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ROLE OF UNIVERSITIES IN EDUCATION, RESEARCH, AND CLINICAL SERVICES OF PRASUTI TANTRA AND STREE ROGA SPECIALTY IN AYURVEDA

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Abstract: Background: During the ancient times Prasuti tantra was not a specialty amongst the eight disciplines of Ayurveda and was a part of Kaumarabhrittya but in later part after the initiation of CCIM a separate department was started in the name of PT and SR. Currently 31 colleges in India offer PG courses in this discipline. Objectives: The basic objective of this study was to assess the national scenario of education, research and clinical practice of Prasuti tantra / Stree roga specialty in Ayurveda. Methodology: The current study was based on the review of various literatures pertaining to the research and education in PTSR. The list of PG/MD and PhD theses were obtained from the concerned reliable sources, publications, libraries and universities for analysis. The analysis of data was carried by using SPSS and MS Excel. Results and Discussion: Svetapradara has been studied extensively that accounts to 31 times followed by Garvavastajanya pandu and different forms of Yoni rogas that accounts to 20 and 19 times respectively. 68 theses mentioned about Ayurvedic management followed by 27 theses mentioned about indigenous drugs. Uttarabasti was found to be studied for 10 times followed by Anuvasana-Basti, Shatavari, Shatapushpa, and Dhupana that accounts to 9, 8, 7 and 4 times respectively as a part of master's and doctoral theses. Gujarat Ayurveda University has been outstanding in providing a fertile land for research in many disciplines of Ayurveda followed by university of Pune and IMS, BHU in second and third position for providing opportunity in carrying out research especially in the discipline of PTSR in this case. Maximum numbers of theses have been associated with MD (Ayurveda) program followed by MS (Ayurveda) which accounts to 68% (275) and 16% (64) of theses respectively followed by PhD programme which accounts to 6% (25) of theses. This is followed by MSAM, D.Ay.M, HPA and MASc. Conclusion: In the last quarter of last Century Ayurvedic education has flourished in our country and also in some other nations of the world. India with over 275 Ayurvedic institutions are gifted with annual turnover of over 8000 Ayurvedic graduates, which by all standards is huge to provide services in health sector parallel to contemporary medicines.

Keywords: Ayurveda, Education, Practice, Prasuti tantra and Stree roga, Research, Role, Universities

ROLE OF UNIVERSITIES IN RESEARCH, EDUCATION AND PRACTICE OF *PRASUTI TANTRA*AND *STREE ROGA* SPECIALTY IN AYURVEDA

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Abstract:

Background: During the ancient times *Prasuti tantra* was not a specialty amongst the eight disciplines of Ayurveda and was a part of *Kaumarabhrittya* but in later part after the initiation of CCIM a separate department was started in the name of PT & SR. Currently 31 colleges in India offer PG courses in this discipline. **Objectives:** The basic objective of this study was to assess the national scenario of education, research and clinical practice of *Prasuti tantra / Stree roga* specialty in Ayurveda. *Methodology:* The current study was based on the review of various literatures pertaining to the research and education in PTSR. The list of PG/MD and PhD theses were obtained from the concerned reliable sources, publications, libraries and universities for analysis. The analysis of data was carried by using SPSS and MS Excel. Results and **Discussion:** Svetapradara has been studied extensively that accounts to 31 times followed by Garvavastajanya pandu and different forms of Yoni rogas that accounts to 20 and 19 times respectively. 68 theses mentioned about Ayurvedic management followed by 27 theses mentioned about indigenous drugs. Uttarabasti was found to be studied for 10 times followed by Anuvasana-Basti, Shatavari, Shatapushpa, and Dhupana that accounts to 9, 8, 7 and 4 times respectively as a part of master's and doctoral theses. Gujarat Ayurveda University has been outstanding in providing a fertile land for research in many disciplines of Ayurveda followed by university of Pune and IMS, BHU in second and third position for providing opportunity in carrying out research especially in the discipline of PTSR in this case. Maximum numbers of theses have been associated with MD (Ayurveda) program followed by MS (Ayurveda) which accounts to 68% (275) and 16% (64) of theses respectively followed by PhD programme which accounts to 6% (25) of theses. This is followed by MSAM, D.Ay.M, HPA and MASc. **Conclusion:** In the last quarter of last Century Ayurvedic education has flourished in our country and also in some other nations of the world. India with over 275 Ayurvedic institutions are gifted

with annual turnover of over 8000 Ayurvedic graduates, which by all standards is huge to provide services in health sector parallel to contemporary medicines.

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Introduction:

The subject of Prasuti Tantra/Stree Roga was amalgamated in Kaumarbhritya in eight primary disciplines of ancient Ayurveda traditionally called "Ashtanga Ayurveda". It is true that in ancient Ayurvedic literature there is no specific Samhitas devoted purely to the subject of Prasuti tantra/Stree Roga. The subject matter is scattered in various chapters of different Samihitas. Kashyap samhita is considered as one of the important doctrine of this subject along with description of Kaumarbhrittya or diseases of Children. While describing the concepts of Shukra and Shonit the important components of procreation have been explained in Ayurveda very well and the anatomical and physiological aspects of female reproductive system too have been written logically. Even during ancient times when diagnostic and imaging techniques of modern day medicine were not available Ayurvedic texts depict detailed scientific descriptions of chapters related to modern day obstetrics and gynecology. This includes description of Ante Natal care (Garbhini Paricharya), Process of labor (Prasav), care of New Born (Navjat Sishu Paricharya), Obstructive labor (Moodha Garbha), Caesarean section (Udarvipatan), Abortions (Garbhasrav) related to Obstetrics. Similarly there are descriptions of Female Sterility (Vandayatava), Dysfunctional Uterine Bleeding (Asrigdhar), Tumors (Arbud), Structural and Functional Disorders of Uterus (Yoni Vyapada), etc which enrich the subject of Stree Roga or Ayurvedic Gynecology.

This knowledge has now been compiled in the form of authentic texts of Ayurveda in the of *Prasuti tantra* and *Stree Roga* by various authors among whom the efforts of Prof. P.V. Tiwari, Former Professor and Head Post Graduate Department of Prasuti Tantra and Stree Roga, IMS BHU, are appreciable. All these texts have made efforts to explain concepts of Ayurveda regarding subject of *Prasuti tantra/stree Roga* in the light of understanding present day Obstetrics and Gynecology. Such efforts have really made the teaching and practice of *Prasuti tantra/stree Roga* more relevant as per the need of present day requirements of students and patients.

Objectives:

The basic objective of this study was to assess the national scenario of education, research and clinical practice of *Prasuti Tantra / Stree roga* specialty in Ayurveda. This will enable a reflection on the said subject and help in guiding budding researchers in similar subjects and avoid duplication.

Methodology:

The current study was based on the review of various literatures pertaining to the research and education in PTSR. The list of PG/MD and PhD theses were obtained from the concerned reliable sources, publications, libraries and universities for analysis. In this paper the post graduate programs refers to HPA, MSAM, M Sc Ay, M.D (Ay) and MS (Ay). The analysis of data was carried by using SPSS and MS Excel.

Results and Discussion:

This section has been divided in to three different section based on the objectives of the study in which the first section primarily deals with the research scenario of this specialty and the education and practice scenario follows it.

Research in PTSR:

A total of 408 number of research theses were collected from different institutions across India for the purpose of this study. The theses collected includes both postgraduate and doctoral thesis as well. The analysis was primarily carried out in four different aspects; the first aspect delineates a frequency distribution of different diseases those were studied as a part of master's and doctoral thesis. The second part of analysis delineates with the frequency of different drugs and procedures those were a part of master's and doctoral thesis. At the third level an observation was made regarding the total number of Theses submitted in different universities across India. Finally the fourth part of discussion includes a discussion on the name of different forms of academic programs for which theses have been submitted in different universities

Table 1, Frequency distribution for different diseases being studies as a part of academic theses at different universities of India

| Sl | Name of the Disease | Frequency | Sl | Name of the Disease | Frequency |
|-----|-----------------------|-----------|-----|---------------------|-----------|
| No. | | | No. | | |
| 1 | PCOD | 3 | 75 | Leucorrhoea | 10 |
| 2 | Acharana Yoni Vyapada | 4 | 76 | Liver damage | 1 |
| 3 | Advanced Pregnancy on | 2 | 77 | Madhumeha Chikitsa | 1 |
| | Phenomenon of Labour | | | | |
| 4 | Alpartava | 2 | 78 | Mahayoni | 1 |
| 5 | Anartava | 1 | 79 | Management of | 1 |
| | | | | Mooladhar chhedan | |
| 6 | Anemia | 2 | 80 | Management of 1 | |
| | | | | Prasavam | |
| 7 | Anabolic effect | 1 | 81 | Medhya effect | 1 |
| 8 | Ankylostoma duodenale | 1 | 82 | Menopausal Syndrome | 3 |
| | infestation | | | _ | |
| 9 | Anovulatory factor | 1 | 83 | Moodha Garbha | 1 |
| 10 | Antifertility effect | 4 | 84 | Navajata shishu | 2 |

| | | | | paricharya | |
|----|-------------------------------|----|-----|---------------------------|---|
| 11 | Apatyapatha sotha | 2 | 85 | Oligospermia and | 3 |
| | | | | Azoospermia | |
| 12 | Artavakshaya | 12 | 86 | Oral contraceptive | 3 |
| 13 | Artavapyapada | 2 | 87 | Oxytocic activity in | 1 |
| | | | | labour | |
| 14 | Aseptic care of new born | 1 | 88 | P' compound | 2 |
| 15 | Asrigdara | 15 | 89 | Pariharya garbhapata | 1 |
| 16 | Bala pakshaghata | 2 | 90 | Pelvic inflammatory | 1 |
| | | | | disease | |
| 17 | Balya effect | 1 | 91 | Perinatal Mortality and | 1 |
| | | | | morbidity | |
| 18 | Beejotsarga | 1 | 92 | Physiological changes in | 1 |
| | | | | pregnancy | |
| 19 | Bhagyoni sotha | 1 | 93 | Pittapradhana | 1 |
| | | | | yonivyapat | |
| 20 | Calcium metabolism during | 1 | 94 | Post -polio Paresis | 1 |
| | Pregnancy | | | | |
| 21 | Cervical erosion | 5 | 95 | Postmenopausal | 1 |
| | | | | Osteoporosis | |
| 22 | Childhood Giardiasis | 1 | 96 | Pradarhar Yoga and | 1 |
| | | | | Ashokarista | |
| 23 | Daihika Prakriti on Artava | 1 | 97 | Prajanana and prakruti | 1 |
| | Vyapad | | | | |
| 24 | Delayed labour | 1 | 98 | Prakruti and | 1 |
| | | | | Rajahpravrutti | |
| 25 | Determination of fetal sex | 4 | 99 | Prajayani avastha | 1 |
| 26 | Doshika asrigdara | 1 | 100 | Pre-eclampsia | 1 |
| 27 | Dushprajatamaya | 1 | 101 | Pregnancy | 3 |
| 28 | Dymenorrhoea | 2 | 102 | PT & ST | 1 |
| 29 | Endocervitis | 2 | 103 | Pumsavana | 4 |
| 30 | Eosinophilic effect | 1 | 104 | 5 | 2 |
| 31 | Family planning | 1 | 105 | Rajo Nivritti | 3 |
| 32 | Female infertility | 6 | 106 | Rajo-Dushti | 1 |
| 33 | Fetal and maternal heart rate | 1 | 107 | Rajo-Nivritti-Janya | 4 |
| | | | | Lakshana | |
| 34 | Garvavastajanya pandu | 20 | 108 | Rajorodha | 1 |
| 35 | Garva and prasava | 1 | 109 | Rajovha Srotogat | 1 |
| | | | | Udavartani | |
| 36 | Garva and garvini | 1 | 110 | Rakatpradara | 8 |
| 37 | Garva nirodha | 2 | 111 | Rakta Yoni | 1 |
| 38 | Garva poshana | 2 | 112 | Raktastambhana karma | 1 |
| 39 | Garva vyapad | 1 | 113 | Relation of Prakriti with | 1 |
| | | | | Labor | |
| 40 | Garva nirodhaka | 1 | 114 | Reproductive | 1 |

| | | | | Physiology | |
|----|---|----|-----|---------------------------------------|----|
| 41 | Garbha-Sthapaka and Garbha- Vridhikara Bhava | 1 | 115 | Sannipatika yonivyapad | 2 |
| 42 | Garvaja chhardi | 6 | 116 | Serum protien level | 1 |
| 43 | Garbhanabhnadi kalpana | 1 | 117 | Shleshmaja yoni roga | 2 |
| 44 | Garbhanivaraka yoga | 1 | 118 | 3 3 & | |
| 45 | Garbhashaya bhramsha | 1 | 119 | Shukra dosha | 2 |
| 46 | Garbhashaya-Greevagata Vrana | 6 | 120 | Shveta pradara | 21 |
| 46 | Garbhashaya shodhana | 1 | 121 | Stanya | 3 |
| 48 | Garbhasrava and Garbhapata | 4 | 122 | Sterility | 4 |
| 49 | Garbhavasthajanya shotha | 4 | 123 | Streeroga chikitsa | 1 |
| 50 | Garbhini kikkisa | 1 | 124 | Sukhprasava | 1 |
| 51 | Garbhini Mutrakricchra | 3 | 125 | Sutika | 14 |
| 52 | Garbhini paricharya | 7 | 126 | Tray <mark>aavarta</mark> yoni | 1 |
| 53 | Garbhini shoola | 1 | 127 | Treatment of H. nana | 1 |
| 54 | Garbhini Vijnana | 1 | 128 | Trichomonas vaginalis | 2 |
| 55 | Garbhini-Udavarta. | 1 | 129 | Tropical pulmonary 1 eosinophilia | |
| 56 | Garbhinivarana | 1 | 130 | Tubal Blockage | 1 |
| 57 | Garbhopadrava shotha | 1 | 131 | | |
| 58 | Garhavasthajanya shotha | 1 | 132 | Udara Krimi | 1 |
| 59 | Gestational hypertension | 2 | 133 | Udavritta Yoniroga | 7 |
| 60 | Giardasis | 1 | 134 | Upapluta yonivyapat | 1 |
| 61 | Hormonal Activity | 2 | 135 | Upavishtaka | 1 |
| 62 | In well being of sutika | 1 | 136 | | |
| 63 | Infertility | 13 | 137 | Urinary tract infections in pregnancy | 1 |
| 64 | Intestinal cestodes and Nematodes | 1 | 138 | Urogenital prolapses 2 | |
| 65 | Jatakottara Samsakara | 1 | 139 | Uterine Activities | 2 |
| 66 | Kakavandhya(secondary sterility) | 1 | 140 | Vaginal operation | 1 |
| 67 | Kaphaja yonivyapat | 1 | 141 | Vataja kasa | 1 |
| 68 | Karnini Yoni Roga | 6 | 142 | Vataja yonivyapat/roga | 2 |
| 69 | Kashtartava | 9 | 143 | VatajaArtava Dushti | 2 |
| 70 | Kashyapa Samhita in Paediatrics | 1 | 144 | · · | |
| 71 | Kaumarbhritya in ancient India | 1 | 145 | Vitapachhed | 1 |

| 72 | Kikkisa | 4 | 146 | Vulvovaginitis during | 1 |
|----|-------------|----|-----|-----------------------|-----|
| | | | | Pregnancy | |
| 73 | Kshinartava | 1 | 147 | Yoni roga Kandu/ | 16 |
| | | | | Vyapat/Tnatra) | |
| 74 | Prasava | 14 | 148 | Total | 408 |

It is evident from the above table that Svetapradara is the disease that has been studied extensively by many authorities. It has been studied 31 times in the name of leucorrhoea and svetapradara and both of the names have been listed separately owing to their own scopes and limitations in the light of Ayurveda and modern medicine. This disease is an outcome of many different forms of reproductive tract of infections. The condition is annoying for both the partners and may lead to many unfavorable conditions. Hence studies on this disease definitely contribute to the medical wisdom in many different aspects of its management. Secondly anemia (Garvavastajanya pandu) has been studied 20 times by different scholars across different institutions in India. This topic is of very relevance to the current scenario as the national government of India is taking it forward and includes it as an important part in the RCH phase-II. In addition many state governments in India are also prioritizing it as the same is an important determinant of maternal morbidity and mortality. Under the umbrella of NRHM (presently NHM) an Ayurvedic preparation named *Punarnavadi Mandura* has been included for the management of community level anemia in the ASHA drug kit. The third place is taken by female infertility which has been studied 19 times followed by different forms of *Yoni rogas* including yoni kandu and vyapat etc. which has been studied 16 times. Asrigdara, prasava and sutika, infertility, Artavakshaya, kastartava, Rakatpradara, Garbhini paricharya, Garbhashaya-Greevagata Vrana, Karnini Yoni Roga and Garvini chardi, cervical erosion, Acharana Yoni Vyapada, Pumsavana, determination of fetal sex, sterility, Garbhasrava and Garbhapata, Garbhavasthajanya shotha have been studied 15, 14, 13, 12, 9, 8, 7,6, 5, 4 times respectively. In addition many pathological conditions and diseases have been studied once or twice or thrice. It is believed that concrete scientific evidence can only be brought by repeated studies hence the same is also recommended in this discipline.

Table 2, Frequency distribution for different drugs/procedures being studied as a part of academic theses at different universities of India

| Sl | Name of the | Frequency | Sl | Name of the | Frequency |
|-----|------------------|-----------|-----|------------------------|-----------|
| No. | Drugs/Procedures | | No. | Drugs/Procedures | |
| 1 | Apamarga moola | 2 | 85 | L' Tablet and 'P' | 1 |
| | | | | compound | |
| 2 | Agastya Haritaki | 1 | 86 | Loha | 1 |
| 3 | Agnikarma | 3 | 87 | Lodhra | 2 |
| 4 | Alash | 1 | 88 | Mandur Bhasma | 1 |
| 5 | Amalaki | 2 | 89 | Medical management | 1 |
| 6 | Amrita | 1 | 90 | Madayantika and doorva | 1 |

| | | | | pyayoga | |
|----|---|----|-----|---|---|
| 7 | Anuvasana-Basti | 9 | 91 | Mayura Piccha churnam | 1 |
| 8 | Artavajanan Vatika | 1 | 92 | Mathulunga Yoga | 1 |
| 9 | Ashokarishta, Ashwagandha Churna and Praval Pishti | 1 | 93 | Madadi upakrama | 1 |
| 10 | Ashoka churna and Shunti churna | 3 | 94 | Mandura bhasma | 1 |
| 11 | Ashvagandha ghrita and Phala ghrita | 1 | 95 | Masha | 1 |
| 12 | Asvagandha, Vrushamadhuka yoga | 1 | 96 | Mandura vataka | 1 |
| 13 | | | 97 | Mahaloongamool and Yashtimadhu | 1 |
| 14 | Alash kshara & dhatakyadi taila pichu | 1 | 98 | Mandur Bhasma and Amalaki Churna | 1 |
| 15 | Avalkandi Churna | 1 | 99 | Madhukadi Vati and Sarivadi Vati | 1 |
| 16 | Ayurvedic management | 68 | 100 | Mam <mark>syadi Vat</mark> i | 1 |
| 17 | Ayush Rakshoghani Malhar | 1 | 101 | Matra Basti | 1 |
| 18 | Basti & Pichu | 1 | 102 | Mutr <mark>ag</mark> rahhar yog | 1 |
| 19 | Bhringaraja Bhavita Kaseesa Bhasma | 1 | 103 | Nagakeshar, Musta and Lodhra | |
| 20 | Bola Baddha Rasa | 2 | 104 | Nimbadi Yoga | 1 |
| 21 | Bramhi | 1 | 105 | Nasya and Matra Basti with Narayana Taila | 1 |
| 22 | Brhat dhatryadi ghanvati | 1 | 106 | Nasya and uttarbasti with mahanarayana taila | 1 |
| 23 | Certain Ayurvedic formulations | 1 | 107 | Nasya (with Medhya drug) | 1 |
| 24 | Chaturbeej churna and Kaishor Guggulu | 1 | 108 | Nagakesara | 1 |
| 25 | Costus specious sm. (Kevuka). | 1 | 109 | Nagakesara churna | 1 |
| 26 | Darvyadi Ghana Vati | 1 | 110 | Nimbapatra kwatha | 1 |
| 27 | Dashamula | 1 | 111 | Nagaramotha churna | 1 |
| 28 | Dashvari Siddha Kshirbasti Prayoga. | 1 | 112 | Ocimum sanctum and Phyllanthus urinaria. | 1 |
| 29 | Dhatkyadi Taila | 1 | 113 | Pathyadya churna | 1 |
| 30 | Dhatryadi Yoga | 1 | 114 | Phalaghrita | 2 |
| 31 | Dhattura | 1 | 115 | Punarnava Mandura | 3 |
| 32 | Dhupan | 4 | 116 | Phala Kalyan Ghrita | 1 |
| 33 | Draksha | 1 | 117 | Psycho-social study | 1 |
| 34 | Garrbhapala rasa | 1 | 118 | Palasha patra | 1 |
| 35 | Erthrina indicalam (Paribhadra) | 1 | 119 | Pradrantaka Rasa | 1 |

| 36 | General management | 1 | 120 | Prakriti Vighatakara ragimen | 1 | |
|----|---|----|-----|---|---|--|
| 37 | Gritta | 1 | 121 | Pippali - Vacha lepam on the Umbilicus | 1 | |
| 38 | Goggula | 1 | 122 | Pichu & Basti 1 | | |
| 39 | Gokshura | 1 | 123 | Pichu | 1 | |
| 40 | Gundarapaka and shuddha guggulu vati | 1 | 124 | Punarnavadi kwatha | 1 | |
| 41 | Haritaki and madhu | 1 | 125 | Putreshti yoga | 1 | |
| 42 | Hayamaradi Taila pichu | 1 | 126 | Pippli moola | 1 | |
| 43 | Hingu | 1 | 127 | Pushyanuga churna | 1 | |
| 44 | Indigenous drugs | 27 | 128 | Prajasthapana-Gana- Siddha Ghrita Uttara- Basti and oral Yoga | 1 | |
| 45 | Indrayana mula | 2 | 129 | Phalkalyan Ghrita By Oral Route And Matra Basti | 1 | |
| 46 | Japakusum and Tanduliyak. | 2 | 130 | Palasha seeds (Butea monosperma) and Gajara seeds (Daucas carota). | 1 | |
| 46 | Jayanti | 1 | 131 | Pradharhar yoga | 1 | |
| 48 | Jiraka | 1 | 132 | Panchavalkaladi Varti | 1 | |
| 49 | Kalamegha | 1 | 133 | Padmadi Lauha" Iron and Folic acid tablets | 1 | |
| 50 | Kanyalauhadi Vati and Manjistha Churna | 1 | 134 | Pathadi kwatha and kanchanaradi kwatha | 1 | |
| 51 | Kampillakadi ghritta | 1 | 135 | Phala ghrita" uttarbasti | 1 | |
| 52 | Kanchanarkwathacha Upayoga. | 1 | 136 | P- Compound in Rakta pradara | 2 | |
| 53 | Karveer tail | 1 | 137 | 1 | | |
| 54 | Kanyalauhadi Vati and Manjistha Churna | 1 | 138 | Rasayana-Kalpa Vati and Mamshyadi Vati | 1 | |
| 55 | Karpoora Siddha Ghrita and Kumariswarasa and Karpoor | 1 | 139 | Rasayana-Kalpa Vati and Mamshyadi Vati | 1 | |
| 56 | kalyanaka ghrita | 1 | 140 | Rambhakanda yoga | 1 | |
| 57 | Kashmaryadi Ghritam. | 1 | 141 | Rajahpravarthini Vati | 1 | |
| 58 | Kikkisahara Yoga | 1 | 142 | Rasanjanadi Yoga | 1 | |
| 59 | Kutaja Ghana Vati & Yonikanduhara Malahara | 1 | 143 | y e | | |
| 60 | Khanjanikari rasa | 1 | 144 | Sarakitta and Madhu | 1 | |
| 61 | Krishna-Tila and Arka-Pushpa Taila Uttara-Basti | 1 | 145 | Sutika Dashmool | 1 | |

| 62 | Krishna-Tila Kvatha & Uttara-Basti of Gudoochyadi | 1 | 146 | Shatapushpa | 7 |
|----|--|----|-----|---|-----|
| | Taila | | | | |
| 63 | Kshara Karma and Agni Karma | 3 | 147 | Sthanika sveda | 1 |
| 64 | Kukkutanda Twak Bhasma | 2 | 148 | Snuhi kshara and Udumbara Pichu | 1 |
| 65 | Kumara ghana | 2 | 149 | S T Compound | 1 |
| 66 | Kumariyadi vati | 2 | 150 | Sariva | 1 |
| 67 | Kikkisahara Ghrita and Kikkisahara Lepa | 1 | 151 | Shatavari | 8 |
| 68 | Kushthadi Choorna & Udumbaradi Tail | 1 | 152 | Shalmalighrut | 1 |
| 69 | Karanja churna and "Karanj Tail yoni pichu | 1 | 153 | Savarnakar ghrita and savarnakar cream | 1 |
| 70 | "Krishnadi churna" and "Twagadi sheerpaka" along wiyh " panchavalakala taila pichu | 1 | 154 | Shamimashvattha Ghrita | 1 |
| 71 | Katu-Neem oil | 1 | 155 | Swetparpati and Trinpanchmool Kwath (As Anupana) along with Yogic Kriya | 1 |
| 72 | Lohakhandayuta Panchamool Kwatha | 1 | 156 | Sukhprasavkar Lepa | 2 |
| 73 | Lohasava | 1 | 157 | sutika dashmool kwatha & dashmool kwatha | |
| 74 | Loha kalpa | 1 | 158 | Snuhi Kshara" and "Apamarg Kshara | 1 |
| 75 | Tilmuladi kwath" and "Rajah- pravartini vati | 1 | 159 | Vacha churnam. | 1 |
| 76 | Tropical application of Tankan with Clycerin. | 1 | 160 | Vaginal tablets | 1 |
| 77 | Triphala kwatha prakshalana | 1 | 161 | Vatagajankush Rasa | 1 |
| 78 | Trivanga Bhasma | 1 | 162 | Yashtimadhu | 1 |
| 79 | Triphala Kwatha Uttar Basti | 1 | 163 | Yavakshara | 1 |
| 80 | Uttarabasti | 10 | 164 | Yoga basti | 1 |
| 81 | Udumbara Pichu | 3 | 165 | Yashti and Pradarantaka Loha | 1 |
| 82 | Vijyadi vati | 1 | 166 | Yashtimadhu Kashmuriphal SharkaraSiddha Dugdha | 1 |
| 83 | Vidanga compound | 1 | 167 | Yogaraja rasa | 1 |
| | Total | | | | 408 |

When the list of theses were being analyzed for the drugs and procedures those have been studied as a part of master's and doctoral thesis in the discipline of PTSR across different institutes of India it was found that most of these theses do not clearly delineate a particular drug or procedure and non specifically mention as Ayurvedic management or indigenous drugs. In this context 68 theses mentioned about Ayurvedic management followed by 27 theses mentioned about indigenous drugs. *Uttarabasti* was found to be studied for 10 times followed by *Anuvasanabasti*, *Shatavari*, *Shatapushpa* and *Dhupana* that accounts to 9, 8, 7 and 4 times respectively. In addition many drugs and procedures have been studied once or twice and thrice.

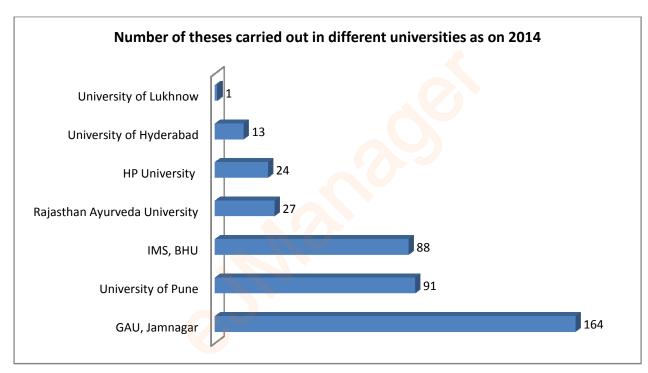
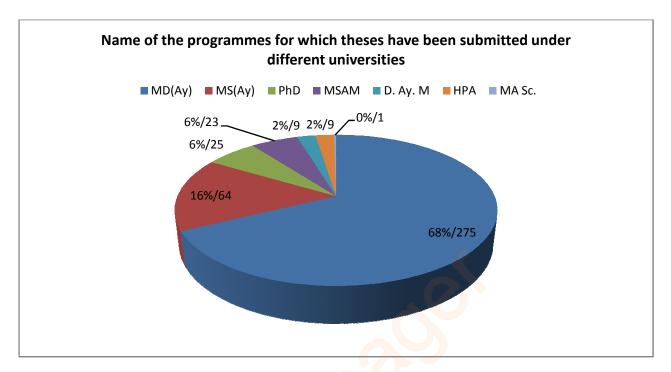


Figure .1: Total number of Theses carried out in different universities across India

The bars in the figure shows that Gujarat Ayurveda University has been outstanding in providing a fertile land for research in many disciplines of Ayurveda and especially in the discipline of PTSR in this case. This is followed by university of Pune and IMS, BHU in second and third position for providing opportunity in carrying out research in the discipline of PTSR. Rajasthan Ayurveda University being relatively new comes under fourth position in this regard. The other institutions follow the list.

Figure 2: Name of different forms of academic programs for which theses have been submitted under different universities



The above pie shows that maximum number of theses are associated with MD (Ayurveda) program followed by MS (Ayurveda) which accounts to 68% (275) and 16% (64) of theses respectively followed by PhD program which accounts to 6% (25) of theses. This is followed by MSAM, D.Ay.M, HPA and MASc. which accounts to 6% (23), 2% (9), 2% (9), 1% of theses respectively associated with the discipline of PTSR.

Education in PTSR:

In post independent India especially during last three decades of twentieth century when Central Council for Indian Medicine (CCIM), the regulatory body of Ayurvedic Education, started exerting its authority efforts were made to give identity to various subjects of Ayurveda as per the need of present era. It is during this exercise Ayurvedic educational institutions were prescribed with minimum standards which included establishment of fourteen teaching departments including Department of *Prasuti Tantra/Stree Roga*. This was done by bifurcating existing Department of *Kaumarbhrittya* (Paediatrics) into *Kaumarbhrittya* and *Prasuti tantra/Stree Roga*. Needless to say this decision has lead to development of this subject and today about 31 Ayurvedic institutions in the country has even Post Graduate Departments of *Prasuti tantra/Stree Roga*. Students at UG level study PTSR parallel to other specialties of Ayurveda and can go for specialization at PG level at different institutions offering PG courses in this specialty. Students desirous of research and academic jobs can also go for PhD in this

specialty. The importance of appropriate and need based teaching and clinical practice of subject of *Prasuti tantra/ stree Roga* in Ayurvedic institution during present day is more essential as over 60 percent of the students being admitted in Govt. and Private Colleges are girls who are more likely to practice and are expected to handle cases related to *Prasuti Tantra/Stree Roga*. Therefore it is mandatory that they are trained in Ayurvedic institutions which have well established academic and clinical set up with competent faculty. It was found that during last 10 years students passing out of the PG specialty of PTSR from R.G. Govt. Ayurveda College Paprola are mostly female that accounts to 90% female (n=30) and 10% male(n=30). Similar observation was also found in NIA in 2011-2012 and 2012-2013 where out of total 6 seats 5 seats were occupied by female students each year. Hence the reported female admission is 83.33 %(n=6) and male admission is 16.67(n=6) each in 2011-12 and 2012-13. (National Institute of Ayurveda, 2015) In addition the following table shows female predominance in UG admission.

Table 3. Admission to BAMS showing female predominance during last 5 years at R.G. Govt. Ayurveda College, Paprola-176115, Himachgal Pradesh (India)

| Batch | Female | Male | Total (n=50) |
|-------|--------|------|--------------|
| 2014 | 40 | 10 | 50 |
| 2013 | 39 | 11 | 50 |
| 2012 | 40 | 10 | 50 |
| 2011 | 42 | 8 | 50 |
| 2010 | 36 | 14 | 50 |

Recently the Central Council of Indian Medicine (CCIM) has started 16 PG Diploma programs in different specialties of Ayurveda with an objective to produce efficient Ayurveda specialists in clinical specialties. These 16 specialties also include a specialization of *Prasuti Evum Striroga* in the form of DGO (Ayu) which stands for Diploma in Obstetrics and Gynecology in Ayurveda. An Ayurveda (BAMS) graduate can take admission in to this program based on the merit and the program is run under the dept. of PTSR in different colleges wherever the facilities are available as per the norms of CCIM. The detail information is available in the CCIM web portal.

Practice of PTSR:

In the clinical aspects the basic important component of training of students in *prasuti tantra* is existence of working labor room facilities in the hospital on 24 hour basis. Such labor rooms should be associated with 24 hour new born care and facility of child nursery. Additionally such Ayurvedic hospitals should provide 24 hour surgical practices for patients in advance stage of labor for caesarean sections. It is heartening to observe that few Ayurvedic institutions like Department of *Prasuti tantra/Stree roga*, IMS, BHU -Varanasi, Rajiv Gandhi Govt. Post Graduate Ayurvedic College Paprola, HP, Ayurvedic and Unani Tibbia college, New Delhi, Tilak Ayurveda Mahavidhalaya, Pune, SDM Ayurvedic College Udupi, Karnataka, etc have already cater such facilities. Students being trained in such institutions have the capability to

handle labor cases efficiently. But majority of Ayurvedic institutions both graduate and post graduate are struggling to establish even labor room services in their hospital though they are desired to have such set ups as per minimum CCIM standards.

Maternal and Child health is high on the agenda of health care authorities. Under NRHM stress is being laid to encourage institutional deliveries to reduce infant and maternal morbidity and mortality. It is assured that pregnant mothers are provided free ante natal, intra-natal and post natal care including free care of new born till first twelve months of life of baby. Labor rooms depending upon their facilities are designated as centers for conducting delivery. In some cases labor room of Ayurvedic college hospitals too have been recognized as delivery point under NRHM and services like JSY (*Janani Suraksha Yojana*) which includes free labor, surgery, transportation of women in labor and free child care for first 12 months are being given. It is important to report that such facilities are being provided to mothers coming for ANC and delivery in Rajiv Gandhi Govt. Post Graduate Ayurvedic College Hospital Paprola.

It is important to note that service of the Departments of *Prasuti Tantra/Stree Roga* in Ayurvedic institutions cannot be purely based in propagating the agenda of modern healthcare. In this direction the antenatal care preached by Ayurveda i.e "Garbhani Paricharya" for pregnant mother needs to be popularized and practiced for achieving healthy progeny. Procedures described in Ayurveda to facilitate comfortable labor like application of medicated paste around umbilicus, giving *Anuvasan Vasti* during third trimester along with *Yoni Pichu* can be generalized for practice. The regular practices with these procedures in the labor Room of Department of *Prasuti Tantra*, Rajiv Gandhi Govt. Post Graduate Ayurvedic College Paprola have created evidence based on the usefulness of such practices to make progress of labor and delivery of baby comfortable. Similarly daily practice of yogic exercises during ante natal period and post natal period shall also strengthen the women physically and mentally and also help prepare them physically for labor as well recovery of mothers to their natural physique after delivery. In addition departments of *Prasuti tantra/Stree Roga* also contributes immensely in the management gynecological ailments of women. Ayurvedic management of Dysfunctional Uterine Disorders, Dysmenorrhea, Peri-menopausal state related disorders are highly effective.

Recently a multi center study of 'feasibility of Introduction of ISM (Ayurveda) services in RCH program" was conducted in two districts of Himachal Pradesh where the patients enrolled in the study were free to choose between Ayurveda and modern medicine for care of ante natal period, intra-natal period, post natal management, infant care as well as gynecological ailments like dysmenorrhea, vaginitis, infantile diarrhoea, lactation promotion, etc. About 3000 volunteer patients (with 2500 pregnant mothers) opted for ISM services. The results of this trial were submitted to the sponsoring agency of Central Council for Research in Ayurveda and Siddha, Govt of India, department of AYUSH. This study has created evidence that ISM services are no way inferior to current protocols of women and child health care of contemporary modern

medicine provided it is implemented through well trained competent manpower with the provision of standard drugs.

Conclusion:

In the last quarter of last Century Ayurvedic education has flourished in our country and also in some other nations of the world. India with over 275 Ayurvedic institutions is gifted with annual turnover of over 8000 Ayurvedic graduates, which by all standards is huge to provide services in health sector parallel to contemporary medicines. Needless to say a majority of these students leaving Ayurvedic colleges are female students. Further about 140 Post Graduates in *Prasuti tantra* after obtaining their specialization in the subject are ready render services in the field of mother and child healthcare. The need is to bring evidence in to our specialties and show that Ayurveda is the real alternative and effective system of medicine. This would not only give us honor as a specialty but can also make the people believe that our ancient science and specialties are equally relevant today to meet the health challenges.

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