
Interpersonal Dependency as a Predictor of Satisfaction with Inpatient Hospital Treatment

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ABSTRACT - Studies have shown that high levels of interpersonal dependency are associated with decreased latency of medical help-seeking following symptom onset, increased frequency of health and mental health service use, and cooperativeness and compliance during medical and psychological treatment. This investigation assessed the relationship between level of interpersonal dependency and satisfaction with inpatient hospital treatment in a mixed-sex sample of 76 patients admitted to a broad array of treatment units. As predicted, dependent patients reported higher levels of treatment satisfaction than did nondependent patients regardless of treatment modality or length of hospital stay. Theoretical and practical implications of these results are discussed.

Since the early 1950s there have been more than 600 empirical studies of interpersonal dependency and dependency personality disorder (DPD). In recent years clinicians and clinical researchers have reached a consensus regarding the core elements of dependency and DPD, and now conceptualize dependent personality traits as reflecting four interrelated factors (see Bornstein, 1993; Pincus & Gurtman, 1995): a) *cognitive* (i.e., a perception of oneself as powerless and ineffectual); b) *motivational* (i.e., a marked need for guidance, protection, and support from others); c) *behavioral* (i.e., use of self-presentation strategies designed to obtain and maintain relationships with potential protectors and caregivers; and d) *emotional* (i.e., fear of abandonment, performance anxiety, fear of negative evaluation).

In social settings, high levels of dependency are associated with help-seeking, interpersonal yielding, conformity, compliance, and suggestibility (Bornstein,

1992; Overholser, 1996). High levels of dependency are also associated with insecure attachment in children, adolescents, and adults (Sperling & Berman, 1991), and with a particularly strong negative response to interpersonal conflict. This pattern emerges regardless of whether responses to conflict are assessed physiologically (e.g., in terms of cardiovascular reactivity and electrodermal responding) or via self-report (Allen, Horne & Trinder, 1996; Masling, O'Neill & Katkin, 1982).

In clinical settings, high levels of dependency are associated with increased risk for a broad array of psychological disorders including depression, eating disorders, anxiety disorders, and somatization disorder (Bornstein, 2005). High levels of dependency are also associated with increased risk for both minor illnesses (e.g., colds and flu) and major diseases (e.g., heart disease and cancer). Parallel findings regarding the dependency-illness link have been obtained in prospective studies (wherein dependency levels are assessed before illness onset) and in retrospective studies (Bornstein, 1998). Moreover, some data suggest that interpersonal conflict may moderate the dependency-illness link: Dependent college students who experience high levels of interpersonal conflict show increased illness rates during the course of a semester; nondependent students and dependent students with low levels of interpersonal conflict have significantly lower illness rates (Bornstein, 1995).

Dependency not only affects illness risk, it also alters treatment dynamics. High levels of dependency are associated with a positive (and deferential) attitude toward physicians and therapists (Parker & Lipscombe, 1980), and studies indicate that dependent adults delay less long than do nondependent adults in seeking treatment after physical and psychological symptoms appear (Greenberg & Fisher, 1977). Once treatment is underway, dependent patients show greater compliance with medical and psychotherapeutic regimens, greater follow-through in outpatient psychotherapy, and fewer missed therapy sessions (Nacev, 1980; Poldrugo & Forti, 1988). In psychiatric inpatient settings dependent patients receive a greater number of psychotropic medications and in-house consultations than do nondependent patients with similar demographic and diagnostic profiles (O'Neill & Bornstein, 2001).

Although studies confirm that high levels of dependency are associated with willingness to seek help when symptoms appear and with cooperativeness and compliance during treatment, no studies have explored whether dependency is associated with increased treatment satisfaction. This question is important from both theoretical and practical perspectives. Theoretically, information regarding the dependency-treatment satisfaction relationship may help elucidate the pathways that mediate links between dependency and various treatment dynamics. Practically, this information may be useful in helping predict which patients are likely to show high levels of treatment satisfaction in inpatient and outpatient settings.

This study examined the relationship of interpersonal dependency to satisfaction ratings following inpatient hospital treatment for medical disorders in a heterogeneous group of adults. We expected that high levels of dependency would be associated with higher satisfaction ratings regardless of the duration or type of treatment.

Method

Participants

Participants were 76 adult hospital patients (56 women and 20 men) undergoing inpatient treatment for various medical disorders. Patients ranged in age from 21 to 81 with a mean of 50.48 years ($SD = 16.44$). Patients were admitted to the following hospital units: medicine ($N = 10$), surgery ($N = 11$), orthopedics ($N = 16$), gastroenterology ($N = 2$), otolaryngology ($N = 9$), cardio-pulmonary medicine ($N = 8$), neurosurgery ($N = 7$), urology ($N = 4$), and obstetrics-gynecology ($N = 9$). Length of hospital stay ranged from 1 to 28 days ($M = 5.18$, $SD = 3.47$).

Measures

Interpersonal dependency. Hirschfeld, Klerman, Gough, Barrett, Korchin, and Chodoff's (1977) Interpersonal Dependency Inventory (IDI) was used to assess level of interpersonal dependency. The IDI is a 48-item questionnaire consisting of a series of dependency-related self-statements, each of which is rated on a 4-point scale anchored with the terms *Disagree* (1) and *Agree* (4). Hirschfeld et al.'s (1977) factor analysis revealed that these 48 items form three subscales: 1) *Emotional Reliance on Others* (ER; 18 items); 2) *Lack of Social Self-Confidence* (LS; 16 items); and 3) *Assertion of Autonomy* (AA; 14 items). Typical items from the three IDI subscales include "The idea of losing a close friend is terrifying to me" (ER), "When I have a decision to make I always ask for advice" (LS), and "What people think of me doesn't affect how I feel" (AA). IDI scores were calculated in the standard manner, by summing each participant's scores on the ER and LS scales, then subtracting from this total the participant's score on the AA scale.

Reviews of evidence supporting the construct validity of the IDI as a measure of interpersonal dependency are provided by Bornstein (1994, 2005). IDI scores are positively correlated with scores on other self-report dependency measures in a variety of participant groups (Hirschfeld, Klerman, Clayton & Keller, 1983), and predict the presence and severity of DPD symptoms in psychiatric patients (Loas et al., 2002). IDI scores also predict important dimensions of dependency-related behavior in laboratory, clinical, and field settings (Bornstein, 1999; Hirschfeld et al., 1983), and show good internal reliability (coefficient alpha = .78; see Gough & Weiss, 1979). Other studies have shown that IDI scores show good retest reliability over 16-, 28-, 60-, and 84-week intervals, with retest reliability coefficients (r 's) ranging from .74 at 16 weeks to .71 at 84 weeks

(Bornstein, 1997; Bornstein, Rossner & Hill, 1994).

Satisfaction with Hospital Services. Patient satisfaction was assessed using the Press Ganey Inpatient Satisfaction Survey (ISS; Press Ganey Associates, 1997), which consists of 73 questions related to various domains of hospital treatment, including the admissions process, room and meal quality, quality of nursing and physician care, treatment of visitors and family, and hospital discharge. Each item is rated by the patient on a 5-point scale anchored by the terms *Very Poor* (1) and *Very Good* (5). In addition, patients rate their overall assessment of the hospital on the same 5-point scale.

Construct validity data for the ISS are provided by Press Ganey Associates (2002). ISS scores show good predictive validity with respect to patient reports of likelihood that they would recommend a given treatment facility (adjusted $R^2 = .77$); internal reliability (coefficient alpha) for the ISS is .98. Other psychometric studies confirm that ISS scores show good convergent and discriminant validity in a variety of inpatient groups.

Procedure

Patients completed copies of the IDI within one day of admission. ISS forms were mailed to patients within two weeks of discharge from the hospital, along with postage-paid envelopes to return the completed questionnaires.

Table 1
Comparison of Dependency Scores in ISS Questionnaire
Completers and Non-Completers

IDI Score	Completers			Non-Completers			t
	M	SD	Range	M	SD	Range	
ER	38.71	9.26	20-63	39.45	9.44	21-64	0.49
LS	28.49	6.40	17-55	27.00	6.10	17-52	1.46
AA	27.72	7.18	14-50	28.09	7.69	14-52	0.31
IDI Total	39.45	14.31	12-78	40.11	14.51	13-81	0.28

Note: Completers and non-completers were matched on gender and age, and drawn from the pool of patients who completed the IDI upon admission. N of completers = 76 (56 women and 20 men); N of non-completers = 76 (56 women and 20 men). IDI = Interpersonal Dependency Inventory (Hirschfeld et al., 1977). ER = Emotional Reliance on Others; LS = Lack of Social Self-Confidence; AA = Assertion of Autonomy. All t values were nonsignificant (all p 's > .10).

Results

Consistent with the typical return rate for this institution, 25% of dependency-screened patients who received ISS forms returned useable satisfaction data. Table 1 presents IDI scores for the 76 patients who returned completed ISS forms and 76 age- and gender-matched patients who did not return these forms. As Table 1 shows, patients who returned ISS forms did not differ from patients who failed to return these forms, either with respect to whole-scale IDI scores or IDI subscale scores.

ISS scores ranged from 49.50 to 100.00 ($M = 82.74$, $SD = 11.64$), with women and men obtaining comparable ISS scores. Coefficient alpha for the ISS in this sample was .74. IDI whole scale scores ranged from 12 to 78 ($M = 39.45$, $SD = 14.31$), with women ($M = 41.29$, $SD = 12.71$) obtaining significantly higher IDI scores than men ($M = 34.31$, $SD = 14.44$); $t(74) = 2.04$, $p < .05$. Coefficient alpha for the IDI in this sample was .77.

Table 2

Correlations of Interpersonal Dependency and Patient Satisfaction Scores

IDI Score	Correlation with ISS Score			
	Uncorrected		Controlling for Length of Stay	
	Women	Men	Women	Men
ER	.36***	.40*	.32**	.36*
LS	.09	-.02	.02	.04
AA	-.29**	-.26	-.31**	-.28
IDI Total	.38***	.40*	.36***	.40*

Note: N of patients = 76 (56 women and 20 men). ISS = Inpatient Satisfaction Survey. IDI subscales are described in Table 1.

* $p < .10$ ** $p < .05$ *** $p < .01$

Table 2 summarizes the correlations between ISS scores and IDI scores. Because: 1) women and men obtained different IDI means in this sample; and 2) previous research confirms that the relationships between IDI scores and indices of dependency-related behavior often differ in women and men

(Bornstein, 2005), analyses were conducted separately by gender. As the left portion of Table 2 shows, high levels of interpersonal dependency were associated with greater treatment satisfaction in both women and men. Although these correlations were comparable in women and men, they did not reach conventional levels of statistical significance in men because of the small number of men in the sample. Analysis of IDI subscale scores further showed that high levels of patient satisfaction were associated with high ER scores, and low AA scores. The correlations between ISS ratings and IDI LS scores were uniformly small in magnitude and nonsignificant.

When these correlations were recalculated controlling for length of stay, IDI-ISS patterns were essentially unchanged. These data are summarized in the right portion of Table 2. As was the case for uncorrected correlations, similar patterns were obtained in women and men, but these correlations were only statistically significant in women.

Discussion

The present results suggest that high levels of interpersonal dependency are associated with increased patient satisfaction across a range of hospital treatment units and durations of hospital stay. This pattern may reflect the more positive attitudes regarding physicians and hospitals typically held by dependent persons (Parker & Lipscombe, 1980), or could be an indirect consequence of increased compliance with treatment regimens (Poldrugo & Forti, 1988). As Clough (1980) noted, increased compliance in inpatient settings may not only lead to more rapid recovery, but also to more positive interactions with hospital staff.

An alternative explanation of the present results has to do with the nature of inpatient treatment. Some researchers have argued that hospital regimes inadvertently reinforce patient dependency (Booth, 1986; Raps, Peterson, Jonas & Seligman, 1982), a phenomenon that still exists (albeit to a lesser degree than it once did) in the age of managed care. Although many people find the loss of autonomy and control aversive, people with strong underlying dependency needs might find this experience less unpleasant--perhaps even rewarding.

These results have clinical implications, and suggest that it may be useful to assess patient dependency at admission. Previous investigations have demonstrated that dependency predicts outpatient and inpatient health service use (Bornstein, 1995; O'Neill & Bornstein, 2001), and length of hospital stay in psychiatric patients (Greenberg & Bornstein, 1989). Insofar as maximizing patient satisfaction is a goal for most treatment facilities, the present results suggest it might be useful to structure treatment somewhat differently for dependent and nondependent patients (see Bornstein, 2005, for a discussion of this issue).

A secondary contribution of this investigation is the derivation of preliminary IDI norms for hospital inpatients. Previous investigations have provided

normative data for psychiatric outpatients (Hill, Gold & Bornstein, 2000; Loas et al., 2002) and college students (Bornstein, 1997). Although these preliminary norms must be replicated and extended using a larger participant sample, the present data suggest that hospital inpatients produce IDI scores comparable to those of college students, and lower than those of psychiatric patients.

As with most clinical investigations, this one had certain limitations, the most important of which were the relatively modest number of men, the limited range of treatment lengths, and the heterogeneity of treatment units and modalities. Future investigations should compare systematically the dependency-satisfaction relationship as a function of type of disorder and treatment modality. In addition, it may be useful to track dependency levels during the course of hospitalization. Previous studies have assessed changes in dependency levels during psychological treatment, but none have examined whether dependency levels change during medical treatment. It is possible that dependency levels increase as treatment continues, or that successful and unsuccessful treatment regimes are associated with different degrees of change in this domain.

Author Notes

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