A Pilot Investigation of Positive Psychology Instruments and Dialectical Behavior Therapy Treatment Outcomes

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There is efficacy evidence for dialectical behavior therapy (DBT) and positive psychology interventions. However, there is minimal research examining positive psychology constructs alongside psychopathology measures in clinical populations. Accordingly, this study examined these associations in a DBT intensive outpatient program (IOP). Participants included 39 adults enrolled in a DBT IOP who completed measures of depression, anxiety, stress, emotion regulation, hope, and self-compassion. Results indicated hope and self-compassion were higher in graduates than in dropouts and were negatively associated with psychopathology measures. The relationship between depression and graduation status reached practical significance but not statistical significance. Two self-compassion subscales, mindfulness and common humanity, were significantly related to the number of sessions attended in this brief program. These findings indicate positive psychology measures possess utility within clinical populations. To accurately assess treatment success, counselors should consider measuring both the pathological and the positive.

Dialectical behavior therapy (DBT) and positive psychology interventions both have strong efficacy evidence (Bolier et al., 2013; Panos et al., 2014). Although DBT has significant efficacy evidence with individuals with a variety of clinical diagnoses, much of the efficacy literature focuses on individuals with significant clinical symptomology (Warlick et al., 2018). The goal in DBT is to advance clients towards "life worth living" (Linehan, 1993, p. 129). However, most DBT research focuses on the early stages of DBT (e.g., Stage 1, which targets life-threatening behaviors) rather than the advanced stages (e.g., Stages 3 and 4, which target improving happiness and joy; Lynch et al., 2007). Inadvertently, this focuses the clinical and research lens toward negative psychology constructs in acute individuals.

In contrast to the DBT literature, positive psychology efficacy research focuses largely on university and community populations, inadvertently neglecting clinical populations (Warlick et al., 2018). Incorporating positive psychology constructs into clinical care may provide a deeper, more balanced lens on clients (Owens et al., 2015). Moreover, Don Clifton called for researchers to study "what is right" with individuals (as cited in Lopez et al, 2005, p. 3), and positive psychology has the potential to emphasize "what is right" with clinical populations, who are often maligned. Maintaining a framework of positive psychology may also promote social justice with this underprivileged population by allowing space to account for their strengths. Thus, this pilot study sought to examine associations between two positive psychology constructs, hope and self-compassion, alongside common psychopathology measures and DBT treatment outcomes.

DBT was developed by psychologist Marsha Linehan as a comprehensive intervention for individuals with severe mental illness, particularly borderline personality disorder (BPD; Linehan et al., 1994). Recent research has demonstrated its efficacy in the treatment of posttraumatic stress disorder (Harned et al., 2014) as well as nonsuicidal self-injurious behaviors (Uliaszek et al., 2016). However, a significant limitation of existing DBT research is maintaining a definition of treatment gains as the *mitigation* of a construct (e.g., decreases in psychopathology). In contrast, positive psychology measures often quantify the *promotion* of a construct (e.g., self-compassion; Neff, 2003). Counselors should work toward both the mitigation of disease and the promotion of fulfillment via client strengths (Seligman & Csikszentmihalyi, 2000). Strengths are defined as being of a moral quality and are often a focus of development (Peterson & Seligman, 2004). Positive psychology focuses on strengths to provide balance with the deficit-focused model typically used (Owens et al., 2015). This does not mean that "negative" data should be ignored, but rather that conceptualization should focus on clients' deficits *and* strengths.

Most of the positive psychology literature examines positive psychology in the context of improving quality of life among university and general community populations (Magyar-Moe et al., 2015). Research has examined associations between positive psychology and behavioral health (e.g., Khazaei et al., 2017), as well as physical health (e.g., Sanjuán et al., 2016). Within clinical populations, meta-analysis indicated significant effects of positive psychology interventions on anxiety, depression, and overall well-being (Chakhssi et al., 2018). This evidence emphasizes the need to continue applying positive psychology constructs within clinical populations. Consequently, the current pilot study examined psychopathology measures, treatment outcomes, and two positive psychology constructs, hope and self-compassion, in a DBT intensive outpatient program (IOP).

HOPE AND SELF-COMPASSION

Given evidence that DBT is an efficacious intervention for BPD (Linehan et al., 1994), which is often characterized by negative sense of self, hopelessness, and suicidality, hope and self-compassion are two constructs that may be particularly relevant to reduce client suffering and build a life worth living. Indeed, researchers and clinicians have published calls for the application of hope (Warlick et al., 2018) and self-compassion (Barnard & Curry, 2011) within a DBT treatment framework.

In the current literature, there are many definitions of hope posited from various theoretical perspectives (Schrank et al., 2008). Snyder et al.'s (1991) definition of hope contains both *pathways thinking* (e.g., "I can think of many ways to get the things in life that are important to me") and *agentic thinking* (e.g., "My past experiences have prepared me well for my future"). This hopeful thinking has been found to be associated with higher levels of job performance (Valero et al., 2015), academic integration and institutional commitment (Browning et al., 2018), and help-seeking behavior (McDermott et al., 2017). Whereas Snyder et al.'s definition of hope remains the most prominent in literature, it is also criticized for ignoring relational components of hope, like interconnectedness, spirituality, or self-worth (Schrank et al., 2008). Miller and Powers (1988) provide another definition of hope, one that is multidimensional and contains satisfaction with self, others, and life; the anticipation of a future; and avoidance of threats to hope. High scores on the Miller Hope Scale (MHS) have been negatively correlated with hopelessness (Brackney & Westman, 1992). Finally, Herth (1992) provides a prominent hope theory within nursing that focuses on positive readiness and expectancy, interconnectedness, and temporality and future. Her definition of hope has also been negatively associated with hopelessness (Herth, 1992) and positively associated

with self-assessed health status in a European general population (Rustøen et al., 2003). Variable definitions of hope aside, results of meta-analyses (e.g., Alarcon et al., 2013; Marques et al., 2017) emphasize the paucity of research studies examining hope among clinical populations. The current study sought to address this limitation while also examining how different definitions of hope are associated with treatment outcomes. Further elucidation of the differential associations of hope may hold important information to inform the assessment and intervention of hope within a clinical context..

Regarding self-compassion, there is one predominant theory and definition within the literature. Neff's (2003) definition specifies three components of self-compassion: (1) being kind and nonjudgmental to oneself, (2) accepting that difficulties occur as a result of living, and (3) differentiating between being aware of painful feelings and being completely absorbed in those feelings. Neff's definition has been positively associated with life satisfaction and connectedness among college students. MacBeth and Gumley's (2012) meta-analysis showed that higher self-compassion is associated with lower mental health symptoms, whereas lower self-compassion is associated with increased mental health symptoms. Additionally, meta-analysis has shown the positive relationship between self-compassion and cognitive and psychological well-being (Zessin et al., 2015). However, as in the literature on hope, there is a gap in the self-compassion and clinical samples literature, emphasizing a need for more exploration of self-compassion and how it is experienced within clinical populations.

CURRENT STUDY

Positive psychology constructs hold unique potential to integrate within a DBT framework. Extant literature shows an imbalance of data examining positive psychology constructs to assess collegiate student and general population samples, as opposed to clinical populations. In a DBT population, in which despair is too often present, hope and self-compassion should be assessed and fostered. Thus, this pilot study sought to extend the current literature and examine associations between positive psychology constructs and clinical outcome measures within a clinical population participating in a DBT IOP. To our knowledge, this is the first study to examine associations between hope, self-compassion, and DBT treatment outcomes (e.g., depression, anxiety, stress, sessions attended, and graduation status).

The current study aimed to address these gaps in a clinical sample of adults participating in a DBT IOP by (a) investigating the relationship between positive psychology measures (e.g., hope and self-compassion) and psychopathology measures (e.g., depression, anxiety, stress, and emotion regulation),

(b) investigating whether psychopathology and positive psychology measures at entry predict graduation status, and (c) investigating whether psychopathology and positive psychology measures at entry predict treatment sessions attended. Based on previous research, we posited (1) positive psychology measures and psychopathology measures would negatively and significantly correlate, (2) positive psychology and psychopathology measures at program entry would predict graduation status in a DBT IOP, and (3) positive psychology and psychopathology measures at program entry would predict treatment sessions attended in a DBT IOP.

METHODS

Participants

Participants were 39 adults (53.8% female) enrolled in a brief DBT IOP at a nonprofit community health organization in the Midwest. Participants were predominantly White (74.4%) and heterosexual (76.5%), with an average age of 32.38 years ($SD = 12.74$). Over half of our participants reported at least one suicide attempt (56.4%), a history of nonsuicidal self-injurious behaviors (76.90%), and at least one previous inpatient psychiatric hospitalization (76.9%). Nearly half of our participants met criteria for severe mental illness (43.6%). Major depressive disorder (59.0%) and posttraumatic stress disorder (41.0%) were the most common diagnoses. Twelve of the 39 participants successfully graduated DBT IOP (30.7%). Table 1 provides descriptive statistics for the entire sample, as well as for graduate and attrition groups. The DBT IOP consisted of DBT skills groups and individual counseling with each partcipant's individual DBT counselor. The skills groups were adherent to Linehan's (1993, 2014) manuals. These DBT IOP groups operated for 3 hours daily (two 90-minute groups), 5 days per week.

Measures

Snyder Hope Scale

The Snyder Hope Scale (SHS; Snyder et al., 1991) is based on a definition of hope that focuses on an individual's perceived ability both to motivate the self and to produce ways to achieved desired goals. The SHS has eight items that produce a total score and two subscales, pathways thinking (*pathways*) and agentic thinking (*agency*). The SHS uses an 8-point Likert-type scale ranging from 1 (*definitely false*) to 8 (*definitely true*). Previous investigations of the SHS reveal Cronbach's α ranging from .73 to .84 and test–retest reliability of .73 (8 weeks) to .82 (10 weeks), with positive relationships with esteem, optimism, and perceptions of control, and negative relationships with hopelessness

and depression (Snyder et al., 1991). Snyder (2002) summarized research on the SHS. Throughout this research, Cronbach's α ranged from .74 to .88 for the overall scale and .63 to .86 for the subscales. The SHS has been included in samples ranging from undergraduate students to veterans seeking treatment for posttraumatic stress disorder (Snyder, 2002). Cronbach's α for internal consistency in this sample ranges from .71 for pathways to .81 for agency and .84 for the total score. We used both the total score and the subscale scores in our analyses.

Miller Hope Scale

The MHS (Miller & Powers, 1988) is based on Miller's definition of hope, which encompasses anticipation for a good future, ability to achieve goals, and overall satisfaction with the self. The MHS has 40 items that produce a total score. The MHS uses a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 8 (*strongly agree*). Previous psychometric investigations (Miller & Powers, 1988) revealed a Cronbach's α of .93, a 2-week test–retest reliability of .82, positive relationships with well-being, and a negative relationship with hopelessness. In a sample of regionally and racially diverse college students from the United States (Ingram et al., 2018), Cronbach's α was .84, and positive relationships with the SHS, the Herth Hope Index (HHI), and the Integrative Hope Scale (Schrank et al., 2011). Cronbach's α for internal consistency in this sample is .94.

Herth Hope Index

The HHI (Herth, 1992) is based on a definition of hope that emphasizes interconnectedness with self and others. The HHI has 12 items that produce a total score, as well as three subscale scores for inner temporality and future, inner positive readiness and expectancy, and interconnectedness with self and others. Previous examinations of the HHI (Herth, 1992) reveal Cronbach's α ranging from .75 to .94, a 2-week test–retest reliability of .91, a positive relationship with well-being, and a negative relationship with hopelessness among individuals receiving medical care in hospitals, outpatient clinics, or at-home medical care. While it has been used predominantly in medical settings, it also possessed an appropriate α ranging from .64 to .77 for subscales and .73 for the total scale, as well as positive relationships with the SHS, MHS, and IHS within a college student sample (Ingram et al., 2018). Cronbach's α for internal consistency in this sample is .76 for inner temporality and future, .73 for inner positive readiness and expectancy, and .89 for the total. The scale for interconnectedness with self and others was not included in analyses, as it failed to meet acceptable α levels (.64), but the other subscales and the total score were included.

Table 1 *Client Characteristics by Graduation Status*

Variable	Total	Graduated	Attrition
Demographics			
Age, *M (SD)*	32.38 (12.74)	35.08 (14.24)	31.19 (12.10)
Gender, *n (%)*			
Male	15 (38.5)	3 (7.7)	12 (30.8)
Female	21 (53.8)	9 (23.7)	12 (30.7)
Transgender	3 (7.7)	0 (0)	3 (100)
Race, *n (%)*			
White	29 (74.4)	10 (25.6)	19 (48.7)
Non-majority	10 (26.6)	2 (5.1)	8 (20.5)
Sexuality, *n (%)*			
Heterosexual	26 (76.5)	8 (20.5)	18 (46.2)
Gay	4 (11.8)	3 (8.8)	1 (2.9)
Clinical information			
Sessions attended, *M (SD)*	4.95 (3.2)	7.1 (3.1)	4 (2.7)
SMI designation, *n (%)*	17 (43.6)	6 (15.4)	11 (28.2)
Primary diagnosis	MDD, 15 (38.5)	MDD, 4 (10.3)	MDD, 11 (28.2)
Secondary diagnosis	None, 11 (28.2)	MDD, 5 (12.82)	None, 10 (25.6)
Primary substance diagnosis	None, 22 (56.4)	None, 7 (17.9)	None, 15 (38.5)
Previous suicide attempt	22 (56.4)	7 (17.9)	15 (38.5)
Previous nonsuicidal self-injury	30 (76.9)	8 (20.5)	22 (56.4)
Previous psychiatric hospitalization	30 (76.9)	8 (20.5)	22 (56.4)
Hope scores, *M (SD)*			
Miller Hope Scale	125.15 (26.99)	127.42 (22.68)	124.15 (7.97)
Herth Hope Index	30.97 (7.26)	31.42 (5.63)	30.788 (7.98)
Temporality and future	9.87 (2.63)	10.08 (1.78)	9.78 (2.95)
Positive readiness and expectancy	10.69 (2.66)	11.08 (2.47)	10.51 (2.76)
Interconnectedness	10.41 (2.7)	10.25 (2.49)	10.48 (2.83)
Adult Hope Scale	38.18 (11.76)	40.92 (11.02)	36.96 (12.07)
Pathways	20.82 (5.78)	21.75 (5.45)	20.41 (5.97)
Agency	17.36 (7.27)	19.17 (7.09)	16.56 (7.33)
Self-compassion scores, *M (SD)*			
Self-compassion total score	57.87 (18.33)	58.33 (19.92)	57.67 (17.97)
Self-kindness	10.97 (4.35)	10.91 (4.87)	11.0 (4.2)
Self-judgment	9.64 (4.66)	9.5 (5.13)	9.7 (4.54)
Common humanity	10.05 (3.66)	9.92 (3.9)	10.11 (3.62)
Isolation	8.21 (3.35)	8.58 (2.78)	8.04 (3.61)
Mindfulness	10.72 (3.56)	10.33 (4.33)	10.89 (3.24)
Overidentified	8.28 (2.96)	9.08 (3.4)	7.93 (2.74)

Note. MDD = major depressive disorder; SMI = severe mental illness. For all categories except sexuality, total clients, $N = 39$; graduated group, $n = 12$; attrition group, $n = 27$. Five respondents chose not to disclose their sexuality.

Self-Compassion Scale

The Self-Compassion Scale (SCS; Neff, 2003) has 26 items that produce a total score, as well as six subscales: self-kindness, reduced self-judgment, common humanity, reduced isolation, mindfulness, and reduced over-identification. Psychometric examinations of the SCS reveal Cronbach's α as .92 for the total measure and .77–.81 for the subscales. The SCS uses a 5-point Likert-type scale ranging from 1 (*almost never*) to 5 (*almost always*). Although a one-factor model fit had difficulties in the initial investigation (Neff, 2003), exploratory structural equation modeling of 20 samples found excellent fit for the single-bifactor model (Neff et al., 2018). Although the subscale Cronbach's α for this sample was acceptable for the total scale ($\alpha = .94$) and most of the subscales (.88 for self-kindness, .90 for reduced self-judgment, .74 for common humanity, .74 for reduced isolation, and .79 for mindfulness), the reduced over-identification subscale failed to meet acceptable α levels, and it was excluded from analyses (.69). We used both the total score and the subscale scores in our analyses.

Depression, Anxiety, and Stress Scale

The Depression, Anxiety, and Stress Scale (DASS; Lovibond & Lovibond, 1995) has 21 items that produce a total score as well as three subscale scores: depression, anxiety, and stress. Higher scores indicate higher levels of depression, anxiety, and stress. The DASS uses a 4-point Likert-type scale ranging from 1 (*did not apply to me at all*) to 3 (*applied to me very much or most of the time*). Initial psychometric examinations of the 21-item DASS indicate Cronbach's α as .87–.94 for the subscales within clinical and community samples. Additionally, within clinical samples, positive relationships were found between the DASS subscales and depression and anxiety (Antony et al., 1998). Cronbach's α for internal consistency in this sample was acceptable for depression (.92), anxiety (.83), and stress (.76).

Difficulties in Emotional Regulation Scale

The Difficulties in Emotional Regulation Scale (DERS; Gratz & Roemer, 2004) has 36 items that produce a total score as well as six subscale scores: nonacceptance of emotional responses, difficulty engaging in goal-directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotion regulation strategies, and lack of emotional clarity. The DERS uses a 5-point Likert style scale ranging from 1 (*almost never*) to 5 (*almost always*). Previous examinations of the DERS across racial and gender demographic groups indicate Cronbach's α as .94 for the total and .79–.90 for the subscales, with positive relationships with symptoms associated with border-

line personality disorder, depression, anxiety, and stress (Ritschel et al., 2015). We used the total score (α = .95) in our analyses.

Graduation Status

Unlike standard DBT, in which a client may agree to attend for a specific period of time, such as one year (e.g., McMain et al., 2018), this DBT IOP involves more variable graduation. The core decision to graduate is individualized around progress, rather than time in treatment. For example, some clients may graduate after 4 weeks if their symptoms have stabilized and their functioning has returned. Other clients may graduate in 2 weeks if both the individual counselor and the client agree that the goals for this intensive treatment have been met. If clients do not graduate (e.g., drop out), they are counted as part of the attrition rate. Graduation status was measured via chart review and confirmation by the individual counselor. Although this process limits replication, collaborative planning around termination is associated with decreased psychopathology in community mental health centers (Adams & Drake, 2006).

Sessions Attended

The data on sessions attended were collected via chart review. If there was medical record documentation that stated a participant attended the session, it was entered into the variable. The total number of sessions was computed by summing the number of sessions attended.

Procedures

Researchers received approval from institutional review boards at the University of Kansas and at Bert Nash Community Mental Health. Each participant provided written consent for study participation. All participants were informed that participation was voluntary and would not influence their clinical care. Upon program entry, participants completed a battery of self-report questionnaires; demographics; and history of previous treatment, hospitalization, suicide attempts, and nonsuicidal self-injurious behaviors.

Data Analysis Plan

To assess our first hypothesis, that positive psychology measures and psychopathology measures would negatively and significantly correlate, we analyzed bivariate correlations. To assess our second and third hypotheses, that positive psychology and psychopathology measures at entry can predict graduation status (second hypothesis) and sessions attended (third hypothesis), we analyzed bivariate relationships among these variables and treatment outcomes. We then inserted variables that correlated significantly with graduation status and sessions attended into either a logistic regression to predict gradua-

tion status or a regression to examine the relationship between these variables and treatment outcomes.

RESULTS

Positive and Psychopathology Measures

In our first hypothesis, we predicted that hope and self-compassion would be negatively related to common psychopathology instruments. To assess this, we computed correlation coefficients across the MHS, HHI, SHS, and SCS with the depression, anxiety, and stress subscales of the DASS and the DERS total score. As null-hypothesis significance testing is influenced by sample size, we also examined effect size to detect practical significance. Ferguson (2009) suggests a Pearson's r of .20 is a small practical significant effect, .50 is a moderate practical significant effect, and .80 is a strong practical significant effect. Given our sample size, we examined effect size estimates for practical significance as well as null-hypothesis statistical testing at the .05 level. We also tested correlational coefficients for equality between graduates and dropouts using Arsham's (1994) application. Correlations between a positive psychology measure and a psychopathology measure that were either practically significant (r of .2 or higher) or statistically significant ($p < .05$) were assessed for significant differences in strength between graduates and nongraduates.

Regarding measures of hope, the MHS was negatively associated with all four pathology measures: depression, $r(37) = -.64$, $p < .001$; anxiety, $r(37) = -.45$, $p = .005$; stress, $r(37) = -.35$, $p = .03$; and DERS, $r(37) = -.47$, $p < .001$. The test for equality revealed no significant differences in correlation strength between graduates and nongraduates among the MHS and these pathology measures.

The HHI was also negatively associated with all four psychopathology measures: depression, $r(37) = -.63$, $p < .001$; anxiety, $r(37) = -.44$, $p = .005$; stress, $r(37) = -.29$, $p = .07$; and DERS, $r(37) = -.61$, $p < .001$. The HHI's association with stress narrowly failed to reach statistical significance, but it did reach practical significance. The test for equality revealed no significant differences in correlation strength between graduates and nongraduates among the HHI and these pathology measures.

The SHS was negatively associated with the DERS, $r(37) = -.47$, $p = .002$. The SHS's associations reached practical significance with depression, $r(37) = -.28$, $p < .08$; anxiety, $r(37) = -.26$, $p < .11$; and stress, $r(37) = -.29$, $p < .007$. However, no association reached statistical significance at the .05 level. The test for equality revealed moderate evidence for significant differences in correlation strength between graduates and nongraduates among the

SHS and depression, $\chi^2(1, N = 39) = 4.58$, $p = .03$, as well as anxiety, $\chi^2(1, N = 39) = 3.96$, $p = .05$, but not for stress, $\chi^2(1, N = 39) = 2.47$, $p = .12$. In non-graduates, the relationships between the SHS and anxiety, $r(25) = -.40$, $p = .04$, and the SHS and depression were negative, $r(25) = -.41$, $p = .04$. Both of these relationships reached statistical and practical significance. However, in graduates, the relationship among the SHS and anxiety, $r(10) = .34$, $p = .27$, and the SHS and depression were positive, $r(10) = .38$, $p = .22$. While neither of these relationships met statistical significance, they both met practical significance.

Regarding self-compassion, the SCS was negatively associated with all four pathology measures: depression, $r(37) = -.44$, $p = .006$; anxiety, $r(37) = -.36$, $p = .02$; stress, $r(37) = -.41$, $p = .009$; and DERS, $r(37) = -.72$, $p < .001$. These results indicate hope and self-compassion are negatively associated with common measures of pathology. The test for equality revealed no significant differences in correlation strength between graduates and nongraduates among the SCS and these pathology measures. Counselors should note that the negative relationship between self-compassion and difficulties with emotional regulation reached a moderate effect size, as did the negative relationship between the HHS and MHS with depression. These results are presented in Table 2.

Graduation Status

In our second hypothesis, we predicted that psychopathology and positive psychology measures at entry would predict graduation status. To assess this, we computed correlation coefficients across the MHS, HHI, SHS, SCS, depression, anxiety, stress, DERS, and graduation status variables. Given our sample size, we examined effect size estimates for practical significance as well as null-hypothesis statistical testing at the .05 level. The associations between these measures and graduation status were not statistically significant at the .05 level. Using Ferguson's threshold, the association between depression and graduation status met the minimum threshold for practical significance ($r = -.21$), indicating a negative relationship between depression and graduation status. As a result of this practical significance, we conducted a logistic regression with depression serving as the predictor variable and graduation status serving as the categorical dependent variable. The omnibus tests of model coefficients reported the model was not interpretable ($p = .07$). This indicates that, although the relationship between depression and graduation status is practically significant, depression does not significantly predict graduation status.

We then speculated that using total scores for hope and self-compassion was too broad, and perhaps specific components of each scale would be able to detect a relationship with graduation status. We computed another round of correlation coefficients a posteriori across the self-compassion and hope subscales that met adequate reliability. The associations between these subscales

Table 2 *Correlation Matrix*

Scale	1	2	3	4	5	6	7	8	9	10
1. Snyder Hope Scale	—	.62**	.65**	.58**	−.28	−.26	−.29	−.47**	.16	.19
2. Miller Hope Scale	.62**	—	.88**	.71**	−.64**	−.45**	−.35*	−.55**	.06	−.05
3. Herth Hope Index	.65**	.88**	—	.77**	−.63**	−.44**	−.29	−.62**	.04	−.11
4. Self-compassion	.58**	.71**	.77**	—	−.44**	−.36*	−.41**	−.72**	.02	−.16
5. Depression	−.28	−.64**	−.63**	−.44**	—	.70**	.60**	.54**	−.21	.97
6. Anxiety	−.26	−.45**	−.44**	−.36*	.70**	—	.73**	.68**	−.15	.61
7. Stress	−.29	−.35*	−.29	−.41**	.60**	.73**	—	.63**	−.11	.97
8. DERS	−.47**	−.55**	−.62**	−.72**	.54**	.68**	.63**	—	.05	.71
9. Graduation status	.16	.06	.04	.02	−.21	−.15	−.11	.05	—	.54**
10. Session attendance	.19	−.05	−.11	−.16	.97	.61	.97	.71	.54**	—

Note. DERS = Difficulties in Emotion Regulation Scale.
*Correlation is significant at the .05 level (two-tailed). **Correlation is significant at the .01 level (two-tailed).

and graduation status were not statistically significant at the .05 level. The effect size of these relationships did not meet the minimum threshold for practical significance. As such, no logistic regression was conducted between these subscales and graduate status. These results indicate that while there are higher hope raw scores in graduates than dropouts, neither hope nor self-compassion can predict graduation status.

Sessions Attended

In our third hypothesis, we predicted that measures of psychopathology or positive psychology at entry would predict amount of treatment completed. To assess this, we computed correlation coefficients across the MHS, HHI, SHS,

SCS, depression, anxiety, stress, DERS, and sessions attended. Not a single score was significantly correlated with sessions attended. The effect size of their relationships did not meet the minimum threshold for practical significance.

Again, we speculated that the specific components may be better able to detect a relationship with sessions attended. Correlation coefficients were computed across the six self-compassion subscales and the four hope subscales. There was not a single subscale that was significantly correlated with sessions attended at the .05 level. However, the relationships among sessions attended and the SCS common humanity subscale ($r = -.26$) and the SCS mindfulness subscale ($r = .22$) reached practical significance.

Given that graduation could occur earlier for some clients than others, this could potentially impact the relationship between these variables and sessions attended. As such, two multiple regressions were conducted to predict sessions attended a posteriori. The first analysis included the two self-compassion scales (common humanity and mindfulness) as predictors. This regression equation with the two self-compassion scales was statistically significant, $R^2 = .29$, $F(1, 37) = 15.37$, $p < .01$. A second analysis was conducted to evaluate whether graduation status predicted sessions attended over and above common humanity and mindfulness. This regression equation was not significant ($\Delta R^2 = .07$, $p = .19$). Based on these results, common humanity and mindfulness were related to sessions attended. However, graduation status appeared to offer little predictive power beyond that contributed by the common humanity and mindfulness subscales.

DISCUSSION

This study examined relationships among positive psychology measures and psychopathology and investigated whether, at entry, these measures could predict graduation and session attendance in a community health DBT IOP. Regarding our first hypothesis, hope and self-compassion were inversely related to common pathology measures in this clinical population. Self-compassion was negatively associated with depression, anxiety, stress, and dysregulation— the latter at a moderate effect size. The SHS relationship differed between graduates and nongraduates. Among nongraduates, there was a negative relationship between the SHS and anxiety and the SHS and depression. However, among graduates, there was a positive relationship between the SHS and anxiety, and between the SHS and depression. The SHS reached practical significance with psychopathology measures, but not statistical significance. Additionally, the HHS and MHS were related to depression at a moderate effect size. There were no differences in strength of correlation between graduates and nongraduates for the MHS and the HHI. These findings suggest that

the MHS and the HHI perform differently than the SHS. While the HHI's brevity (12 items versus the MHS's 40 items) makes it more practical than the MHS, these findings warrant additional comparisons of hope measures, especially the SHS, within clinical samples.

Regarding our second hypothesis, measures at entry were unable to predict graduation status. Although depression's relationship with graduation was practically significant, it failed to predict graduation status. Of the 39 participants, 27 (69.2%) did not graduate from the DBT IOP. In the DBT community populations, the attrition rate is likely to range from 24% to 58% (Landes et al., 2016), so our attrition rate is not unexpected given the setting, the treatment, and the acuity of the clientele in this program. Additional research into factors that help clients persist toward graduation is essential.

Regarding our third hypothesis, common humanity and mindfulness significantly predicted sessions attended. Adding graduation status to the model did not add predictive power. As mindfulness is a DBT skills training module, individuals with higher levels of mindfulness at entry may be better able to persist through treatment. A key element of common humanity is seeing how strengths and struggles occur in "light of common human experience" (Neff, 2003, p. 227). Individuals higher in common humanity may be more open to persisting, as they may see their fellow skills group members as proof that they are not alone in their struggles. Given that the DBT standard dosage is 12 months (McMain et al., 2018), and the dose–effect model (Howard et al., 1986) suggests that more sessions are associated with better outcomes, fostering mindfulness and common humanity may be especially relevant for brief programs.

These findings warrant a larger study. Although providers may have reservations regarding positive psychology measures and approaches (Krentzman & Barker, 2016), Owens et al. (2015) argue that using such approaches enhances conceptualization. This may be especially true for more stigmatized populations (Warlick et al., 2018). Within therapy, not all participants experience both the reduction of symptoms and the promotion of well-being (Trompetter et al., 2017). To accurately assess a client, and to accurately assess treatment, counselors need to measure both the psychopathological symptoms and the strengths of well-being. This process begins at intake.

As part of routine outcome assessment, counselors should include positive psychology measures alongside psychopathology measures. Owens et al. (2015) suggest counselors should ensure the positive psychology measures are psychometrically sound and culturally appropriate. The larger sample associated with routine assessment would be helpful in revealing the relationships among these constructs and treatment outcomes.

Snyder et al. (2000) suggest that counselors should create supportive climates to allow hope to develop. Within intakes, multiple measures of hope could prompt this development. Also within intakes, counselors could collect client narratives about positive psychology constructs. These narratives may help clients in their recovery (Slade, 2010). The relationship among hope, self-compassion and dysregulation within this sample suggests that counselors who desire to grow hope and self-compassion in clients should also target emotion regulation. While therapy often provides elements of social support, it would also be beneficial to help clients develop additional social support outside of the therapeutic relationship, especially considering social support's relationship with well-being (Sagiv & Schwartz, 2000). Furthermore, as shared decision-making in community health is associated with mitigated clinical symptomology (Adams & Drake, 2006), it would be useful to see if sharing these positive psychology data with clients would increase the therapeutic alliance or other treatment outcomes. This study involved a pilot trial at one DBT program, which limits generalizability of findings. Additionally, while collaborative termination is appropriate for community health centers, this process does limit strict replication.

Despite the study's limitations, given the multiple measures of positive psychology used and the general dearth of information on positive psychology measures in mixed-diagnostic clinical populations, this study provides an important step toward assessing the relative worth of integrating positive psychology instruments in a mixed-diagnostic clinical sample.

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