Complementary and Alternative Medicine Research in Lebanon: implications for health care and policy

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What is CAM?

https://nccih.nih.gov/health/integrative-health
Complementary and alternative medicine in Lebanon: *Situation Analysis*

- Prevalence of CAM use
- What types of CAM are used?
- Is CAM used as complementary or alternative?
- Is the CAM used safe?
- Are consumers satisfied?
- Are physicians aware about what CAM patients are taking?
Understanding CAM in Lebanon:

1. The use of complementary and alternative medicine among Lebanese adults: results from a national survey *Naja F et al.*; (Under Review)

2. Complementary and alternative medicine use among pediatric patients with leukemia: the case of Lebanon *Naja F et al. 2011*; *Integrative Cancer Therapies*


Complementary and alternative medicine in Lebanon: *Situation Analysis*

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General Population → Patient populations
Prevalence of CAM Use among Lebanese adults (n=1500)

Prevalence of CAM use in Lebanon

- 70% Used CAM during the past 12 months
- 30% Never used CAM

Worldwide prevalence estimates of CAM use in adults

- Saudi Arabia: 74%
- Kuwait: 71%
- South Korea: 62%
- Canada (Ontario): 51%
- Nigeria: 47%
- USA: 40%
- Taiwan: 38%
- Lebanon: 30%
- England: 26%

Naja F et al. (under review)
Prevalence of CAM use among pediatric patients with leukemia (n=125)

Naja F et al. (2011)
Prevalence of CAM use among breast cancer patients (n=180)

### Prevalence of CAM use among Lebanese breast cancer patients

- 59% Used CAM since diagnosis
- 41% Never used CAM

### Worldwide prevalence estimates of CAM use among breast cancer patients

<table>
<thead>
<tr>
<th>Country</th>
<th>Prevalence of CAM use (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>86%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>71%</td>
</tr>
<tr>
<td>Germany</td>
<td>63%</td>
</tr>
<tr>
<td>Brazil</td>
<td>50%</td>
</tr>
<tr>
<td>Europe (11 countries)</td>
<td>45%</td>
</tr>
<tr>
<td>Lebanon</td>
<td>41%</td>
</tr>
</tbody>
</table>

Naja F et al. (under review)
Prevalence of CAM use among patients with diabetes (n=333)

Naja F et al. (2014)
Prevalence of CAM use among patients with infertility (n=213)

- Prevalence of CAM use in the study population on infertility in Lebanon:
  - 59% Used CAM at least once as treatment for infertility
  - 41% Never used CAM

- Worldwide prevalence of CAM use among patients with infertility:
  - Turkey (M,F): 82%
  - Lebanon (M,F): 41%
  - UK (F): 40%
  - Denmark (F): 31%
  - US (M,F): 29%

Ghazeeri G et al. (2012)
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General Population → Patient populations
Types of CAM used among Lebanese adults (n=448)

- Folk herbals: 75%
- Over the counter prescriptions: 32%
- Folk foods: 13%
- Vitamins and minerals: 11%

Naja F et al. (under review)
Types of CAM used among Lebanese adults (n=448) (cont’d): folk herbals

Folk herbals used among 75% of CAM users

- Green Tea: 20%
- Peppermint: 15%
- Chamomile: 18%
- Anise: 15%
- Kassain: 4%
- Thyme Tea: 5%
- Zhourat Tea: 14%

Other: 9%
Types of CAM used among Lebanese adults (n=448) (cont’d): vitamins and minerals

Vitamins and minerals used among 11% of CAM users

<table>
<thead>
<tr>
<th>Types of vitamins and minerals</th>
<th>Frequency of use (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multivitamins and minerals</td>
<td>41%</td>
</tr>
<tr>
<td>*Others</td>
<td>35%</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>18%</td>
</tr>
<tr>
<td>Iron</td>
<td>6%</td>
</tr>
</tbody>
</table>

‘Others’ category includes specific vitamin and mineral combinations with a health claim (e.g. weight reduction, hair growth, etc), vitamins B6, B7.

Naja F et al. (under review)
Types of CAM used among Lebanese pediatric leukemia patients (n=19)

- Prayer & spiritual healing: 29%
- Black seed: 29%
- Bone ash dissolved in water: 19%
- Green tea: 5%
- Green wheat: 5%
- Holy water: 5%
- Honey & carob syrup: 5%
- Rosemary: 5%

Naja F et al. (2011)
Types of CAM used among breast cancer patients in Lebanon (n=73)

*Other CAM reported were Aroma therapy (n=2); inhalation of Cannabis ‘Hashishi’ (n=1), intake of Shark collagen (n=1).

Naja F et al. (under review)
Types of CAM used among patients with T2DM (n=127)

Naja F et al. (2014)
Types of CAM used among patients with infertility in Lebanon (n=87)

Ghazeeri G et al. (2012)
Complementary and alternative medicine in Lebanon: *Situation Analysis*

- **What types of CAM are used?**
- **Prevalence of CAM use**
- **Is CAM used as complementary or alternative?**
- **Is the CAM used safe?**
- **Are consumers satisfied?**
- **Are physicians aware about what CAM patients are taking?**

**General Population**

**Patient populations**
Disclosure to physicians among Lebanese adults who use CAM (n=437)

- 28% of Lebanese adults consulted a doctor before using CAM.
- 72% of Lebanese adults did not consult a doctor before using CAM.

Naja F et al. (under review)
Disclosure to physician among Lebanese pediatric leukemia patients (n=19)

- 32% of parents asked the physician about CAM use
- 68% of parents did not ask the physician about CAM use

Naja F et al. (2011)
Disclosure to physician and physician’s reaction among breast cancer patients in Lebanon (n=73)

*Values in () are percentages.

Naja F et al. (under review)
Disclosure to physician among patients with T2D in Lebanon (n=130)

93% of T2D patients consulted a doctor before using CAM.

7% of T2D patients did not consult a doctor before using CAM.

Naja F et al. (2014)
Disclosure to physician among patients with infertility in Lebanon (n=87)

- Patients with infertility reported CAM use to physician: 13%
- Patients with infertility did not report CAM use to physician: 87%

Ghazeeri G et al. (2012)
Complementary and alternative medicine in Lebanon: *Situation Analysis*

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General Population → Patient populations
General and patient Lebanese populations: Satisfaction vs Side Effects from CAM Use

Satisfaction vs Side Effects from CAM

CAM users

Lebanese Adults (n=437)
Leukemia patients (n=19)
Breast cancer patients (n=73)
T2D patients (n=130)
Infertile patients (n=87)

Frequency (%)

Naja F et al. (2011,2014,under review)
Ghazeeri G et al. (2012)
Complementary and alternative medicine in Lebanon: *Situation Analysis*

- What types of CAM are used?
- Prevalence of CAM use
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General Population

Patient populations
General and patient Lebanese populations: Complementary vs Alternative CAM Use

<table>
<thead>
<tr>
<th>CAM users</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults (n=187)</td>
<td></td>
</tr>
<tr>
<td>*Breast cancer patients (n=180)</td>
<td></td>
</tr>
<tr>
<td>*Pediatric leukemia patients (n=19)</td>
<td></td>
</tr>
<tr>
<td>*T2D patients (n=86)</td>
<td></td>
</tr>
<tr>
<td>*Patients with infertility (n=87)</td>
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</tr>
</tbody>
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*Complementary: Concomitant use of CAM with conventional treatment

Naja F et al. (2011,2014,under review)
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**Patient populations**
Regulation Process

- 1998: The Lebanese MOH assigned an expert committee to regulate the entry of CAM products in the Lebanese Market. (decree number 11710)

- The committee, led by the Director General of the MOH, includes 7 members (trade, education and research communities) . The recommendations of this committee receive final approval from the Minister of Health.
Regulation Process (cont’d)

<table>
<thead>
<tr>
<th>Product submitted for review to CAM Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Free Sale Certificate</td>
</tr>
<tr>
<td>2. Good Manufacturing Product Certificate</td>
</tr>
</tbody>
</table>

**Assessment and Description of Constituents**

| 1. Chemicals/unusual compounds included       |
| 2. Toxicity and RDA requirement               |
| 3. Sideeffects and Drug Interaction           |

**Check for Labeling**

<table>
<thead>
<tr>
<th>Manufacturing Country</th>
<th>Composition</th>
<th>Method of Use</th>
<th>Therapeutic Claim</th>
</tr>
</thead>
</table>

**Safety Checks**

- Scientific Research and Literature looking for evidence of safety

*Figure 1 The CAM Review Process in Lebanon.*
Assessment of the CAM regulations: Qualitative study

PROFESSIONAL ASSOCIATIONS
- CAM1. Consumer protection
- CAM5. Pharmacists
- CAM7. Physicians
- CAM10. Consumer protection

ACADEMICS
- CAM6. Herbal Medicine
- CAM12. Agriculture and food sciences
- CAM9. Pharmacology

DECISION MAKERS
- CAM2. Nutrition/Agriculture
- CAM3. Laboratory
- CAM11. Medicine

POLICY MAKERS
- CAM4. CAM product licensure
- CAM15. Ministry of Health

IMPORTERS/DISTRIBUTORS
- CAM8. European & American products
- CAM14. Products of various origins
- CAM16. Leading brand manager

MEDIA
- CAM13. A leading media figure with experience in nutrition
The most cited critique!

“The law as it stands today is not the biggest problem; it is rather the compliance to existing regulations and the need to update and strengthen these regulations”
Additional critiques....

- The product entry process
  - Overruling the decision of the review committee
- The review process
  - Need for laboratory testing
  - More qualified members on the review committee
- The selling process
  - Selling practices are erratic and need urgent regulation
  - Pricing
Barriers for proper regulation:

- weak infrastructure
  - Lack of central laboratory
  - Absence of database
- poor regulation
  - The decision of the committee is “advisory “and not binding
- negative role played by politics
  - Political endorsement of some distributors.
- poor awareness of both the public and the healthcare providers of CAM
- sub-optimal coordination and cooperation among stakeholders
Recommendations

- A national drug policy, endorsed by all concerned stakeholders, and supported by a clear plan of action. Such a policy would aim at enhancing public safety and well-being through the proper regulation and integration of CAM products into healthcare system.

- Political resolve coupled with the support of all stakeholders, would be prerequisites for the success of current and future regulation and integration attempts.
Who are the stakeholders?

Order of Pharmacists
Order of Physicians

Academic Institutions

Ministry of Health

Distributors

Ministry of Economics and Trade

Ministry of Interior

Media outlets

Consumer Protection Agency
Acknowledgments

- Dr Mohamad Alameddine, Department of Health Management and Policy, American University of Beirut
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  - The Lebanese National Council for Scientific Research
  - The University Research Board
- The great team of research assistants and graduate students at the department of Nutrition and Food Sciences, American University of Beirut.
- Study participants!


