

Measuring Hope in Jail Inmates with Substance Use Problems

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TREATMENT RESEARCH HAS identified a variety of factors influencing the effectiveness of substance use treatment for criminal justice (CJ) populations (see review by Greenfield et al., 2007; Moos, 2007; Prendergast, Podus, Chang, & Urada, 2002). However, the literature has disproportionately focused on the reduction of pathological symptoms, such as reducing drug use, prolonging drug abstinence, and addressing related social and behavioral problems. There is an increasing call for research on the phenomenon of human flourishing and psychological strengths (Keyes & Haidt, 2003; Krentzman, 2013), and the delineation of relations between strengths and deficits (Woldgabreal, Day, & Ward, 2016). In practice, interventions should not only focus on reducing risk factors but also capitalize on psychological strengths or positive functioning (both terms are used interchangeably in this study). The current study measures one type of positive functioning (i.e., hope) and examines the relations between hope and risk factors in jail inmates, the findings of which could help practitioners develop programs responsive to address risk factors and promote a positive lifestyle and general well-being.

Hope

Hope is a psychological strength buffering the negative consequences experienced from adversity (Hellman & Gwinn, 2017) and facilitating general well-being (Magaletta & Oliver, 1999). Snyder (2000) defines hope as a cognitive-based motivational theory, in which two components—"pathways" and "agency"—work reciprocally towards the third component—goals. Pathway refers to mental

strategies that would lead to goal attainment; agency is the mental energy or willpower that motivates oneself to attain the goals (Snyder, 2002). Research has indicated that hopeful thinking has the power to alleviate depression, assist in goal setting, and improve mental and physical health among high-risk populations (Hergenrather, Geishecker, Clark, & Rhodes, 2013; Rosenstreich, Feldman, Davidson, Maza, & Margalit, 2015). In the event of challenges, people with hope tend to evaluate potential barriers and develop strategies to overcome barriers or switch to alternative pathways to goal attainment (Snyder, 2000). Also, hopeful people may persevere by self-motivating and regulating emotions, thoughts, and behaviors to desirable goals (Snyder, 2000). In this sense, hope is particularly instrumental for high-risk individuals (such as those involved in the justice system) in propelling them to achieve desired goals in the midst of life adversity.

Despite being a highly desirable cognitive state in inmates, hope has not been addressed adequately in research with CJ populations (Stearns, Yang, & Boudreaux, 2018) or substance use treatment (Krentzman, 2013). With 100 jail inmates in Ontario, Martin & Stermac (2009) revealed that inmates with lower levels of hope are at high risk of being involved in illegal behaviors and persist in maintaining such a behavior. Marshall, Champagne, Brown, and Miller (1997) studied hope in sex offenders and indicated that increases in hope were associated with greater empathy, enhanced intimacy, and lowered feelings of loneliness. In the area of substance use treatment, research has revealed that hope is related to the deterrence of substance use (Irving,

Seidner, Burling, Pagliarini, & Robbins-Sisco, 1998; Logan, Kilmer, & Marlatt, 2010), greater time abstinent (Irving et al., 1998), higher self-efficacy (Irving et al., 1998), and better treatment outcomes (Kaskutas et al., 2005; Kelly, Stout, Zywiak, & Schneider, 2006). In a pilot study, Stearns, Yang, and Boudreaux (2018) implemented a four-week intervention to develop and enhance hope among female jail inmates with substance use problems; the study found that resources that provide structure and discipline were necessary to successful delivery of the hope-based intervention among these women. This suggests that more research is needed to understand justice-involved individuals and factors that are associated with hope.

Characteristics of Criminal Justice Populations

Justice-involved individuals usually grow up in environments rife with stressors and challenges, such as poor social support, financial and legal challenges, unstable housing, and other criminogenic contextual factors (Boardman, Finch, Ellison, Williams, & Jackson, 2001; Morenoff & Harding, 2014; Naser & Visser, 2006) and are likely to be exposed to traumatic experiences (Green, Miranda, Daroowalla, & Siddique, 2005; James, 2004; James & Glaze, 2006; McClellan, Farabee, & Crouch, 1997). Thus, they are likely to develop psychological maladjustment in terms of the feeling of worthlessness, depression, and anxiety (Chamberland, Fallon, Black, Trocmé, & Chabot, 2012; Ge, Best, Conger, & Simons, 1996; Paredes, Ferreira, & Pereira, 2014) and turn to substance use as a

way to cope with these painful psychological consequences (Auerbach, Abela, & Ho, 2007; Gutierrez & Van Puymbroeck, 2006; Kelly, Rollings, & Harmon, 2005; Weiss, 2004). Substance use aggravates their exposure to life adversity and reinforces negative feelings of worthlessness, depression, and helplessness (Gutierrez & Van Puymbroeck, 2006; Weiss, 2004).

Furthermore, confinement in prisons or jails adds a layer of psychological risk; many inmates experience panic, anxiety, depression, rage, hopelessness, despair, and other psychological problems (American Psychological Association, 2014; Covin, 2012). The confinement also creates a disruption in their social relations, which compounds the weak attachment with a positive social network (Western, Braga, Davis, & Sirois, 2015). When social support or other assistance is not available, justice-involved individuals during reentry are at high risk of reoffending and reincarceration. Thus, research is needed that examines psychological strengths among justice-involved populations that are associated improved reentry and future crime deterrence.

Gender Difference

Gender plays a role in rehabilitation because males and females have different treatment needs (Coleman, Almond, & McManus, 2018; Salisbury, Van Voorhis, & Spiropoulos, 2009; Skrobecki, 2014). For example, compared to male counterparts, females tend to report extensive traumatic and abusive histories, have mental health problems, use substances to cope with physical and emotional pains, and have low self-esteem and self-efficacy (Carlson, Shafer, & Duffee, 2010; Salisbury et al., 2009). Males have more criminal involvement and use multiple drugs (Hser, Huang, Teruya, & Anglin, 2003). These different characteristics and treatment needs may reflect disparity in psychological functioning. For instance, males have reported high levels of self-esteem and decision-making confidence, and lower levels of risk-taking than females (Yang et al., 2015). Thus, it is possible that the relations between risk factors and hope would differ between genders.

The Current Study

CJ populations are typically characterized by high-risk factors, victimization experience, violent behavior, substance use, and mental health problems. Because hope is a mechanism that facilitates people's striving for better life outcomes and general well-being, it is

essential to study hope in CJ populations, the population of which would benefit from such a cognitive capacity. With a jail sample, the current study intends to (1) assess hope, (2) examine the association between hope and several factors that characterize CJ populations with substance use problems, and (3) explore gender differences in the associations between hope and these factors.

Methods

Participants

Data were collected from 209 adults (81 percent male) in a local jail who volunteered to participate in the study. The demographic and background information is presented in Table 1. All of the participants had substance use problems before being arrested. The majority of the participants had a felony charge (81 percent), the remaining being charged with either misdemeanor (10 percent) or case pending (9 percent). The average length of time being held in custody was 170 days (range = 3 days—13 years). The average age of the first arrest was 19 (ranging from 10 to 49), with 48 percent of the participants having juvenile records. All participants provided informed consent to participation. The study has been approved by the author's university institutional review board.

Procedures

Data were collected in a classroom setting inside the jail with the assistance of jail officials. Potential participants were recruited from a substance use treatment program in groups (no more than 15 participants per group). Participation was voluntary and did not impact the treatment or legal status in any way. A correctional officer was on site to ensure safety and order; however, the correctional officer had no involvement in research. Those who declined to participate were asked to read their usual program materials. After all the participants completed the survey, inmates were escorted back to the cells together. The entire data collection was conducted between fall 2015 and spring 2018.

Measures

Risk factors included recent criminal involvement, recent medical treatment, need for public assistance, lifetime victimization, lifetime violence history, and substance use severity. The time frame for recent risks was referred to six months before being arrested. Recent criminal involvement (three items; e.g., "being arrested"), medical treatment

use (four items; e.g., "being treated in an emergency room"), and need for public assistance (three items; e.g., "receiving any public financial support (food stamps, disability, public assistance)") were assessed by the Texas Christian University (TCU) A-RISK form (Institute of Behavioral Research, 2008). Lifetime victimization and violence were assessed by the MacArthur Community Violence Inventory (Steadman et al., 1998). Participants were asked in their lifetime (1) if they were victimized in eight categories (e.g., "has anyone thrown something at you," "tried to physically force to have sex against your will," and "threatened you with a knife or a gun or other lethal weapon") and (2) if they had violent behavior in nine categories (e.g.,

TABLE 1.
Demographic Characteristics and Background Information (N = 209)

Gender (male)	81 percent
Race (n = 199)	
White	39 percent
African American	47 percent
Others	14 percent
Education (n = 201)	
9 years education	24 percent
10-11 years education	20 percent
12 years or GED	35 percent
more than 12 years education	21 percent
Marital status (n = 201)	
Single (never married)	59 percent
Married	17 percent
Divorced	17 percent
Separated or widowed	5 percent
Primary Drug use (in the past 12 months before being locked up)	
Alcohol	21 percent
Marijuana	20 percent
Methamphetamine	11 percent
Stimulants	10 percent
Heroin	7 percent
Synthetic Marijuana	5 percent
Prescription Medications - Opioid Pain Relievers	5 percent
Others ^a	22 percent

Note: Others^a include hashish, opium, Ketamine (1 percent), and others unspecified by the participants.

“pushed, grabbed or shoved anyone,” and “used a knife or fired a gun at anyone”). The scale demonstrated good internal reliability ($\alpha = 0.85$ for the victimization scale; $\alpha = 0.84$ for the violence scale) with the current sample. The composite score was used in the data analysis. Substance use severity was measured by the TCU Drug Screen II ($\alpha = .89$; Knight, Simpson, & Morey, 2002; e.g., “Did your drug use cause emotional or psychological problems?”). The items in risk factors are rated with a dichotomous scale (0 = no, 1 = yes).

Anxiety (seven items; e.g., “You have trouble sitting still for long,” $\alpha = .75$) and depression (six items; e.g., “You feel sad or depressed,” $\alpha = .77$) were assessed by the TCU Psychological Functioning (PSYFORM) assessments (Simpson, Joe, Knight, Rowan-Szal, & Gray, 2012). Optimism (e.g., “In uncertain times, I usually expect the best”) was measured by the 10-item Life Orientation Test–Revised (Scheier, Carver, & Bridges, 1994; $\alpha = .51$ for the current sample). Hope (possible scores ranging from 1 to 5) was measured by the 12-item Hope Scale (Snyder et al., 1991; $\alpha = .72$ for the current sample), which included two subscales of agency (i.e., goal-directed energy) and pathways (i.e., planning to accomplish goals). Two sample questions are “I energetically pursue my goals” and “I can think of many ways to get out of a jam.” The measures of anxiety, depression, optimism, and hope are rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree).

Results

Descriptive statistics and correlations between hope and other key variables are presented in Table 2. Primarily, hope was negatively associated with recent need for public assistance ($r = -0.13, p = 0.035$), anxiety ($r = -0.27, p < .001$), and depression ($r = -0.21, p < .001$), and positively associated with optimism ($r = 0.75, p < .001$). With regard to gender difference, males ($M = 35.48, SD = 6.15$) reported a higher level of hope than did females ($M = 32.48, SD = 6.66; t = 2.72, p = .007$). Correlation analyses also revealed gender differences in the associations between hope and other variables. Specifically, anxiety ($r = -.23, p = .004$), depression ($r = -.16, p = .05$), and optimism ($r = .74, p < .001$) were significantly associated with hope for males; victimization ($r = -.32, p = .04$), substance use severity ($r = -.33, p = .04$), and optimism ($r = .79, p < .001$) were correlated to hope for females (see Table 3, next page).

Regression analyses were used to explore the unique contribution of each variable to predicting hope with a stepwise method (using a criterion of $p < .05$) in the overall sample and each gender sample. The results of the overall sample indicated that substance use severity ($\beta = -.24, t = -3.36, p = .001$), and anxiety ($\beta = -0.20, t = -2.72, p = .007$) significantly predicted hope, while other variables did not emerge to be significant predictors ($R^2 = .11$). A stronger degree of substance use severity and anxiety were associated with lower levels of hope. For male offenders, anxiety

predicted hope, while other variables were not significant predictors ($R^2 = .05$); more anxiety was associated with a lower level of hope ($\beta = -0.23, t = -2.78, p = .006$). Substance use severity predicted hope for females, in which more severe substance use was associated with a lower level of hope ($\beta = -0.36, t = -2.37, p = .02; R^2 = .13$). Because a small sample of females was recruited, the results of regression analysis only revealed tentative findings.

Discussion

The literature suggests that hope represents positive functioning that promotes mental health and well-being, whereas hopelessness is a powerful predictor of criminal behavior. Thus, it is essential to assess hope and examine the relationship between hope and factors that characterize justice-involved populations. The current study adopted Snyder’s cognitive model to measure hope and identified four factors associated with the level of hope: recent public assistance, anxiety, depression, and optimism. A stronger need of recent public assistance (i.e., having a full-time job, looking for a job, or not relying on public financial support), higher levels of anxiety and depression, and lower optimism were associated with lower levels of hope, characterized by less energetically seeking pathways to achieve goals. Additional regression analyses also revealed that more substance use severity and higher levels of anxiety significantly predicted lower levels of hope. Filling an existing research gap, this study’s findings

TABLE 2.
Mean, Standard Deviation (SD), and Correlations between Key Variables.

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 Age	32.98	9.21										
2 Victimization	4.89	2.57	-0.05									
3 Violence	5.12	2.64	-0.37 ***	0.49 ***								
4 Recent criminal involvement	1.52	1.10	-0.24 **	-0.04	0.09							
5 Recent medical treatment	0.95	1.13	-0.04	0.21	-0.04	0.00						
6 Recent public assistance	1.10	0.98	0.02	0.08	0.04	0.04	0.19 **					
7 Substance use severity	6.93	4.01	0.00	0.35 ***	0.17 *	0.05	0.26 ***	0.21 **				
8 Anxiety	25.76	8.47	0.11	0.22 **	0.06	0.05	0.30 ***	0.15 *	0.15 *			
9 Depression	28.95	9.41	0.08	0.33	0.10	-0.04	0.34 ***	0.10	0.25 **	0.70 ***		
10 Optimism	3.18	0.67	0.16 *	-0.18 **	-0.08	-0.03	-0.13	-0.03	-0.10	-0.38 ***	-0.28 ***	
11 Hope	3.49	0.63	-0.02	-0.01	0.03	-0.03	-0.04	-0.13 *	-0.12	-0.27 ***	-0.21 **	0.75 ***

Note. *** $p < .001$, ** $p < .01$, * $p < .05$.

revealed several risk factors and treatment needs that were associated with hope in a jail-based population. They suggest that treatment provisions for substance use and mental health problems not only address pathological symptoms, but they also have the potential to facilitate psychological strengths that propel them to strive for general well-being.

The literature suggests that CJ populations are more likely to rely on government or public assistance to support their lives because they often live in an environment with stressors, such as financial challenges and poor social support (Boardman et al., 2001; Morenoff & Harding, 2014; Naser & Visher, 2006). Individuals growing up in a difficult financial environment are often inflicted with economic pressure and psychological distress and may in turn use substance as a coping strategy (Auerbach et al., 2007). Substance use reinforces these negative feelings, which can translate into a negative outlook, despair, and hopelessness (Connell, O’Cathain, & Brazier, 2014). The current findings suggest that these stressors and mental health problems are detrimental to an individual’s degree of hope, resulting in a struggle to believe that they are capable of reaching their goals and energetically seeking pathways to pursue positive life outcomes.

Males in the study reported a higher level of hope than females, which aligned with the literature indicating that justice-involved

females typically possess more risks than do males (Yang et al., 2015). In this study, risk factors associated with hope also differed between genders. Males with mental health problems tended to develop low levels of hope, whereas victimization and substance use severity were deleterious to hope among females. These results are unique because most of the hope literature in CJ populations is focused on sex offenders (Marshall et al., 1997; Martin & Stermac, 2009). The associations between hope and victimization and substance use in females reflects the fact that justice-involved females are at high risk of trauma and adoption of substance to cope with physical and emotional pains (Carlson et al., 2010; Salisbury et al., 2009). In short, the current findings suggest that hope is important for both genders, and that interventions for enhancing hope are especially important for females because they may be experiencing a lower level of hope.

Clinical Implications

Given the association with several risks, low levels of hope should be considered an important treatment need in developing rehabilitation programs for justice-involved individuals. Strengths-based interventions represent a promising option. As acknowledged by researchers in other fields of psychology (e.g., Duckworth, Steen, & Seligman, 2005; Sin & Lyubomirsky, 2009), strengths-based

interventions have important implications in criminal justice settings, because these interventions focus on the development and growth of strengths in an ongoing manner and striving for the potential to sustain positive outcomes (Berg, 2016; Harris, Brazeau, Clarkson, Brownlee, & Rawana, 2012; Krentzman, 2013). Substance users would benefit from developing positive feelings, behaviors, or cognitions (Sin & Lyubomirsky, 2009), in lieu of continuing maladaptive psychological processes and destructive behaviors. Because hope is a predictor of recidivism (Martin & Stermac, 2009), reentry programs also may want to consider including a strengths-based approach to help individuals envision and prioritize goals, visualize concrete pathways, and foster energy to attain desirable goals. Finally, the findings suggest that a holistic treatment approach is optimal—one in which treatment provisions of mental health problems, substance use, and traumatic experiences are necessary for successfully delivering interventions that foster and enhance positive functioning.

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TABLE 3.
Correlations between Key Variables for Each Gender Group

	1	2	3	4	5	6	7	8	9	10	11
1. Age		0.17	-0.24	-0.21	-0.07	-0.24	0.00	0.25	0.24	0.09	0.09
2. Victimization	-0.05		0.2	-0.19	0.15	0.06	0.4	0.27	0.46**	-0.29	-0.32*
3. Violence	-0.24**	0.59***		-0.16	0.05	0.04	0.13	-0.15	-0.05	-0.02	0.06
4. Recent criminal involvement	-0.26***	-0.02	0.04		-0.04	0.27	-0.09	0.15	-0.09	-0.03	-0.04
5. Recent medical treatment	0.13	0.20**	-0.05	0.06		0.44**	0.15	0.14	0.20	-0.17	-0.17
6. Recent public assistance	0.03	0.003	0.13	0.15	0.09		0.31*	0.19	0.004	-0.11	-0.14
7. Substance use severity	0.08	0.30***	0.21**	0.11	0.26***	0.11		-0.15	-0.08	-0.15	-0.33*
8. Anxiety	-0.05	0.14	0.14	0.09	0.32***	0.03	0.16*		0.71***	-0.41**	-0.24
9. Depression	-0.02	0.24**	0.17*	0.02	0.36***	-0.01	0.29***	0.66***		-0.28	-0.17
10. Optimism	0.01	-0.12	-0.15	-0.08	-0.1	0.1	-0.06	-0.35***	-0.24**		0.79***
11. Hope	-0.14	-0.04	-0.11	-0.1	-0.09	-0.07	-0.13	-0.23**	-0.16*	0.74***	

Note. *** $p < .001$, ** $p < .01$, * $p \leq .05$. Correlation coefficients below the diagonal were for male offenders; correlation coefficients above the diagonal were for female offenders.

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