

The Effect of Hopelessness and Perceived Group Compatibility on Treatment Outcome for Patients With Personality Dysfunction

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Abstract: Improvement in life satisfaction is hard to achieve for any patient with personality psychopathology, and possibly even more so for those who feel hopeless at the start of treatment. The present research investigated the potential influence of hopelessness in the treatment of patients with personality dysfunction, using data from patients who completed an intensive group therapy program designed to reduce symptom distress and support optimal psychosocial functioning ($N = 80$). In the present study, we sought to examine whether hopelessness would moderate (*i.e.*, strengthen or weaken) relations between compatibility ratings and life satisfaction outcome. Hopelessness had a significant moderating effect on the relationship between compatibility and outcome, suggesting that, for patients who entered treatment feeling more hopeless, higher appraisals of fit within the group facilitated better gains in life satisfaction. If replicated, the findings underlie the importance of focusing on increasing hope and perceived group affiliation in the treatment of personality dysfunction.

Key Words: Hopelessness, group compatibility, personality dysfunction, group treatment

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Hopelessness can be characterized by negative attitudes, beliefs, and expectancies about the future (*i.e.*, pessimism) and feelings of “giving-up” (Marchetti, 2019). The hopelessness theory of depression (Abramson et al., 1989; Liu et al., 2015) hypothesizes that the interaction between negative cognitive styles and negative life events can evoke a sense of hopelessness that in turn contributes to the onset, relapse, and recurrence of depressive episodes. The importance of hopelessness in treatment is supported by the finding that a decrease in hopelessness during various psychotherapy modalities is significantly associated with a decrease in symptom severity (Cuijpers et al., 2013). In addition, other studies identified hopelessness as one of the most reliable risk factors for suicidal behavior (*e.g.*, David Klonsky et al., 2012). Also, after successful treatment, hopeless individuals are at high risk of an unfavorable course for long-term symptom severity (van Bronswijk et al., 2019).

People with personality pathology are prone to experiencing relatively poor treatment outcomes, including low rates of symptom remission and persistent life dissatisfaction (Zeitler et al., 2020). Whether one considers life dissatisfaction to be an intrinsic element of personality dysfunction (Nuzum et al., 2019) or a consequence of pathological personality functioning and traits, it is widely accepted as a central target of personality dysfunction assessment and treatment (Clark and Ro, 2014). Indeed, treatment programs for personality dysfunction tend to focus on

helping individuals to live a satisfying, hopeful, and productive life even with remaining limitations (Zeitler et al., 2020).

Improvement in life satisfaction is hard to achieve for most patients with personality psychopathology, but this might be especially so for those who feel hopeless at the start of treatment. Given that people who suffer from personality psychopathology tend to exhibit high levels of hopelessness (Carvalho and Pianowski, 2019; Köhling et al., 2015; Zanarini et al., 2019) and often have a negative future outlook (Janis et al., 2006; Kealy et al., 2017), some treatment programs specifically address patients' hopelessness in the context of personality pathology (*e.g.*, CBT, as in Beck et al., 2015; DBT, as in Bohus et al., 2004).

Hopelessness may have particular relevance in group interventions, a mainstay of personality disorder treatment (Johnson et al., 2019), due to the potential impact of hopelessness on patients' experiences of the interpersonal milieu in group programs, potentially limiting the ameliorative effects of affiliation with other group members. From a clinical perspective, individuals with higher levels of hopelessness as well as personality dysfunction may need an especially reliable feeling of affiliation with other group members (Burlingame et al., 2018) to benefit from group psychotherapy. Although some recent studies have examined change in hopelessness in group treatments for patients with personality dysfunction (*e.g.*, Andreasson et al., 2016; Lin et al., 2019), empirical knowledge regarding the effects of hopelessness in group treatment for personality dysfunction is limited. Little is known regarding the interaction of dispositional hopelessness and patients' perceptions of the group environment, in predicting outcome.

The present research was developed to investigate the potential influence of hopelessness in the treatment of patients with personality dysfunction, using data from patients who completed an intensive group therapy program designed to reduce symptom distress and support optimal psychosocial functioning. In the present study, we sought to examine whether hopelessness would moderate (*i.e.*, strengthen or weaken) relations between ratings of group compatibility and life satisfaction outcome. Given the limited research regarding hopelessness in relation to the group process of intensive PD treatment, we considered the present study to be exploratory. However, because pessimism tends to be associated with negative health and social effects (Hatchett and Park, 2004; Heinonen et al., 2017), we speculated that hopelessness might have a weakening effect on the compatibility-outcome relationship.

METHODS

Participants and Setting

Participants were 80 consecutively admitted psychiatric outpatients who completed the Evening Treatment Program (ETP) and who provided pretreatment and posttreatment assessment data for the study. The ETP, offered through the Department of Psychiatry at the University of Alberta Hospital in Edmonton, Canada, is an intensive outpatient group therapy program for the treatment of personality dysfunction (McCallum et al., 1997). The ETP aims to reduce symptom distress and improve well-being and social functioning for adults (minimum age of 18 years) suffering from personality dysfunction, ranging from

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clinically significant personality difficulties (several personality disorder traits) to diffuse personality disorder (two or more diagnosed personality disorders; Tyrer and Johnson, 1996). Further admission criteria to the program include engagement in a meaningful daily activity, such as employment, education, parenting, or volunteering, as well as a capacity for group participation, demonstrated by interest in group work and availability to attend the program. Exclusion criteria consisted of active psychosis (e.g., schizophrenia), organic mental disorder, acute suicidality, active substance abuse in need of primary attention, significant intellectual impairment, or active treatment at another mental health service. Program staff evaluated these admission criteria during clinical intake interviews. Ethics approval for the study was granted by the Health Research Ethics Board at the University of Alberta. All patients who participated in the study provided written informed consent before participation.

Treatment

Treatment in the ETP is exclusively group oriented, involving various groups through which patients progress, while attending five evenings per week, 4 hours per evening (except Fridays when the program ends earlier), over an 18-week period. Patients enter the program on a rolling admission basis, with one or two patients beginning each week and a similar number being discharged each week; there are typically 25 patients in the program at any given time. Treatment is integrative, involving a modular approach that targets various aspects of personality dysfunction (Livesley et al., 2015) using a staged sequence of group treatment experiences. The program covers multiple clinical targets within an overall psychodynamic-relational orientation, including symptom management, emotion regulation, interpersonal skills, and the development of insight, in a manner similar to that outlined in Piper et al. (1996). Three 6-week “phases” progressively address 1) therapeutic skill acquisition, as in the management of symptoms and emotion regulation; 2) focused therapeutic work, as in the exploration of conflicts around intimacy and dependency; and 3) consolidation of gains and therapeutic termination. Staff continually monitor and attend to threats to the therapeutic alliance, and identify and address problematic interactions (e.g., scapegoating, acting out, and absenteeism) using group-level and individual-level transference interpretations. The ETP has shown to be clinically effective, with the majority of patients completing and benefiting from the program (McCallum et al., 1997).

Each evening begins with a large psychodynamic group (attended by all patients) that uses an interpretive focus to address here-and-now issues among the patients, program-related concerns, and residual material from previous sessions. This is followed by a series of groups involving insight-oriented psychotherapy and rehabilitative and skills-oriented groups, using interventions from cognitive-behavioral and interpersonal

psychodynamic orientations, as well as art, vocational, and physical exercise group interventions (see Fig. 1). Patients participate in one small psychodynamic group (6–10 patients) throughout the ETP while rotating through all other groups. This “home group” anchors patients' progress through the program by focusing on their treatment goals in relation to the various aspects of the program, and in relation to their intrapersonal and interpersonal dynamics. An interdisciplinary team of program staff—a psychiatrist and five therapists from the disciplines of occupational therapy, psychology, and psychiatric nursing—continuously monitor patients' progress to ensure a coordinated approach to treatment.

Measures

Hopelessness

The Beck Hopelessness Scale (BHS; Beck et al., 1974) was used to assess feelings and expectations regarding the future. Questions such as “I do not expect to get what I really want,” and “I can look forward to more good times than bad times” are endorsed as either true or false. The 20 items are summed to provide a total score that can range from 0 to 20, reflecting the dimension of hope-hopelessness, with higher values indicating a more negative general outlook on life. Total scores less than 3 are considered within normal limits, scores 4 to 8 are considered mildly hopeless, scores 9 to 14 are considered moderately hopeless, and lastly, scores higher than 14 are considered severely hopeless (Beck et al., 1988). Ratings were obtained before commencement of treatment.

Depressive Symptoms

The Beck Depression Inventory-II (BDI-II; Beck et al., 1996) was used to assess severity of depressive symptoms before commencing treatment and at termination. The BDI-II is a 21-item self-report measure, which is commonly used in psychiatric outpatient services. The BDI-II has excellent internal consistency (Cronbach's alpha = 0.92), differentiates between depressed and nondepressed individuals, and has well-established content validity (Beck et al., 1996; Richter et al., 1998). Scores for each item are measured on a four-point Likert scale (0 = not present; 3 = severe); the total score is the sum of all responses (total range of 0–63).

Life Satisfaction

Patients used a seven-point Likert scale to provide ratings of life satisfaction on a single item, with higher scores indicating greater general satisfaction with life: “All things considered, how satisfied or dissatisfied are you with your life as a whole these days? Circle one number on the line that you feel best represents your level of satisfaction with your present life” (1 = completely dissatisfied; 7 = completely satisfied). Higher scores indicate greater overall satisfaction with life. Life satisfaction ratings

	Monday	Tuesday	Wednesday	Thursday	Friday
Group 1	Large group	Large group	Large group	Large group	Large group
Group 2	Small dynamic group	Psychodrama	Social outing	Projective techniques (phase 1) Small dynamic group (phase 2) Dynamic group with video replay (phase 3)	Life skills (phase 1) Communication skills (phase 2) Re-entry to community (phase 3)
Group 3	Personal development group	Sports activity	Social outing	Leisure planning and program government	

FIGURE 1. Daily programming structure of the Evening Treatment Program integrative group treatment for personality dysfunction.

were obtained before commencement of treatment and at termination. Similar single-item ratings have been found to perform almost identically with multiple-item assessments of life satisfaction (Cheung and Lucas, 2014). Using latent modeling with longitudinal data (separating true-score variance from occasion-specific variance), reliability estimates for single-item life satisfaction measures have been found to range from 0.68 to 0.74 across four large multiwave samples (Lucas and Donnellan, 2012).

Compatibility With Other Group Members

Compatibility with the group was assessed using the compatibility scale of the Cohesion Questionnaire (Piper et al., 1983). The compatibility scale consists of three items scored on a six-point Likert scale (1 = very little; 6 = very much), reflecting the patient's perception of how well group members function together (e.g., “The group is composed of people who fit together”). Ratings were obtained at week 5 of the program to reflect patients' feelings about the group's interpersonal compatibility relatively early in the program. Patients completed these ratings in reference to their psychodynamic “home group,” the group that remained constant throughout their tenure in the ETP. These compatibility ratings addressed overall goals and treatment progress, and were thus considered to be a proxy for compatibility to the program overall. Higher total scores (ranging from 3–18) indicated higher perceived group compatibility.

DSM-4 Diagnoses

Psychiatric diagnoses were based on administration of the computer-administered Structured Clinical Interview for DSM-4 (First et al., 1998) and the Structured Clinical Interview for DSM-4 Personality Disorders (First et al., 1997). Interviews were administered by trained bachelor-level research assistants, and diagnoses were validated through independent clinical diagnosis assigned jointly by an ETP therapist and psychiatrist, both of whom saw the patient for the initial program intake. The average interrater reliability (k) for the PD diagnostic assessment, based on five raters and 20 cases, was 0.68 (range, 0.60–0.79; Joyce et al., 2009). The number of diagnosed DSM-4 personality disorders was used as a proxy for overall severity of personality dysfunction (Ogrodniczuk et al., 2001), in order to examine its potential confounding effect.

Approach to Data Analyses

Statistical analyses were conducted using SPSS version 25, including the PROCESS macro 3.0 (Hayes, 2018). Preliminary analyses regarding potential confounding effects examined associations between the study variables (hopelessness, compatibility, depressive symptoms, life satisfaction) and age and number of DSM-4 personality disorders (using zero-order correlations). Additional zero-order correlations were computed to examine associations between hopelessness and compatibility ratings, as well as with pretreatment and posttreatment scores for life satisfaction. Regression analysis predicting posttreatment life

satisfaction was then conducted, using compatibility ratings and hopelessness as predictors, along with an interaction term composed of the product of hopelessness and compatibility (predictors were mean-centered before analysis). Pretreatment life satisfaction was included as a covariate to account for pretreatment scores on posttreatment life satisfaction. Thus, we examined main and interaction effects for hopelessness and compatibility in predicting improvement in life satisfaction. Follow-up analyses were conducted to determine whether the moderating effect of hopelessness would hold after accounting for pretreatment depressive symptoms—which are often entangled with hopelessness—and severity of personality dysfunction by entering depressive symptoms and number of DSM-4 personality disorders as control variables in the regression model.

RESULTS

Participant Characteristics and Preliminary Analyses

Descriptive statistics for the study variables are presented in Table 1. Of the 80 patients, most were female (70%; *n* = 56) and white (95%; *n* = 76), with an average age of 37 ± 10 years. Forty-four percent (*n* = 35) were living with a partner. Most patients (69%; *n* = 55) reported having obtained some form of postsecondary education. Seventy-three percent (*n* = 58) were employed at the time of admission to the ETP. Nearly all patients (91%; *n* = 73) had received some form of psychiatric treatment in the past, including 19% (*n* = 15) as an inpatient. About two thirds of patients (65%; *n* = 52) met criteria for at least one personality disorder, the most common being avoidant (36%; *n* = 29), obsessive-compulsive (25%; *n* = 20), and borderline (24%; *n* = 19) personality disorders. Thirty percent (*n* = 24) met criteria for more than one DSM-4 personality disorder diagnosis. Nearly all patients (94%; *n* = 75) met criteria for at least one DSM-4 Axis I diagnosis, including major depressive disorder (49%; *n* = 39), obsessive-compulsive disorder (49%; *n* = 39), agoraphobia or other-specific phobia (45%; *n* = 36), bipolar disorder (33%; *n* = 26), and social phobia (30%; *n* = 24). None of the potential covariates were significantly associated with compatibility ratings or outcome variables and hence were not included in the final regression models. Although hopelessness was found to be higher among patients with a diagnosed personality disorder (mean ± SD, 0.58 ± 0.27) than those without (mean ± SD, 0.45 ± 0.25; *t*(78) = -0.215; *p* = 0.04; *d* = 0.50), no such differences were found for compatibility ratings or posttreatment outcome scores.

As shown in Table 1, hopelessness was significantly associated with pretreatment depressive symptoms and pre-post treatment life satisfaction scores in expected directions. However, hopelessness was not significantly associated with compatibility ratings. Subsequently, regression models were computed for hopelessness and compatibility, and their interaction, to predict improvement in life satisfaction as the dependent variable at posttreatment, after controlling for depressive symptoms and number of personality disorder diagnoses.

TABLE 1. Descriptive Statistics and Zero-Order Correlations for Primary Study Variables (*N* = 80)

	Mean (SD)	Range	Skewness	Kurtosis	1	2	3	4	5
1. Hopelessness, pretreatment	10.66 (5.41)	1–20	0.10	-0.98					
2. Depressive symptoms, pretreatment	26.34 (10.63)	9–56	0.33	-0.38	0.59**				
3. Group compatibility ratings, week 5	4.48 (0.81)	2.67–6	-0.14	-0.48	-0.10	-0.13			
4. Life satisfaction, pretreatment	3.06 (1.39)	1–7	0.58	-0.22	-0.58**	-0.58**	0.20		
5. Life satisfaction, posttreatment	4.76 (1.17)	1–7	-1.07	1.91	-0.42**	-0.37**	0.41**	0.37**	
6. No. DSM-4 personality disorders	1.13 (1.16)	0–6	1.34	2.76	0.27*	0.25*	0.06	-0.13	0.04

p* < 0.05. *p* < 0.01.

TABLE 2. Results of Regression Analyses Examining Main Effects and Interaction of Hopelessness and Group Compatibility Ratings on Improvement in Life Satisfaction at Posttreatment

Predicting Posttreatment Life Satisfaction	<i>b</i>	SE	<i>t</i>	<i>p</i>	ΔR^2
Main effects					
Pretreatment life satisfaction (control)	0.130	0.094	1.383	0.171	0.410
Hopelessness	−0.062	0.024	−2.600	0.011	
Compatibility ratings, week 5	0.518	0.131	3.970	<0.001	
Interaction effect					
Hopelessness × compatibility	0.077	0.023	3.407	0.001	0.091
Effects of compatibility at low and high levels of hopelessness					
Compatibility at −1 SD hopelessness	0.100	0.176	0.570	0.570	
Compatibility at +1 SD hopelessness	0.936	0.182	5.143	<0.001	

Boldface indicates statistical significance.

Improvement in Life Satisfaction

The main effects of compatibility and hopelessness were found for improvement in life satisfaction (Table 2). The interaction of the two predictors was also significant, indicating a moderation effect that accounted for an additional 9% of the variance in life satisfaction change. Probing of the interaction effect indicated that the association between compatibility and improvement in life satisfaction became stronger as hopelessness increased from low (−1 SD: $b = 0.100$; 95% confidence interval [CI], −0.250 to 0.451; $p = 0.570$) to the mean ($b = 0.518$; 95% CI, 0.258 to 0.778; $p < 0.001$) to high (+1 SD: $b = 0.936$; 95% CI, 0.573 to 1.298; $p < 0.001$). The interaction of hopelessness with group compatibility held after accounting for the effect of pretreatment depressive symptoms and number of *DSM-4* personality disorders, with negligible influence on conditional effects or portion of variance accounted for (*i.e.*, <0.002 change in R^2). Hence, we retained the original model. As illustrated in Figure 2, the relationship between compatibility ratings and improvement in life satisfaction was strongest for patients with relatively higher levels of hopelessness. Thus, among the more hopeless patients, higher ratings of group compatibility were associated with a higher level of satisfaction in life after treatment.

DISCUSSION

The present study examined the impact of hopelessness, as an individual difference among patients with personality dysfunction, on

patients' appraisals of group compatibility in integrative group treatment, and subsequent improvement in overall life satisfaction. Findings indicated that hopelessness was not significantly associated with patient-rated group compatibility. However, hopelessness moderated the association between compatibility ratings and improvement in life satisfaction, in that the compatibility-outcome relationship was strongest for those with higher levels of hopelessness. For patients who entered treatment feeling more hopeless, perceptions of greater group cohesion were associated with more improvement in life satisfaction. This suggests that more hopeful/optimistic patients were able to achieve therapeutic gains regardless of their feelings of compatibility with other group members, whereas patients who had particularly negative expectations about the future required a positive experience of group affiliation in order to benefit from the treatment (Strunk et al., 2006).

A recent study of depressed patients showed that patients' higher dispositional optimism correlated significantly with a better capacity to absorb positive information (Korn et al., 2014). It is thus possible that the subgroup of hopeless patients who perceived high compatibility in the group were better able to take in positive information from the group members, and thus made more use of the therapeutic process. Perceptions of group compatibility may thus compensate for high levels of hopelessness and encourage the obtaining of treatment benefits. The fact that a strong sense of compatibility during group treatment may ensure that benefits can be realized might be an important justification for a group treatment approach for people with personality dysfunction.

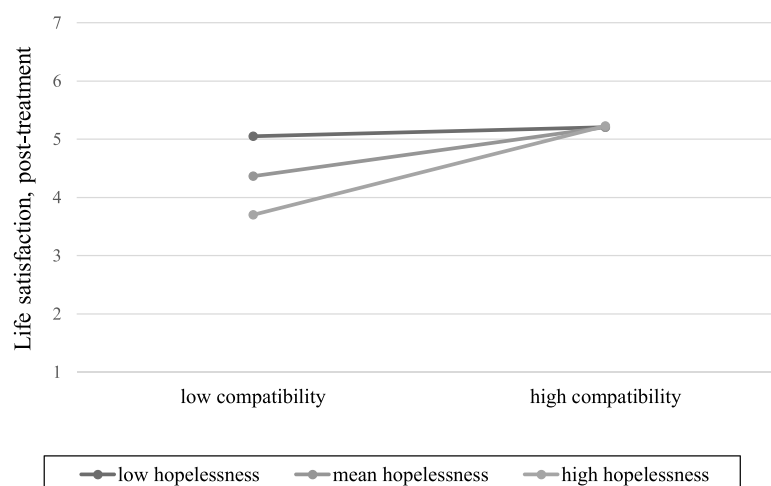


FIGURE 2. Plot illustrating the moderating effect of hopelessness on the relation between group compatibility ratings and posttreatment life satisfaction, after controlling for pretreatment life satisfaction.

Our results correspond with findings from a number of studies that show that pessimistic individuals tend to be less resilient (Alarcon et al., 2013), that is, less able to adapt to and “bounce back” from adversities (Fletcher and Sarkar, 2013), unless compensated by a strong perceived affiliation with others. Although more optimistic patients might sustain their efforts to make changes in their lives, regardless of their immediate interpersonal experiences in the therapy groups (Alarcon et al., 2013; Carver and Scheier, 2014; Nes and Segerstrom, 2006), for hopeless patients, lower appraisals of fit within the group could plausibly inhibit further therapeutic group work and result in limited treatment gains over time (Carver and Scheier, 2014). Although one could argue that hopelessness is just an epiphenomenon of psychopathology, our results still held after controlling for initial severity of depression and personality dysfunction.

Limitations

Several limitations should be noted. Some researchers have suggested that the BHS lacks sufficient specificity and construct validity (e.g., Osman et al., 2010). For instance, Osman et al. (2010) noted that the BHS combines negatively worded items (e.g., “My future seems dark to me”) with positively worded items (i.e., “I look forward to the future with hope and optimism”) that are reverse-scored and combined together to obtain a single score, thereby assuming that negative future expectations and positive future expectations are opposing ends of a single dimensional construct. Yet, research suggests that future-oriented thinking is multifaceted, not unidimensional, with an absence of positive expectations being more strongly associated with hopelessness than the presence of negative expectations (MacLeod et al., 2004; Osman et al., 2010). Moreover, it is possible that hopelessness is not a trait (as presumed by the BHS) but a flexible state of being. Within-individual changes in optimism (i.e., hope) have been observed over longer times during the course of life (Nes and Segerstrom, 2006). Therefore, it is conceivable that hopefulness could itself be a beneficial target of therapeutic intervention. To get a clearer view of the influence of hopelessness in group psychotherapy, further work might well investigate dynamic group processes more closely. For example, the association of hopelessness with patients' early treatment outcome expectations and subsequent post-treatment outcomes warrants further research (Constantino et al., 2018).

Moreover, given that lower appraisals of fit within the group could inhibit further therapeutic group work for more hopeless individuals, future research could assess which variables create a good fit for individual patients, in order to assign them to the most appropriate group. It could also be important to know if hopelessness and group fit are predictive of changes in other domains of functioning posttreatment (e.g., severity of symptoms, interpersonal functioning, global functioning). Finally, in order to increase generalizability, future research should also employ a more comprehensive, dimensional assessment of personality dysfunction and extend beyond the predominantly female and white sample that was reported here.

CONCLUSIONS

In sum, the current study was the first we know of to examine to role of patients' hopelessness on the relation between group compatibility and treatment outcome. Although patients' hopelessness did not appear to influence their general perceptions of group compatibility, for patients who entered treatment feeling more hopeless, higher perceived group compatibility appeared to facilitate gains in life satisfaction. Within group psychotherapies, it might therefore be important to increase hope and improve perceived compatibility among group members, particularly for individuals who are locked in pathological patterns of functioning with entrenched negative views of the future, as is the case for many individuals with personality dysfunction. If this finding is replicated across different samples of personality dysfunction and treatment settings, it underlines the importance of encouraging affiliation among

members in group treatment as a means of compensating for an overly hopeless outlook.

DISCLOSURE

The authors declare no conflict of interest.

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