



## Research Article

**INTEGRATION OF AYURVEDA WITH BIOMEDICINE: A RESPONSE IDENTIFICATION CROSS SECTIONAL SURVEY****Sulochana Bhat<sup>1</sup>, Saketh Ram Thrigulla<sup>2\*</sup>, N Srikanth<sup>3</sup>, M.M. Padhi<sup>4</sup>, Kartar Singh Dhiman<sup>5</sup>**<sup>1</sup>Research Officer (S-3), Advanced Centre for Ayurveda in Mental Health and Neuro Sciences Ayurvedic Research Unit, NIMHNS, Hosur Road, Bengaluru, India.<sup>2</sup>Research Officer (Ay.), Ministry of AYUSH, Ayush Bhawan, GPO Complex, INA Market, New Delhi, India.<sup>3</sup>Assistant Director (Ay.), <sup>4</sup>Deputy Director General, <sup>5</sup>Director General Central Council for Research in Ayurvedic Sciences (CCRAS), Janakpuri, New Delhi, India.**Article info****Article History:**

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**Keywords:** Ayurveda, Biomedicine, Integration, Funcional Integration, Mainstreaming, Safety And Efficacy Ayush, Primary Care, Tertiary Care.**ABSTRACT****Background:** There is re-emergence of the integrative approach to facilitate affordable, safe and equitable health to all. Due to the active initiatives taken up by the Government of India and other stake holders the reach of Ayurveda has expanded along with wide spread consumer acceptance. The efforts to co-locate Ayurveda centers along with bio-medical facilities across India through programs like National Rural Health Mission (NRHM) are limited to the extent of only physical proximity between biomedicine and Ayurveda and far away from the possibility of functional integration granulated to the level of clinical service delivery together.**Objective:** To document the perceptions of biomedical practitioners about Ayurveda and possible integration with the biomedicine.**Methods:** Survey through self administered questionnaire carried out at Safdarjung Hospital, New Delhi involving 300 doctors from various biomedical medical specialties. Out of them, 98 doctors did not respond where as 202 responses were received in the stipulated format, which were analyzed, and interpreted based on standard statistical methods.**Results:** From the analysis of 202 responses, it is evident that all the respondents were aware of basic principles and strengths of Ayurveda. They also opined that, integration is useful to strengthen the overall health care delivery in India. Further, they expressed that the communication barrier between practitioners of Ayurveda and Biomedicine, meagre research work with respect to safety and efficacy of Ayurvedic medicines and therapies, inadequate policy initiatives are the important obstacles in realizing functional integration between Ayurveda and Biomedicine.**Conclusion:** The survey reported good level of awareness of biomedical practitioners and their supportive attitude about the integration. Need for upgrading the skills of Ayurveda practitioners, safety and efficacy of the medicines, interdisciplinary research, information sharing and coordination between practitioners of Ayurveda and Biomedicine are identified as essential elements for successful integration.**\*Address for correspondence****Dr. Saketh Ram Thrigulla**Research Officer (Ayu.),  
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Email: [dr.saketram@gmail.com](mailto:dr.saketram@gmail.com)**INTRODUCTION**

Traditional medicine (TM) is widely used by the community for various of health problems worldwide.<sup>[1-2]</sup> Owing to the increased consumer awareness many medical practitioners, academicians and scientists are venturing themselves to examine and consider the merits of Ayurveda. The trend has lead to conceive the idea of integration of Biomedicine with Ayurveda as it may be mutually benefit both the medical systems in the form of filling up he the gaps in biomedical management certain lifestyle related diseases and also set suitable

platform for propagating holistic, patient oriented, personalized medicine based on the tenets of Ayurveda.

The health care model adopted by India after Independence is based on the recommendations of various committees that were commissioned to shape the country's healthcare system. Udupa Committee in its report published as early as in 1958 recommended that there is a need for integrated system of medicine in India.<sup>[3]</sup> National Health Policy (1983 & 2000), National

Population Policy (2000), National Policy on ISM & H (2002), National Rural Health Mission (2005 - 2012) are Some of the major policy initiatives of Govt. of India for mainstreaming of Ayurveda<sup>[4]</sup>. As of now many Government, private hospitals and research units have co-located Ayurvedic treatment units in their campuses, however in most of the cases there is no operational integration between Ayurveda and Biomedicine. In such a scenario the process of mainstreaming should not be seen only as a process of co-location by appointing an Ayurveda practitioner and Ayurvedic medicines in an existing biomedical facility<sup>[5]</sup> without any functional interaction. Sanjeev Rastogi compares the process of integration to that of an umbrella where in different medical systems may work as the spine and cloth of it. He recommends a balanced approach without prejudices and favours, undue criticism to reach the ultimate goal of health for all through the approach of integration<sup>[6]</sup>. Bhushan Patwardhan advocates a cautious approach while dealing with issue of integration as it is like 'riding the tiger' with an impending risk of "a risk of losing identity and getting lost or carried away, as also equally, there is a danger of getting swamped."<sup>[7]</sup> V. Sujatha has observed that, there is no organizational parity between Ayurveda and Biomedicine and the focus of Ayurveda per se must be public health rather than the global health market.<sup>[8]</sup> Terence J Ryan describes the meaning of "Integrated and Integrative" as an amalgam of latest scientific advances with ancient healing systems, of complementary medicine and biomedicine with a seamless good quality care between hospital and primary care<sup>[9]</sup>. Keeping in view of the need to understand the perspectives of Biomedical doctors, the current study was designed with the following objectives:

1. To collate the information about the attitude and the awareness of biomedical doctors about Ayurveda through a self-administered questionnaire.

2. To collate the perspective of biomedical doctors about the role of Ayurveda in strengthening the present health care system.
3. To gather the information regarding the opinion of biomedical doctors towards the integration of Ayurveda and Allopathy in prevention and management of some health conditions.

**To achieve the objectives stated above,** a pre-validated survey questionnaire was prepared and provided to 300 biomedical doctors from different specialities at Safdarjung Hospital, New Delhi. The doctors on regular rolls of the hospital were included in the study, and residents, contractual doctors were excluded in the study (to ensure availability of respondents during survey period). Total duration of the survey was for two weeks and the survey was conducted by the physician appointed at Ayurvedic unit co-located in the hospital during 2008-09. The questionnaire consisted of twelve objective type questions and one descriptive question. The survey questionnaire having four main sections: 1. Demographic characters of the respondents, 2. Awareness about Ayurveda, 3. Attitude about integration and 4. Opinion and suggestions of the respondents for making Ayurveda more acceptable and elicited single response for certain questions and sought multiple responses for some.

**Statistical methods:** sample size was calculated by using Raosoft sample size calculator<sup>[10]</sup>. Out of total population of 300 biomedical practitioners 169 respondents were required to conduct the study with 5% margin of error, 95% confidence level and 50% response of distribution. Each variable of the survey questionnaire was analysed and their percentage value was calculated. SPSS version 15.0 was used for analysis of data. In the analysis total number of responders to each question was considered.

**Results:** Out of 300 practicing doctors who were provided with the questionnaire, 98 practitioners who either declined or failed to respond are categorized as 'non respondents'. The reasons assigned by them for non response were also collated where ever it was possible.

**Table 1: Awareness about the basic principles and concepts of Ayurveda- multiple options (n=202)**

S. No.	Basic Concepts	No. of Practitioners	Percentage
1.	<i>Tridosha</i> Theory	60	29.70
2.	Gives more stress on prevention	92	45.54
3.	Importance is given to mind and spirit also	117	57.92
4.	Recommends healthy lifestyle	111	54.95
5.	Preparation of diet for prevention & treatment of diseases	170	84.16
6.	Holistic approach	79	39.11
7.	Cleansing measures like Panchkarma	152	75.25
8.	Use of natural products in the treatment	176	87.13
9.	Any other*	54	26.73

\*The response was *Vata, Patta and Kapha*, spiritual therapy, astronomy

**Table 2: Awareness about the strength of Ayurvedic medicine in some diseases - Multiple options (n=202)**

S. No.	Diseases/ conditions	No. of Practitioners	Percentage
1.	Joint Disorders	148	73.27
2.	Neurological	63	31.19
3.	Gastrointestinal	57	28.22
4.	Chronic Pain	65	32.18
5.	Women's Problems	54	26.73
6.	Skin diseases	110	54.46
7.	Liver Disorders	107	52.97
8.	Allergy	75	37.13
9.	None	4	1.98
10.	Any Other, Please specify	0	0.00

**Table 3: Opinion about the side effects of Ayurvedic medicine (n=202)**

S. No.	Occurrence of Side effects	No. of Practitioners	Percentage
1.	Yes	113	55.94
2.	No	6	2.97
3.	Don't Know	83	41.09
4.	Others, Specify	0	0.00
	<b>Total</b>	<b>202</b>	<b>100.00</b>

**Table 4: Reason for referring the patients by allopathic practitioners to Ayurvedic unit- multiple options (n=202)**

S. No.	Reason for referral	No. of Practitioners	Percentage
1.	As a First Choice	2	0.99
2.	Biomedical medicine did not help	37	18.32
3.	Developed Side effects	11	5.44
4.	Patient Opted for it	0	0.00
5.	As add-on therapy	26	12.87
6.	Not Applicable	132	65.64
7.	Any Other, Please Specify*	9	4.45

\* recommended but not referred

**Table 5: Reason for not referring any patient to Ayurvedic unit in the hospital- Multiple Options (n=202)**

S. No.	Reason for not referring	No. of Practitioners	Percentage
1.	I never felt the need	48	23.76
2.	Medicine are not effective	12	5.94
3.	The system is not Scientific	23	11.39
4.	Medicine have side effect	16	7.92
5.	Quality standard of the medicines	21	10.40
6.	Not Convinced about the system	45	22.28
7.	Not Convinced about the doctors	14	6.93
8.	It is not my system	82	40.59
9.	Not Applicable	37	18.32

**Table 6: Willingness to participate in a collaborative project with Ayurveda in different departments of the hospital (n=202)**

S. No.	Willingness to participate	No. of Practitioners	Percentage
1.	Yes	99	49.01
2.	No	6	2.97
3.	Not Sure	31	15.35
4.	I will support but not participate	51	25.25
5.	Any other	15	7.42
6.	Total	202	100.00

**Table 7: Best areas for integration- multiple options (n=202)**

S. No.	Possible Problem	No. of Practitioners	Percentage
1.	Preventive	167	82.67
2.	Joint Disorders	94	46.53
3.	Neurological	43	21.29
4.	Gastrointestinal	55	27.23
5.	Chronic Pain	58	28.71
6.	Cancer	24	11.88
7.	HIV / AIDS	19	9.41
8.	Women's Problem	27	13.37
9.	Skin Diseases	118	58.42
10.	Psychology / psychiatry	53	26.24
11.	Any Other	0	0.00

**Table 8: Suggestions on ways to make Ayurveda more acceptable to allopathic doctors- multiple options (n=202)**

S. No.	Suggestions to make Ayurveda more acceptable	No. of Practitioners	Percentage
1.	Through IEC (Information Education Communication) Strategy	117	57.92
2.	Scientific Validation	192	95.04
3.	Collaborative studies with Biomedical Doctors	100	49.50
4.	More Govt. Support	26	10.89
5.	Any Other*	30	14.85

\*Involve Biomedical doctors, industry and community, ensure quality, safety and efficacy of Ayurvedic medicines, capacity building of Ayurveda practitioners

## DISCUSSION

Out of 300 practicing doctors from various specialties who were provided with the questionnaire 98 practitioners (About 30%) declined or failed to respond mainly because of their busy schedule. Overall results of the questionnaire survey revealed that the doctors are aware of the basic principles and benefits of Ayurveda in certain health problems especially in chronic and degenerative disorders [Table 1], [Table 2]. Majority of the biomedical doctors were of the view that Ayurveda is best suited for human beings as they are natural, traditional very close to native life style and time tested. Some of them were also of the view that these are economical and easily available. At the same time the respondents were apprehensive that Ayurvedic medicines may also have side effects [Table 3]. 50% of the respondents used Ayurvedic medicines at some point or other for themselves and also for their family members in different forms including home remedies. About 98% of them stated that if they are convinced about the safety and efficacy they will recommend Ayurvedic treatment for others. Although there are several factors that either encouraged or discouraged them to refer the patients for Ayurveda care, it was evident from this study that biomedical practitioners were in need of extra information. 35 % of the practitioners referred their patients to Ayurvedic unit located in the hospital for the treatment for various chronic diseases where biomedical modalities were not catering to address the problem [Table 4]. The reasons for not referring by rest of 65% was either due to the feeling that it was not their system "or" they never felt the need "or" they were not convinced about the system [Table 5]. Almost 50% of the doctors expressed their

willingness to participate in collaborative research projects related to Ayurveda [Table 6]. The biomedical doctors who responded were of the view that there is possibility of integration of Ayurveda with Biomedicine. The suitable areas identified for integration according to them were preventive medicine, treatment of skin diseases, joint disorders, neurological conditions, gastrointestinal disorders, chronic pain, psychological abnormalities, diabetes, obesity, lipid disorders, auto immune diseases, degenerative conditions and other miscellaneous disorders where biomedical system has certain limitations [Table 7]. The hindrances identified for integration between Ayurveda and Biomedicine were lack of information among health care providers, skeptical attitude of biomedical and Ayurvedic doctors towards each other, gaps in substantial scientific validation of Ayurveda. It was felt that the amicable communication between the experts of different medical systems, mutual appraisal of the available information, sharing of research experiences and evidence-based results are essential factors for fruitful integration. Finally the respondents opined that, the active involvement of Ayurvedic practitioners, biomedical doctors, medical researchers, quality assurance by pharmaceutical industry and evidences for safety and efficacy of Ayurvedic medicines will usher the real-time integration [Table 8].

## CONCLUSION

The observations of the study re-ascertain that Ayurveda is a time-tested, natural health care system which recommends holistic treatment methods, lifestyle interventions, for prevention and treatment of chronic

and degenerative diseases. Further, it was also opined that, keeping in view of the improved access and inclination of people's choices toward Ayurveda and limitations of conventional medicine to deal with certain preventable, acute/ chronic conditions, due to serious side effects and adverse events, there is a definite need of functional integration today. The salient suggestions provided by the respondents (participated in the study) to improve the visibility and acceptability of Ayurveda to the mainstream biomedical practitioners are as follows:

- Up gradation of the skill and knowledge of Ayurvedic service providers aided by reorientation programmes and practical training workshops to ensure patient safety.
- Doctors of Ayurveda and Biomedicine have to improve mutual communication on regular basis and be active partners of interdisciplinary research.
- Safety, effectiveness and quality of Ayurvedic products and practices should be ensuring based on research and evidence.
- All efforts should be made to improve public awareness regarding the safe usage of Ayurvedic medicines and therapies. Anything amounting to magic remedies, unrealistic claims which tarnish the authenticity and reputation of Ayurveda must be discouraged.
- Improved Access to high-quality, cost-effective, safe Ayurveda medicines and procedures has to be in place.

Further, the study noted the following issues which have become impediments in successful integration of Ayurveda and Biomedicine in India: 1. Lack of high-quality scientific evidence with respect to Ayurvedic drugs, treatments, 2. No Legal frame-work in place to realize integrative practice, 3. Lack of awareness among medical fraternity regarding the possibility of functional integration. As the study was conducted in pilot mode and restricted to only one tertiary care center the sample may not represent the whole of biomedical fraternity in

India, however the findings of study will help set the stage for further work to realize the goal of amicable/functional integration of Ayurveda and Biomedicine in the public interest.

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