Integrative Medicine Patients Have High Stress, Pain, and Psychological Symptoms

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Context: Integrative medicine (IM) is a rapidly growing field whose providers report clinical success in treating significant stress, chronic pain, and depressive and anxiety symptoms. While IM therapies have demonstrated efficacy for numerous medical conditions, IM for psychological symptoms has been slower to gain recognition in the medical community.

Objective and Design: This large, cross-sectional study is the first of its kind to document the psychosocial profiles of 4182 patients at 9 IM clinics that form the BraveNet Practice-Based Research Network (PBRN).

Results: IM patients reported higher levels of perceived stress, pain, and depressive symptoms, and lower levels of quality of life compared with national norms. Per provider reports, 60% of patients had at least one of the following: stress (9.3%), fatigue (10.2%), anxiety (7.7%), depression (7.2%), and/or sleep disorders (4.8%). Pain, having both physiological and psychological components, was also included and is the most common condition treated at IM clinics. Those with high stress, psychological conditions, and pain were most frequently treated with acupuncture, IM physician consultation, exercise, chiropractic services, diet/nutrition counseling, and massage.

Conclusion: With baseline information on clinical presentation and service utilization, future PBRN studies can examine promising interventions delivered at the clinic to treat stress and psychological conditions.

Key words: Integrative medicine, PBRN, stress, psychological disorders, pain

INTRODUCTION

While integrative medicine (IM) therapies have demonstrated efficacy for numerous physiological conditions,[1,2] IM approaches for psychological conditions, including affective disorders, have not been as well accepted by the medical community.[3,4] Despite IM provider reports of success treating psychological conditions[5] and growth in high-quality research on IM for treating stress, other psychological conditions, and pain,[6,7] there is yet to be substantial practice-based data available to guide clinicians in pairing psychological conditions, particularly affective disorders, with appropriate IM therapies.

IM is a rapidly growing field aimed at optimizing health and wellness while addressing core causes of illness through personalized care.[8] Although IM combines evidence-based Western and non-Western therapies, IM is not simply a blend of complementary and alternative medicine (CAM) and conventional medicine; rather, it is a complex system of care that emphasizes prevention, wellness, and bio-psycho-socio-spiritual healing of the whole person to support the body's innate healing abilities.[9,10] As consumer interest grows in complementary therapies used in IM,[11] so does the prevalence of IM clinics in academic medical centers and health systems. Despite this, research is limited on the practice-based applicability and effectiveness of IM, particularly regarding psychological symptoms.[12]

Psychological issues such as stress, depressive symptoms, fatigue, chronic pain, and disordered sleep affect multiple

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body systems, lifestyle choices, morbidity, and mortality.[13–18] Because stress responses can impact multiple systems,[19] it is not surprising that an estimated 60–90% of physician visits are stress related.[20,21] One particularly helpful aspect of IM treatment lies in its ability to positively impact multiple physiologic systems simultaneously. For example, the use of acupuncture and meditation to treat chronic stress simultaneously impacts a plethora of systems including the autonomic nervous system, musculoskeletal, cardiovascular, immune, and endocrine systems.

Practice-based research networks (PBRNs) have emerged as an effective means to connect researchers and clinicians in the clinical setting to systematically collect data about typical practices and clinical effectiveness.[22–24] BraveNet, the first IM PBRN, has conducted two studies to better understand patients seeking and receiving IM. In one study,[25] mean pain-severity scores for 252 IM chronic-pain patients decreased 23% from moderate to mild, and pain interference scores dropped 28% over six months of IM care. Also, IM treatment positively impacted other psychological outcomes. The goal of this article is to systematically characterize the psychological profile of patients seeking care at IM clinics and the integrative services provided to those presenting with psychological issues.

METHODS

Participants and Procedures

A total of 4182 patients were recruited from nine IM clinics that comprise the BraveNet PBRN (Table S1). Eligible participants were ≥18 years old, English- or Spanish-literate, able and willing to provide informed consent, and receiving treatment by an IM clinician. Participants completed a uniform set of questionnaires, within two weeks of their IM clinic visit. A corresponding form was completed by the clinician (or research staff using the medical record) to indicate provider assessment of conditions that were addressed and IM services that were provided. Site-research personnel entered de-identified data into a central database through a secure website. All procedures for each study center and the coordinating center received full approval by the appropriate institutional review boards (IRBs).[a]

Measures

Participants were provided a case report form, which included basic demographic information and three well-validated psychological questionnaires. Perception of stress level was determined via the four-item Perceived Stress Scale (PSS-4[26]). PSS-4 scores range from 0 to 16, with a national average of 4.4 [standard deviation (SD) = 2.9] for individuals aged 45–54 years.[27] Mood was assessed via the 10-item Center for Epidemiologic Studies Depression Scale (CESD[28]), for which scores range from 0 to 30.[29] Quality of life was assessed using the 12-Item Short Form Health Survey (SF-12) to obtain both physical and mental function estimates.[30] US physical-health norms have a mean of 50 (SD = 9.6), and mental-health norms have a mean of 50 (SD = 9.5[31]). Participants indicated their experience over the past month from 0 to 10 for pain (average and worst), fatigue, and restfulness of sleep using numerical rating scales (NRSs). Finally, clinicians indicated health conditions addressed during the visit and services received onsite (31 categories of services were listed in the survey). Descriptive labels of services were agreed upon by BraveNet investigators, drawing from Eisenberg et al[11,32] and National Health Interview Survey CAM definitions.[33,34]

Statistical Analyses

All descriptive statistics were calculated using SAS version 9.4 and JMP Pro version 11.0 (SAS Institute, Inc., Cary, NC). Categorical variables were summarized using frequencies and percentages. Means and SDs were reported for continuous variables. Univariate analyses were utilized to detect outliers, which were subsequently submitted as queries to sites to ensure clean data. Age values were calculated from birthdate to visit date, and those below 18 years that could not be validated by the sites were excluded from subsequent descriptive analyses.

RESULTS

Demographics and Patient Status

Of 4182 participants, the majority were non-Hispanic white (84.5%) women (73.4%), with a mean age of 51.6 (SD = 15.1) years (Table 1). Patients were mostly self-referred (70%); 88.3% had health insurance, although the range of patients planning to submit for insurance reimbursement varied widely according to site (7–95%).

Perceived Stress, Symptoms of Depression, and Quality of Life per Patient Report

Average PSS-4 scores were 5.9 (SD = 3.29), a half-SD above the national mean (Table 2). In fact, 64% scored above the national mean for individuals with similar socioeconomic status, and 20% of the sample was more than two SDs above. Average CESD scores were 8.9 (SD = 6.15), one point below the cutoff suggestive of likely clinical depression.[29] More importantly, 39% scored ≥10, suggesting likely clinical depression. The average SF-12 mental-health score was 44.1 (SD = 11.19), a little more than a half-SD below the national norm (mean = 50, SD = 9.5). The average SF-12 physical-health score was 43.1 (SD = 10.09), three-fourths of an SD below the national norm (mean = 50, SD = 9.6).

Pain, Sleep Quality, and Fatigue per Patient Report

Worst pain over the past month was rated at 5.2 (SD = 3.11) (0 = no pain, 10 = worst-imaginable pain), and average pain

[a] Full approval for the study was received by Allina Health IRB; Beth Israel Medical Center Human Subjects Protection Office IRB; Duke University Health Systems IRB; The Scripps Clinic IRB; Thomas Jefferson University, Division of Human Subjects Protection; University of California Los Angeles IRB; University of California San Francisco Committee on Human Research; and University of Maryland IRB. The BraveNet Network Coordinating and Statistical Center first received IRB approval through Duke University Health System (Protocol #18346) in 2008 and has maintained this approval through the present.