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Research Article

Herbal drugs: knowledge, attitude and practice of its concurrent use with allopathic drugs, scientific testing and effectiveness in common diseases among educated class

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ABSTRACT

Background: Craving for a holistic approach for healthcare and concern about side effect of the chemically produced drug is increasing interest in herbal medicine. There is a favourable perception about its effectiveness in complete cure of certain diseases. Its regulation, concurrent use with allopathic medicine and scientific testing has always been of concern.

Methods: Cross sectional descriptive study was done using predesigned questionnaire among the educated class. Socio-demographic data, attitude and practice about simultaneous use, effectiveness in common disease, scientific testing and regulation of herbal medicine were asked. Also a rating of different system of medicine i.e allopathy, unani, ayurveda, homeopathy was asked.

Results: Total completed participants were 120. Across level of education use of herbal medicine was 55% in the last 1 year, 56.7% have used or intend to use herbal along with allopathic and only 18.9 % tell it to treating physician. 50% consider concurrent use as safe, 43% believe it cures completely, 31.7% consider equally effective than allopathic and 95% have not encountered any side effect or allergic reaction with it. A majority did not know about any scientific testing and clinical study of herbal drugs.

Conclusions: Herbal medicines have very positive perception. The regulatory authorities are also patronising it in many countries. They are also being used along with allopathic medicine and many times even without knowledge of treating doctor. The perception about herbal medicine is historical based on personal or clinical experiences, mostly lacking with good grade of strength of evidence. There is need to have Level Ia or Ib evidence for their effectiveness and safety.

Keywords: Herbal drugs, Complementary and alternative medicine, Drug herb interaction, Doctor patient communication

INTRODUCTION

Traditional medicine/complementary medicine have historically been considered as safer and holistic way of treatment. Unanimity over the definition of tradition/complimentary medicine is still elusive. National center for complementary and alternative medicine define as "a group of diverse medical and

health care systems, practices and products that are not presently considered to be part of conventional medicine". 1

The WHO traditional medicine strategies; 2002-2005 document mentions that "traditional medicine" is a comprehensive term used to refer both to TM systems such as traditional Chinese medicine, Indian ayurveda

and Arabic unani medicine, and to various forms of indigenous medicine. It also includes herbal medicines." The document defines "herbal medicines include herbs, herbal materials, herbal preparations and finished herbal products that contain as active ingredients parts of plants, or other plant materials, or combinations thereof."²

There is an upsurge of public interest and use of herbal medicine. This trend is common throughout the developed and developing world. Different studies suggest that use of some form of CAM therapy in different countries ranges from 30 to 80%. ³⁻⁶

Concern about side effects of the chemically synthesized drugs, and inclination towards holistic approach to healthcare has further contributed its growth. In many parts of the world scientific investigation, drug standardization and official pharmacopeia of these systems are being developed. The government health care systems also gives due importance to it. In India a separate Ministry of Ayush (ayrveda, unani, sidhha, homeopathy) been created to promote research and to bring traditional medicine closer to the principles of evidence based medicine. Ayurveda and unani are practiced throughout India and sidha system mostly in south India. At present there are approximately 246 ayurveda and 46 unani medical colleges in India. Annual herbs sales, between 1999 and 2000, were estimated at 6705 million Indian rupees. 10,111

This paper is part of a research study and some data of the study has already published and available.¹² The remaining data and its analysis is being presented here. In this paper the knowledge attitude about herbal medicine in common disease condition, its concurrent use with allopathic drugs, perception about its effectiveness compared to allopathic drugs, knowledge about its scientific testing for efficacy and safety have been focused.

Herbal drugs are widely used for the management of many of the chronic conditions. There is a favourable perception about effectiveness of herbal medicine in complete cure of certain disease e.g. liver disease, asthma, sinusitis, GI diseases, gynecological problem, hair falling, sexual problem, joint pain etc. They are often used along with allopathic drugs sometimes without the knowledge of treating physician of allopathic system. There is a concern with respect to drug interaction. There are some studies among health care professional on these aspect of herbal medicines but hardly any study among general public. ^{13,14} The need of regulation and scientific testing of herbal drugs has always been a concern. The knowledge and attitude about it among the users will determine its rational use.

Hence, the present work is aimed at studying the knowledge, attitude and practice of these aspects of herbal medicine among the educated class in India.

Finally it was also interesting to know the overall rating of allopathic, ayurveda, unani and homeopathy given by the participants on the scale of 10.

METHODS

A cross-sectional descriptive study was conducted in a city in north India. The data were collected based on socio-demography, as well as knowledge, attitude and practice of herbal medicine using a pre-designed questionnaire in English language that was to be filled by participants. Study was approved by institutional ethics committee. All participants were well versed in English language and minimum qualification of participants was matric (secondary school). Participants were given sufficient time to fill the form. Questionnaire included the following

- Socio-demographic data including age, sex, residence, education, income group etc.
- Use of herbal medicine along with allopathic medicine and informing it to treating doctor and perception about concurrent use.
- Effectiveness in different disease condition.
- Knowledge about scientific testing and regulation of herbal medicine.
- Overall rating of different system of medicine i.e. allopathy, unani, ayurveda, homeopathy.

RESULTS

Total 134 participants were enrolled. Out of this 14 incomplete questionnaires were excluded. 120 subjects completed the survey. The socio-demographical data of i.e. age distribution, place (urban/rural/semi urban), family monthly income, level of education, field of education has been detailed in previous publication of the study and available in public domain and not being repeated. Some important socio-demographic figures were following. There were 82 (68.3%) male and 38 (31.7%) females. Among the participants 68% were graduate or post graduate, PhD (11.7%) and rest were matriculation or post matric diploma. Across the gender and level of education 66 (55%) participants have used herbal medicine in last 1 Year.

Out of total participants 56.7% have used or intend to use herbal medicine along with allopathic and only 18.9% tell this to treating allopathic physician about the use and remaining 81.1% don't inform the doctor for different reasons with good number believing concurrent use as safe (Table 1, 2, 3). For effectiveness of herbal drugs 43% believe that it cures completely and 31.7% consider equally effective as allopathic and 16% believe more effective than allopathic. 114 (95%) have not encountered any side effect or allergic reaction from herbal drugs (Table 4). Perceptions of effectiveness of herbal drugs in some specific disease condition were asked.

Table 1: Concurrent use of herbal medicine along with allopathic drugs.

	Number (%) saying yes or no	
	Yes (%)	No (%)
Already used or may use herbal medicine along with allopathic	68 (56.7)	52 (43.3 %)
If you will use, will tell to treating physician about concurrent use	14 (11.7%)	60 (50.0%)

Table 2: What is the reason for not telling to doctor about concurrent use of allopathic and herbal drugs?

If not telling to doctor, w	hat is the reason (n=60)
Not essential	28 (46.6%)
Doctor would be angry	6 (10%)
Will lose faith in me	14 (23.3%)
Doctor never asked	10 (16.6%)
Medications for different problems	2 (3.3%)

Table 3: Do you consider the concurrent use of herbal drugs and allopathic are safe?

Do you consider the concurrent use of herbal drugs and allopathic as safe		
Safe	60 (50%)	
Maybe harmful	50 (41.7%)	
Not safe	10 (8.3%)	

Among the participants 96 (80%) believe that herbal drug either cure completely or at least treat the liver diseases. The percentage of people believing to get cured or treated by herbal drugs for other diseases has been detailed (Table 5). Questions were asked on testing of herbal drugs

safety, efficacy and constituents. A overwhelming majority were not having any idea on scientific testing for safety, efficacy or constituent of herbal drugs and contrary to many favorable perception only 44 (36.6%) were using or intend to use herbal drugs in children (Table 6).

Overall rating of different system of medicine was asked on scale of 10. Among the participants 84 (70%) respondents rated allopathic as good (score 7-8) or very good (score 9) that was highest among all system. Scoring of all systems has been detailed (Table 7).

Table 4: Effectiveness of herbal drugs drug in curing the disease, effectiveness compared to allopathic, time taken for cure, having encountered any side effect.

How effective herbal medicines	are (N-120)				
Cure completely	52 (43.3%)				
May or may not cure completely	56 (46.7%)				
Only reduce symptoms	12 (10%)				
Effectiveness of herbal medicine	es compared to				
allopathic medicine (N= 120)					
Less effective	66 (55%)				
Equally effective	38 (31.7%)				
More effective	16 (13.3%)				
Time taken by HM for healing (Time taken by HM for healing (N=120)				
Not fit for emergencies	56 (46.7%)				
Takes too much time	28 (23.3%)				
1 and 2 both	34 (28.3%)				
Have you encountered any aller	gic reaction and side				
effect with herbal drugs (N=120)				
No	114 (95%)				
Yes (allergic reaction)	6 (5%)				
The reported allergic reactions were itching, rashes and					
restlessness.					

Table 5: Efficacy of herbal medicine in different disease condition.

Disease condition	Cure completely (N=120)	Treat the disease (N=120)	Ineffective (N=120)	No idea (N=120)
Liver disease	58 (48.3%)	38 (31.7%)	18 (15%)	6 (5%)
Asthma	16 (13.3%)	34 (28.3%)	60 (50%)	10 (8.3%)
Diabetes	12 (10%)	36 (30%)	56 (46.7%)	16 (13.3%)
Hypertension	4 (3.3%)	22 (18.3%)	78 (65%)	16 (13.3%)
Sinusitis	16 (13.3%)	36 (30%)	56 (46.7%)	12 (10%)
GI diseases	28 (23.3%)	40 (33.3%)	40 (33.3%)	12 (10%)
Tuberculosis	8 (6.7%)	8 (6.7%)	86 (71.7%)	18 (15%)
Any other condition seems to be effective	The respondents number affirming effectiveness in gynecological problem (12), hair falling (6), sexual problem (16), joint pain (2)			

Table 6: Are herbal drugs are scientifically tested for safety, efficacy and constituents?

Tested for	Yes (tested) (N=120)	No (not tested) (N=120)	Don't know (N=120)	
Tested for safety	8 (6.66%)	18 (15%)	94 (78.33%)	
Tested for efficacy	18 (15%)	10 (8.33%)	92 (76.66%)	
Tested for constituents	12 (10%)	16 (13.33%)	92 (76.66%)	
Use of herbal drugs in	The respondents number affirming use/can use in children were 44 (36.6%) and those were			
children	not using/not intend to use in children were 76 (63.3%)			

Table 7: Overall rating of different system of medicine on the scale of 10.

Rating (score out of 10)	Allopathic (N=120)	Ayurveda (N=120)	Unani (N=120)	Homeopathic (N=120)
2 (Very poor)	0 (0%)	0 (0%)	2 (1.7%)	0 (0%)
3-4 (Poor)	8 (6.6%)	32 (26.6%)	26 (21.6%)	20 (16.6%)
5-6 (Average)	28 (23.3%)	64 (53.3%)	64 (53.3%)	28 (28.3%)
7-8 (Good)	70 (58.3%)	22 (18.3%)	24 (20%)	10 (8.3%)
9 (Very good)	14 (11.66%)	0 (0%)	4 (3.3%)	0 (0%)
No of respondents not rated	0 (0%)	2 (1.7%)	0 (0%)	62 (51.7%)

DISCUSSION

Herbal drugs are increasingly being used and very often along with allopathic prescription drugs. In this study 56.7% have used or intend to use them concurrently. As 60% believe concurrent use as safe so a high prevalence of concurrent use is not surprising. High prevalence of concurrent use has also been reported in earlier studies. 15,16 This is serious concern as herbal drugs have well documented pharmacokinetic or pharmacodynamic interaction with allopathic drugs.¹⁷ Many has been described as major interaction and some even contraindication. 18,19 Apart from its concurrent use another concern is of not informing the treating doctors about it. The reason for not telling to doctor was very interesting ranging from being angry or losing faith to not being asked by doctor. Being angry or losing faith and considering not essential to inform the doctor points out the importance of effective doctor patient communication. Effective communication is critical in building patient doctor relationship that is central to high quality health care system. 20,21

46.6% of participants considering non-essential to inform also points out the need of awareness among patients about importance of telling everything about disease and treatment taken. The reason of physician never asked points out the importance of active questioning by doctor while taking treatment history.

Perception of effectiveness of herbal drugs in liver diseases was very high. There is hardly any standard hepato-protective drug in allopathic system. ²² Even for infective hepatic condition like viral hepatitis the drug treatment is not satisfactory. ^{23,24} These all have given free

space for public perception and use of herbal drugs and many herbal drugs are used in liver diseases. Gastrointestinal disease was other condition having good perception of being cured or treated with 56.6% having positive opinion. Many of the GI symptoms are vague and attributed to functional disorder and even psychosocial factors are involved. There is a need of properly designed clinical trials to test the effectiveness of herbal drugs in different disease condition. So a proportionate relation between perception and scientifically proved efficacy could be established.

Many of these data indicates very favourable perception about herbal medicine. Perception and faith has important bearing on compliance and health care system of country should take account of it. But contrary to many favourable perceptions only 44 (36.6%) were using or intend to use herbal drugs in children pointing towards concern of efficacy of herbal drugs in special conditions. The much higher overall rating of allopathic compared to ayurveda and unani system is also pointing towards limitation of these systems. Overall rating of different system gives idea about preference after considering advantages and shortfalls.

A great majority of respondent (76-78%) were having no idea about scientific testing of herbal drugs for efficacy, safety or chemical constituent. The scientific testing to meet the standard of evidence based medicine and strict regulation have always been a concern for herbal medicine. Many of these products are marketed as dietary supplement and does not come under strict regulation for a drug. Dietary supplements are governed by different act and generally does not require safety and efficacy studies for marketing approval, as per the Drugs and Cosmetics

Act of 1940 (DCA) in India and also in other countries.^{28,29}

There is also problem of unethical marketing practices leading to false claim about the safety and efficacy of these products. False claims are being promoted in print and electronic media and through the Internet. Although a statement claiming to treat, prevent, diagnose, or cure specific diseases by these products is not permissible by law, in reality practice is rampant. A study of internet marketing found good percentage of website advertisement of these products claim treatment of specific disease. ³⁰

Herbal medicine has a strong presence and very positive perception among the educated class. They are getting good support from state healthcare authorities.

Good percentage of people concurrently using herbal drugs along with prescribed allopathic drugs, which may result serious pharmacokinetic or dynamic interaction in many cases. So there is a need of effective doctor patient communication and active questioning in treatment history about herbal drugs use. Herbal drugs are many times promoted as dietary supplements having lighter condition for marketing approval. Many times their use is driven by widespread unethical promotion, advertisement and the unsubstantiated health care claims. The regulatory authorities should take care of it and should make a comprehensive policy to tackle this. The perception about herbal medicine is historical based on personal or clinical experiences, mostly lacking with good grade of strength of evidence. There is need to have scientifically validated data in support of its efficacy and safety specially Ia evidence (obtained from meta-analysis of RCTs) or Ib evidence (obtained from at least one RCT).31 All the stakeholders should expedite the herbal drug research on the principles of evidence based medicine and should solve the challenges related with efficacy, safety monitoring, quality control and regulatory aspect of herbal drugs.

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