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Use of Complementary and Alternative Medicine in a General Pediatric Clinic

Dany Jean, MD, Claude Cyr, MD, FRCPC

Département de Pédiatrie, Faculté de Médecine et des Sciences de la Santé, Université de Sherbrooke, Sherbrooke, Québec, Canada

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ABSTRACT

BACKGROUND. Use of complementary and alternative medical therapies is common and increasing, particularly for children with chronic disease.

OBJECTIVES. The purpose of this work was to describe the use of complementary and alternative medicine by children and to identify factors that may influence the use of complementary and alternative medicine.

PATIENTS AND METHODS. We conducted a cross-sectional descriptive study with children who were visiting a pediatric outpatient clinic. Parent's satisfaction about primary care was evaluated with the Parent's Perceptions of Pediatric Primary Care Quality questionnaire.

RESULTS. Fifty-four percent of children used ≥ 1 type of complementary and alternative medicine in the previous year. No sociodemographic characteristic difference was found between user and nonuser groups. Children most often used complementary and alternative medicine to treat musculoskeletal problems (27%), psychological problems (24%), or infections (20%). Factors that influenced complementary and alternative medicine use were "word of mouth" (36%), "reference by a physician" (28%), "personal experience by parents" (28%), and "no adequate resources in 'traditional' medicine" (21%). Forty-seven percent of complementary and alternative medicine users used prescribed medications simultaneously. Most users (75%) believed that complementary and alternative medicine had no potential adverse effects or interactions with prescribed medication. Only 44% of complementary and alternative users were known as such by their physician. The primary care satisfaction was significantly lower in complementary and alternative users versus nonusers. Parents of complementary and alternative users were less satisfied in the areas of accessibility, knowledge of the patient, and communication.

CONCLUSIONS. Complementary and alternative medicine was used by 54% of the children in our cohort. Complementary and alternative medicine users were less satisfied with primary care than nonusers. Only 44% of complementary and alternative medicine users were known by their physician. It is important that

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Key Words

complementary and alternative therapy, child, primary care

Abbreviations

CAM—complementary and alternative medicine

P3C—Parent's Perceptions of Pediatric Primary Care Quality

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Address correspondence to Claude Cyr, MD, FRCPC, Université de Sherbrooke, CHUS, 3001, 12^eme Avenue Nord, Sherbrooke, Québec, Canada J1H 5N4. E-mail: claudc.cyr@usherbrooke.ca

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physicians systematically elicit families' expectations of treatment and be aware of the range of therapies used by children.

THE USE OF alternative medicine in North America is increasing.¹⁻⁴ Many studies evaluating the use of complementary and alternative medicine (CAM) by children with chronic illnesses, such as cystic fibrosis, juvenile arthritis, cancer, and asthma, found a user rate as high as 72%.⁵⁻⁷ A classic study by Spigelblatt et al³ showed that 11% of Canadian children seen in a pediatric outpatient clinic consulted ≥ 1 CAM practitioner. Similar studies on the use of CAM in children who were not chronically ill showed prevalence ranging between 2% and 55%.^{2,8,9}

The mainstream medical population seems to manifest interest for CAM. Physicians want to know more about CAM and occasionally encourage their patients to use them.¹⁰ Sikand et al¹¹ showed that 84% of pediatricians believed that some of their patients used CAM, and most of the physicians thought that this population represented $< 10\%$ of their patients. Approximately 50% of families had discussed with their physician their use of CAM. However, 76% of physicians believed their patients would tell them if they were using CAM.¹¹ Studies have also demonstrated that most adult patients do not inform their physicians that they are using CAM.

Adverse effects are possible with CAM, and multiple pharmacologic interactions exist with prescription medication.⁴ These facts demonstrate the importance for physicians to be knowledgeable about CAM and to be aware of their patient use of CAM.

The aims of this study were to evaluate simultaneously the use of CAM by children, to evaluate the awareness of physicians about this use, and to compare satisfaction with primary care between CAM users and nonusers.

METHODS

This cross-sectional descriptive study was conducted using a convenience sample of parents of patients presenting in a pediatric outpatient clinic at a university-affiliated general hospital in Estrie (Quebec, Canada) over a 4-week period (October and November 2003). None of the health care providers working in this clinic were practitioners of any form of CAM. CAM included: chiropractic remedies, naturopathy (dietary supplements, medicinal plants, and dietary manipulation), homeopathy, massage, acupuncture, Reiki/energy care (therapy involving the use of energy fields including biofield therapies and bioelectromagnetic-based therapies), hypnosis, osteopathy (any form of osteopathic manipulation), folk remedies, and bone setting (any hands-on techniques to alleviate pain, restore function, or promote health and well being). Any other forms of CAM not

listed above were sought and included if disclosed. We used 2 questionnaires: one for patients/families and the other for physicians. Parents and physicians were told that the study was being conducted to examine the types and quality of health care received by the child. Care was taken so that only 1 questionnaire was completed for each child, and all of the collected data remained confidential and anonymous.

The patient/family questionnaire was composed of 39 questions: general information about the child, information about CAM use, and a section with the French translation of the Parent's Perceptions of Pediatric Primary Care Quality (P3C) questionnaire. This questionnaire measures the parents' degree of satisfaction on ~ 6 quality domains of primary care: longitudinal continuity, access, contextual knowledge, communication, comprehensiveness, and coordination. Computing the mean of the nonmissing values on each scale formed the total score, as well as scores for each subscale. Scores ranged from 0 to 100, with 100 being best. The P3C questionnaire has good face validity, good reliability (internal consistency with Cronbach's coefficient of .95 for total score and between .75 and .95 for subscales) and construct validity (convergent and divergent validity).¹² Parents were asked whether the child's doctor had been informed about their use of CAM. The physician questionnaire included questions about the perceived satisfaction with health care and the types of therapies used by the patient, including CAM.

Statistical analysis was performed using StatView 5.0 (SAS Institute Inc, Cary, NC) to provide descriptive statistics. Nominal data were analyzed with χ^2 test and ordinal data with the Mann-Whitney *U* test. The study was approved and conducted in accordance with the ethical standards set by the research ethics committee.

RESULTS

On 200 questionnaires distributed, 114 pairs were completed (66%). The patient/family questionnaires were principally completed by mothers (84%). Almost half of the parents had completed a college degree or more. The majority of parents lived as a couple (83%), were employed (86%), and had familial income more than \$20 000 per year (79%). The primary care provider for children was a pediatrician in 56% of instances. Fifty-four percent (61 of 114) of the respondents had used ≥ 1 CAM for their children in the year before the study. We found no sociodemographic difference between the groups of CAM users and nonusers (see Table 1).

The most frequently used CAM types are listed in Table 2. The most frequent health problems that justified CAM use were musculoskeletal problems (27%), psychological problems (24%), infections (20%), asthma/allergies (15%), pain (8%), skin problems (8%), and colic (8%). Fifty-two percent of children were using a prescription medication at the time of the survey, 36%

TABLE 1 Characteristics of CAM Users Versus Nonusers

Characteristics	CAM Users	Nonusers
Age father (mean), y	39	38
Age mother (mean), y	36	35
Age child (mean), y	8	7
No. of children in family (median)	2	2
Mother works as a health care professional, %	28	15
Father works as a health care professional, %	10	11
Marital status, %		
Couple (never separated)	75	69
Reconstituted family	12	19
Single parent	13	12
Vaccination up to date, %	92	96
Child currently taking prescription medication, %	48	43
Child with chronic illness, %	25	12

TABLE 2 Prevalence of CAM Use

CAM Type	Prevalence, %	
	Past 12 mo	Lifetime Use
Homeopathy	30	39
Naturopathy	20	23
Chiropractic remedy	19	24
Osteopathy	13	16
Massage therapy	12	12
Folk remedies	9	9
Reiki	8	13
"Bone setter"	6	17
Acupuncture	2	2
Hypnosis	0	2

used natural products like herbal remedies, and 19% used both simultaneously. Seventy-five percent of the patients/families did not believe that CAM could have adverse effects or interactions with medication.

CAM users were less satisfied with the primary care received by their children than nonusers according to the P3C (global score, users versus nonusers, mean \pm SD: 74 \pm 16 vs 80 \pm 15; $P = .01$). Satisfaction was particularly lower in the CAM users group in the areas of accessibility, contextual knowledge, and communication. Forty-seven percent of CAM users had discussed CAM with their physicians. Only 44% of actual CAM users were identified as such by their physician.

DISCUSSION

The prevalence of CAM use in this study (54%) is higher than reported previously in a similar setting³ but in the range of recent reports about chronically ill children.^{5,6,13-15} Our survey used a broader definition of CAM and included practices such as folk remedies. These remedies may be easier to access than those identified by Spigelblatt et al,³ and that might explain the higher rate of CAM usage in our study. The most popular CAM types were homeopathy, chiropractic remedies, and naturopathy. These results were similar to many others studies.^{5,6,13-15}

The patients used CAM for a variety of health issues, principally for musculoskeletal, psychological, and infectious problems. Conventional medicine offers often-limited solutions for these chronic problems. Word-of-mouth was the most common factor influencing a caretaker's decision to use such a therapy. Many caretakers reported >1 factor influencing their decision. Families may choose a CAM therapy because it will not require a visit to a doctor or a clinic and because they perceive the therapy as more natural. A common explanation for the increasing popularity of CAM is the dissatisfaction with primary care.

Our study population might represent more chronically ill children than the general population, because the patients were followed in a pediatric clinic (secondary or tertiary care). This might explain a higher prevalence than studies in primary care but lower than studies with children with chronic illness.

The method used (questionnaires) can create a selection bias, because the CAM users group could be overestimated. The use of CAM and questions about reasons and motivations are subject to recall bias, because it is a retrospective account over the past year. Potential limitations to our study also include small sample size. Our results may not be representative of the true prevalence of CAM use in the pediatric population. We also used only a single Canadian institution for our survey, which would fail to account for any regional or geographic differences in CAM usage among the pediatric population.

Although we found a high prevalence of CAM usage in our patient population, 53% of CAM users reported that they did not inform their health care provider that they were using CAM. We also found moderate rates of combining prescription medicines and CAM, risking adverse events. Eighteen percent of our population simultaneously used herbal medicines and prescription medication, and 75% believed that CAM had no potential adverse effect or interaction. This raises important issues of safety, especially in view of the poor communication shown by parents and physicians about CAM. These findings are not new and support previous studies of poor CAM disclosure rates by parents with pediatricians.^{8,16} Some CAM treatments may be associated with adverse effects or interactions with conventional therapies.¹⁷⁻¹⁹ Given the increasing use of CAM and the significant degree of underreporting demonstrated in our study, as well as in others, it is important for health care providers to actively question parents and patients on possible CAM use.

In our study, CAM users seemed less satisfied with primary care quality than nonusers as measured with the P3C questionnaire. One interpretation might be that dissatisfaction with "conventional" medicine lead to the use of CAM. On the other side, interest for these therapies by patients (with their individual values and be-

liefs)²⁰ lead them to be less satisfied by the conventional medical context. One of the frequent reasons for CAM use was persistent medical problems that were perceived not to have improved with conventional medical treatment. This reason, combined with a general dissatisfaction with conventional medicine, accounted for one third of the total of reasons given. Two US studies concluded that the use of CAM therapies cannot be attributed primarily to perceived dissatisfaction with conventional medical care or caregivers and that many adults seek, explore, and experience benefits from both conventional and CAM therapies.^{20,21} This contrasts with previous comments suggesting that the high prevalence of CAM use largely represents a societal rejection of orthodox and conventional medical care.²² If health care professionals are to effectively support individuals in making informed, safe, and appropriate choices, it is critical that they develop greater awareness of the nature of, potential efficacy of, and reasons for CAM use. Given the frequency of use of a variety of CAM therapies, caregivers should inquire about CAM usage in all children at each and every office visit. Further studies about CAM use should look into the reasons for use and incorporate the perception of parents about the quality of primary care.

CONCLUSIONS

The use of CAM by children is frequent. Poor communication about CAM use leads to lack of knowledge by physicians. CAM users are less satisfied with primary care quality, especially for aspects of communication, contextual knowledge, and accessibility. Physicians should have a working knowledge of the escalating literature on CAM to be in a position to discuss implications of use. Because they are being used to treat children, physicians who care for children should be aware of the various types of CAM therapies, scientific evidence supporting or refuting their use, and the potential adverse effects of each therapy.

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