The Role of Complementary Medicine in a Pediatric Day Center in Germany

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Keywords
CAM · Pediatrics · Pediatric day center

Summary
Background: The role of complementary alternative medicine (CAM) in pediatrics has considerably increased in the last years. The knowledge about potential side effects and possible interactions with conventional drugs is still limited, and often pediatricians do not know whether their patients use CAM. This can be critical, as in order to diagnose and treat illnesses properly physicians need to know about the full extent of the self-administered therapy of their patients. Many studies have been conducted in other countries in order to assess the extent of CAM use and the types of substances that are consumed, but in Germany data in regard to pediatric interventions are lacking. We therefore developed a questionnaire to evaluate the frequency of CAM use among German pediatric patients.

Patients and Methods: 115 parents visiting the pediatric day center in Epe between September and November 2011 responded to the questionnaire. The survey contains questions concerning the prevalence of CAM use and data about socioeconomic factors.

Results: A total of 75.7% of all children enrolled in the study had already been treated with CAM by their parents, while only 43.6% of the parents knew that there can be interactions with CAM and prescribed drugs. In only half of the cases (50.6%) the pediatrician knew about the CAM usage of the child.

Conclusion: The frequency of CAM usage among children is higher than anticipated. It is essential that pediatricians know about possible interactions with conventional medicine, and it lies in their responsibility to include the question about CAM usage in their standard protocols.

Schlüsselwörter
Komplementärmedizin · Pädiatrie · Kinderarztpraxis

Zusammenfassung


Ergebnisse: Insgesamt haben 75,7% aller Kinder komplementärmedizinische Arznei von ihren Eltern verabreicht bekommen, während nur 43,6% aller Eltern wussten, dass es Wechselwirkungen mit herkömmlichen verordneten Medikamenten geben kann. Nur in der Hälfte der Fälle (50,6%) wusste der Kinderarzt über die Nutzung komplementärer Medikation bei den Kindern Bescheid.

Background

The role of complementary and alternative medicine (CAM) in the therapy of pediatric illnesses has considerably increased in the past years and will continue growing [1, 2]. CAM can be defined as ‘diagnosis, treatment and/or prevention which complements mainstream medicine by contributing to a common whole, by satisfying a demand not met by orthodoxy, or by diversifying the conceptual frameworks of medicine’ [3]. Or generally speaking, this means the integration of non-allopathic methods into preventive or acute health care [4]. This definition embraces herbal remedies, non-prescribed vitamins, and homeopathy. A high prevalence of the use of CAM in children has been documented; however, only a very small number of studies have been conducted in Germany. It is important for various reasons to know the full extent of the use of CAM especially in children, as the remedies used may seriously interfere with conventional medicine [5] and their efficacy may be questionable when used incorrectly [2, 6]. Only recently studies on adverse herbal drug reactions have entered the literature, but the doctor’s question about the use of CAM is not yet part of the standard protocol [7]. Only few patients and their parents tell their physician about the application of CAM [8]. The main reasons for this lack of communication are the physicians’ indifference or opposition towards CAM use and their emphasis on scientific evidence as well as the patients’ anticipation of a negative response from their physician [9]. As a result, it is very important that pediatricians are aware of the continuing increase of CAM use and encourage the patients’ parents to tell them about the substances they administer to their children.

The main focus of our survey lies on drug-based therapies containing naturopathic, dietary and food supplements, non-prescribed vitamins and minerals as well as herbal remedies. In a wider range, even commonly used remedies such as honey, special teas, or even herbs such as onions or garlic can be defined as CAM when used to prevent illness or enhance recovery. The fact that these seemingly harmless remedies may cause serious side effects is often not realized, and therefore it is important to know the frequency of their use. The full extent of CAM used in pediatrics in Germany is unclear as data are lacking. That is why we have designed a questionnaire in order to assess frequency, types, and conditions of CAM use against the background of sociodemographic data.

Patients and Methods

Between September and November 2011, 185 parents of children who were treated at the pediatric day center in Epe (Germany) were asked to fill out the questionnaire and 115 responded. While the parents were waiting to see the doctor, they were asked for 10 min of their time to fill out the questionnaire anonymously. By asking the parents directly on the background of sociodemographic data.

The questionnaire consisted of 23 items including 14 items regarding CAM use and 9 items asking about socioeconomic factors. The questions were primarily closed and structured into multiple categories, including areas for comments. Seven items concerning CAM could be answered with yes/no, and in 7 items regarding CAM use multiple answer options were given, including the possibility to write a comment (fig. 1). In the introduction text at the top of the questionnaire it was elaborated why this survey was conducted, that it is anonymous as well as voluntary, and most importantly that also remedies like honey, special herbal teas, or medicines based on plants can be classified as CAM and should be indicated. The survey further contained questions concerning the yearly and monthly prevalence of CAM use, the used type of CAM, the disease for which alternative remedies were used, and whether or not the pediatrician knew about this. It was further inquired if the parents themselves used CAM, why they chose to use CAM for their child, and how they found out about alternative remedies. Furthermore, the parents were asked about whether or not the child took prescribed drugs, how often the child took them, and whether or not it has taken them together with CAM. The use of CAM and the intake of prescribed drugs were correlated to sociodemographic factors. The personal questions concerning the sociodemographic data were put at the end of the questionnaire in order to allow the parents to adjust and feel secure about the anonymity of the survey.

Analysis

All calculations were performed with the statistic program SPSS, version 16.0. The analysis of the questionnaire was carried out descriptively by evaluating the relative frequencies and percentages. Furthermore the questionnaire was analyzed regarding situative and sociodemographic differences.

Results

From a total of 185 parents who were asked for their cooperation 115 parents (62.2%) agreed to fill out the questionnaire. A detailed description of the sample of parents who participated in the survey is given in table 1.

Analysis

A total of 75.7% of all parents have already applied CAM to their children, and the same percentage of parents has tried CAM themselves (79.1%). Two thirds of the children (68.9%) received CAM treatment in the last month and one third (31.1%) during the last year. The most commonly used CAM...
remedies were honey (30.6%), various herbs including tea (36.0%), nonprescribed vitamins (12.7%), and 20.7% of the parents used various other remedies, such as onion and herbal drugs as well as homeopathy and inhalations (fig. 2). The different illnesses for which parents have used CAM were mainly diseases of the respiratory system such as asthma or the common cold (50.7%) and sicknesses of the gastrointestinal tract such as stomach aches or diarrhea (51.1%). CAM was further used for skin diseases (10.1%), and a small number of parents used CAM for otitis media, teething, sleep problems, and infection of the urinary system. The parents gained their knowledge about CAM mostly from family members (28.7%) and on the basis of personal experience (27.5%) but also from friends (15.2%), pediatricians (15.7%), and nonmedical practitioners (8.4%). A small number of parents indicated to get their knowledge from the pharmacy, their midwife, and the internet. The parents used CAM for their children mainly because of the assumption that the remedies have no contraindi-
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been taking any form of CAM. It turned out that she had taken
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very diligently, there is probably very little contortion.

The mentioned studies have been carried out at sampled
health care facilities such as hospitals, day centers, and emer-
gency departments as well as in pediatric oncology. A conclu-
sive trend towards a higher use of CAM in one of the different
facilities could not be detected. Since we had not found any
data in the literature about the use of CAM in children specifi-
cally in Germany, our data are of special importance for Ger-
man pediatricians, as the frequency of CAM usage may vary
between countries. The setting in which the questionnaire was
distributed was a pediatric day center – for further evaluation
of the frequency of CAM usage in children an additional sur-
voy in a hospital would be desirable.

In our study, only half of the parents believe that their doc-
tor is aware of their child taking CAM. This could not be veri-
fied by asking the doctor directly due to anonymity reasons.
With half of the parents returning the questionnaire, the re-
sponse rate can be rated as good [23]. Furthermore, when us-
ing closed questions or questions with a few answering options
there is a possibility that the outcome might be influenced in
some way, resulting in higher frequencies for certain predeter-
mined answers than they would have obtained under normal
circumstances or even neglecting important aspects. That is
why we have inserted a comment section in each item with
multiple answers, and as these comments have been filled out
very diligently, there is probably very little contortion.

Almost half of the parents (43.6%) were aware of possible
interaction between CAM and conventional medicine but
none of them could give an example. A case that highlights the
necessity to know about possible interactions happened in the
USA. A 16-year-old girl being HIV-positive for 1 year has
been taking a recommended antiretroviral medication with
therapeutic success, but then suddenly the CD4 T-cell counts
had decreased and continued decreasing for the next month.
Specialists found this inconclusive as the instructions have
been followed and no other medication has been taken. While
visiting her family practitioner he asked her whether she had
been taking any form of CAM. It turned out that she had tak-
en St John’s wort (Hypericum perforatum) against her depres-

The knowledge of adverse reactions between CAM and
conventional medicine is quite recent, and the question wheth-
er the child takes CAM is not yet part of the standard protocol.
This case shows that it is very important for pediatricians to
ask directly whether the child uses any other substances than
conventional medicine, especially if the child suffers from a
chronic disease. Patients suffering from chronic diseases are
more likely to use CAM than other patients [25–27], and
therefore they require special attention. In order to diagnose
and treat the children effectively, it is imperative that pediatri-
cians know about their patients self-treatment regimens [28,
29].

The pediatric day center is a monoprofessional institution
with about 90% of the children having statutory health insur-
ance. The remaining children had a private health insurance,
and 1 child did not have any insurance. We did not detect any
correlation between socioeconomic factors and the frequency
of CAM use. In a study carried out by Manya et al. [2012] ana-
lyzing the use of CAM among people with diabetes, it was
stated that factors such as age, gender, income, and education
were not associated with a higher rate of CAM usage [26]. In a
previously conducted study [25] sociodemographic differences
(i.e., family income, education) did not prove to be significant
predictors for CAM usage.

However, it is not only the responsibility of the pediatri-
cians to ask their patients’ parents about the application of
CAM to their children, but also the parents need to become
more aware of the possible impact of substances their children
consume. The case of the patient in USA is a common example
for those who use herbal supplements or any other form of
CAM assuming that they are safe because they are considered
‘natural’ [30]. If parents were better informed about the risks
of CAM use and potential adverse reactions with conventional
drugs, they probably would be more forthcoming in telling
their physician about their self-treatment. Of course, most
CAM therapies are safe and can be effective when used as rec-
ommended [31–34]. However, apart from the physician’s posi-
tion towards CAM, a good communication between pediatri-
cian and parents is important [35, 36] and can even lead to
higher levels of satisfaction in therapy on the parents’ side
[37].

Disclosure Statement

All authors contributed equally. The authors declare that there is no
conflict of interest.
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