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Differences in referral and use of complementary and alternative medicine between pediatric providers and patients

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Summary
Objectives: The goal of this study was to compare pediatric complementary and alternative medicine (CAM) use and pediatric health care provider CAM referral as well as identify predictors of use and referral.
Design: Surveys were administered to 283 parents/caregivers of pediatric patients and 200 pediatric health care providers (HCP).
Setting: This study took place at the Children's Hospital of Orange County (CHOC Children's) in Orange, CA.
Main outcome measures: Caregivers and HCP were provided a list of 32 CAM interventions and asked to indicate which treatments their child had *ever* used or which they would consider using for their child and which treatments they had *ever* referred or which they would consider referring, respectively. The main outcome variables were the number and type of CAM therapies endorsed by participants.
Results: Providers referred the majority of CAM therapies significantly more often than patients used each therapy and more often than caregivers would consider each therapy for their child. In addition, children from families with higher incomes, whose parents were older and had more education, who were White, and whose primary language spoken at home was English were more likely to use CAM therapies, all p's < 0.05. HCP CAM referral was not significantly predicted by number of years a health care provider practiced or health care profession, all p's < 0.05.
Conclusions: HCP referred CAM therapies more often than parents reported use for their children. Findings may imply that parents/caregivers are underutilizing CAM therapies for their children. Potential barriers to CAM use in pediatric patients needs to be explored.

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Introduction

Complementary and alternative medicine (CAM) refers to non-traditional medical approaches used in conjunction with (complementary) or in place of (alternative) conventional medicine.[1] CAM often includes natural remedies such as yoga, herbology, or acupressure and is associated with minimal side effects.[2–6] Additionally, several forms of CAM therapy may be more cost-effective compared to conventional medicine.[7,8] It is therefore not surprising that CAM therapies have become increasingly popular with recent studies documenting that 40% of adults reported using at least one CAM therapy in the past 12 months[9] and 39–48% of physicians reported recommending CAM to adult patients.[10,11]

CAM is also becoming more prevalent in pediatric settings. The use of CAM among children continues to grow[12] with reports of between 11% and 21% of children using at least one CAM therapy each year.[9,13] In terms of health care providers (HCP), 66% of pediatricians believe that CAM is effective in reducing negative health symptoms in children[14] and report having referred CAM to their pediatric patients.[15] Although CAM use has been studied in many pediatric populations, less is known about how this use correlates with referrals by HCP.

Due to the growing use of CAM, it is important to understand how often pediatric patients are using CAM and how often providers are referring patients to CAM therapies. To investigate these questions, we asked parents and caregivers receiving treatment at a major children's hospital which CAM therapies their children have ever used. Similarly, HCP at the same hospital were asked which CAM therapies they have ever referred to pediatric patients. The first aim of this study was to examine the frequency of a broad range of CAM use and referral by pediatric patients and HCP, and to explore predictors of use and referral. The second objective was to compare frequency of pediatric use and HCP referral to uncover whether CAM treatments are being utilized at frequencies consistent with referrals by HCP.

There is lack of agreement about which specific therapies should be considered as CAM (e.g., folk medicine, vitamins, and prayer are not always included).[6,9] Accordingly, selection of CAM therapies to include can impact results. In the present investigation, we chose to include a broad range of strategies under the CAM definition in order to capture therapies that both parents and HCP may be using/referring that could potentially be missed when using more narrow definitions of CAM therapies. This approach allows for broader examination of the differences in CAM use and referral between patients and providers.

Methods

This study was approved by the Children's Hospital of Orange County (CHOC Children's) institutional review board. A waiver of written informed consent was obtained. Participation was voluntary and caregivers and health care providers (HCP) were not paid for their involvement.

Participants

Families

Surveys were administered to a convenience sample of 283 caregivers of inpatient (65%) and ambulatory care (35%) pediatric patients at CHOC Children's. Caregivers were comprised of 75% mothers, 16% fathers, and 9% ''other'' (e.g., grandmother, grandfather, etc.). Caregivers were eligible if their primary language was English or Spanish. Surveys were in Spanish or English to match participant primary language.

Health care providers

Surveys were administered to a convenience sample of 200 HCP (attending physicians, nurses, medical residents, etc.; see results for descriptive information on health care profession) at CHOC Children's. HCP were recruited during medical rounds and staff meetings or through email.

Measures

Demographics

Caregivers reported demographic information including parental age, race/ethnicity, and education; child age, gender, race/ethnicity, inpatient/outpatient status; family income; and primary language spoken at home. If caregivers were not the mother or father of the child (e.g., grandparent), they were asked to report demographic characteristics of the child's mother and father. HCP indicated their healthcare profession, and years post training.

CAM therapies

Caregivers were provided a list of 32 CAM interventions as identified by the National Center for Complementary and Alternative Medicine,[16] published empirical articles on CAM,[12,14,17] and recent reviews of the CAM literature[18,19] (see Appendix A) and asked to indicate which treatments their child had ever used or which they would consider using for their child. HCP were given the same list and asked to indicate which treatments they had ever referred pediatric patients to or which they would consider referring.

Statistical analyses

Means, standard deviations, and percentages were used to present demographic information for children, caregivers, and HCP. Percentages were also used to describe the numbers of children using the different CAM therapies, the amount of caregivers willing to consider CAM therapies for their children, and the amount of HCP who have referred or would consider referring the CAM therapies. Pearson product-moment correlations were used to examine relationships between caregiver/patient demographic variables and number of CAM therapies used, caregiver/patient demographic variables and number of CAM therapies considered, and HCP demographic variables and number of CAM therapies referred. Mean comparisons via independent sample *t*-tests and analysis of variance (ANOVA) examined differences in CAM use and consideration among child gender, race, and primary language as well as differences in HCP CAM referral based on health care profession. Finally, Chi-square analyses with a Bonferroni correction for family-wise error were used to examine differences between the frequency of HCP CAM referral and child use of CAM as well as between HCP CAM referral and caregiver consideration of use of CAM for their child.