

Parents' Strategies of Managing Minor Childhood Illnesses Using Complementary and Alternative Medicine in Jordan

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Abstract

Background: Complementary and Alternative Medicine (CAM) is a group of medical products and practices that are not part of conventional medicine.

Method: The aims of this study were to identify the strategies of managing minor illnesses, perceptions and significant predictors of using CAM among Jordanian parents. A cross-sectional descriptive design was used. The study was conducted in ten Ministry of Health comprehensive health centers in Jordan. A convenience sample of 328 participants was recruited and asked to complete a self-report structured questionnaire.

Results: Over 80% of study participants used CAM to treat minor illness for their children. Digestive system problems, upper respiratory tract infection, and urinary tract infection were the most common managed illnesses. Herbs, prayer, and aromatherapy were the most common types of CAM therapy. The most common reasons for using CAM were making the child comfortable, supporting medical treatment, and promoting health and preventing disease. The major sources of advice were self, mother or mother in law, and friend. 72% of CAM users reported that they always consulted their health care providers about CAM use. More than 60% of the study sample perceived CAM as complementary, safe, and efficient. Finally, CAM belief, father's education, and living with extended family significantly predicted CAM use.

Conclusion: Health care providers in general should be able to assess CAM use, provide accurate health education and encourage parents to consult their health care providers about CAM use.

Keywords: children, minor illness, management, parents, complementary medicine

1. Introduction

In order to provide optimal care to pediatric patients it is crucial that health care providers understand the use of complementary medicine. Since the 1990s, the use of complementary medicine, also known as traditional medicine, has grown (World Health Organization [WHO], 2014). The National Center for Complementary and Alternative Medicine (NCCAM) defines Complementary and Alternative Medicine (CAM) as "a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine" (NCCAM, 2012). According to the National Center for Complementary and Integrative Health (NCCIH), complementary therapies include natural products and mind-body therapies. Natural products include a variety of products such as vitamins and minerals, herbs, and dietary supplements. Body-mind therapies include a large and diverse group of procedures or techniques administered or taught by a trained practitioner such as yoga, meditation, massage, acupuncture and relaxation techniques (NCCIH, 2016). The increased use of complementary medicines extends to the care of children. This requires that health care providers recognize the cultural context of CAM use from the parental perspective in order to adequately communicate with parents when providing care to children (Hannan, 2015).

The use of CAM is common worldwide. Based on a review of 111 published articles on CAM use in children in 2011. The most common CAM therapies were herbal/ dietary supplements, acupuncture, massage, chiropractic, and homeopathy. The most commonly used conditions were pain, headache, attention deficit hyperactivity disorder (ADHD), asthma, and colic (Snyder & Brown, 2012). Most of the CAM therapies are given to children by

their parents. In Jordan, among 176 parents attending neurologic clinic, 56% reported that they had used CAM for their child's illness (Aburahma, Khader, Alzoubi, & Swalha, 2010).

Many parental level factors influence the use of CAM by parents of children across different diseases. Examples of these factors are parent's educational level, type of occupation (Ozturk & Karayagiz, 2008), parent's age, belief in its use as well as delay in improvement with conventional treatment (Aburahma et al., 2010).

A high prevalence of CAM use has been documented in children with chronic illnesses in UK, Australia, and China (Meyer et al., 2013). However, the focus of this study was on managing minor illnesses using CAM. For this study, minor illness was defined as an illness that can be managed at home including upper respiratory infections (common cold and influenza), digestive system problems (abdominal pain, diarrhea, constipation, and vomiting), fever, headache, skin rashes, inability to sleep, urinary tract infection, or others.

The overarching purpose of this study was to understand parental practices in Irbid, Jordan related to the use of CAM when caring for children complaining of minor illnesses. In particular the objectives of this study were to: 1) describe the percentage of parents who used CAM, 2) identify the most common CAM therapies that were used, the illnesses that were most apt to be treated using CAM, and the main reasons for using CAM, 3) detect the main sources of consultation and advice on using CAM, 4) describe parental perceptions of the effectiveness of using CAM, and 5) examine significant paternal socio-demographic predictors of using CAM.

2. Background and Significance

There is an emerging set of studies that were conducted to look at CAM in children. For example, the use of CAM among children in Turkey and the factors affecting their use were explored. Six hundred parents completed the structured questionnaires. They reported that 57% of parents used CAM therapies for their children, with herbal therapy used most frequently (77%). The most frequent reasons for using CAM among Turkish children were having respiratory problems (49%), having digestive problems (25%), comforting children (49%) and supporting prescribed medical therapy (59%). The most common recommendation to use CAM was originated from one or more family members (55%). Parents who were university graduates, lived in the city, had one child and had used this type of therapy themselves were more motivated to use CAM for their children. Most of the time, parents did not discuss CAM use with doctors or nurses. Thus, the authors concluded that health professionals should routinely ask parents about CAM use and discuss the reasons and expected outcomes of use (Ozturk & Karayagiz, 2008).

Another cross-sectional study was conducted in Turkey to assess the use of CAM therapies in children, factors that influence their use, and attitudes towards them. Ninety eight parents of children who attended gastroenterology outpatient clinics at a pediatric hospital completed a questionnaire about CAM use, awareness and attitudes. The majority of the respondents (69%) were using or had used CAM. The most frequently used CAM therapies were nutritional supplements (56%) and probiotics (50%). The referral by a friend or family member composed 53.2% of CAM users. Self-reported well-being was correlated with CAM use ($P = 0.000$) and 68% of parents described CAM therapies as partially effective. While 80% of the respondents believed that doctors should support the use of CAM. The authors concluded that awareness and acceptance of CAM by care givers of children with gastroenterology conditions is high (Wadhera, Lemberg, Leach, & Day, 2011).

In a comprehensive survey on the use of complementary health approaches conducted in the United States, researchers analyzed data from National Health Interview Survey (NHIS) that included more than 10,000 children aged 4 to 17. They found that 11.6% of the children had used or been given some form of complementary health product or practice, such as yoga or dietary supplements, during the past year. In children, complementary health practices were mostly used for back or neck pain, head or chest cold, anxiety or stress, and other musculoskeletal conditions. In addition to attention-deficit hyperactivity disorder (ADHD) or attention-deficit disorder (ADD), and insomnia or trouble sleeping (Black, Clarke, Barnes, Stussman, & Nahin, 2015).

Furthermore, based on a review of articles published between 1980 and 2012 in the United States, Hannan (2015) concluded that diverse alternative healthcare practices are regularly used. Mothers considered CAM practices effective as they passed from one generation to another. Hannan concluded that health care providers must be knowledgeable about CAM practices toward children and their potential complications. This can be achieved by obtaining accurate information from mothers and avoiding judgmental approach during the health assessment. Similar findings were reported in a cross-sectional study in Saudi Arabia that included 462 families selected through cluster-sampling. The authors found that 37.3% of the parents reported the use of CAM for their children including reciting the Quran, honey and Ferula asafoetida (26.1%, 21.5% and 18.8%, respectively). The authors concluded that parents' use of CAM for themselves is the most important predictor of its use for children (Gad,

Al-Faris, Al-Rowais, & Al-Rukban, 2013).

In Jordan, two studies were found that examined the use of CAM by parents of ill children. In the first study, the researchers evaluated CAM use among parents of children attending pediatric neurology clinic in North Jordan. Among the 176 parents who completed the questionnaire, 56% reported that they had used CAM for their child's neurological illness. Factors significantly associated with CAM use were speech delay, belief in its usefulness, mothers with education less than high school, and father's age more than 30 years (Aburahma et al., 2010). In the second study, 69 parents of children with cancer were surveyed in a pediatric oncology department. Around 62% of parents had used one type of CAM as minimum during the treatment of their children; 45% of CAM users perceived benefits of its use for their children with cancer. The most common used CAM therapies were biological and nutritional (70.5%), use of body and soul (22.2%), and body movement (20%). However, most of the patients (77.8%) had not discussed the use of CAM with the medical staff. An explanation for this might be that the assessment of CAM use is not a routine part of health care in Jordan. Potential interactions and benefits cannot be determined without adequate information about parental CAM behavior (Al-Qudimat, Rozmus, & Farhan, 2011).

In summary, the use of CAM therapy by parents of children suffering from different illnesses is increasing globally. However, there are many reasons and resources for using CAM. The use of CAM can be also influenced by many factors including personal beliefs. In most of the reviewed studies, parents did not consult their health care providers about CAM use. Since nurses are the first health care providers to contact in pediatric clinics, they have to develop a strong data base about the use of CAM. In addition, they have to enhance their knowledge and experience of assessing CAM use and providing valid consultation.

It is crucial to know what CAM therapies are used specifically by parents in the Jordanian culture. It is also crucial to recognize parents' perceptions in order to maintain open communication between health care providers and parents. This communication can help to develop effective public health education and assure safe use of CAM. Parents tend not to discuss CAM use with doctors or nurses (Ozturk & Karayagiz, 2008). However, since the roles of nurses in pediatric outpatient clinics are to take initial patient history, provide patient education and administer medications and prescribed treatments, nurses should always assess CAM use by parents and specify the reasons and outcomes of use. This can lead nurses to understand the use of CAM by parents and to guide them in their choices (Ozturk & Karayagiz, 2008).

Public health nurses can provide education about the most trusted sources of CAM therapies, the importance of adherence to the instructions of qualified professionals, and attention to the contraindications with medical treatment. To do this, nurses themselves should be well informed about the frequency, perceptions and factors affecting CAM use in their country as well as among other countries. It is also vital for nurses and other health care providers to understand the use of CAM within a cultural context. Though researchers have investigated the use of CAM for children in developing countries few have examined the use of CAM for children with minor illnesses and none have examined the use of CAM therapies among Jordanian children who suffer from minor illnesses.

3. Method

The current study used a cross-sectional, descriptive survey design to answer the question. The study was conducted in Irbid Governorate, the second largest city in Jordan after Amman. Irbid Governorate is covered by 124 public health centers, which provide the population with health care. Ten of these centers are comprehensive health centers and considered referral centers for the primary ones. These ten comprehensive health centers were used to conduct the study and recruit the sample. The comprehensive health centers were chosen because it was expected to find larger number of potential participants with various health conditions.

3.1 Sample

For the purpose of this study, participants were Jordanian parents of children under twelve years. A convenience sampling procedure was used to recruit participants. The inclusion criteria included: a father or mother aged 20 years or more, who is able to read and write Arabic, and who has at least one child less than 12 years. To achieve an adequate sample size 30 to 35 participants from the pediatric/ family clinic of each of the 10 health centers were recruited. A total of 350 questionnaires were distributed to participants who meet the inclusion criteria with a return of 328 questionnaires, a response rate of 93.7%.

Since there were eight independent variables (mother's age, father's age, father's educational level, mother's educational level, family income, number of children, living with a member of extended family, and belief in its use) and one dependent variable (Jordanian parent's use of CAM). Around 20-30 participants were needed to satisfy the required number of each variable (Pituch & Stevens, 2016). This means that 328 participants were enough to provide adequate power and examine the relationships among study variables.

3.2 Measures

A self-report structured questionnaire was used to examine parents' strategies of managing minor childhood illnesses using CAM. The instrument was developed by the researcher based on literature (Aburahma et al., 2010; Al-Qudimat, et al., 2010; Ozturk & Karayagiz, 2008). The questionnaire was prepared in English and translated to Arabic and back-translated to English again by someone who knows the two languages very well. The questionnaire was assessed by three experts in public health to evaluate the questions for face and content validity, inclusiveness, and readability before starting the data collection. For internal consistency reliability, Cronbach's alpha coefficient for CAM questionnaire including parents' perceptions was .79 in previous literature (Al-Qudimat, Rozmus, & Farhan, 2010) and 0.70 in the current study. The questionnaire was composed of three parts: Socio-demographics data sheet, parent's strategies of managing minor childhood illnesses using CAM, and parent's perceptions of using CAM.

Socio-demographic Data Sheet: This sheet included mother's age, father's age, participant's relationship to the child, religion, marital status, mother's educational level, father's educational level, number of children, if the parent lives with a member of extended family, mother's occupation, father's occupation, total household income, and the reason for visiting the health center.

Management of Minor Childhood Illnesses Using CAM: This questionnaire was a self-report instrument designed to measure strategies of managing minor childhood illnesses using CAM. It consisted of eight questions with two to ten alternatives. The questions included: if the parent believe in using CAM to treat children's illnesses (yes, no); if the parent used CAM to manage illnesses for his/her children (yes, no); types of childhood conditions that the parent use CAM for (upper respiratory infections, digestive system problems, fever, headache, skin rashes, inability to sleep, urinary tract infection, or others); types of CAM practices that the parent usually uses to treat child (herbs, special food, vitamins, relaxation technique, prayer or reading Quran/ holy book, spiritual healers, massage, body movement, aromatherapy or inhaled oil, cupping, acupuncture, or others); reasons for using CAM (making his/her child comfortable; supporting medical treatment; promoting health and preventing disease; reducing side effects of medical treatment; dissatisfaction with medical treatment; religious, cultural, or personal beliefs that it is helpful; tradition; no improvement in symptoms from medical treatment; medical expenses; or others); the resource of advice for using CAM (him/herself, mother or mother in law, spouse, friend, health care providers, media, alternative healer, or others); if the parent always consult a health care providers about CAM use (yes, no); and if yes, who does she/he consult (physician, nurse, nutritionist, pharmacist, or other)

Perceptions of using CAM to manage minor childhood illnesses: Six items were used to measure the degree of agreement of parent's opinion about using CAM. CAM could substitute for conventional treatment, CAM could be complementary to conventional treatment, CAM has less side effects than medicine conventional treatment, CAM is used to try all things aiming to help your child, CAM is safe to use, and CAM is efficient. The answers included (agree, don't agree, and don't know).

3.3 Protection of Human Rights

Approval of the study was obtained from the Institutional Review Board (IRB) of Jordan University of Science and Technology. Written informed consent was not requested by the IRB Committee. However, it was explained to the participants that an implied consent was assumed if they voluntarily complete and return the questionnaire. Confidentiality of the data collection process and anonymity of the questionnaires were maintained. The data was kept in locked files without identifiable information. This study had no risks and no direct benefits to the study participants. However, the participants were assured that data collected will help health care providers to develop health education programs about CAM use.

3.4 Data Collection Procedure

Participants were recruited from the ten comprehensive health centers in Irbid Governorate. For the purpose of data collection; the data collector who was trained by the researcher visited the health centers two to three times per week. The purpose of this study was explained to the nurses responsible for coordinating services in the comprehensive health centers. They were also provided with the inclusion criteria and introduced the researcher to potential participants. The data collector screened for eligibility among participants, explained the purpose of the study, clarified the questionnaire content, and answered participants' questions in a private room located in the clinic area. Upon the completion of the informed consent, a paper and pencil questionnaire was given to the participants who agreed to participate, and an envelope to put the completed questionnaires. These envelopes were collected by the researcher at the completion of filling of questionnaire. The paper and pencil approach was used to avoid any leading questions and wording bias by the data collector. The questionnaire took 10-15 minutes to be

completed. The data collector was available for any questions. Data were collected between September and December 2013.

3.5 Data Management and Analysis

Data were input into the Statistical Package for Social Sciences (SPSS) version 19. To answer the researcher questions, descriptive statistics such as (means, standard deviations, frequencies, and percentages) were used to synthesize and describe the socio-demographic characteristics of participants, the percentage of parents who use CAM, minor childhood illnesses managed by CAM, types of CAM therapies, reasons for using CAM, sources of advice and consultation for using CAM, and perceptions of Jordanian parents toward managing of childhood illnesses using CAM. Inferential statistics; logistic regression was used to examine significant paternal socio-demographic predictors of using CAM.

4. Findings

4.1 Sample Description

Among study participants, 287 mothers answered the questionnaire (87.5%) versus 41 fathers (12.5%). The mean age of mothers was 33.1 years (SD= 7.87), the mean age of fathers was 38 (SD= 8.2), the mean number of children was 3.5 (SD = 1.9), and the mean of monthly income was 482.2 (SD = 312.5). Other demographic characteristics are summarized in Table 1.

Table 1. Demographic variables of the study sample

Variable	Frequency	Percentage %
Religion		
Islam	318	97
Christianity	10	3
Child Relation		
Mother	287	87.5
Father	41	12.5
Marital s status		
Married	322	98.2
Widow	2	0.6
Divorced	4	1.2
Mother's Level of Education		
Less than secondary	43	13.1
Secondary	113	34.5
College or more	172	52.4
Father's Level of Education		
Less than secondary	59	18.0
Secondary	115	35.1
College or more	154	47.0
Living with extended family		
Yes	66	20.1
No	262	79.9
Mother's work		
Yes	219	66.8
No	109	33.2

4.2 Complementary and Alternative Medicine

In the current study, 80.5% of study participants (n= 264) used CAM to treat minor illness for their children. Among those who used CAM the top three illnesses were digestive system problems, upper respiratory tract infection, and urinary tract infection (Table 2). Herbs, Prayer and reading from the holy book (Quran), aromatherapy and special food were the most common types of CAM therapy (Table 3). The most frequent reasons for using CAM were making the child comfortable, supporting medical treatment, and promoting health and preventing disease (Table 4).

Table 2. Minor Illnesses Managed by CAM (n = 264)

Item #	Illness managed by CAM	Frequency	Percentage %
1.	Digestive system problems	190	72.0
2.	Upper respiratory infections	184	70.0
3.	Urinary tract infections	88	33.3
4.	Inability to sleep	63	23.9
5.	Fever	35	13.3
6.	Headache	26	9.8
7.	Skin rashes	10	3.8
8.	Others	5	1.9

Table 3. Types of CAM used CAM therapy (n= 264)

Item #	Type of CAM used	Frequency	Percentage %
1.	Herbs	232	87.9
2.	Prayer and Reading from the Holy book	173	65.5
3.	Aromatherapy	107	40.5
4.	Special food	100	37.9
5.	Massage	75	28.4
6.	Vitamins	60	22.7
7.	Relaxation technique	51	19.3
8.	Body movement	21	8.0
9.	Cupping	5	1.9
10.	Other	4	1.5
11.	Spiritual healer	2	0.8
12.	Acupuncture	0	0

Table 4. Reasons for using CAM

Item #	Reasons of using CAM	Frequency	Percentage
1.	Making my child comfortable	187	70.8
2.	Supporting medical treatment	109	41.3
3.	Promoting health and preventing disease	95	36.0
4.	Religious, cultural, or personal beliefs that it is helpful	65	24.6
5.	Reducing side effects of medical treatment	55	20.8
6.	Medical expenses	39	14.8
7.	Tradition	25	9.5
8.	No improvement in symptoms from medical treatment	24	9.1
9.	Dissatisfaction with medical treatment	14	5.3
10.	Others	2	0.8

Regarding the major resources of advice, 55.3% of study sample used CAM based on self-advice, 45.5% based on mother or mother in law advice, 36.4% based on friend’s advice, 24. 6% on health care provider. Furthermore, 12.5%, 10.2%, and 3.4% were based on spouse, media, and alternative healer respectively.

Of CAM users 72.3% reported that yes, they always consult their health care provider about CAM use. Among those who consult their providers, 85.9% usually consult the physician. However, only 23%, 22%, and 20.4% consult the pharmacist, nutritionist, or nurse respectively.

Regarding the perceptions towards CAM use, only 22% of all study participants perceived CAM as a substitute for conventional treatment. However, 69.2% perceived CAM as complementary to the conventional treatment. Around half of the study sample 47.3% agreed that CAM had less side effects than conventional medical treatment and percentage little over half 51.8% agreed that CAM is used to try all things aiming to help their child. Of the participants 64% agreed that CAM is safe to use and 71.6% agreed that CAM is efficient (Table 5).

Table 5. Parent’s Perceptions of Managing Minor Childhood Illnesses Using CAM (n = 328)

Item #	Perception statement	Agree n (%)	Don’t agree n (%)	Don’t know n (%)
1.	CAM could substitute for conventional treatment	72 (22%)	196 (59.8)	60 (18.3)
2.	CAM could be complementary to conventional treatment	227 (69.2)	67 (20.4)	34 (10.4)
3.	CAM has less side effects than medicine conventional treatment	155 (47.3)	85 (25.9)	88 (26.9)
4.	CAM is used to try all things aiming to help your child	170 (51.8)	108 (32.9)	50 (15.2)
5.	CAM is safe to use	210 (64)	58 (17.7)	60 (18.3)
6.	CAM is efficient	235 (71.6)	52 (15.9)	41 (12.5)

Logistic regression was used to examine significant paternal socio-demographic predictors of using CAM. Among all socio-demographic variables, only three independent variables made a statistically significant contribution to the model; CAM belief, father’s education, and living with extended family. The strongest predictor of reporting CAM use was CAM belief ($B = 3.976, p = .000$) with an odds ratio of 53.320 (95% CI 20.144 – 141.133). This indicated that parents who believed in CAM use had a significantly higher likelihood to report using CAM than those who reported not. Living with extended family was the second strongest predictor ($B = 1.489, p = .005$) with an odds ratio of 4.433 (95% CI 1.578 – 12.457). This indicated that parents who reported living with their extended families had a significantly higher likelihood to report using CAM than those who did not. The third predictor was father’s education ($B = -.807, p = .011$) with an odds ratio of .446 (95% CI .239 - .834). This indicated that fathers who reported a higher level of education had a significantly lower likelihood to report using CAM than those who reported a lower level of education (Table 6).

Table 6. Logistic regression summary for variables that predict CAM use

Variable	B	P	OR	Upper CI	Lower CI
Mother’s age	.023	.580	1.023	.943	1.111
Father’s age	.032	.434	1.032	.953	1.119
Mother’s education	-.229	.482	.796	.420	1.506
Father’s education	-.807	.011	.446	.239	.834
Number of children	-.134	.262	.875	.693	1.105
Living with extended family	1.489	.005	4.433	1.578	12.457
Total house income	.000	.543	1.000	.999	1.002
CAM belief	3.976	.000	53.320	20.144	141.133
Constant	-8.765	.000	.000		

5. Discussion

In this study most of the study participants used CAM to manage minor childhood illnesses. The percentage of CAM users in this Jordanian sample was higher than the study conducted in the US (Black et al., 2015) Turkey (Ozturk & Karayagiz, 2008) and Saudi Arabia (Gad et al., 2013). In the current study, digestive system problems and upper respiratory tract infections were the most common illnesses managed by CAM. The most common reasons for using CAM were making the child comfortable and supporting medical treatment. These results are congruent with the results from a study conducted in Turkey (Ozturk & Karayagiz, 2008). The availability and affordability of well-known herbs to manage digestive and respiratory problems might be one of the reasons to explain these results. The willingness of parents to comfort their sick child as soon as possible might be another reason.

Herbs, prayer, and aromatherapy were the most common types of CAM therapy in this study. Herbal therapy was the most frequently used in the study conducted in Turkey as well. (Ozturk & Karayagiz, 2008). One explanation might be that herbal use is a part of Jordanian culture and people traditionally boil and drink herbs even without sickness (e.g. chamomile, peppermint, sage, and rosemary). Herbs are also used to manage minor conditions and they found that herbs are really helpful in managing respiratory, digestive and urinary tract problems. However, there are some common useful herbs that are well known by most parents but certain herbs are only known by the older generation or experts. Reading from the holy book (reciting Quran) was the most frequent CAM therapy use in Saudi Arabia study (Gad et al., 2013). An explanation of prayer might be that people become very spiritual when they face any serious condition such as sickness of or losing any family member. So, Muslims in general believe that God's will plays a major role in their lives and the best method to ask for his mercy is through prayer and reciting Quran.

The major sources of advice in this study are either self, family member, or friend. These results are consistent with the study conducted in Turkey, where 80% of the respondents believed that doctors should support the use of CAM (Wadhwa et al., 2011). The majority of CAM users reported that they always consult their health care providers about CAM use and most of them usually consult the physician more than any other health care provider. An explanation of this result might be that physicians in the eastern culture are very well respected and may be more trusted regarding disease treatment and management in comparison to other providers.

The majority of the study participants perceived CAM as complementary to the conventional treatment, safe and efficient. These results are in agreement with the study conducted in Turkey where 80% of respondents believed that doctors should support the use of CAM and with the study conducted in Jordan where 45% of CAM users perceived benefits of its use (Aburahma et al., 2010). An explanation might be the cultural and religious beliefs of parents in Jordan where therapies as herbs, prayer, and special food are used constantly by others. Thus, parents perceived that these therapies will not cause harm even if they do not cure their child, they are affordable and convenient, and they can go parallel to the conventional treatment.

Finally, CAM belief, father's education, and living with extended family significantly predicted CAM use. Some of these results are consistent with the study conducted in Jordan regarding belief in its use and low education level of one parent (Aburahma et al., 2010). Regarding living with extended family member, it can be explained that these therapies are very well known and commonly used by older generation. So, the extended family members may provide additional advice and encourage CAM use, based on their knowledge and experience of perceived effective results. Also, fathers with lower level of education might have stronger belief in alternative treatment since they are closer to their belief system or culture.

5.1 Practice Implications

This study has some international implications for practice. One major implication is that there should always be a continuous assessment of parents' knowledge, perception, and use of CAM therapy to manage minor illnesses. Health care providers all over the world should explore parent's understanding of how to use CAM therapy and what to expect as an effect. They should always offer accurate education and training as needed. In order to do that, health care providers themselves should have an in depth knowledge about the appropriate use of CAM. They should also receive a professional training to support its use and explain its effect when necessary. They should always encourage the parents to consult with their health care providers as well to incorporate CAM use within the management plan if appropriate. They can also collaborate with professional CAM practitioners to develop education programs. Al-Qudimat, et al. (2011) stated that it is vital to know what CAM therapies are used by particular cultural groups and to maintain open communication about CAM therapies. The use of CAM therapies should be additionally investigated in the Middle Eastern culture. Worldwide policy makers should offer health care providers the required materials needed for accurate health education such as prepared pamphlets and

systematic protocol for assessment and management of minor illnesses. Health courses and programs should be planned to prepare professionals to play a significant role in providing health care, education, and counseling within a cultural context.

5.2 Recommendations

Further research is needed using a prospective design in other settings to explore parents' strategies of managing minor illnesses. Further studies are also recommended to investigate specific details about CAM products and procedures that are used by parents in the Jordanian culture and to assess parent's knowledge regarding these therapies. Intervention studies are needed for comparison between parents who were exposed to a health education program related to CAM use versus parents who were not. Finally, more studies are also needed to examine the knowledge and perceptions of health care providers about CAM use and the effectiveness of certain CAM therapies on the management of minor illness among children.

5.3 Study Limitations

There are some limitations for this study. The design was descriptive cross-sectional survey that does not take into account other factors such as the severity of the child's illness or use of CAM over time. The sample included only parents in the comprehensive health centers in Irbid city who agreed to participate, so the results cannot be generalized to all Jordanian parents. The data were self-reported which is subjected to recall bias. Furthermore, the objectives of the study were only to indicate whether the parents used certain CAM therapies such as herbs and aromatherapy without specifying the types of these therapies. In addition, only parents' perceptions of using CAM were investigated. However, parents' knowledge about CAM use or how they think it is safe or efficient were not investigated.

6. Conclusion

Using CAM to manage minor childhood illnesses may be common in this study, especially with digestive and upper respiratory diseases. However, the majority of parents depend on themselves or their families to seek advice which might lead to unfavorable consequences in case there was a delay in diagnosis and treatment. Some herbs and food types are really helpful in making the child more comfortable and supporting the medical treatment. However, they are not enough to cure the disease or sometimes they are not safe. Thus, health care providers in general should be able to assess CAM use, provide accurate health education and encourage parents to consult their health care providers about CAM use.

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Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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