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Comparative Outcomes among the Problem Areas of Interpersonal Psychotherapy for Depression

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Abstract

Background—Although interpersonal psychotherapy (IPT) is an efficacious treatment for acute depression, the relative efficacy of treatment in each of the four IPT problem areas (grief, role transitions, role disputes, interpersonal deficits) has received little attention. We evaluated the specificity of IPT by comparing treatment success among patients whose psychotherapy focused on each problem area. Moreover, we sought to understand how the patient characteristics and interpersonal problems most closely linked to the onset of a patient's current depression contributed to IPT success.

Methods—Patients meeting DSM-IV criteria for an episode of major depressive disorder (n=182) were treated with weekly IPT. Remission was defined as an average Hamilton Rating Scale for Depression 17-item score of 7 or below over 3 weeks. Personality disorders were diagnosed using the Structured Clinical Interview for DSM-IV Personality Disorders.

Results—Contrary to our prediction that patients whose treatment was focused on interpersonal deficits would take longer to remit, survival analyses indicated that patients receiving treatment

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focused on each of the four problem areas did not differ in their times to remission. Nor were patients in the interpersonal deficits group more likely to have an Axis II diagnosis. Patients whose treatment focused on role transitions remitted faster than those whose treatment focused on role disputes, after controlling for covariates.

Conclusion—With skillful use of IPT strategies and tactics and with careful medication management where appropriate, patients in this study whose treatment focused on each problem area were treated with equal success by trained IPT clinicians.

Keywords

mood disorders; treatment outcome; personality disorders; specificity; pharmacotherapy

Introduction

Interpersonal psychotherapy (IPT^[1]) is a time-limited, manual-based, focused treatment for depression. Its efficacy is well supported by empirical research.^[2–6] IPT reduces depressive symptoms by helping patients to resolve interpersonal problems.^[7] Treatment focuses on one or two of four specified IPT problem areas: grief, role transitions, role disputes, or interpersonal deficits, based on recent life events or other factors that may relate to the current depressive episode.^[8, 9]

A detailed description of each problem area can be found in the IPT manuals by Klerman et al.^[1] and Weissman et al.^[9, 10] Briefly, the **grief** problem area focuses on “abnormal grief reactions, i.e., from failure to progress through the various phases of the normal mourning process” (p. 61).^[9] **Role disputes** focuses on resolution of conflicts arising from nonreciprocal role expectations that exist between the patient and one or more significant others in the patient’s life. **Role transitions** focuses on situations in which the patient has difficulty adapting to changes in key social roles. **Interpersonal deficits** becomes the focus of treatment with patients who lack sufficient satisfying interpersonal relationships, who have difficulty maintaining the relationships that might exist,^[1, 10] or who have unresolved symptoms that interfere with current relationships.^[9] IPT therapists are specifically instructed to select this problem area only when one of the other problem areas does not apply to the patient’s circumstances.

As treatment focus is chosen according to the specific needs and experiences of the patient, some characteristics among patients in each problem area group may relate to their success in treatment. Recently, there has been an appeal to investigate the effect of the four problem areas on treatment outcome as a way of elucidating the specificity of IPT.^[11]

Thus, we aimed to identify characteristics of patients whose treatment focused on each problem area in order to explain possible differences among groups in time to remission. The interpersonal deficits problem area typically addresses more enduring and pervasive problems, and may carry the worst prognosis.^[12] This is based on the idea that this group may experience a more endogenous form of depression, one associated with an earlier age of depression onset. These patients have also been described as having a pattern of long-standing relationship difficulties,^[12] perhaps as a result of comorbid Axis II pathology. This

group's difficulty with long-standing relationships may also be related to the finding that depressed patients with personality pathology fare worse in treatment.^[13–15]

Patients whose treatment focuses on the role disputes problem area may find it more difficult to resolve their interpersonal problems than patients whose treatment focuses on grief or role transitions. Although all three areas involve concrete challenges that surround a life event, the needs and motivations of both the patient and the other party to the dispute must be taken into consideration in role disputes work, while grief and role transitions typically focus solely on the needs of the patient.

In an effort to identify the patients who benefit most from IPT, we compared the relative efficacy of treatment among patients whose treatment focused on each of the four IPT problem areas. We hypothesized that individuals whose therapy is focused on interpersonal deficits would take longer to remit than those whose therapy is focused on the other three problem areas, that individuals whose therapy is focused on role disputes would take longer to remit than those whose therapy is focused on grief or role transitions, and that individuals whose therapy is focused on interpersonal deficits would have more personality pathology and report an earlier age at onset than those whose therapy is focused on the other three problem areas.

Methods

The study population for this report consisted of 182 men and women participating in the pilot and full-study phases of the study, "Depression: The Search for Treatment Relevant Phenotypes" (MH65376, E. Frank, PI). This protocol was carried out at the University of Pittsburgh Medical Center's Depression and Manic Depression Prevention Program, part of the Western Psychiatric Institute and Clinic (n=97), and at the Department of Psychiatry, Neurobiology, Pharmacology, and Biotechnology of the University of Pisa, Italy (n=85). The participants ranged in age from 18 to 64 and met DSM-IV criteria for a current episode of non-psychotic unipolar major depressive disorder. The protocol was approved by the Institutional Review Board of the University of Pittsburgh and the Ethics Committee of the University of Pisa. Study participants were informed of all study procedures and given an opportunity to ask questions about the protocol prior to providing written consent to participate.

For a full description of the study procedures, see Frank and colleagues.^[16] Participants who entered the study were randomly assigned to one of two conditions, IPT or pharmacotherapy, which consisted of the selective serotonin reuptake inhibitor (SSRI) escitalopram oxalate. Of the 368 patients who entered this study, 182 were randomly assigned to IPT. These patients received psychotherapy for approximately 50 minutes per week from their assigned therapist. The study included an acute treatment phase of at least 12 weeks and, once patients remitted, a continuation phase. A study participant could remain in the acute phase for a maximum of 32 weeks, even if remission had not been achieved by that point. Those who did not achieve remission by week 32 were evaluated to determine if continued treatment was clinically appropriate. If so, up to 64 weeks of treatment was offered. While IPT typically lasts 16–20 weeks, this study allowed a longer duration of

treatment as our goal was to determine which subgroups of depressed patients would fare best in each treatment condition, rather than testing the efficacy of IPT as a short term treatment.

After the first few sessions, the therapist and patient agreed upon a primary problem area focus according to the IPT manuals.^[1, 9, 10] A secondary problem area was also agreed upon for about 70% of the participants as their concerns were better addressed by a more inclusive treatment conceptualization at one or more time points. Using a standardized form, therapists recorded the problem area focus or foci at visits 2, 10, 14, and 22, if the patient remained in the study for all of those visits. To determine the problem area groupings for the present report, we utilized the primary problem area that was assigned at visit 2, with the exception of the interpersonal deficits group, which was comprised of all patients whose primary *or* secondary problem area was listed as interpersonal deficits at that time point. This decision was based on the tendency of therapists to choose deficits as a secondary treatment focus, even if it appeared to be the patient's greatest interpersonal challenge. However, patients who were included in the interpersonal deficits group based on their secondary problem area being listed as deficits were *not* also counted in their primary problem area group (they were not double-counted). Last, for five patients (2.7%) who did not have a treatment focus listed at visit 2, visit 10 treatment focus was used.

Participants were assessed at each weekly visit by an independent evaluator to measure depressive symptoms. At three triage points (visits 7, 13, and 21), study participants were evaluated to determine if *response* or *remission* criteria had been met. *Response* criteria was at least a 50% reduction of the baseline HRSD-17^[17] score. *Remission* was defined as a mean HRSD-17 score of 7 or below over a 3 week period, but patients could not receive scores of 12 or above during the week *after* achieving remission. If sufficient improvement had not been met at each of these triage points, pharmacotherapy was added. The most common time points for added pharmacotherapy were visit 7 (58.7%), visit 8 (9.5%) and visit 13 (7.9%). This study examines participants who were initially assigned to IPT, regardless of whether or not they later received adjunctive pharmacotherapy. Only measures obtained during the acute phase of treatment are included.

Therapists

IPT therapists were masters or doctoral level clinicians with backgrounds in social work, psychology, psychiatry nursing, or psychiatry, who received specific training and certification in IPT for the purposes of this study. The therapists were involved in a year-long pilot study in which they treated a minimum of two cases under individual supervision by an experienced IPT supervisor. All IPT therapists were supervised regularly during the study on the basis of audio- or videotapes of sessions. Audiotapes were rated by blind raters for adherence to IPT principles.

Measures

Depression was diagnosed according to DSM-IV criteria using the SCID-I^[18] and a score of 15 or higher on the HRSD-17.^[17] Personality disorders were diagnosed according to DSM-IV criteria using the SCID-II.^[19] As the measurement of personality pathology for 14 of the

pilot patients at Pisa was based on a different version of the SCID-II, these patients were excluded from analyses involving personality pathology. Other Axis I disorders were also diagnosed according to DSM-IV criteria using the SCID-I.

Data Analyses

Analysis of variance (ANOVA) was used to compare the four treatment focus groups on continuous demographic and clinical variables. The Games-Howell test was used for post-hoc comparisons to account for the unequal sample sizes of the groups. The chi-square test was used to compare differences among the four groups on the categorical variables; if statistically significant ($p < 0.05$), 2×2 chi-square tests tested for differences among pairs of groups. Kaplan-Meier survival curves were created to estimate the time to remission of the four problem area groups. To test for an overall difference on time to remission among groups, problem area assignment was entered into a Cox proportional hazard model with role transitions as the reference group, based on this group's relatively large sample size. Covariates were added in two steps to determine if patient characteristics were related to time to remission after accounting for problem area assignment. This method was chosen over analyzing the data by remitter or non-remitter status, perhaps with logistic regression, as the Cox proportional hazard model takes advantage of the longitudinal design by calculating hazard rates of remission over time. Two planned contrasts were constructed to test our hypotheses, one comparing the interpersonal deficits group and the other three groups combined, and another comparing the role disputes group and the grief and role transitions groups combined. Additional analyses were conducted to examine the effects of adjunctive pharmacotherapy.

Results

Demographic and clinical characteristics of study participants are presented in Table 1. Patients in the four problem area groups differed significantly on education level ($F(3, 177) = 2.78, p = 0.04$), age at first depressive episode ($F(3, 177) = 3.70, p = 0.01$), marital status ($X^2(3) = 11.37, p = 0.01$), and site ($X^2(3) = 14.63, p = 0.002$). The four groups did not differ on the presence of an Axis II disorder.

Post-hoc comparisons revealed that the grief group had a significantly later age of first depressive episode onset than the role transitions group, while the role disputes group was significantly more likely to be married than the role transitions group. The interpersonal deficits group experienced an earlier age of first depressive episode than the grief group, but this difference did not reach conventional levels of statistical significance. Patients in the role transitions group were more frequent at Pittsburgh site, while patients in the grief and role disputes groups were more frequent at Pisa site. Pittsburgh patients were more likely than Pisa patients to be male ($X^2(1) = 8.99, p = 0.003$), and to have more comorbid Axis I disorders ($X^2(1) = 15.43, p < 0.0001$), an earlier age of depressive episode ($F(1, 179) = 10.71, p < 0.0001$), and more previous depressive episodes ($X^2(1) = 9.08, p = 0.003$). Based on these site differences, we chose to stratify the Cox proportional hazard model by site.

Of the 182 patients in this sample, 29 (15.9%) were considered censored observations, the most common reasons for which include being lost to follow-up, discontinuation for non-

adherence to the study protocol, and relocation. Kaplan-Meier curves in Figure 1 show similar survival times among the four groups, with a median time to remission of 68 days ($s.e.=3.7$). The median times to remission for each problem area group were: grief, 69 days ($s.e.=25.31$); interpersonal deficits, 71 days ($s.e.=13.15$); role disputes, 69 days ($s.e.=4.38$); role transitions, 63 days ($s.e.=11.32$). Interpersonal deficits was chosen as a secondary focus in 6 of the 14 (42.8%) cases in which it was identified as a problem area. The median time to remission among this group of 6 was approximately 53 days, while the median time to remission for those whose primary focus was interpersonal deficits ($n=8$) was 71 days (log rank test=0.34, $p=0.56$) based on the Kaplan-Meier estimate.

Table 2 outlines the results of a Cox proportional hazard model showing the effect of several variables on time to remission. When entered into the model alone, the four problem area groups did not differ significantly on time to remission ($p=0.47$). When demographic variables were entered, patients in the role disputes group had a borderline significantly longer time to remission than the role transitions group ($\text{Exp}(\beta)=0.66$, $CI=0.47-1.01$, $p=0.05$), and patients who were married or living as married had a significantly shorter time to remission ($\text{Exp}(\beta)=1.56$, $CI=1.05-2.37$, $p=0.03$) than those who were single, never married, divorced, or widowed. When clinical variables were added, patients in the role disputes group had a significantly longer time to remission than the role transitions group ($\text{Exp}(\beta)=0.62$, $CI=0.40-0.96$, $p=0.03$), and patients who were married had a significantly shorter time to remission ($\text{Exp}(\beta)=1.61$, $CI=1.04-2.49$, $p=0.03$). The presence of a personality disorder diagnosis was unrelated to time to remission ($\text{Exp}(\beta)=0.78$, $CI=0.53-1.16$, $p=0.22$).

As the role transitions group evidenced a significantly shorter time to remission than the role disputes group (63 vs. 69 days) however, we wondered whether the planned contrasts would reveal significant differences. Using the log rank test, contrasts comparing the interpersonal deficits group to all others ($X^2=0.04$, $p=0.85$), and the role disputes group to the grief and role transitions groups ($X^2=0.07$, $p=0.79$) on time to remission were not significant. Medication was added to IPT in 37% of the overall sample and did not differ significantly in terms of frequency ($X^2(3)=1.36$, $p=0.72$) or timing ($F(3, 67)=0.74$, $p=0.53$) across the four problem areas. The addition of medication (yes vs. no) was used as a time-varying covariate in a separate Cox proportional hazard model as it occurred at varying time points depending on the patient's need. Addition of medication was associated with earlier remission ($\text{Exp}(\beta)=0.50$, $p<0.01$) when examining only the period of time that patients received combination therapy. Overall, however, patients receiving combination therapy required more time to reach remission than patients receiving IPT only because they were, by definition, harder to treat and because of the additive design of the study. The Cox proportional hazard model also showed that the addition of medication did not interact with problem area assignment ($p=0.41$) when comparing the interpersonal deficits group to all other groups.

Discussion

In order to examine the specificity of IPT, we used survival analyses to compare time to remission among depressed patients whose treatment focused on each of the four problem

areas. Contrary to prediction, patients whose treatment focused on interpersonal deficits did not experience a longer time to remission than all other patients, nor did patients whose treatment focused on role disputes experience a significantly longer time to remission than patients whose treatment focused on grief and role transitions.

Though not supported by our data, we expected patients in the interpersonal deficits group to report more personality pathology, given their difficulty in treatment and likelihood of suffering from characterologic challenges.^[9, 10, 12] Although our clinical intuition that this group experiences more Axis II pathology may be correct, a dimensional measure of personality pathology may be more meaningful in differentiating this group than categorical diagnoses. Moreover, the presence of a personality disorder was not associated with time to remission in this study, so even if the deficits group *had* reported more personality diagnoses this likely would not have affected their time to remission. Of note, this study only excluded those with antisocial personality disorder.

Our hypothesis regarding an earlier age of depression onset among patients in the interpersonal deficits group was not supported at conventional levels of statistical significance. These patients may suffer from the most pervasive and enduring problems as they did have the earliest age of depression onset, but a larger sample size may be needed to detect a significant difference.

The grief group may have experienced a later age of first depression onset than the role transitions group as those whose first depressive episode follows the loss of a loved one (such as a parent) are likely to be older than patients in a role transition (such as college graduation). Those who are married may be more likely to focus on role disputes than role transitions because role disputes of sufficient severity to precipitate depression are probably most common in the context of a marital relationship. Patients in this study who are married experienced a shorter time to remission, perhaps because the social skills necessary to secure and maintain a long-term relationship may be assets in treatment using IPT, and may speak to an overall lower level of psychopathology.

One explanation for the lack of significant differences in time to remission shown in the Kaplan-Meier and Cox proportional hazard models is the possibility that the patients whose treatment focused on interpersonal deficits are not representative of those whose treatment should really focus on this challenge, as clinicians often focus on any problem area other than interpersonal deficits, if possible. Patients with a secondary focus of interpersonal deficits may have spent much of treatment working on one of the other three treatment foci, resulting in a more successful and efficient resolution of their depression. Nonetheless, the fact that patients whose true challenge may have been interpersonal deficits were treated successfully by *avoiding* this focus provides further support for IPT as an efficacious and flexible treatment for patients whose depression is not primarily related to a life event.

We hypothesized that patients whose treatment focused on role disputes would fare worse with IPT than patients whose treatment focused on grief or role transitions. This is based on the potential difficulty in incorporating the needs of the other party to the dispute into treatment, whether by including this individual in a few IPT sessions, or by focusing the

patient's individual work on expectations of the relationship. Our prediction was partially supported, as evidenced by the longer time to remission of the role disputes group when compared to the role transition group. However, the median difference of roughly six days is hardly clinically significant.

Finally, analyses conducted to explore the effect of added medication on treatment outcome showed that patients in all of the problem area groups who did not improve sufficiently with psychotherapy alone appear to have benefited from the addition of pharmacotherapy, although time to remission increased across all problem areas. Nevertheless, the addition of medication did not differ significantly across groups.

Limitations

A limitation of this study is the small sample sizes of the grief and interpersonal deficits groups, occurring as a result of the non-random inclusion of participants in the various problem area groups, since treatment focus is a clinical decision made on the basis of on the patient's specific needs. This likely had an impact on the power to detect differences in survival times. Nonetheless, median survival times of the groups do not indicate a statistically or clinically significant difference. Second, the addition of pharmacotherapy limited our ability to interpret differences among the groups' time to remission based on treatment with IPT only. However, analyses demonstrated that the impact of pharmacotherapy was not significantly different across problem area groups. Third, because selection of the IPT problem area is made in collaboration with the patient, assessment of inter-rater reliability (or the likelihood that two independent therapists would reach a similar treatment decision with the same patient) has not been assessed in this or previous studies. Finally, several of the patients in the study reported interpersonal challenges in more than one problem area. However, the current study did not evaluate how much actual therapy session time was devoted to the identified primary or secondary problem areas, particularly for the interpersonal deficits group, in which patients may have endorsed deficits as *either* a primary or secondary focus.

Conclusions

We examined relative time to remission among the four problem area groups of depressed midlife adults receiving IPT. In contrast to initial hypotheses, the interpersonal deficits group did not experience a significantly earlier age of depression onset or more personality pathology than patients in all other groups, nor was the presence of a personality disorder diagnosis associated with time to remission. There is some evidence that patients in the role transitions group had a shorter time to remission than those in the role disputes group after controlling for covariates, although this difference is not clinically significant. Overall, with skillful use of IPT strategies and careful medication management where appropriate, patients in this study whose treatment focused on each problem area were treated with equal success by trained IPT clinicians. Future studies should continue to focus on characteristics of both patients and treatment to identify factors that may contribute to the differential efficacy of IPT in depressed adults.

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Figure 1.
Days to remission by problem area.

Table 1

Demographics and Clinical Characteristics of the Sample

	Grief N=17	Inter. Deficits N=14	Role Disputes N=60	Role Transitions N=91	All Groups N=182	F or X ²
Mean Age (S.D.)	42.10 (12.88)	39.90 (14.19)	41.39 (12.09)	36.79 (12.69)	39.04 (12.74)	2.02
Sex (Female)	88.2%	50.0%	73.3%	68.1%	70.3%	5.86
Ethnicity (Caucasian)	76.5%	92.9%	96.7%	87.9%	90.1%	7.06
Mean Education Level in Years (S.D.)	13.63 (3.59)	13.14 (2.77)	13.48 ^a (3.70)	14.78 ^a (2.63)	14.12 (3.17)	2.78 ^{**}
Employed/ Student	94.1%	78.6%	77.6%	76.9%	78.9%	2.64
Married or Living with a Partner	29.4% ^b	35.7%	55.0% ^{b,c}	28.6% ^c	37.9%	11.37 ^{**}
Mean Age at First Episode (S.D.)	34.18 ^{d,e} (13.88)	22.92 ^d (14.18)	28.63 (12.38)	25.01 ^e (11.18)	26.91 (12.36)	3.70 ^{**}
Previous Depressive Episodes (2)	58.8%	57.1%	65.0%	76.9%	69.8%	4.880
Medication Added	23.5%	42.9%	35.0%	35.2%	34.6%	1.36
Baseline HRSD- 17 Score	20.00 (3.88)	18.57 (2.17)	19.70 (3.61)	19.77 (3.86)	19.68 (3.66)	0.49
Other Axis I Disorders	41.2%	50.0%	51.7%	63.7%	56.6%	4.38
One or more Axis II Disorders	31.3%	50.0%	39.6%	25.6%	32.3%	4.80
Site (Pittsburgh)	41.2% ^f	50.0%	36.7% ^g	67.0% ^{f,g}	53.3%	14.63 ^{**}
Remitted	88.2%	78.6%	86.70%	80.2%	83.0%	1.592

* $p < 0.10$

** $p < 0.05$

^a Tran > Dis*

^b Dis > Grief*

^c Dis > Tran**

^d Grief > Def*

^e Grief > Tran**

^f Tran > Grief**

^g Tran > Dis**

Table 2

Relationship between Demographic and Clinical Variables and Time to Remission using the Cox Proportional Hazards Model

Model	Variable	Exp(β) (95% CI)	Significance
Step 1	Problem Area (Transitions as Reference Group)		ns
	Grief	0.67 (0.36–1.26)	ns
	Deficits	0.92 (0.47–1.80)	ns
	Disputes	0.77 (0.52–1.14)	ns
Step 2	Problem Area (Transitions as Reference Group)		ns
	Grief	0.73 (0.37–1.44)	ns
	Deficits	0.90 (0.45–1.81)	ns
	Disputes	0.66 (0.47–1.01)	0.05*
	Age	1.00 (0.98–1.01)	ns
	Education	0.97 (0.92–1.04)	ns
	Sex	1.13 (0.77–1.66)	ns
	Married	1.58 (1.05–2.37)	0.03**
Step 3	Problem Area (Transitions as Reference Group)		
	Grief	0.60 (0.30–1.22)	ns
	Deficits	1.04 (0.50–2.18)	ns
	Disputes	0.62 (0.40–0.96)	0.03**
	Age	0.98 (0.97–1.01)	ns
	Education	1.00 (0.92–1.04)	ns
	Sex	1.07 (0.73–1.58)	ns
	Married	1.61 (1.04–2.49)	0.03**
	Age of Depression Onset	1.02 (0.99–1.04)	ns
	Previous Depressive Episodes	1.07 (0.66–1.76)	ns
	Baseline Depression Score	0.95 (0.90–1.00)	ns
	Other Axis I Disorders	0.76 (0.51–1.12)	ns
	Axis II Disorders	0.78 (0.53–1.16)	ns

* $p < 0.10$

** $p < 0.05$