Brief Report: Use of Complementary and Alternative Medicine and Psychological Functioning in Latino Children with Juvenile Idiopathic Arthritis or Arthralgia

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Objective  To describe the use of complementary and alternative medicine (CAM) and its relationship to symptoms of anxiety, depression, and dysthymia in Latino children with juvenile idiopathic arthritis (JIA) or arthralgia.  Methods  Parents of 36 children between the ages of 6 and 16 years with either JIA (n = 17) or arthralgia (n = 19) completed questionnaires during routine pediatric rheumatology clinic visits assessing use of CAM and psychological functioning.  Results  CAM was used by the majority of children primarily to treat pain episodes. The most common modalities were prayer and massage therapy. CAM use was associated with decreased symptoms of anxiety and dysthymia in children with arthralgia, but not in children with JIA.  Conclusion  Preliminary findings suggest that CAM use is associated with improved psychological functioning in children with arthralgia. Healthcare providers are encouraged to routinely screen for CAM usage and to educate families about the potential benefits and limitations of CAM.

Key words  arthralgia; complementary and alternative medicine; juvenile idiopathic arthritis.

Introduction

Complementary and alternative medicine (CAM) consists of healthcare approaches currently not considered to be standard medical practice. CAM modalities such as massage and herbal preparations are often utilized as a supplement to traditional medical treatments. The incidence of CAM use is notably rising among adults and children with chronic health conditions, such as arthritis (Feldman et al., 2004; Hagen, Schneider, Stephens, Modrusan, & Feldman, 2003; Southwood, Malleson, Roberts-Thomson, & Mahy, 1990), and within adult ethnic minority groups with rheumatological conditions (Herman, Dente, Allen, & Hunt, 2006). Less is known, however, about ethnic preferences of CAM use in children with chronic health conditions.

Juvenile idiopathic arthritis (JIA) is comprised of a heterogeneous group of chronic diseases (e.g., oligoarthritis, polyarthritis, systemic arthritis) characterized by joint inflammation with onset at or before 16 years of age. Estimates of JIA in children vary from 80,000 to 285,000 [Centers for Disease Control and Prevention (CDC), 2003]. Children with arthralgia, which occurs more commonly than arthritis, experience joint pain without signs of inflammation. Although JIA is considered a chronic health condition, whereas arthralgia is considered a symptom, both youth with JIA and those with arthralgia may experience acute and chronic pain, stiffness, decreased mobility, and functional disabilities. Latino individuals in particular experience disproportionate rates of impairment secondary to arthritis as compared to Caucasian individuals (CDC, 2005). Youth with JIA are also at an increased risk for experiencing psychological symptomatology, especially internalizing symptoms (LeBovidge, Lavigne, Donenberg, & Miller, 2003). To our knowledge, there are no data concerning psychological functioning in children with arthralgia.

Standard medical management for JIA and arthralgia involves a variety of therapies (e.g., nonsteroidal anti-inflammatory drugs, physical therapy); however, conventional treatment alone may not meet the needs of some patients with chronic rheumatic diseases. Studies suggest
that some families with children with rheumatic disease seek CAM therapies in addition or as an alternative to conventional treatment due to concerns about medication side effects and a perception that the child’s health condition is not improving (Rosenberg, 1996).

CAM utilization is better documented in the adult population than in children with rheumatic disease; however, of the few studies examining use in pediatric patients, CAM use was found to be common (Feldman et al., 2004; Hagen et al., 2003). Canadian studies have noted that 34–64% of pediatric rheumatology patients use at least one form of CAM (Feldman et al., 2004; Hagen et al., 2003). Furthermore, a study assessing CAM use in children attending an arthritis camp in either Australia or Canada found that 70% of children use CAM (Southwood et al., 1990). To our knowledge, there are no data regarding CAM use in children with arthralgia.

In an effort to address these gaps in the literature and to advance the understanding of CAM use in Latino children with rheumatic disease, the purpose of this study was 3-fold. First, the study described the prevalence, type, and reason for CAM use in Latino children with JIA or arthralgia. Consistent with previous pediatric rheumatology studies (Feldman et al., 2004; Hagen et al., 2003), we hypothesized that CAM usage would be common, with frequency of use associated with increased identification with culture of origin. Second, we assessed the relationship between CAM use and psychological functioning. Based on findings from a pediatric oncology sample (Post-White, 2006), we hypothesized that CAM use would be associated with decreased symptoms of anxiety, depression, and dysthymia. Finally, we provided preliminary data regarding potential group differences that exist between children with JIA and children with arthralgia regarding CAM use and psychological functioning. Due to the chronic nature of JIA and previous research (LeBovidge et al., 2003), we hypothesized that children with JIA would be more likely to use CAM to reduce symptoms than children with arthralgia.

Methods
Participants
The study was approved by the local institutional review board. Families were recruited from the rheumatology clinic at a Midwest tertiary care children’s hospital and invited to participate by their pediatric rheumatologist, using an interpreter when necessary, if children were (a) between the age of 6 and 16, (b) had a diagnosis of JIA as defined by the Durban classification criteria (Petty et al., 1998) or symptoms of arthralgia (i.e., joint pain without inflammation, no diagnosis of arthritis or other rheumatic condition), (c) were of Latino origin (i.e., at least one parent has a Latin American background), and (d) did not have significant cognitive impairments. Of the 39 children who met the eligibility requirements, 36 (92%) agreed to participate. Three families declined participation due to a preference to share private health information only for the purposes of receiving medical care. Informed consent was obtained.

Measures
Data collection occurred during routine clinic visits and was conducted by trained Spanish-speaking research assistants. English and Spanish versions for consent forms and measures were available.

Demographic and Illness Questionnaire
Parents completed a brief questionnaire that included questions about disease-related and demographic information. The pediatric rheumatologist completed a form indicating current illness characteristics.

CAM Questionnaire
Parents completed a questionnaire assessing frequency of CAM use, CAM type(s), perceived benefit of CAM (i.e., very, somewhat, or not helpful), and reason(s) for seeking such therapies (i.e., cure arthritis, manage fatigue, manage pain, overall well-being, symptoms unrelated to arthritis, or other). CAM use was defined as utilizing at least one type of CAM in conjunction with conventional medical treatment. The questionnaire also included an item assessing the child’s pain intensity on a scale from 0 (no pain) to 10 (severe pain).

Functional Ability
The 30-item Childhood Health Assessment Questionnaire (CHAQ; Singh, Athreya, Fries, & Goldsmith, 1994) assessed children’s performance over the past week in eight areas of daily functioning and yielded an overall Disability Index score. Higher scores indicated worse functioning. The CHAQ has demonstrated good reliability and validity in children with all subtypes of juvenile arthritis (Singh et al., 1994).

Level of Acculturation
The 30-item Acculturation Rating Scale for Mexican Americans-II (ARSMA-II; Cuellar, Arnold, & Maldonado, 1995) was used to assess acculturation and orientation (i.e., language, ethnic identity, cultural heritage, and ethnic interaction) toward the Mexican/Latino and Anglo cultures. The measure has been adapted for use with all Latino groups and Cronbach’s alpha for the scales ranged from .83 to .88.
Psychological Functioning
The Child and Adolescent Symptoms Inventories-4 (CSI and ASI; Gadow & Sprafkin, 2002) are rating scales that assessed the behavioral and psychological functioning of the child (ages 5–12) and adolescent (ages 12–18). Severity scores for anxiety, depression, and dysthymia were used. Normative data are available for both English and Spanish versions of the measure. The instruments have demonstrated satisfactory test–retest reliability and predictive and concurrent validity.

Results
Descriptive characteristics of each illness group and the sample are summarized in Table I. Parents reported moderate levels of child’s pain severity and limited impairment in functional ability. Independent samples t-tests revealed significant differences between the two groups. Children with JIA were older [t (34) = 3.71, p = .001] and had the diagnosis longer [t (24) = 2.36, p < .05] than children with arthralgia, which is consistent with the chronic nature of arthritis and typical age of diagnosis.

CAM Use
Consistent with our hypothesis, the majority of families (56%) used at least one CAM therapy in conjunction with conventional medical treatment. The most common modalities were prayer (56%), massage therapy (50%), meditation/relaxation (30%), salve/skin creams (30%), aromatherapy (25%), touch therapy (20%), and herbal medicine (20%). CAM was used to manage pain (90%) or improve overall well-being (20%) and found to be somewhat helpful according to parent report (80%). Almost half of the families (45%) indicated that their physician was not aware of their CAM use. Contrary to our hypothesis, CAM was used equally by both children with JIA (n = 10) and children with arthralgia (n = 10). Demographic and illness characteristics (i.e., disease duration, pain, functional ability) were not associated with CAM use.

Level of Acculturation
Mean level of acculturation (M = −.29, SD = 1.52) fell into the Latino-oriented range. Families were typical traditional Latino to high bicultural types. Contrary to our hypothesis, level of acculturation was not associated with CAM use.

Psychological Functioning
Mean parent-report scores for the child’s symptoms of anxiety (M = 54.53, SD = 8.69) and depression (M = 58.00, SD = 10.98) were within normal limits, while mean scores for symptoms of dysthymia

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<th>Table I. Descriptive Characteristics [M (SD) or n (%)]</th>
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<td>Child’s Age**</td>
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<td>Child’s Gender (Female)</td>
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<td>Country of Origin</td>
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<td>Mexico</td>
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<td>Puerto Rico</td>
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<td>Other (Guatemala, Cuba)</td>
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<td>Parents’ marital status*</td>
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<td>Married</td>
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<td>Primary caregiver’s education*</td>
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<td>&lt;High school</td>
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<td>≥High school/GED</td>
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<td>Illness duration (years)*</td>
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<td>Pain severity</td>
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<td>Disability Index</td>
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Note. **Groups differed significantly (p < .05); *Groups differed significantly (p < .001).
Scores were similar between children with JIA and children with arthralgia. Contrary to our hypothesis, CAM use was not associated with psychological functioning for the overall sample; however, between-group differences emerged. Using hierarchical linear regressions, after controlling for child’s age and gender, CAM use predicted symptoms of anxiety ($F = 11.66, p < .01$) and dysthymia ($F = 4.64, p < .05$) in children with arthralgia but not in children with JIA; use was associated with decreased symptoms. A significant relationship between use and symptoms of depression was not found for either group.

**Discussion**

The use of CAM in this sample, particularly prayer and massage therapy, was common, which is consistent with previous studies (e.g., Feldman et al., 2004; Hagen et al., 2003; Southwood et al., 1990). Families sought CAM therapies primarily for relief of child’s pain. CAM was viewed by parents as somewhat helpful in minimizing symptoms and sequelae of JIA or arthralgia. Despite perceived CAM effectiveness, 45% of families did not share their CAM use with the child’s pediatric rheumatologist. This rate is lower than those in previous adult and pediatric studies, which found nondisclosure rates as high as 66–77% (Cincotta et al., 2006; Robinson & McFrail, 2004). Reasons for nondisclosure may include a maladaptive belief that physicians may not need to know about CAM usage or may respond negatively to the use.

Level of acculturation was not associated with CAM use, which may suggest that the decision to use CAM is motivated by concerns about the child’s health and current symptoms, independent of the family’s cultural background. It is also possible, however, that differing levels of acculturation are associated with different types of CAM usage, which our study did not assess.

CAM use was associated with lower levels of anxiety and dysthymia symptoms in children with arthralgia, but not in children with JIA. One potential reason for this finding is that increased disease severity in children with JIA may minimize improvement in perceived psychological functioning and overall well-being. Moreover, children with JIA typically have persisting stressors related to inflammation and its sequelae, which may offset potential benefits from CAM therapies. Furthermore, it is possible that psychological symptoms did improve over time (e.g., children with JIA initially had higher levels of anxiety and dysthymia); however, the small sample size and cross-sectional nature of the study limited the ability to test this hypothesis.

Pediatric healthcare providers are encouraged to inquire about CAM use as part of their routine medical assessment of the child. As the efficacy and potential contraindications of CAM therapies are not well established (Hagen et al., 2003; Post-White, 2006), physicians are encouraged to provide families with reliable information concerning CAM use and to coordinate use with standard medical treatment not only to monitor for medicinal interaction, but also to enhance its utility to the child’s well-being. Furthermore, increased awareness and communication between families and the child’s physician can reconcile misconceptions of conventional medicine and facilitate the provision of culturally sensitive healthcare.

Findings and limitations of the present study suggest potential directions for future study. First, the sample size was small and consequently, findings need to be confirmed by a larger and more heterogeneous sample (e.g., a variety of ethnic groups). Second, as parent report may be discrepant with children’s perceptions and behaviors (Palermo, Zebracki, Newman, & Singer, 2004), future data should be collected from multiple informants using multiple methods. Third, as this study was cross-sectional in nature implications regarding the causation of findings cannot be made. Therefore, a longitudinal study is warranted. Finally, to augment this study’s preliminary findings, future research should assess reasons for nondisclosure of CAM use and examine what CAM treatment factors (e.g., frequency, type, duration) differentially affect the child’s medical and psychological status and contribute to a positive outcome and optimal overall functioning.

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**References**


