

QUANTITATIVE RESEARCH

Understanding the relationships between personal growth initiative, hope, and abstinence self-efficacy

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Abstract

Literature suggests personal growth initiative (PGI) and hope play critical roles in problematic substance use. Authors describe the association between PGI and abstinence self-efficacy (ASE) and the mediating factor of hope. Implications for additions counselors and school counselors are provided.

KEYWORDS

abstinence self-efficacy, personal growth, hope

UNDERSTANDING THE RELATIONSHIPS BETWEEN PERSONAL GROWTH INITIATIVE, HOPE, AND ABSTINENCE SELF-EFFICACY

Self-efficacy is a critical factor in the motivation to avoid problematic substance use (Ilgen et al., 2005; Marlatt & Gordon, 1985). In his landmark studies, Bandura (1977) defined self-efficacy as the extent to which individuals consider themselves capable of performing a task. Relating this concept to substance use, Chavarría et al. (2012) established the term *abstinence self-efficacy* (ASE) as the belief individuals have in their ability to abstain from engaging in an undesired action. ASE includes an individual's level of confidence with their ability to abstain from substances for an extended period of time (Ilgen et al., 2005). According to Bandura (1977) self-efficacy arises from four sources: performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Bandura's theory also stated that cognitive beliefs, access to coping skills, and fostering self-efficacy assisted individuals in overcoming challenges and facing stressful situations (Bandura, 1977). Research is less clear on how ASE arises, but the concept itself is germane in understanding addiction prevention and recovery.

Personal growth initiative

Personal growth initiative (PGI) is a concept established in the literature that may contribute to ASE. PGI is an active and intentional process of change in which individuals are engaged in their personal

growth (Robitschek, 1998; Shorey et al., 2007). PGI is elemental to counseling practice and process, and relevant across life domains (Robitschek et al., 2012). Hardin and colleagues (2003) demonstrated that PGI appears to be a protective factor against emotional distress and enhances individuals' well-being by preventing distress. Individuals with higher levels of PGI experience lower levels of depression and feel more closely aligned with the type of person they aspire to be (Hardin et al., 2003). Ayub and Iqbal (2012) found similar connections between PGI: improved psychological well-being and reduced psychological distress among adolescents and college students.

Within the concept of PGI, Robitschek and colleagues (2012) identified four factors: (a) planfulness, (b) readiness for change, (c) using resources, and (d) intentional behavior. These four factors demonstrate the multiplicity of steps involved in the process of personal growth. For instance, an individual seeking opportunities for change demonstrates *Readiness for Change*; an individual capitalizing on opportunities and following through on their plans demonstrates *Intentional Behavior* (Robitschek et al., 2012). When applied to ASE, cognitive resources (i.e., planfulness, readiness for change, use of resources, intentional behavior) may have a positive effect on individuals' ASE and confidence (Majer et al., 2004; Robitschek et al., 2012). Chen and colleagues (2020) suggest that adolescents with high levels of PGI tend to have more positive coping strategies and decreased risk of substance use. Therefore, because PGI may serve as a protective factor, drug prevention programs that prioritize students' self-esteem, purpose, goal fulfillment, intentionality, agency, and opportunities, may have a greater impact on students' ASE as compared to programs that prioritize drug awareness.

Hope

Across studies, scholars have identified that a common element to problematic substance use is the construct of hope (Hampton et al., 2011; Mathis et al., 2009; Saboor et al., 2019). Though they are separate constructs, PGI and hope are interwoven and share a number of features. Both include (a) teachable goal-directed processes, (b) clear, future-oriented goal setting, (c) creating action steps or pathways toward goals, and (d) a sense of agency to implement plans and attain set goals (Robitschek, 1998; Shorey et al., 2007; Snyder et al., 1991). Dispositional hope may predict individuals' abstinence from substances at various stages of recovery (Mathis et al., 2009). When seeking treatment for substance use, hope is an important piece of an individual's progress (Hampton, et al., 2011) and hope-based interventions may, in fact, increase individuals' self-efficacy (Saboor et al., 2019) and promote change throughout the counseling process (Larsen et al., 2007).

Hope has emerged as a social-emotional construct related to addiction and substance use behavior, but has never been examined in relationship to ASE (Gutierrez, 2019; Gutierrez et al., 2020; Bressler et al., 2010; Kaskutas et al., 2014; Leamy et al., 2011; Robitschek, 1998; Shorey et al., 2007; Snyder et al., 1991). According to Snyder et al. (1991), when an individual has hope, they can hold personally valued goals, create pathways to achieve their goals, and are motivated to follow the pathways in pursuit of their goals. Bressler et al. (2010) noted that those with higher levels of hope exhibit an ability to set and accomplish their goals, create more challenging goals for themselves, and are willing to take chances in order to achieve their goals. The connection between hope and the recovery process for mental health and problematic substance use is supported throughout the literature (Gutierrez, 2019; Gutierrez et al., 2020; Kaskutas et al., 2014; Leamy et al., 2011). Hope appears to be the common denominator within the processes of personal growth initiative across contexts.

In an effort to explain the concept of hope, various definitions exist in the literature. These definitions range in emphasis including hope as a cognitive goal-setting framework, hope as an emotion, and hope as an element of social systems (Gutierrez et al., 2020; Bruininks & Malle, 2005; Snyder, 2002). Snyder (2002) defined hope as "the perceived capability to derive pathways to desired goals, and motivate oneself via agency thinking to use those pathways" (p. 249). Bruininks and Malle (2005) conceptualized hope as a fundamental emotion integral to the basic human processes of goal-setting, investment, coping, and motivation to change. With specific attention to hope and goal attainment,

Tong et al. (2010) examined the connection between hope and trait pathways, trait agency, state pathways, and state agency. Their findings indicate that individuals who believe their goals are attainable report consistently feeling hopeful, yet this hopefulness is not limited to individuals' held beliefs about themselves (Tong et al., 2010); as long as people feel as though a goal can somehow be attained, they will report feeling hopeful. Regardless of researchers' perspectives regarding the construct of hope, literature consistently supports hope as a critical element of individuals' growth academically, personally, professionally, and psychologically (Gutierrez et al., 2020; Bressler et al., 2010; Kaskutas et al., 2014; Leamy et al., 2011; Snyder, 2002).

With regard to substance use, the Substance Abuse and Mental Health Services Administration (SAMHSA, 2012) identified hope as a key element of the recovery process. In their study of 412 participants, Gutierrez and colleagues (2020) administered the Adult Hope Scale (Snyder et al., 1991), the Advanced Warning of Relapse Questionnaire (Miller & Harris, 2000), and the Recovery Assessment Scale – Domains and Stages (Hancock et al., 2016). Their findings indicate hope's statistically significant mediating effect on the relationship between recovery progress and risk of relapse, further supporting the possibility that hope may be the central contributor to an individual's abstinence from substance use, even in the case of previous substance use history.

Despite this possible connection, there is a dearth in the research examining the relationship between each of the identified constructs, and the connecting thread of hope as a tool for the bolstering of ASE. The literature has provided significant insight into the relationships between PGI, hope, and ASE. However, there is a scarcity of literature examining the directionality of these relationships, the strength of these associations, and how these constructs relate simultaneously. In the current study, we seek to understand whether an individual's PGI will increase their ASE, and if that relationship is mediated by PGI's influence on hope. If this relationship is significant, it would have potential implications for the focus of prevention and recovery programs in addictions treatment. The two questions guiding this investigation are as follows:

1. What is the association between PGI and ASE?
2. Does hope mediate the relationship between personal growth and ASE?

Previous research has indicated that hope is a mediating variable in the substance use, recovery, and abstinence. Therefore, we hypothesize that PGI will have a positive impact on participants' ASE and that hope will be a mediating factor in the relationship between PGI and ASE. Because we are measuring multiple constructs, we will examine the correlation between our constructs with a structural equation model (SEM). The SEM design evaluates the relationships between constructs and latent variables (Crockett, 2012). We expect hope to be the latent variable influencing PGI and ASE.

METHOD

Participants

This study included a total number of 364 participants. Three hundred fifty-three participants reported living in the United States (97%), and 11 reported living outside of the United States (3%). The areas in which participants lived included urban ($n = 163$, 44.8%), rural ($n = 105$, 28.8%), and suburban ($n = 96$, 26.4%) locations. The majority of participants identified as male ($n = 223$, 61.3%), followed by female ($n = 140$, 38.5%), and transgender/gender nonconforming ($n = 1$, .3%). Two hundred sixty-one participants self-identified as White (71.7%), 58 as Black or African American (15.9%), 32 as Hispanic or Latino (8.8%), 14 as Asian (3.8%), 10 as American Indian/Alaskan Native (2.7%), two as Native Hawaiian or Other Pacific Islander ($n = 2$, .5%), two as Multiracial ($n = 2$, .5%), and one participant identified as Other ($n = 1$, .3%). The mean age of participants was 39.17 years

($SD = 11.58$), with ages ranging from 20 to 70 years old. With regard to highest level of education, 242 participants had a bachelor's degree (66.5%), 86 had a master's degree (23.6%), 16 had some college degree (4.4%), 10 had an associate's degree (2.7%), five reported as high school graduate (1.4%), and five had a doctoral degree (1.4%). Individual income of participants ranged from less than \$30,000 to over \$150,000, with 58 (15.9%) reporting less than \$30,000, 122 (33.5%) reporting between \$30,000 and \$50,000, 117 (32.1%) reporting between \$50,000 and \$75,000, 50 (13.7%) reporting between \$75,000 and \$100,000, 15 (4.1%) reporting between \$100,000 and \$150,000, 2 (.5%) reporting over \$150,000; four participants did not disclose. Further, we used the Alcohol Use Disorders Identification Test (AUDIT; Babor et al., 2001) to screen for participants' level of alcohol use. Scores ranged from 9 to 42 with a mean score of 24, indicating that all participants scored within the range of hazardous or harmful alcohol consumption to the possibility of moderate-severe alcohol use disorder (Babor et al., 2001; Hagman, 2016; Källmén et al., 2019). See Table 1 for a visual representation of participant characteristics (Table 1).

Procedures

We used the crowd-sourcing service Mechanical Turk (MTurk) to invite individuals to participate in our study. A community sample of ($n = 364$) participants completed a number of assessments uploaded to an electronic web survey platform (Qualtrics, 2013). Previous research has provided evidence for the reliability and validity of MTurk for the recruitment of participants in survey research (Buhrmester et al., 2016; Fleischer et al., 2015; Goodman et al., 2013; Kim & Hodgins, 2017; Landers & Behrend, 2015; Paolacci & Chandler, 2014). Further literature supports the reliability and validity of MTurk as a recruitment method in the case of individuals struggling with addiction and substance use (Kim & Hodgins, 2017). Through the MTurk platform, participants received 50 cents in US dollars after completion of the assessments. We conducted all survey procedures following approval from our institutional review board.

Instruments

Demographic questionnaire

We created a brief demographic questionnaire in order to control for participant demographics. The demographic questionnaire documented information regarding participants' gender, age, ethnicity, country of residence, geographic location, employment status, level of education, individual income range, and household income.

Brief abstinence self-efficacy scale

To measure participants' abstinence self-efficacy, we implemented the self-report Brief Abstinence Self-Efficacy Scale (McKiernan et al., 2011). The Brief Abstinence Self-Efficacy Scale is a 12-item version of the original 40-item Alcohol Self-Efficacy Scale (DiClemente et al., 1994). The Brief Abstinence Self-Efficacy Scale was developed to efficiently assess the domains of temptation and confidence with regard to substance use and abstinence (McKiernan et al., 2011). An example of a question within the temptation domain is "How tempted would you be to drink or use drugs when you are emotionally upset (feeling down, angry, afraid, or guilty)?" An example of a question within the confidence domain is "How confident would you be not to drink or use drugs when around or seeing others who are using – such as during celebrations or on vacation?" Participants responded to

TABLE 1 Participant characteristics

| | <i>M (SD)</i> | <i>n (%)</i> |
|--|---------------|--------------|
| Participant age | 39.17 (11.58) | |
| AUDIT Score | 24.12 (7.03) | |
| Gender | | |
| Female | | 140 (38.5) |
| Male | | 223 (61.3) |
| Transgender/Gender nonconforming | | 1 (.3) |
| Ethnicity/Race | | |
| Asian | | 14 (3.8) |
| American Indian/Alaskan Native | | 10 (2.7) |
| Black or African American | | 58 (15.9) |
| Hispanic or Latino | | 32 (8.8) |
| Multiracial | | 2 (.5) |
| Native Hawaiian/Other Pacific Islander | | 2 (.5) |
| White | | 261 (71.7) |
| Other | | 1 (.3) |
| Education level | | |
| High school graduate | | 5 (1.4) |
| Some college | | 16 (4.4) |
| Associate's degree | | 10 (2.7) |
| Bachelor's degree | | 242 (66.5) |
| Master's degree | | 86 (23.6) |
| Doctoral degree | | 5 (1.4) |
| Individual income | | |
| Below \$30,000 | | 58 (15.9) |
| Between \$30,000–\$50,000 | | 122 (33.5) |
| Between \$50,000–\$75,000 | | 117 (32.1) |
| Between \$75,000–\$100,000 | | 50 (13.7) |
| Between \$100,000–\$150,000 | | 15 (4.1) |
| Over \$150,000 | | 2 (.5) |
| National location | | |
| Within the United States | | 353 (97) |
| Outside of the United States | | 11 (3) |
| Geographical location | | |
| Rural | | 105 (28.8) |
| Urban | | 163 (44.8) |
| Suburban | | 96 (26.4) |

each of the items on a five-point Likert-type scale, from 1 (*not at all*) to 5 (*extremely*). McKiernan and colleagues (2011) report good reliability for both domains, citing a Cronbach's alpha of 0.92 for confidence, and a Cronbach's alpha of 0.88 for temptation. For this study, a Cronbach's alpha of 0.84 for confidence and a Cronbach's alpha of 0.88 for temptation suggested good internal consistency.

Personal growth initiative scale-II

To assess the multifaceted process of personal growth, we included the Personal Growth Initiative Scale-II (PGIS-II; Robitschek et al., 2012). The PGIS-II is an updated version of the original PGI Scale (Robitschek, 1998, 1999) to more efficiently encompass the complexity of the personal growth initiative process (Robitschek et al., 2012). The PGIS-II measures four factors of personal growth, including planfulness, using resources, readiness for change, and intentional behavior. Participants responded to items on a five-point Likert-type scale, from 1 (*disagree strongly*) to 5 (*agree strongly*). One example of an item statement is “I know how to set realistic goals to make changes in myself.” In their evaluation of the PGIS-II, Robitschek and colleagues (2012) reported good internal consistency across total scale scores citing Cronbach’s alpha ranging from 0.90 to 0.94. The Cronbach’s alpha for this study is 0.91, indicating good internal consistency.

Adult hope scale

To measure participants’ level of hope, we used the Adult Hope Scale (AHS; Snyder et al., 1991). The AHS is a 12-item self-report measure assessing two domains of hope: agency (goal-directed energy) and pathways (plans to accomplish goals; Snyder et al., 1991). Participants indicated their responses on an eight-point Likert-type scale ranging from 1 (*definitely false*) to 8 (*definitely true*). Examples of the items include, “I energetically pursue my goals,” and “I can think of many ways to get the things in life that are important to me.” Studies of the AHS suggest good internal validity with Cronbach’s alpha scores ranging from 0.74 to 0.84 (Hedayati & Khazaei, 2014; Snyder et al., 1991). The Cronbach’s alpha for this study is 0.90, indicating good internal consistency.

Data analysis

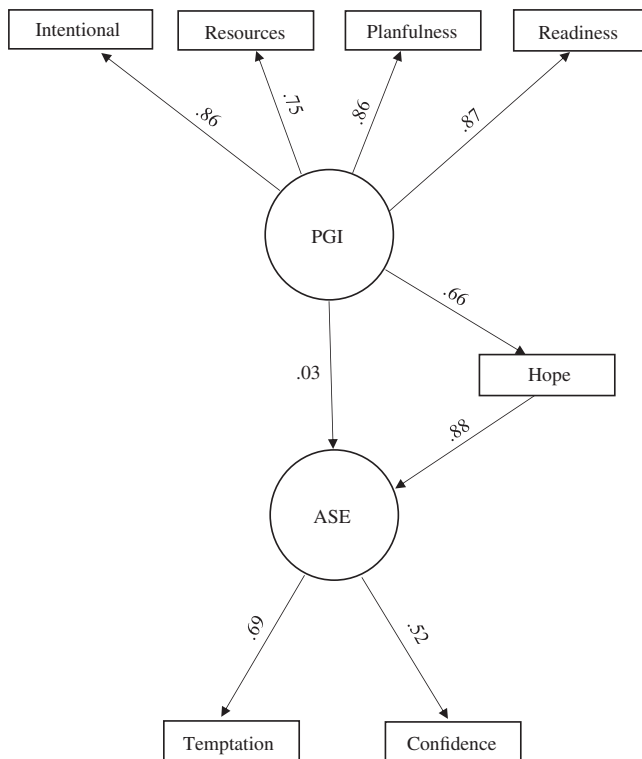
All analyses were conducted using IBM SPSS and AMOS version 26. To test the fit of our data to our hypothesized mediation model, we utilized structural equation modeling with a maximum likelihood estimation technique. We estimated the indirect effects using 5000 bootstrapped and bias corrected confidence intervals and a two-tailed test of significance. These additional steps, although not always necessary, allowed for a more conservative evaluation of the relationships. We consulted the chi-square ratio (χ^2), comparative fit index (CFI), goodness-of-fit index (GFI), Tucker-Lewis Index (TLI), and the root-mean-square error of approximation (RMSEA) to determine the acceptable fit of the model. The cut-off scores we utilized for the analysis included a chi-square degrees of freedom ratio of less than 5, a CFI and GFI of greater than 0.90, and an RMSEA below 0.08 (Kline, 2011). We presented the standardized regression weights (β) to interpret the direct effects.

RESULTS

We began by conducting preliminary analysis to establish the reliability of the data and ensuring that the statistical assumptions were met. Cases with missing data ($n = 2$) were removed from the analysis after being determined that their presence was missing completely at random and they did not hold influence over the findings. A correlational analysis of the variables of interest indicate statistically significant relationships. PGI demonstrated a positive relationship with temptation ($r = 0.37, p < 0.01$), confidence ($r = 0.40, p < 0.01$), and hope ($r = 0.63, p < 0.01$). Hope was also correlated with temptation ($r = 0.63, p < 0.01$) and confidence ($r = 0.47, p < 0.01$). Determining power in SEM can be complex resisting general rules and guidelines (see Wolf et al., 2013); however, with

FIGURE 1 Structural mediation model of the associations between PGI, hope, and ASE

Structural mediation model of the associations between PGI, hope, and ASE



a sample size of 364 and a relatively simple model mediation model, we established that the sample size was sufficient for the analysis and exceeded typical general rules (Kline, 2011; Wolf et al., 2013).

The mediation model demonstrates a good fit to the data, $\chi^2(12) = 39.33$, $p = 0.01$, CFI = 0.98; $\chi^2/df = 3.3$; TLI = 0.97; RMSEA = 0.08. As hypothesized, all pathways in the model were statistically significant with direct effects ($p < 0.01$), except for the path between PGI and ASE. Hope had a positive association with ASE ($\beta = 0.88$, $p < 0.01$) and on PGI ($\beta = 0.66$, $p < 0.01$). Consulting the bootstrap confidence intervals reveals a significant indirect effect ($\beta = 0.81$, $p < 0.01$) between PGI and ASE indicating that this relationship is fully mediated by hope. See Figure 1 for a visual representation of the model (Figure 1)

DISCUSSION

In the current study, we examine the relationship between PGI, hope, and ASE with the goal of identifying pathways for mitigating problematic substance use. We hypothesized that PGI would have a positive impact on participants' ASE and that hope will be a mediating factor in the relationship between PGI and ASE. Consistent with our hypothesis, these data reveal a significant relationship between PGI and ASE. The findings indicate that the association between these constructs is statistically significant with a medium to large effect size. Further analysis reveals that hope fully mediates this relationship. When individuals increased in PGI they also increased in hope; it was through that indirect relationship that PGI ultimately influenced ASE.

To our knowledge, this is the first study to examine ASE in light of these other constructs, adding to the emerging literature suggesting more holistic conceptualizations of addiction recovery and prevention. The indication that hope fully mediated the hypothesized relationship is consistent with previous

research, adding further evidence to the critical nature of hope in preventing problematic substance use. In recent literature (Bradshaw et al., 2015, 2017; Gutierrez, 2019; Gutierrez et al., 2020; Shumway et al., 2014), hope has emerged as a preventative mechanism for addiction behaviors; yet, the literature around its manifestation in practice is still being explored. In this case, the findings suggest that a focus on personal growth could increase a sense of hope and have positive effects on one's capacity to stay abstinent.

Previous studies have argued that the conceptualizations of substance use prevention and recovery models are often limited (Gutierrez et al., 2020). Understanding the social-emotional contributions to ASE is a critical piece for practical education and prevention (Springer et al., 2004). Furthermore, the inclusion of social-emotional competencies are usually strong predictors of relapse prevention (Gutierrez et al., 2020). According to the Collaborative for Academic, Social, and Emotional Learning (CASEL, n.d.), social-emotional learning education can improve students' attitudes, skills, and prosocial behavior, while also decreasing students' anxiety, behavior challenges, and substance use. School-based drug prevention programs that prioritize building students' self-esteem, sense of purpose, goal setting, and personal growth, may have lasting positive impact on students' overall development. Springer and colleagues (2004) report that the most effective prevention programs incorporate social-emotional learning, including behavioral skills and positive alternative approaches. They argue that future programs must be designed to not only address the negative effects of substances, but to emphasize social skill and intrapersonal development (Springer et al., 2004).

Implications for clinical practice

Programs designed to prevent substance use often focus on skills training and psychoeducation while paying less attention to wellness factors and emotional regulation (Clarke et al., 2020; Gutierrez et al., 2020). For example, school-based prevention programs emphasize processes like goal-setting rather than developing key social-emotional concepts (Springer et al., 2004). This approach has significant benefits; however, it appears in the literature that the opportunity for greater influence on ASE lies in the construct of hope and personal growth. For adolescents, the presence of hope may serve as a protective factor against risk behaviors, including substance use (Padilla-Walker et al., 2011). This is an important consideration for mental health professionals and school counselors working with adolescents individually and in school-based programming.

For individuals struggling with substance use, hope-based interventions can impact their degree of hope, creative problem-solving, motivation to pursue goals, resilience in the face of obstacles, and overall self-efficacy (Saboor et al., 2019). Therefore, one implication of our findings for substance use prevention service providers is that the use of hope-focused and personal growth interventions could amplify current approaches to substance use treatment. Helping professionals should consider adopting prevention programs that focus on or include hope and personal growth components. In schoolwide interventions, school counselors can emphasize strategies for developing students' sense of hope and PGI. Additionally, including a focus on personal growth and hope could also benefit those in recovery from substance use disorder.

Limitations and considerations for future research

Recruitment for this study utilized a crowdsourcing platform with evidence for reliability and validity in previous studies, but to increase the trustworthiness of these findings we suggest that future researchers examine with various populations. Each of our participants' AUDIT scores fell within the range of clinically significant diagnoses; however, these data were attained from a community sample and not a strictly clinical sample. It is possible that a strictly clinical sample, as well as a sample derived through alternative sampling methods, may provide different outcomes. We also suggest that future

research explore the use of experimental designs to test the potential causal relationships. Because this study is relevant to drug prevention education, we suggest further research explore the effectiveness of PGI and hope-based interventions on ASE in student populations. A longitudinal examination of the ongoing effects of PGI and hope on individuals' ASE may provide further support for the early implementation of hope-based interventions for adolescents and young adults.

CONCLUSION

Substance use continues to claim and disrupt the lives of millions of individuals across the world. This makes the ability to abstain from drugs and alcohol critically important. This ability is especially important during stressful times. However, the ability to stay abstinent is a significant challenge, a fact that is highlighted by the high relapse rates and increasing substance use trends. Existing interventions for the prevention and mitigation of problematic substance use may be amplified when helping professionals consider individuals' initiative towards personal growth and the significant influence of hope.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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