HHS Public Access

Author manuscript

J Nerv Ment Dis. Author manuscript; available in PMC 2018 November 05.

Published in final edited form as:

J Nerv Ment Dis. 2010 August ; 198(8): 597–600. doi:10.1097/NMD.0b013e3181ea4d3d.

An Interpersonal Psychotherapy approach for comorbid depression and chronic pain

Ellen L. Poleshuck, Ph.D.[1,2], **Nancy E. Talbot, Ph.D.**[1], **Caron Zlotnick, Ph.D.**[3], **Stephanie A. Gamble, Ph.D.**[1], **Xiang Liu, M.A.**[4], **Xin Tu, Ph.D.**[4], and **Donna E. Giles, Ph.D.**[5]

[1]Department of Psychiatry, University of Rochester Medical Center, Rochester, NY 14642, USA

[2]Department of Obstetrics and Gynecology, University of Rochester Medical Center, Rochester, NY 14642, USA

[3]Department of Psychiatry and Human Behavior, Brown University School of Medicine, Providence, RI, 02906, USA

[4]Department of Biostatistics and Computational Biology, University of Rochester Medical Center, Rochester, NY 14642, USA

[5]Department of Psychiatry, University of Florida Medical Center, Gainesville, FL, 32605, USA

Abstract

Chronic pain is prevalent among patients with depression, and a risk factor for poor depression treatment outcomes. No known psychotherapy approaches have been developed to target the needs of patients with comorbid depression and chronic pain. This study's goals were to evaluate feasibility, acceptability and initial effects of Interpersonal Psychotherapy adapted for women with depression and chronic pain. Seventeen women with major depression and chronic pelvic pain received 8-sessions individual treatment, Interpersonal Treatment for Depression and Pain (IPT-P). Participants were recruited from a women's health clinic, were predominantly low-income and minority, and generally did not initially self-identify as depressed. Large effect sizes with significant improvements were found for depression severity and social adjustment; pain interference remained unchanged. Most enrolled patients reported a high level of satisfaction with IPT-P. This pilot study provides preliminary support for the use of IPT-P for patients with comorbid depression and chronic pain.

Keywords

depression; pain; interpersonal psychotherapy; poverty; primary health care

INTRODUCTION

Depression increases risk for chronic pain, with about two-thirds of individuals with depression reporting comorbid chronic pain (Bair et al., 2003). Compared to individuals

Corresponding Author: Ellen Poleshuck, Ph.D., Departments of Psychiatry and Obstetrics and Gynecology, 300 Crittenden Boulevard, University of Rochester Medical Center, Rochester, NY 14642, Phone: 585-275-3138, Fax: 585-276-2065, Ellen_Poleshuck@urmc.rochester.edu.

with depression alone, those with comorbid pain report more severe depression, greater suicidal ideation, poorer function, and worse treatment outcomes (Karp et al., 2005; Kroenke et al., 2008; Mavandadi et al., 2007; Poleshuck et al., 2009a; Poleshuck et al., 2009b). Despite the notable rates and additional burden of pain in patients with depression, no evidence-based psychotherapeutic depression treatments are specifically designed to address pain and depression together.

Low income individuals, minority individuals, and women are at increased risk for both depression (Brown et al., 2003; Miranda et al., 1998; Scholle et al., 2003) and chronic pain (Badley and Ibanez, 1994; Elliott et al., 1999; Gureje et al., 1998; Portenoy et al., 2004). Ethnic minority and low-income women often use women's health clinics for their physical and mental health care (Alvidrez and Azocar, 1999; Miranda et al., 1998; Scholle et al., 2003; Weisman et al., 1995), yet are unlikely to receive adequate depression and pain treatment when they present to these settings (Green et al., 2004; Miranda and Cooper, 2004). Women's health clinics serving low-income minority women, therefore, present an excellent setting for identifying and treating patients with depression and chronic pain.

We selected Interpersonal Psychotherapy (IPT) to address the needs of patients presenting to primary care with comorbid depression and pain. Although there is substantive evidence supporting the use of cognitive-behavioral therapy for pain (e.g. (Hoffman et al., 2007), IPT has never been prospectively tested for patients with pain. IPT is a time-limited psychotherapy based on the premise that by improving interpersonal relationships and social support, depressive symptoms will improve (Stuart and Robertson, 2003; Weissman et al., 2000). IPT has been demonstrated to be beneficial for treatment of depression among individuals with physical illnesses (Koszychi et al., 2004; Markowitz et al., 1998; Miller et al., 1996; Ransom et al., 2008). IPT has also been shown to be a good match for low-income and minority women with multiple social adversities and limited support (Grote et al., 2009; Spinelli and Endicott, 2003; Zlotnick et al., 2001). Furthermore, IPT's focus on improving social interactions and increasing social support fits well with the relationship disruption, isolation, and increased reliance on others facing many individuals with chronic pain and depression (Peat et al., 2004; Poleshuck et al., 2006). Women in particular may benefit from a relational psychotherapy approach based on evidence that their physical and emotional health is impacted by the quality of their relationships (Kiecolt-Glaser and Newton, 2001). Adapting IPT to incorporate issues related to pain has the potential to provide a novel approach to addressing the needs of patients with comorbid depression and pain.

This article reports on a small open pilot study that examined the feasibility, acceptability, and effects of an adaptation of IPT, Interpersonal Treatment for depression and pain (IPT-P). We targeted low-income women's health patients with chronic pelvic pain and major depression who did not necessarily self-identify as depressed nor were seeking depression treatment. We identified this group because of their high rates of depression, their likelihood of presenting to a women's health setting, and because no treatments have been developed or tested with them. The primary study aim was to examine the effects of IPT-P on depressive symptoms, social adjustment, and pain. The secondary aim was to establish rates of study recruitment and treatment participation, and the acceptability of IPT-P.

METHODS

Patients were recruited from a large, urban, hospital-based university-affiliated women's health clinic. Non-pregnant patients between the ages of 18-50 attending appointments received brief initial screenings administered by graduate and undergraduate student research assistants. The brief initial screening used: 1) the PHQ-2 (Lowe et al., 2004) to determine if there was significant depressed mood and/or anhedonia based on a score of 3 or greater; and 2) the SF-36 pain scale (Ware and Sherbourne, 1992) to determine if there was a. moderate or greater pain intensity, with a score of 3 or greater; and b. moderate or greater pain interference, with a score of 2 or greater. Those who screened positive on both scales were screened further by the research assistants for study inclusion and exclusion criteria. Self-reported pain in the pelvic region present for a minimum of three months was required for inclusion. Exclusion criteria were: currently receiving individual psychotherapy; residing more than 60-minutes away from the medical center; and unable to complete the baseline assessment in English. Women who met inclusion and exclusion criteria were invited to meet with the clinical research coordinator who obtained informed consent, completed the baseline assessment, and determined study eligibility. Participants were required to meet criteria for major depression using the Structured Clinical Interview for the DSM-IV (SCID) (First et al., 2001), and have a score ≥ 15 on the Hamilton Rating Scale for Depression - 17 (HRSD) (Hamilton, 1960). In addition, they were excluded if on interview they reported imminent suicidal intent, or met criteria for psychotic disorder, current alcohol or substance dependence disorder, or Bipolar I Disorder on the SCID. All procedures were approved by the university research subjects review board.

IPT-P is a manual-guided 8-session individual therapy (Poleshuck et al., unpublished manuscript). Adaptations for IPT-P were developed through an iterative process during weekly team meetings with the study therapists, principal investigator (ELP), a consulting IPT researcher (SAG), and a consulting women's health practitioner (Luis Rosario-McCabe, N.P.) over the course of the project. We had two primary goals in our adaptations: to address pain as well as depression; and to increase accessibility for the largely minority, financially disadvantaged non-treatment-seeking group of women. Accessibility adaptations included: 1) decreased number of treatment sessions (8 45-minute sessions) based on Brief IPT (Swartz et al., 2008); 2) therapy sessions held in the women's health clinic; 3) up to 36 weeks allowed to complete the 8 sessions; and 4) up to 2 phone sessions in place of in-person sessions if the patient were unable to attend. We implemented three adaptations to address pain. First, patients and therapists typically identify one problem area as the focus of treatment from the following categories: interpersonal dispute, grief, role transition, and interpersonal sensitivity. As in Brief IPT, we dropped interpersonal sensitivity because of the brevity of the treatment. In addition, based on identified themes, we added a problem area of "change in healthy self" to target the recurrent themes of women struggling to cope with the pain-related changes of their physical status and their changed roles, relationships, and functioning. Second, we incorporated traditional pain management strategies that mapped on to patients' treatment goals, and applied them within an interpersonal context. Examples include taking regular walks with a friend or talking with a partner about how to implement activity pacing to manage chores at home. Third, we emphasized self-care activities (e.g.,

bubble baths, socializing, engaging in recreational activities) to encourage patients to recognize and address their own needs and improve their quality of life.

IPT-P was delivered by three doctoral psychologists previously trained as IPT research therapists, two of whom were new to working with pain. Therapist training consisted of didactic instruction, weekly face-to-face group supervision of taped sessions, and completion of two cases. Assessments were conducted at baseline, and 12, 24, and 36 weeks. While the 12-week assessment was planned as a post-treatment assessment, participants were permitted to attend at their own pace, and took up to the full 36 weeks to complete treatment.

Depression outcomes were evaluated with the HRSD-17 and the Beck Depression Inventory (BDI). Pain outcomes were evaluated with the Multidimensional Pain Inventory (MPI) Pain Interference Scale (Kerns et al., 1985). Social adjustment outcomes were evaluated with the total score from the Social Adjustment Scale – Self-Report (Weissman and Bothwell, 1976). Treatment satisfaction was measured with the Client Satisfaction Questionnaire – 8 (Attkisson et al., 1994). A qualitative interview was completed with participants after the 36-week assessment to obtain their feedback about the intervention.

Response to treatment was determined using generalized estimating equations (Liang and Zeger, 1986) to assess change over time. The significance level of statistical hypothesis tests was set as 0.05. Baseline antidepressant use (present/absent) was controlled in all analyses; pain and social adjustment analyses were adjusted for baseline HRSD scores. An intent-to-treat approach was used for all data analyses. Effect sizes were calculated for each outcome variable using an adjusted version of Cohen’s d (Rosenthal, 1994).

RESULTS

Recruitment

In total, 1,114 patients attending gynecology women’s health appointments received the brief initial screenings for chronic pain and depressive symptoms. Patients had visits for a range of reasons, including annual exams, birth control, and problem visits. They were approached by research assistants while waiting in exam rooms to be seen by their providers. Through the initial screenings, 212 (19%) endorsed symptoms of depression and pain, and were invited to be screened further for study eligibility to determine if study criteria were met for: 1) pain in the pelvic location for a minimum of 3-months duration, and 2) exclusion criteria. Eighty-four (39.6 %) were found not to meet inclusion and exclusion criteria (e.g. already engaged in psychotherapy, pain was not in pelvic region), 70 (33.0 %) did not have time to continue before their medical appointment and were lost to follow-up, and 21 (9.9%) declined to proceed. The remaining 37 (17.5 %) potentially eligible women agreed to give informed consent and participate in the baseline assessment to evaluate their study eligibility. Of those, 13 (35.1 %) were lost to follow-up and could not be reached by telephone or letter, 7 (18.9 %) did not meet study criteria (e.g. symptoms did not meet threshold criteria on the SCID-IV or HRSD-17; current substance abuse and/or psychosis was present), and 17 (45.9 %) completed the baseline assessment and met all study eligibility criteria.

Study Participants

The 17 participants were young (mean age: 36.0 ± 8.2 years) and predominantly minority: 7 (41.2%) African American; 7 (41.2%) Latina; 3 (17.6%) White. Approximately two-thirds (n = 11; 64.7%) were single or divorced, and with an annual household income under $20,000. Most (n = 13; 76.5%) reported children under the age of 18 living in the home. Fourteen (82.4%) participants met DSM-IV criteria for at least one other active Axis I diagnosis, most frequently Posttraumatic Stress Disorder (n = 8; 47.1%). Nearly half (n = 8; 47.1%) reported taking antidepressant medications, and 3 (17.6 %) reported previous experience with psychotherapy. Most women reported comorbid medical problems as well. All had pelvic pain and 15 (88.2%) reported at least one other chronic pain diagnosis, with low back pain (n = 6; 35.3%) most common. Other Axis III diagnoses reported included obesity (n = 12; 70.6%), asthma (n = 4; 23.5%), hypertension (n = 4; 23.5%), chronic obstructive pulmonary disease (n = 2; 11.8%), and polycystic ovarian syndrome (n = 2; 11.8%).

Outcomes

Nine women (47.1%) completed the 36-week assessment. We compared education, race, income, marital status, age, baseline depression severity, and baseline pain severity for participants who remained in the study for the full 36-weeks to those who did not. There were no significant differences except that participants with a high school diploma or more were more likely to drop out ($\chi^2 = 5.6$, $p < .05$). Analyses demonstrate significant improvements over time for depression severity based on both self-report and clinician-rating and for social adjustment (Table 1). Large effect sizes of the improvements over time were found for depression severity and social adjustment. There was no significant improvement in MPI pain interference, and the effect size was small. Five of the nine women (55.6%) were in remission for major depression by the SCID at 36 weeks.

Treatment Participation and Acceptability—Fifteen of 17 participants (88.2%) attended at least one session, and 9 (52.9 %) completed a total of either 7 or 8 sessions. Participants attended a mode of 7 sessions (mean = 5.3 ± 2.9, range 0-8) in a mode of 14 weeks (mean = 16.4 ± 10.9, range: 1-36). Eleven participants completed the 12-week measures on treatment satisfaction. These 11 women reported high treatment satisfaction on the CSQ-8 (mean = 27.4 ± 4.1, range: 18-32). More specifically, 90.9% (n = 10) reported they received the kind of treatment they wanted, 90.9% (n = 10) described the treatment as good or excellent, 90.9% (n = 10) stated they felt the treatment helped them to deal with their problems more effectively “somewhat or a great deal,” and 100% (n = 11) stated they would probably or definitely come back to this program should they seek treatment again. Of the 12 participants who completed the 12-week assessment, one did not complete the CSQ-8. The majority of comments on the qualitative interview after study completion were also favorable. Three representative examples follow:

“She made me realize some pains and stuff that I was having was because I was depressed and going through changes.”

"Socializing more, like what we agreed on will help out a whole lot, because I was enjoying that, you know. The pain was stopping me from, socializing, going taking to family events like a picnic or something like that. But once I started doing it, it made me feel better."

"What I learned about it is, not to let things stress me out …. 'cause if I'm worrying about that I'm just adding on to my injury, and my depression…. Because, by me worrying that the dishes are not done, it may be putting more on myself, and I'm, I'm already depressed, I'm already in pain. By me worrying about that, making the pain worse than what it is and making the depression worse than what it is … When you feel tired, sit down, relax, you know? And I'm not like that, you know? I wasn't like that but now I do. I take the time out and I relax.

Study therapists reported the intervention was well-matched for patients' concerns and positive experiences administering the intervention.

DISCUSSION

Results from this open-trial pilot study support the treatment acceptability and effects of IPT-P for women who opted to participate. More specifically, treatment participants demonstrated adequate involvement in psychotherapy and reported significant improvements with large effect sizes in their depressive symptoms and social adjustment. Results with this small sample revealed challenges in recruiting low-income and predominantly minority patients in a women's health clinic into a depression treatment study.

It is encouraging that 55% of patients remitted following treatment. Given the brevity of the intervention, it is not surprising some patients continued to demonstrate moderate levels of depressive symptoms following treatment. Eight sessions of psychotherapy may not provide an adequate dose to remit depressive symptoms fully for all patients. This is particularly true given the significant and complex burden of physical symptoms, mental symptoms, and financial disadvantage borne by these participants. Several patients obtained additional psychotherapy in a community mental health center after completing IPT-P. We viewed this outcome as a success because it suggested they found IPT-P to be a positive experience and were able to accept a referral to a traditional mental health setting, allowing for longer-term psychotherapy. Perhaps one important goal of IPT-P offered in medical settings is to provide symptom relief and facilitate transition to psychotherapy offered in traditional mental health settings.

Notably, the majority of potentially eligible patients did not enter the trial. Research shows that African Americans and Latinos may be less likely to prefer medication and more likely to prefer psychotherapy for treatment of their depression (Cooper et al. 2003; Dwight-Johnson et al. 2000). Yet many did not follow through with psychotherapy when offered. This is not an unusual finding among non-treatment seeking low-income women with depression (Miranda et al. 2003). We cannot determine why many did not participate, although possible reasons, among many, include: not viewing their symptoms as requiring intervention; not finding psychotherapy an acceptable treatment; depression was not a priority given other life demands; discomfort or distrust participating in research and/or

psychotherapy; lack of readiness to discuss personal experiences; barriers such as childcare, life instability, and health. Furthermore, meeting our screening criteria did not determine that depression treatment was necessarily indicated.

We were surprised to find patients did not report improvement in their pain following treatment, despite the other symptom changes noted. The small effect size suggests a larger sample size may be needed to show statistically significant change. Pain may prove slower to respond to treatment, and a longer course of treatment or more intense dose may be needed. It is also possible the moderate depression severity present after treatment interfered with the improvement of pain. Perhaps IPT-P did not adequately address physical symptoms to the extent that we had anticipated. Further research is needed to understand this finding.

Conclusions regarding the study findings must be tentative, given the lack of a comparison group, small sample size, challenges with recruitment and retention, and the preliminary nature of the study. Improvements may be due to factors other than IPT, such as placebo effect or spontaneous symptom improvement. Clearly randomized controlled trials are required to evaluate the effectiveness of IPT-P as a treatment for women with comorbid depression and chronic pain.

CONCLUSIONS

This pilot study of IPT-P for comorbid depression and pain shows improvements in depression and social adjustment in a low-income, diverse sample of women presenting to a women's health clinic.

ACKNOWLEDGEMENTS

Our appreciation goes to Nicole Leshoure, M.S., project coordinator, for her outstanding organization of the project and clinical skill in completing the assessments with study patients. Beth Cerrito, Ph.D., Natalie Cort, Ph.D., and Debra Hoffman-King, Ph.D., contributed their exceptional clinical skill as research therapists. Nicole Lighthouse, M.S., Jessica Marino, Lacy Morgan-Develder, M.S., and Amanda Pelcher provided invaluable persistence, enthusiasm, and competence as research assistants. Luis Rosario-McCabe, N.P.'s perspective provided an indispensible contribution to manual development and clinical supervision. Holly Swartz, M.D., shared her wisdom and experience in IPT by providing clinical supervision to Dr. Poleshuck.

This study was supported by a grant from the National Institute of Mental Health to Dr. Poleshuck (K23 MH079347) and by an anonymous donation to the Department of Obstetrics and Gynecology, University of Rochester Medical Center.

REFERENCES

Alvidrez J, Azocar F (1999) Distressed women's clinic patients: preferences for mental health treatments and perceived obstacles. Gen Hosp Psychiatry 21:340–347. [PubMed: 10572775]

Attkisson CC, Greenfield TK, Maruish M (1994) The Client Satisfaction Questionnaire-8 and the Service Satisfaction Questionnaire-30 The use of psychological testing for treatment planning and outcome assessment. Hillsdale, NJ: Erlbaum.

Badley EM, Ibanez D (1994) Socioeconomic risk factors and musculoskeletal disability. J Rheumatol 21: 515–521. [PubMed: 8006896]

Bair MJ, Robinson RL, Katon W, Kroenke K (2003) Depression and pain comorbidity - A literature review. Arch Intern Med 163:2433–2445. [PubMed: 14609780]

Brown C, Abe-Kim JS, Barrio C (2003) Depression in ethnically diverse women: Implications for treatment in primary care settings. Prof Psychol Res Pr 34:10–19.

Cooper LA, Gonzales JJ, Gallo JJ, Rost KM, Meredith LS, Rubenstein LV, Wang NY, Ford DE (2003) The acceptability of treatment for depression among African-American, Hispanic, and white primary care patients. Medical Care 41:479–489. [PubMed: 12665712]

Dwight-Johnson M, Sherbourne CD, Liao D, Wells KB (2000) Treatment preferences among depressed primary care patients. J Gen Intern Med 15:527–534. [PubMed: 10940143]

Elliott AM, Smith BH, Penny KI, Smith WC, Chambers WA (1999) The epidemiology of chronic pain in the community. Lancet 354:1248–1252. [PubMed: 10520633]

First MB, Spitzer RL, Gibbon M, Williams J (2001) Structured Clinical Interview for DSM-IV-TR Axis I Disorders. New York New York State Psychiatric Institute.

Green CR, Baker TA, Ndao-Brumblay SK (2004) Patient attitudes regarding healthcare utilization and referral: A descriptive comparison in African- and Caucasian Americans with chronic pain. JNMA 96:31–41.

Grote NK, Swartz HA, Geibel SL, Zuckoff A, Houck PR, Frank E (2009) A randomized controlled trial of culturally relevant, brief interpersonal psychotherapy for perinatal depression. Psychiatr Serv 60:313–21. [PubMed: 19252043]

Gureje O, Von Korff M, Simon GE, Gater R (1998) Persistent pain and well-being: A World Health Organization Study in Primary Care. JAMA 280:147–151. [PubMed: 9669787]

Hamilton M (1960) A rating scale for depression. J Neurol Nerosurgery Psychiatry 23:56–61.

Hoffman BM, Papas RK, Chatkoff DK, Kerns RD (2007) Meta-analysis of psychological interventions for chronic low back pain. Health Psychol 26:1–9. [PubMed: 17209691]

Karp JF, Scott J, Houck P, Reynolds CF, Kupfer DJ, Frank E (2005) Pain predicts longer time to remission during treatment of recurrent depression. J Clin Psychiatry 66:591–597. [PubMed: 15889945]

Kerns RD, Turk DC, Rudy TE (1985) The West Haven-Yale Multidimensional Pain Inventory (WHYMPI). Pain 23:345–356. [PubMed: 4088697]

Kiecolt-Glaser JK, Newton TL (2001) Marriage and health: His and hers. Psychol Bull 127: 472–503. [PubMed: 11439708]

Koszychi D, Lafontaine S, Frasure-Smith N, Swenson R, Lesperance F (2004) An open-label trial of interpersonal psychotherapy in depressed patients with coronary disease. Psychosom 45:319–324.

Kroenke K, Shen J, Oxman TE, Williams JW, Jr., Dietrich AJ (2008) Impact of pain on the outcomes of depression treatment: results from the RESPECT trial. Pain 134:209–15. [PubMed: 18022319]

Liang KZ, Zeger SL (1986) Longitudinal data analysis using generalized linear models. Biometrika 73:13–22.

Lowe B, Kroenke K, Herzog W, Grafe K (2004) Measuring depression outcome with a brief self-report instrument: sensitivity to change of the Patient Health Questionnaire (PHQ-9). J Affect Disord 81:61–66. [PubMed: 15183601]

Markowitz JC, Kocsis JH, Fishman B, Spielman LA, Jacobsberg LB, Frances AJ, Klerman GL, Perry SW (1998) Treatment of depressive symptoms in human immunodeficiency virus-positive patients. Arch Gen Psychiatry 55:452–457. [PubMed: 9596048]

Mavandadi S, Ten Have TR, Katz IR, Durai UNB, Krahn DD, Llorente MD, Kirchner JE, Olsen EJ, Van Stone WW, Cooley SL and others (2007) Effect of depression treatment on depressive symptoms in older adulthood: The moderating role of pain. J Am Geriatr Soc 55:202–211. [PubMed: 17302656]

Miller MD, Paradis CF, Houck PR, Rifai AH, Mazumdar S, Pollock B, Perel JM, Frank E, Reynolds CF (1996) Chronic medical illness in patients with recurrent major depression. Am J Geriatr Psychiatry 4:281–290. [PubMed: 28530965]

Miranda J, Azocar F, Komaromy M, Golding JM (1998) Unmet mental health needs of women in public-sector gynecologic clinics. Am J Obstet Gynecol 178:212–217. [PubMed: 9500476]

Miranda J, Chung JY, Green BL, Krupnick J, Siddique J, Revicki DA, Belin T (2003) Treating depression in predominantly low-income young minority women: a randomized controlled trial. JAMA 290:57–65. [PubMed: 12837712]

Miranda J, Cooper LA (2004) Disparities in care for depression among primary care patients. J Gen Intern Med 19:120–126. [PubMed: 15009791]

Peat G, Thomas E, Handy J, Croft P (2004) Social networks and pain interference with daily activities in middle and old age. Pain 112:397–405. [PubMed: 15561396]

Poleshuck EL, Bair MJ, Kroenke K, Watts A, Tu X, Giles DE (2009a) Pain and depression in gynecology patients. Psychosom 50:270–6.

Poleshuck EL, Giles DE, Tu X (2006) Pain and depressive symptoms among financially disadvantaged women's health patients. J Womens Health 15:182–193.

Poleshuck EL, Talbot NL, Su H, Tu X, Chaudron L, Gamble S, Giles DE (2009b) Pain as a predictor of depression treatment outcomes in women with childhood sexual abuse. Compr Psychiatry 50:215–20. [PubMed: 19374964]

Portenoy RK, Ugarte C, Fuller I, Haas G (2004) Population-based survey of pain in the United States: Differences among white, African American, and Hispanic subjects. J Pain 5:317–328. [PubMed: 15336636]

Ransom D, Heckman TG, Anderson T, Garske J, Holroyd K, Basta T (2008) Telephone-delivered, interpersonal psychotherapy for HIV-infected rural persons with depression: a pilot trial. Psychiatr Serv 59:871–7. [PubMed: 18678684]

Rosenthal R (1994) In Cooper H, Hedges LV (Eds), The handbook of research synthesis (pp 231–344). New York: Russell Sage Foundation.

Scholle SH, Haskett RF, Hanusa BH, Pincus HA, Kupfer DJ (2003) Addressing depression in obstetrics/gynecology practice. Gen Hosp Psychiatry 25:83–90. [PubMed: 12676420]

Spinelli MG, Endicott J (2003) Controlled clinical trial of interpersonal psychotherapy versus parenting education program for depressed pregnant women. Am J Psychiatry 160:555–562. [PubMed: 12611838]

Stuart S, Robertson M (2003) Interpersonal Psychotherapy: A clinician's guide. New York: Arnold Publishers.

Swartz HA, Frank E, Zuckoff A, Cyranowski JM, Houck PR, Cheng Y, Fleming MA, Grote NK, Brent DA, Shear MK (2008) Brief interpersonal psychotherapy for depressed mothers whose children are receiving psychiatric treatment. Am J Psychiatry 165:1155–62. [PubMed: 18558645]

Ware JE, Sherbourne CD (1992) The MOS 36-Item Short-Form Health Survey (SF-36): I. Conceptual framework and item selection. Medical Care 30:473–483. [PubMed: 1593914]

Weisman CS, Cassard SD, Plichta SB (1995) Types of physicians used by women for regular health care: Implications for services received. J Womens Health 4: 407–416.

Weissman MM, Bothwell S (1976) Assessment of social adjustment by patient self-report. Arch Gen Psychiatry 33: 1111–1115. [PubMed: 962494]

Weissman MM, Markowitz JC, Klerman GL (2000) Comprehensive Guide to Interpersonal Psychotherapy. New York: Basic Books.

Zlotnick C, Johnson SL, Miller IW, Pearlstein T, Howard M (2001) Postpartum depression in women receiving public assistance: Pilot study of an interpersonal-therapy-oriented group intervention. Am J Psychiatry 158:638–640. [PubMed: 11282702]

Table 1.

Generalized Estimating Equations determine preliminary IPT-P pilot outcomes

Dependent Variable	Baseline Mean (SD)	12-weeks Mean (SD)	24-weeks Mean (SD)	36-weeks Mean (SD)				
	(n = 17)	(n = 12)	(n = 11)	(n = 9)	% change	*z*	*p*	*effect size*
HRSD-17	20.2 (4.9)	11.8 (5.3)	15.3 (5.9)	11.6 (6.0)	42.7	−4.43	<.001	1.57
BDI	29.0 (8.0)	25.0 (7.0)	22.0 (7.0)	19.6 (11.4)	32.6	−4.11	<.001	.96
SAS-SR	2.7 (0.4)	2.4 (1.2)	2.8 (0.5)	2.3 (0.6)	14.8	−2.12	.03	.77
MPI Pain Interference	4.4 (1.4)	4.3 (1.3)	4.7 (1.0)	4.3 (1.3)	2.3	−1.07	.28	.13

Notes. BDI: Beck Depression Inventory; HRSD-17: Hamilton Rating Scale for Depression – 17 items; SAS-SR: Social Adjustment Scale - Self-Report; MPI:Multidimensional Pain Inventory; analyses controlled for baseline antidepressant medication use; pain and social adjustment analyses also controlled for baseline HRSD-17.