rate (less than 10%) was associated with the exercise only intervention. Directly related to substance use there was noted negative associations with physical activity and the use of illicit substances and nicotine with adolescents, no clear relationship with marijuana, and a positive relationship to use of alcohol (Brellenthin & Lee, 2018). Bardo and Compton (2015) reveal, alongside noted limitations and concerns, that their preclinical evidence demonstrated exercise a valuable tool for not just the prevention of substance use, but for reduction in existing use during treatment intervention. Bardo and Compton (2015) express the importance of continued research on the neuroglial impact, noting direct effects on exercise to areas of the brain affected by addiction. Smith and Lynch (2012) echo this need citing the found correlations in exercise and reduction of use and need to further validate the behavioral and neurological changes that may serve to reduce risk and initiated use as a means of both prevention and treatment across a broad spectrum of transitional treatment and recovery phases. Compiling research on exercise and neuronal plasticity, Praag and Christie (2015) also believe exercise may serve as a means for alleviation of substance use disorders. Work by Zhang and Liu (2022) demonstrated that for the substance nicotine, some of these observed brain changes are believed to be associated with the noted reduction in cravings substance-seeking behaviors as a result of exercise. There are believed to be a multitude of physical, mental health, and substance use disorder related benefits from exercise programs used as a targeted intervention in treatment settings (Zhang & Liu, 2022). A study by (Stoutenberg et al., 2023) revealed that despite these known benefits and program staff

willingness and confidence to implement regular physical activity into substance use treatment, most providers cite lack of staff and available related funding to do in their treatment centers, even when they have the necessary equipment or space. An emphasis on funding, staffing, and resources tied to the benefits of physical activity and exercise integration into substance use disorder treatment could serve as a positive driver in improving outcomes and engagement.

Spirit

Myers and Diener (1995) in their review of *Who is Happy?* discuss religion as a strong connection to positive well-being, mental and physical health, reduction of delinquency, marital satisfaction, reduction of suicide, increased resiliency in crisis, and reduction of substance use. As reviewed, mutual help groups and 12 step programs are a common component of substance use disorder recovery, and theism is highly associated with 12 step (Dermatis & Galanter, 2015). Galanter (2007) establishes a clear connection between positive psychology and the act of attributing meaning, which can be linked to engaging in 12 step programs and the supportive networks they offer. According to Galanter (2007), these programs serve as a means of experiencing spiritual rejuvenation within social circles that foster shared and transcendent significance. The benefits of this spiritual connection was not only validated as valuable during treatment, but in long term recovery efforts as well. In a longer term follow up through the NIDA-Drug Addiction Treatment Outcome Study (DATOS), researchers measured relapse as a function of spirituality/religiosity (Schoenthaler et al., 2015). Their findings demonstrated that across spirituality measures that there was a significant, direct, and strong relationship between spirituality and religiosity and reduced rates of relapse across all substances (with the exception of one, crack). (Dermatis & Galanter, 2015) found that the components of 12 step that were associated with spirituality and religiosity, such as “Feeling God’s presence daily, believing in a

higher power as a universal spirit, and serving as an AA sponsor” (pg. 510) were effectively correlated with reduction of cravings and reduced emotional distress. However, there is complex data here to review. Spirituality and religiosity measures did **not** correlate with 12 step attendance at three years follow up (Kaskutas et al., 20023). A reported “spiritual awakening” as a result of 12 step attendance **was** associated positively with sobriety; however, a spiritual awakening was found to be unrelated to sobriety at a three year follow up (Tonigan, 2003). It seems that a key component to the 12 step benefits is the meaning and associated spirituality and religiosity, and that this increases after sobriety is achieved (Dermatis & Galanter, 2015). Dermatis and Galanter (2015) also state that despite found positive impacts on relapse risk items (i.e., cravings), 12 step and associated spirituality and religiosity may only partially mediate relapse outcomes (Dermatis & Galanter, 2015). It is clear that religiosity plays a related part in mental health and substance use disorders as well as overall well-being; however, similar to what has been reiterated throughout, this is not a one size fits all approach, and to assume so would be inappropriate and in some cases unethical.

Individualization, Mastery, and Other Considerations

Another common fault is the attempt to create a “one size fits all” approach to treatment. While some interventions may work for some, this is proposed to be no more valuable than a shoe store that sells only size 6 shoes. Put simply, this is inconsistent with the individualized nature of individual human beings. The uniqueness of signature strengths and their expressions can be attributed to the concept of individualized mastery. A longstanding concept, James (1892) discusses this phenomenon through the framework of habit. These habits are products of instinctual and manifested nerve-center structuring, restructuring, and activity. There exists a brilliant balance of plasticity within the organic makeup of an individual which yields a breeding

ground for effective habit formation and implementation. James (1892) reveals that this mastery and excellence comes from the simplified execution of tasks accomplished through the development of practical habits. As our excellence increases, the fatigue, required attention, and complexity of task all reduce (James, 1892). James (1892) discusses that these deep binding neurological pathways give possibility to action with minimal effort, muscular or mental. Our mastery becomes a part of us physically and mentally, and gives rise to our unique proficiency (James, 1984).

We see this mastery take shape and form through professionalism and specialized roles and activities, and just as individuals vary, so do these distinct expressions of mastery. Building upon the work of Aristotle, Melchert (2002) reviews this same concept through examples of the cobbler and flutist, and moving beyond occupation to an elevated state of excellence. Melchert (2002) asserts that this very execution of excellence is the direct link to happiness. Building on this same theme we see Csikszentmihalyi (2008) review this notion via athletes, plumbers, mechanics, and other musicians. Csikszentmihalyi (2008) proposes that humanity, in its truest sense, is contingent upon master of thoughts and feelings, and that incorporation of this into one's unique specialty and areas of competence can lead to *optimal experience* (Csikszentmihalyi, 1989). By ensuring we take the time to individualize our interventions, we can set our patients up for success in a means that creates a positive recursion for mastery, self-efficacy, and contributes to overall happiness and well-being. As discussed, Wood and Neal (2016) demonstrated that the continued engagement of new habits and practices is contingent upon engagement and satisfaction during their process. This relationship, once formed, is so powerful that Wood and Neal (2016) state even the knowledge of significant health damage or participation in an activity that is unenjoyable will still be pursued despite these factors. Utilizing

mastery and healthy habit formation with adolescents could serve as an automatic or “wired-in” defense against cravings, relapse risk, and other negatively contributing factors by creating a “built-in” habitual defense strategy of new behaviors and activities. Again, here we see that the role of feedback from those intervening may be most effective if it utilizes *context clues*, *repetition of rewards* as well as *uncertainty* of their receipt for most effectiveness (Wood & Neal, 2016).

These components of *mastery* speak to the importance of finding what Lyubomirsky (2013) refers to as an individual’s *fit*. Through an available *Person-Activity-Fit Diagnostic* an individual can receive immediate feedback on their potentially best fit positive interventions. This recommendation with choice methodology allows for unique and individualized approaches and recommendations, but also for individualized autonomy in the selection and application process. In Schueller’s (2014) review of the *Person-Activity-Fit* he offers support of the efficacy of this approach and its consistency with Self-Determination Theory (SDT; Deci & Ryan, 1985), but cautions to the importance of individualization based on race, motivation, socioeconomic status, and culture is critical in creating a salient and effective positive intervention experience.

For specific applications to substance use disorders, Pawelski’s (2020) framework for identifying, organizing, implementing, and even validating the effectiveness of positive interventions is recommended. This elements model offers a 5-category structure:

1. Desired Outcome (the individual’s goal)
2. Target System (domain of change)
3. Target Change (desired change for that system)

4. Active Ingredient (cause of the change)

5. Activity (medium for ingredient to deliver change).

Through this framework an individual can work multidimensionally in crafting a plan of intervention to achieve their desired goals, working from a palette of options in which they can select and identify key components that are tailored to their strengths, needs, interests, and outcomes.

Sin and Lyubomirsky (2009) demonstrate the effectiveness of Positive interventions on well-being and directly encourage clinical practice, with substantial evidence to their benefit of depressive symptoms. While the implications for substance use disorder specific targeting may serve as theoretical, there is direct application for the proven benefits to depression as it relates to substance use disorders in knowing that roughly one half of all adolescents with a substance use disorder also had a Major Depressive Episode in the same year (SAMHSA, 2022). Positive interventions benefit from well-researched and established frameworks, categories, and continued development of *pooled* intervention strategies. However, the importance of *individualized* interventions in addition to *informed* interventions is both essential and necessary for continued effective implementation of positive interventions (Bao & Lyubomirsky, 2014). Application to substance use disorders, specifically adolescents, through application to strengths and mastery speaks directly to this individualization. Another consideration is that it may be tempting when we have found *an* effective intervention with individuals with substance use disorders to think that we have found *the* effective intervention. Pedrotti and Edwards (2017) also note that specific populations require specific considerations, and there is a substantial lack of research to help support the variance and understanding within these classes, categories, and

differences. We need continued research, support, and understanding in a variety of areas: social-class, disability, gender, sexual orientation, race/ethnicity, and disability (Pedrotti & Edwards, 2017). However, despite this need for categorical individualization, caution that we do not overgeneralize as we begin to find themes in research. For example, we cannot utilize these thematic findings to make deterministic generalizations (i.e., all gay white middle class males will benefit from x intervention). Frameworks and guiding ethical principles remain valuable, but individualization must still exist within.

Brickman and Campbell introduced the concept of a *hedonic treadmill* (1971). That is, that all emotions (good and bad) will subject themselves to the Gaussian curve's pull back to the norm. This effect was made explicitly evident in the follow-up studies on lottery winners and individuals paralyzed in accidents revealed happiness levels returned towards the mean (Brickman et al., 1978). This concept poses as the antagonist in the face of long lasting and effective positive interventions, and a major consideration of pessimism noted in the *Sustainable Happiness Model* (Lyubomirsky, Sheldon, and Schkade, 2005). Follow up on the sustainable happiness model Sheldon and Lyubomirsky (2021) assert that through emphasis and intentionality to frequency, variation, and individualization (or *fit*), this adaptation can be overcome. This variety served as such an important factor, it was the core driver of the *Hedonic Adaptation Prevention Model* itself (Sheldon & Lyubomirsky, 2012; Sheldon, Boehm, & Lyubomirsky, 2013). Addiction may exacerbate this challenge and effect quite substantially as the (hedonic) pleasure system becomes hijacked and drastically effected (HHS, 2014) and the pleasure and reward systems are actively affected and impacted (NIDA, 2014; Goldstein & Volkow, 2012), driving an individual towards continued pursuit of related rewards (ASAM,

2011), but not realizing or experiences their *normal* effects (NIDA, 2014; Goldstein & Volkow, 2012).

We must also remember the presence of *anhedonia*, that is, the *inability* for an individual to process pleasure, and its presence and impact in substance use disorders (Destoop et al., 2019; Koob & Moal, 2005; Volkow & Morales, 2015). Positive interventions that rely on hedonic pleasures, such as Garland et al. (2015) and *savoring of the hedonic experience* may assume neurotypical brain functioning and a response system that may not be in place in addiction. Additionally, the *hedonic set point* has been drastically altered by active and/or prolonged substance use (Ahmed & Koob, 1998) and normal reward responses. Diener et al., (2009) propose necessary adaptations to intervention with an emphasis on the differences on varying set points and adaptation points across individuals and contexts.

The effect of anhedonia can also lead to misinformed confrontational approaches that are assuming the patient *won't* be in a good mood or a child that *isn't* grateful, rather than recognizing this is someone that *can't* experience those pleasures and emotions normally due to the effects of addiction on the brain. Failure to recognize these important brain changes can lead to a decrease of empathy and understanding of the patient's experience and current state. Holding someone harshly responsible for not doing something their brain simply cannot do is a recipe for frustration, stress, and lack of effective engagement (by both parties). Addiction, having hijacked the brain in an endless pursuit of hedonic pleasure through substance use, seems to have a built-in result of hedonic adaptation, and it is present in the reduced response in continued substance use; we see a muted response to the pleasures of drugs, as well as non-drug rewards (Goldstein & Volkow, 2011; NIDA, 2014). Regardless of any attenuation in effect, the *meaning* that can be incorporated into actions has shown incredible power, even when the lack of hedonic

experiences is present (Garland et al., 2015). Sheldon (2018) promotes approaches less concerned with hedonic pleasures and focused on the importance of *doing*-well as a means of achieving and enhancing *being*-well. Garland et al. (2015) does reveal that although hedonic principles play a role in the creation of pleasure (and some well-being), it is *eudaimonic* well-being that is associated with a higher-level meaning and subjective well-being experience. This leaves hope that a lack of hedonic response or pleasure processing ability can be combatted by an emphasis on meaning; and further reiterates the importance of uncovering the areas meaningful *to the patient*. Viktor Frankl demonstrates through the stories of holocaust victims, the immense power of meaning in its ability to allow individuals to cope and bear almost any tragedy or suffering (Frankl et al., 2006).

Positive interventions can provide the *active* intervention that targets neither a purely hedonic (pleasure attainment, pain avoidance) nor a purely eudaimonic (meaning and realization of self) end goal (Ryan & Deci, 2001). Their emphasis, and true success, lies in targeting *subjective well-being*, which allows for variance and exposure to an arguably more balanced approach to pursuit of well-being when compared with active substance use. Diener et al., (2009) propose that although adaptation is an incredibly powerful force, it can be overcome with targeted efforts, and that even very small interventions can be highly effective in doing so. Sheldon and Lyubomirsky (2021) echo in that hedonic adaptation is not inevitable, proposing that the use of variance is critical for success. Despite the influence of addiction and this established pull back to *normality*, we can utilize the numerous key strategies for finding individualized positive interventions, as well as strategies to adapt, expand, and retain efficacy via positive interventions are offered by Sheldon, Boehm, & Lyubomirsky (2013) in their *Hedonic Adaptation Prevention Model*. Key aspects include the monitoring and management of

aspiration levels, emphasis on intrinsic motivators, and the use of variety (including modification of existing vs. all new interventions) (Sheldon et al., 2013). This combined with an approach rooted in individualized selection to get *the right* intervention creates a formula for increased success likelihood. Once this is established one should prioritize *relatedness* while implementing techniques associated with variation (Brown & Ryan, 2015). However, the balance of relatedness without compromising the integrity of repetition and individualization is of important consideration, as well as challenge.

Discussion

By exploring a diverse range of methodologies, positive interventions, and thoughtful critiques, we have successfully formulated a novel framework aimed at revolutionizing addiction treatment to be more innovative and effective. This novel approach is the result of synergizing knowledge from positive psychology with a deep understanding of the addicted brain, which enabled us to identify shortcomings in current treatment methodologies. Our proposed alternatives are rooted in evidence-based practices and hold the potential to address these identified issues, filling gaps in progress and outcomes. This comes at a critical juncture in which the impacts of substance use disorders, especially among adolescents, demonstrate rising negative effects alongside deficient treatment and intervention methodologies. A review of current and traditional practices may have indicated that interventions are actually exacerbating problems and symptoms of SUDs via intended “treatments”.

Nonetheless, it is crucial to acknowledge the pressing need for ongoing research concerning adolescent substance use disorders and the application of positive psychology within this specific demographic. By continuing to invest in this area, we can refine and enhance our

proposed framework, thereby better addressing the unique challenges faced by adolescents struggling with addiction.

Considering the existing research and best practices, we have meticulously crafted a comprehensive proposal that merits serious consideration and immediate implementation. This proposal holds promise for significantly improving the treatment outcomes and overall well-being of those affected by addiction. It is our hope that this holistic approach, incorporating insights from positive psychology and tailored to the adolescent population, will bring about a positive and lasting impact in the field of addiction treatment.

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