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MANPOWER SURVEY
Health and Medical Manpower

STOCK TAKING OF DENTAL PERSONNEL IN INDIA



INSTITUTE OF APPLIED MANPOWER RESEARCH
INDRAPRASTHA ESTATE, RING ROAD
NEW DELHI-1

and

NATIONAL INSTITUTE OF HEALTH ADMINISTRATION
AND EDUCATION, PATIALA HOUSE,

NEW DELHI-1

September, 1966

The Institute of Applied Manpower Research was set up in 1962 by the Government of India to conduct research on problems of manpower planning. The main objects of the Institute are: -

- To advance knowledge about the nature, characteristics and utilisation of the human resources in India.
- To provide a broad perspective of requirements of trained manpower for economic development in different fields with due regard to the probable impact of technological changes on the pattern of employment.
- To develop improved methods and techniques for dealing with: -
 - training and development of the existing work force;

- preparation for employment;

and
- selection of persons for employment;

- identifying and developing highly talented persons;

- forecasting demand and supply of manpower and
- developing manpower resources.

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PREFACE

This Working Paper sets out the results of a series of studies forming part of the Health and Medical Manpower Survey. This survey has been taken up by the Institute of Applied Manpower Research in collaboration with the National Institute of Health Administration and Education, Ministry of Health. A draft of this paper was prepared and first circulated to a number of persons for their comments. The draft paper was further reviewed in the meeting of the Sub-Committee for Health and Medical Manpower Survey in September 1966 and the final working paper has been prepared on the basis of comments and suggestions received both from individuals as well as from the sub-committee members.

2. Estimates of the number of dentists in India are available from several sources each of which gives a partial picture. The object of this paper is to bring together all available information on the number and distribution of dentists, and to arrive at an acceptable estimate of the total number of dentists in India at the end of 1964.

3. The results set out in this paper present the most acceptable estimates that can be found by putting together available information from a number of sources each of which is affected by incompleteness in some parts and deficiencies in others. It is believed, however, that the present estimates are good enough to be accepted as a working basis for purposes of planning.

4. The Institute had access to published and unpublished data of the census of India 1961 under the courtesy of the Registrar General's Office. It had also access to the registration data of the Dental Council of India. The facilities extended by both these organisations are gratefully acknowledged.

5. The paper has been prepared by Shri S. K. Sinha, Research Officer, of the Institute, under the supervision and guidance of Dr. S. Krishnaswamy Rao, Adviser to the IAMR for the Health and Medical Manpower Survey and Professor of Public Health Administration, National Institute of Health Administration and Education, New Delhi. Shri R. R. Iyer, formerly of the Institute, had also supervised the preparation of this paper. S/Shri Rukan Singh and J. N. Goel assisted in the collection and computation of the data.

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SECTION I

INTRODUCTION AND SUMMARY OF FINDINGS

The purpose of this study is to bring together all available information on the number and distribution of dentists and then to arrive at a firm estimate of the stock of dentists at the end of 1964 with their distribution by sex, age, rural/urban residence, etc.

Definition

2. In this paper the term 'dentist' has been used to apply to those who "give medical and surgical treatment for diseases and disorders of dentals of human beings and also make and fit artificial teeth". This definition includes those persons who possess requisite academic qualifications such as a degree or a diploma in dentistry and others practising by virtue of their practical experience in this field. It also includes auxiliary dental personnel like dental hygienists and dental mechanics, etc.

Sources of data

3. Data on the number and distribution of dentists by various characteristics are available from the following sources:-

- (a) Census of India, 1961.
- (b) Information available from the Directorate General of Employment and Training.
- (c) Registration data available with the Dental Council of India.

4. In Sections II to IV of this working paper, data on the stock of dentists and their distribution by sex, age, qualifications, etc., taken from these various sources are presented and analysed. In the last section of this paper, an attempt has been made to arrive at the most acceptable estimate of the stock of dentists in India at the end of 1964.

5. The estimates of stock of dentists at the end of 1964 worked out on the basis of registration data of the Dental Council of India and the Census of India, 1961, are 5,754 and 8,386 respectively. It is most likely that the lower figure obtained from the Dental Council of India registration data arises from the likely under-registration of dentists

and the non-registration of ancillary dental personnel in certain areas, by the Dental Council. Therefore, estimates based on the Census of India, 1961 and updated to 1964 are considered more acceptable.

6. More important among the findings of this study are:

- (i) the total number of available dentists in 1964 was 8,386: this includes 7,957 male dentists and 429 female dentists;
- (ii) 26% of this number were in rural areas and 74% in urban areas;
- (iii) of the total number of dentists registered, only 30% had either degree or diploma in dentistry and 70% had no recognised educational qualifications but only practising experience in this field;
- (iv) there were 18 dentists for every million persons at the end of 1964, of these 13 were in urban areas and 5 in rural areas;
- (v) most of the stock of dentists are in comparatively younger age-groups. About 61% are below 45. Less than 30% are in the age-group of 46 to 54.

SECTION II

ESTIMATES BASED ON CENSUS OF INDIA, 1961

7. The last census enumeration was completed throughout India on the 5th of March, 1961. This is one of the most important sources of information on "Health and Medical Manpower" in our country. Based on the data collected through the Individual Slip, the Census Office ("Office of the Registrar General of India") has prepared a number of tables which contain information on "Health and Medical Personnel". Among these only Table B.V contains information on dentists. This table gives the occupational-classification of all persons at work, other than at cultivation, in both rural and urban areas. According to this classification* a dental practitioner with or without a degree or diploma has been recognised as a dentist. Under this classification, dentists fall under the two-digit group '03', in families '035' and '039'.

8. The number of dental teachers in different educational institutions cannot be estimated from the data available in the Census because at the three-digit level university teachers of all categories and subjects are pooled together under one code. Therefore, the number of teachers in dental colleges in 1960-61 has been taken from the publication "Dental Teachers in India, 1961" of the Dental Council of India and has been added to this Census stock.

Limitations of Census Data

9. No tabulation on the basis of educational qualification and age has been done in the case of dentists. Detailed classification of dentists according to their specialisation such as dental surgeons, dental mechanics and dental hygienists, etc., has also not been prepared in the census.

* National Classification of Occupations, Directorate General of Employment and Training, 1961.

Group	Family	Description
03	-	Physicians, Surgeons and Dentists
-	035	Dentists
-	039	Physicians, Surgeons and Dentists not elsewhere classified

Dentists in India in 1961

10. There were over seven thousand eight hundred sixty (7, 860) dentists in India in 1961, out of which approximately 2, 050 were in rural and the rest were in urban areas. Table 1 presents the number of dentists in India, their rural-urban and sex-wise distribution.

TABLE 1

Number of Dentists in India - 1961 by rural-urban and sex

(Figures in brackets show percentages)

S.No.	Description	Rural			Urban			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1.	All States	1,922 (24.46)	71 (0.90)	1,993 (25.36)	4,816 (61.27)	271 (3.45)	5,087 (64.72)	6,738 (85.73)	342 (4.35)	7,080 (90.08)
2.	Union Territories	57 (0.73)	-	57 (0.73)	710 (9.03)	13 (0.16)	723 (9.19)	767 (9.76)	13 (0.16)	780 (9.92)
3.	All-India	1,979 (25.19)	71 (0.90)	2,050 (26.09)	5,526 (70.30)	284 (3.61)	5,810 (73.91)	7,505 (95.49)	355 (4.51)	7,860* (100.0)

Source: Census of India, 1961.

* Out of a total of 7, 860 dentists 5, 529 were identified under the family '035' and 2, 331 were identified under the family '039'. This figure has been arrived at by making adjustment for Physicians, Surgeons not else where classified.

show of

11. The census data that out of the total number of dentists in 1961, 74% were in urban areas and 26% in rural areas. This shows a high concentration of dentists in urban and low in rural areas and is very similar to the urban-rural distribution of doctors (67%: 33%) in the country. It also appears that dentistry as a profession has not attracted women. Only about 5% of the dentists were reported to be women.

Dentists - Population Ratio

12. Table 2 presents the data regarding population per dentist.

TABLE 2

Ratio of Dentists to Population-India, 1961

S. No.	States and Union Territories	Population per Dentist		
		Rural	Urban	Total
1.	All States	1, 78, 214	14, 962	60, 917
2.	Union Territories	80, 549	3, 766	10, 181
3.	All-India	1, 75, 499	13, 569	55, 882

13. The all-India ratio of population per dentist can thus be regarded only as a rough yardstick for the measurement of the level of facilities in the country.

Estimate of Dentists at the end of 1964, on the basis of Census, 1961

14. Based on the occupational data of the Census of India 1961, the total stock of dentists was 7, 860 of which 7, 505 were males and 335 were females. The stock of active dentists as at the end of 1964 (Table 3) has been arrived at by adding the survivals from the stock of dentists in 1961 to those who have passed from the dental colleges during the years 1961-1964.

TABLE 3Estimated Stock of Dentists at the end of
1964

I.	Dentists enumerated according to the Census of India, 1961	7,860
II.	Number of Dentists available in 1964 out of the stock in 1961	7,663
III.	Out-turn of qualified dentists from colleges during 1961 — 1964	741
IV.	Survivals in 1964 of qualified dentists (1961-1964)	723
V.	Total estimated stock of dentists available in 1964	8,386
	(Total of II and IV)	

Note: 2.5% attrition rate has been applied.

15. Thus it is estimated that total Stock of Dentists at the end of 1964 was of the order of 8,386 out of which 7,957 are males and 429 females. Statewise distribution of this estimated stock of dentists is given in Section V. This estimate includes only qualified dentists who may have entered the profession during the period 1961-64.

SECTION III

ESTIMATES BASED ON PERIODICAL STUDIES OF THE DIRECTORATE GENERAL OF EMPLOYMENT AND TRAINING

16. Another source of information on dental personnel is the occupational pattern study periodically made by the Directorate General of Employment and Training for the public and private sectors. The studies are based on the biennial returns from the Public and Private sector establishments in alternate years. The first survey for the Public sector was as on the 30th September, 1960 and the second as on 30th September, 1962. For the Private sector the first such survey was conducted as on 30th September, 1961. The data from the Public sector survey of 1962 and the Private sector survey of 1961 have been used in this section.

17. The surveys have used the National Classification of Occupations which was also used in the 1961 Census.

Dentists employed in Public Sector, 1962 and Private Sector, 1961.

18. The total number of dentists employed, as obtained from the Public sector survey of 1962 and the Private sector survey of 1961, is given in Table 4.

TABLE 4

Dentists employed full time in Public and Private Sectors

S. No.	States and Union Territories	Public Sector, 1962	Private Sector, Act and Non-Act Establishments,* 1961
1.	All States	90	23
2.	Union Territories	32	-
3.	All-India	122	23

* An Act Establishment is one which employs 25 or more persons. A Non-Act Establishment is one which employs 5 or more but less than 25.

19. The figures given in Table 5 give only the numbers employed in establishments which responded to the questionnaires issued by the Directorate General of Employment and Training. The Survey on the Occupational Pattern in Public Sector in India* covered only 82.2% of the total number of employees. Similarly the Survey of the Occupational Pattern in the Private Sector**, for the Act and Non-Act Establishments covered 93.2% and 87% employees respectively. If the estimate is raised in the Public and Private Sectors to 100%, the following results are obtained.

TABLE 5

Estimated number of Dentists employed in
Public and Private Sectors

S. No.	States and Union Territories	Public Sector, 1962	Private Sector, 1961, Act and Non-Act Establishments
1.	All States	109	27
2.	Union Territories	39	-
3.	All-India	148	27

20. These figures are too low in comparison with the census results. Dentists do not form an important occupational category for the Directorate General of Employment and Training studies and it is possible that some of them have been reported as doctors. The reason for a low total may be ascribed partly to the large number of dentists in private practice.

* Occupational Pattern in Public Sector, 1962, Directorate General of Employment and Training.

** Occupational Pattern in Private Sector, 1961, Directorate General of Employment and Training.

SECTION IV

REGISTRATION OF DENTISTS WITH DENTAL COUNCIL OF INDIA

Introduction

21. Registration data available with the Dental Council of India form another useful source of information which has been used in this paper. The Dental Council of India collects such data through the State Dental Councils. A note on constitution and composition of Dental Council of India is given in Appendix VII of this paper.

22. The registration of dentists with the Dental Council of India covers the period upto April, 1963 and these have been presented in Table 6.

TABLE 6

Distribution of Registered Dentists by
Qualification and Sex, April 1963

	Male		Female		Total	
	No.	%	No.	%	No.	%
Registered under Part 'A'	1,502	29	124	48	1,626	30
Registered under Part 'B' Permanent and Temporary	3,704	71	134	52	3,838	70
Total Registered	5,206	100	258	100	5,464	100

Source: Dental Council of India.

23. A total of 5,464 dentists were registered with the Dental Council of India by April 1963, of whom 5,206 were males and 258 females. Of the total dentists registered, 30% have either a degree or diploma in dentistry and 70% have been included in Part 'B' as they had no proper degree or diploma, but only practising experience in this field.

24. As the registration of dentists with Dental Council of India covers the period upto April, 1963, therefore to arrive at the stock of

registered dentists at the end of 1964, the Institutional outturn of dentists in the year 1964 has been added to the dentists registered with Dental Council of India upto April, 1963. The total stock thus obtained has been presented in Table 7.

SECTION V

EVALUATION AND CONCLUSION

25. Three estimates of the stock of dentists based on the data available from different sources have been obtained in the preceding sections. In this section, these estimates have been compared and evaluated. An acceptable estimate of the stock of dentists as at the end of 1964 has also been prepared and the distribution of this stock by age, sex-qualification and rural-urban areas etc. is given.

26. The estimates of the stock of dentists at the end of 1964 obtained from each of these three sources are presented in Table 7.

TABLE 7

Estimate of stock of dentists at the end of 1964
obtained from different sources

S. No.	Name of States and Union Territory	SOURCES		
		Census	Directorate General of Employment and Training	Dental Council of India
1.	All States	7, 559	165	5, 396
2.	Union Territories	827	47	358
3.	All-India	8, 386	212	5, 754

27. Of these, the estimates derived from the Census data and registration data of the Dental Council of India are comparable. The estimate based on the Occupational Pattern Studies of the Directorate General of Employment and Training does not stand comparison because these studies cover only those dentists who are employed in the Public Sector and Organised Private Sector establishments and therefore do not give a complete count of all the practising dentists in India and secondly, the figures are obviously too low to be accepted as representing the correct position. The estimates of the stock of dentists at the end of 1964 obtained from the registration data of the

Dental Council of India and Census of India - 1961 are 5, 754 and 8, 386 respectively. The difference of 2, 632 between these two estimates can be explained largely as being caused by under-registration of dentists and the non-registration of the ancillary personnel in certain areas by the Dental Council. The limitations of the registration data discussed earlier lead to the conclusion that any estimate arising there-from would be on the conservative side. On the other hand, Census is a country-wide survey covering all categories of personnel including dentists and ancillary personnel, like dental hygienists and dental mechanics, practising in India. The possibility of the estimate based on a complete count being more accurate and reliable for purposes of planning is thus greater, notwithstanding the limitations inherent in the Census operation. It follows that until the registration data as well as data regarding outturn of dentists becomes more complete in both coverage and quality, the estimates derived from the Census should be accepted. The estimate is accordingly accepted to be 8, 386.

28. For want of better measure it is assumed that distribution of dental personnel in 1964 will follow the same pattern as in 1961. In the following tables, the distribution of this stock by sex, rural-urban ratio to population by States, and age has been attempted.

29. The State-wise distribution of estimated stock of dentists in rural and urban areas is given in Table 8. An International Comparison of the ratio of dentists to population is given in Table 11.

TABLE 8

Rural and Urban Distribution of Dentists at the
end of 1964

S. No.	States	Urban			Rural			
		Male	Female	Total	Male	Female	Total	
1.	Andhra Pradesh	241	8	249	43	1	44	
2.	Assam	66	1	67	35	1	36	
3.	Bihar	159	4	163	75	1	76	
4.	Gujarat	387	28	415	24	-	24	
5.	Jammu and Kashmir	56	-	56	16	-	16	
6.	Kerala	301	18	319	270	25	296	
7.	Madhya Pradesh	217	-	217	57	-	57	
8.	Madras	350	22	372	22	6	28	
✓ 9.	Maharashtra	1,031	122	1,153	36	6	42	
10.	Mysore	178	8	186	53	5	58	
11.	Orissa	13	-	13	1	-	1	
12.	Punjab	532	24	556	661	15	676	
13.	Rajasthan	149	1	150	14	2	16	
14.	Uttar Pradesh	740	89	829	386	20	406	
15.	West Bengal	678	12	690	342	6	348	
16.	States	Total	5,098	337	5,435	2,035	89	2,124
17.	A and N. Islands	2	-	2	3	-	3	
18.	Delhi	675	17	692	-	-	-	
19.	Himachal Pradesh	29	-	29	11	-	11	
20.	L. M. and A. Islands	-	-	-	-	-	-	
21.	Manipur	9	-	9	6	-	6	
22.	Tripura	9	-	9	17	-	17	
23.	D. N. Haveli	-	-	-	-	-	-	
24.	Goa, Daman and Diu	18	-	18	15	-	15	
25.	N. E. F. A.	-	-	-	-	-	-	
26.	Nagaland	2	-	2	4	-	4	
27.	Pondicherry	6	-	6	4	-	4	
28.	Union Territories	Total	750	17	767	60	-	60
29.	All-India		5,848	354	6,202	2,095	89	2,184

Source: Registrar General of India.

30. The ratio of dentists to population by States is given in Table 9.

TABLE 9

Ratio of Dentists to Population by States as on
December, 1964

S. No.	States	Estimated Population in 1964 (in millions)	Dentists	Population per Dentist
1.	Andhra Pradesh	38.36	293	130,928
2.	Assam	13.07	103	126,893
3.	Bihar	50.13	239	209,749
4.	Gujarat	22.58	439	51,435
5.	Jammu and Kashmir	3.73	72	51,806
6.	Kerala	18.36	615	29,854
7.	Madhya Pradesh	35.15	274	128,285
8.	Madras	35.63	400	89,075
9.	Maharashtra	43.06	1,195	36,033
10.	Mysore	25.47	244	104,385
11.	Orissa	18.88	14	1,348,571
12.	Punjab	22.48	1,232	18,247
13.	Rajasthan	22.17	166	133,554
14.	Uttar Pradesh	79.39	1,235	64,283
15.	West Bengal	38.20	1,038	36,802
16.	A and N. Islands	0.07	5	14,000
17.	Delhi	3.14	692	4,538
18.	Himachal Pradesh	1.46	40	36,500
19.	L. M. A. Islands	.03	-	-
20.	Manipur	.88	15	58,667
21.	Tripura	1.26	26	48,462
22.	D. N. Haveli	.06	-	-
23.	Goa, Daman and Diu	.65	33	19,697
24.	N. E. F. A.	.36	-	-
25.	Nagaland	.39	6	65,000
26.	Pondicherry	.40	10	40,000
27.	Sikkim	.17	-	-
28.	All-India Total	475.53	8,386	56,705

Source: Registrar General of India.

31. The most favourable ratio is in Punjab, where population per dentist is 18,000. Among the Union Territories Delhi enjoys the most favourable position with one dentist for 5,000 population.

32. The age-distribution of the estimated stock of dental personnel in 1964 is given in the Table 10. This distribution is based on the age-distribution of the registered dental personnel given in Appendices X and XI of this study.

TABLE 10
Age-Distribution of Dentists as at the end of 1964

S. No.	Age-Group	Male		Female		Total	
		No.	%	No.	%	No.	%
1.	20-24	430	5.4	75	17.5	505	6.1
2.	25-29	771	9.7	70	16.3	841	10.1
3.	30-34	915	11.5	64	14.9	979	11.7
4.	35-39	1,226	15.4	63	14.6	1,289	15.3
5.	40-44	1,424	17.9	57	13.2	1,481	17.7
6.	45-49	1,345	16.9	41	9.6	1,386	16.5
7.	50-54	1,058	13.3	30	7.1	1,088	12.9
8.	55-59	573	7.2	22	5.2	595	7.1
9.	60+	215	2.7	7	1.6	222	2.6
10.		7,957	100.0	429	100.0	8,386	100.0

Source: Ibid.

33. Table 10 shows that about 28% of the dentists are below the age of 35 years, and about 33% are below the age of 44 years. Their percentage in the age-group 60 and above is very small being only 2.6%.

34. The ratio of dentists to population given in Table 11 shows that, compared to the economically advanced countries, India lags behind considerably. It also lags behind Ceylon, Iran and UAR.

TABLE 11Ratio of Dentist to Population in Various Countries
and India

S. No.	Name of Countries	Base Year	Ratio of Dentist to Population
1.	U. S. A.	1960	1, 922
2.	Norway	1960	2, 000
3.	Sweden	1959	2, 271
4.	France	1960	2, 700
5.	Canada	1960	2, 790
6.	Japan	1960	2, 800
7.	Great Britain	1960	3, 988
8.	USSR	1960	4, 800
9.	South Africa	1960	11, 200
10.	UAR	1960	33, 800
11.	Iran	1960	35, 900
12.	Ceylon	1960	51, 811
13.	INDIA	1964	56, 705
14.	Indonesia	1958	2, 83, 700

Source: 1. World Directory of Dental Schools, WHO, 1959-60.
2. Statistical Year Book, U. N., 1963.

Some Suggestions

35. The discussion regarding the sources and quality of data on dental personnel in India leads clearly to the conclusion that a good deal of improvement is required. The first major direction in which action needs to be taken lies in a regular programme of updating the all-India and State Registers of Dentists by the Dental Council of India.

36. Simultaneously, action should also be initiated for the establishment of separate councils in Union Territories so that the likelihood of any deficiencies occurring due to lack of area-coverage may be eliminated.

37. It appears that the time has also come for the Dental Council to take step for the registration of ancillary dental personnel in the States still not covered so that this important category of manpower is included fully in future studies.

38. Considering the level of outturn of dental graduates, the capital required to start a dental clinic and the existing shortage of dentists in rural communities, the Sub-committee for Health and Medical Manpower Survey felt that a first step towards the solution of this problem would be to start dental health units first at all the district hospitals and subsequently, at the taluk hospitals on a phased basis.

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APPENDIX I

Dentists in India - 1961

S. No.	Name of States/Union Territories	No. of Dentists Total
1.	Andhra Pradesh	276
2.	Assam	97
3.	Bihar	225
4.	Gujarat	410
5.	Jammu and Kashmir	68
6.	Kerala	576
7.	Madhya Pradesh	259
8.	Madras	374
9.	Maharashtra	1, 112
10.	Mysore	229
11.	Orissa	13
12.	Punjab	1, 157
13.	Rajasthan	157
14.	Uttar Pradesh	1, 149
15.	West Bengal	978
<hr/>		
A	States Total	7, 080
<hr/>		
16.	A. N. Islands	5
17.	Delhi	650
18.	Himachal Pradesh	39
19.	L. M. and A. Islands	-
20.	Manipur	15
21.	Tripura	24
22.	D. N. Haveli	-
23.	Goa, Daman and Diu	31
24.	N. E. F. A.	-
25.	Nagaland	6
26.	Pondicherry	10
27.	Sikkim	-
<hr/>		
B.	Union Territories Total	780
<hr/>		
C	All-India	7, 860

Source: Registrar General of India.

APPENDIX II

Dentists in Urban India - 1961

S. No.	Name of States and Union Territories	No. of Dentists		
		Male	Female	Total
1.	Andhra Pradesh	228	7	235
2.	Assam	62	1	63
3.	Bihar	150	3	153
4.	Gujarat	365	23	388
5.	Jammu and Kashmir	53	-	53
6.	Kerala	285	14	299
7.	Madhya Pradesh	205	-	205
8.	Madras	331	18	349
9.	Maharashtra	975	98	1,073
10.	Mysore	168	7	175
11.	Orissa	12	-	12
12.	Punjab	502	19	521
13.	Rajasthan	141	1	142
14.	Uttar Pradesh	699	71	770
15.	West Bengal	640	9	649
A	States Total	4,816	271	5,087
16.	A. N. Islands	2	-	2
17.	Delhi	637	13	650
18.	Himachal Pradesh	28	-	28
19.	L. M. and A. Islands	<u>No. urban areas</u>		
20.	Manipur	9	-	9
21.	Tripura	9	-	9
22.	D. N. Haveli	Nil	-	Nil
23.	Goa, Daman and Diu	17	-	17
24.	N. E. F. A.	<u>No. urban area</u>		
25.	Nagaland	2	-	2
26.	Pondicherry	6	-	6
27.	Sikkim	Nil	-	Nil
B.	Union Territories Total	710	13	723
C.	All-India	Total 5,526	284	5,810

Source: Registrar General of India.

APPENDIX III

Dentists in Rural India - 1961.

S. No.	Name of States and Union Territories	Rural Dentists		
		Male	Female	Total
1.	Andhra Pradesh	40	1	41
2.	Assam	33	1	34
3.	Bihar	71	1	72
4.	Gujarat	22	-	22
5.	Jammu and Kashmir	15	-	15
6.	Kerala	256	21	277
7.	Madhya Pradesh	54	-	54
8.	Madras	21	4	25
9.	Maharashtra	34	5	39
10.	Mysore	50	4	54
11.	Orissa	1	-	1
12.	Punjab	624	12	636
13.	Rajasthan	13	2	15
14.	Uttar Pradesh	364	15	379
15.	West Bengal	324	5	329
A.	States Total	1,922	71	1,993
16.	A. N. Islands	3	-	3
17.	Delhi	-	-	-
18.	Himachal Pradesh	11	-	11
19.	L. M. A. Islands	-	-	-
20.	Manipur	6	-	6
21.	Tripura	15	-	15
22.	Dadra Nagar Haveli	-	-	-
23.	Goa, Daman and Diu	14	-	14
24.	N. E. F. A.	-	-	-
25.	Nagaland	4	-	4
26.	Pondicherry	4	-	4
27.	Sikkim	-	-	-
B.	Union Territories Total	57	-	57
	All-India Total	1,979	71	2,050

Source: Registrar General of India.

APPENDIX IV

Number of Dentists Per Million Population
by States, Rural, Urban, 1961

S. No.	States	Popula- tion in Millions	Total No. of Dentists			No. of Dentists Per Million Population		
			Rural	Urban	Total	Rural	Urban	Total
1.	Andhra Pradesh	35.98	41	235	276	1.14	6.53	7.67
2.	Assam*	12.21	34	63	97	2.78	5.15	7.93
3.	Bihar	46.46	72	153	225	1.55	3.29	4.84
4.	Gujarat	20.63	22	388	410	1.06	18.81	19.87
5.	Jammu and Kashmir	3.56	15	53	68	4.21	14.89	19.10
6.	Kerala	16.90	277	299	576	16.39	17.69	34.08
7.	Madhya Pradesh	32.37	54	205	259	1.67	6.33	8.00
8.	Madras	33.69	25	349	374	.74	10.36	11.10
9.	Maharashtra	39.55	39	1,073	1,112	.98	27.14	28.12
10.	Mysore	23.59	54	175	229	2.29	7.42	9.71
11.	Orissa	17.55	1	12	13	.06	.68	.74
12.	Punjab	20.31	636	521	1,157	31.32	25.65	56.97
13.	Rajasthan	20.15	15	142	157	.75	7.04	7.79
14.	U. P.	73.75	379	770	1,149	5.14	10.44	15.58
15.	West Bengal	34.93	329	649	978	9.42	18.58	28.00
16.	States Total	431.63	1,993	5,087	7,080	4.62	11.78	16.40
17.	U. Territories	7.60	57	723	780	7.50	95.13	102.63
18.	All-India	439.23	2,050	5,810	7,860	4.67	13.23	17.90

* Includes N. E. F. A.

Source: Registrar General of India.

APPENDIX V

Dentists full time employed in Public Sector
and Private Sector in India

S. No.	States and Union Territories	Public Sectors 1962	Private Sectors Non-Act Establi- shments	Total
1.	Andhra Pradesh	2	1	3
2.	Assam	4	-	4
3.	Bihar	4	-	4
4.	Gujarat	2	3	5
5.	Kerala	2	-	2
6.	Madhya Pradesh	10	-	10
7.	Madras	2	12	14
8.	Maharashtra	28	1	29
9.	Mysore	2	-	2
10.	Orissa	5	-	5
11.	Punjab	14	1	15
12.	Rajasthan	7	-	7
13.	Uttar Pradesh	7	8	15
14.	West Bengal	20	1	21
15.	Union Territories	39	-	39
16.	All-India	148	27	175

Source: Directorate General of Employment and Training.

APPENDIX VI

Distribution of Dental Personnel Employed in the
Public Sector by Type of Organisation

S. No.	Type of Organisation	No. of Dentists Employed
1.	Central Government	22
2.	*State Government	96
3.	Quasi Government	17
4.	Local Bodies	13

* Excludes Jammu and Kashmir.

Source: Directorate General of Employment and Training.

APPENDIX VII

Dental Council of India — Its Constitution and Composition

1. With the enactment of the Dentists Act, 1948, the Dental Council of India came into existence in April 1949. The said Act being a Central Act to regulate the profession of dentistry in the country now extends to the whole of India except the State of Jammu and Kashmir. The Act provides for a Dental Council at the Centre and formation of State Dental Councils in the States and Union Territories. While the Dental Council of India at the Centre is the overall body to look after the welfare of the Dental profession and for that purpose to maintain proper uniform standards of Dental education in the country, the State Dental Councils are primarily responsible for the maintenance of registration of dentists, dental hygienists and dental mechanics and matters arising thereof. In the initial stage, however, when the Dentists Act is enforced in a State, the registration of dentists is carried out by the Dentists Registration Tribunal, constituted by the State Government. The Register so prepared by this Tribunal is termed as the First Dentists Register and which on formation of a State Dental Council by the State Government is handed over into its custody. The State Dental Councils, with the prior approval of the concerned State Governments, have framed their own Rules and Regulations etc., and it is in accordance with these Regulations, etc., that fresh registration, annual renewal of registration of dentists, deletion of names and registration of dental hygienists and dental mechanics are carried out. At present, such State Dental Councils are functioning in 13 States viz.: (1) Assam, (2) Bihar, (3) West Bengal, (4) Uttar Pradesh, (5) Punjab, (6) Madhya Pradesh, (7) Andhra Pradesh, (8) Kerala, (9) Madras, (10) Mysore, (11) Maharashtra, (12) Gujarat and (13) the Union Territory of Delhi. State Dental Councils are yet to be constituted in (1) Orissa, (2) Rajasthan and Union Territories of (3) Himachal Pradesh, (4) Goa, Daman and Diu and (5) Pondicherry, where for the present Dentists Registration Tribunals exist. In some areas the State Dental Councils of the neighbouring States look after the affairs of registration of dentists etc.

2. For the purposes of regulating the standards of Dental education in the country, the Dentists Act, 1948, empowers the Dental Council of India to (1) inspect any dental institution imparting courses in the various specialities such as (1) Post-graduate course in Dentistry, (2) Under-graduate course in Dentistry, (3) Dental Hygienists course and (4) Dental Mechanics course. The power to appoint inspectors for this purpose is vested in the Executive Committee of the Dental

Council of India. Secondly, the Dental Council of India is also vested with powers to accord recognition to both Indian and foreign dental qualifications obtained by the Indian nationals not specified in any of the three Schedules appended to the said Act. Thirdly, the Dental Council of India is the Examining Body for the two statutory Examinations (Examination No. I and II) envisaged under Section 34 of the said Act. The Act further authorises the Dental Council of India to enter into negotiations with the authorities concerned abroad for settling of a scheme of reciprocity for the recognition of dental qualifications. The Dental Council of India with the prior approval of the Central Government have laid down Regulations and Syllabus etc. for (1) M.D.S. degree, (2) B.D.S. degree, (3) Dental Hygienists course and (4) Dental Mechanics course and which are being followed by the institutions concerned. Over and above, the Dental Council of India is entrusted with the task of maintaining an All-India Dentists Register. This Register is compiled in alphabetical order by the Dental Council of India on the basis of the State Dentists Registers obtained from time to time from the various State Dental Councils. The first Indian Dentists Register was compiled and printed in 1952 and since then a series of such Registers and their Supplements have been published. Such Registers contain the full particulars of the dentists registered under the said Act with the concerned State Dental Councils viz. (i) full name of the dentist and his date of birth, (ii) qualifications entitling for registration, (iii) date of First Registration, (iv) residential and professional addresses. This Register is comprised of three parts. Dentists possessing recognised qualifications are shown in Part 'A'. Those not possessing such qualifications but who had been carrying on the profession of dentistry as their principal means of livelihood for not less than 5 years prior to the date appointed under Section 32(2) of the said Act for the preparation of the First Dentists Register by the Dentists Registration Tribunal are shown on Part 'B' Permanent. Similarly, those having 2 years practice at the time of the preparation of the First Dentists Register are shown on Part 'B' Temporary. After the preparation of the First Dentists Registers in the States no unqualified person can secure registration unless he obtains a recognised dental qualification or passes the statutory Examination No. II laid down by this Council and that too within a period of 10 years from the enforcement of the said Act in a State.

Condition for Registration

3. Once the Dentists Act, 1948, is enforced in any State/Union Territory, no dentist can escape from registration, as the practice of dentistry without registration is an offence and punishable under the said Act. A dentist has not only to seek registration once, but has to have his

name renewed every year on payment of the prescribed fees, laid down by the concerned State Dental Councils for the purpose, failing which his name is struck off from the State Dentists Register.

4. The name so struck can however be restored on the State Dentists Register, upon payment, by the defaulting dentist of the penalty fee etc., etc., alongwith the renewal fee. Not only this, if a dentist after his registration obtains any additional recognised dental qualification, that too he has to specify against his name in the State Dentists Register upon payment of the prescribed fee. For purposes of Registration on Part A of the State Dentists Register, one should be a citizen of India, and be in possession of a recognised dental qualification specified in any of the three Schedules appended to the said Act or qualification recognised by the Dental Council of India. For purposes of registration on Part 'B' Permanent, one besides being a citizen of India should also have practised the profession of dentistry as his principal means of livelihood for a period of not less than five years from the date fixed by the State Government concerned for purposes of preparation of the First Dentists Register, by the Dentists Registration Tribunals. For registration on Part B Temporary, one should have practised the profession of dentistry for at least 2 years as his principal means of livelihood. This facility of registration on Part B to these un-qualified persons is restricted only to the preparation of the First Dentists Register.

5. Unlike the preparation of the First Dentists Registers by the Dentists Registration Tribunals, the task of preparing the First Register of Dental Hygienists and Dental Mechanics is only vested in the State Dental Councils. So far such registers of Dental Hygienists and Dental Mechanics have been prepared in Punjab, Delhi and Uttar Pradesh only. In other States, it is in progress.

6. The data on the number of registered dentists in the various States, as compiled by the Dental Council of India on the basis of the State Dentists Registers obtained from the various State Dental Councils upto April, 1963 are in Table 6 of the Section IV. A detail coverage of the Dental Council of India is also given in the Appendix VIII.

APPENDIX VIII

Coverage of the Dental Council

S. No.	Name of the State Dental Council	Year of Establish-ment	Head-Quarters	Coverage
1.	Assam State - Dental Council	1952	Shillong	The whole State of Assam
2.	Maharashtra - Dental Council	1951	Bombay	Maharashtra
3.	Gujarat - Dental Council	1961	Ahmeda- bad	Whole of Gujarat State.
4.	Bihar State - Dental Council	1953	Patna	Bihar State only.
5.	Madras State - Dental Council	1951	Madras	Madras State.
6.	Madhya Pradesh - Dental Council	1954	Bhopal	Madhya Pradesh.
7.	Uttar Pradesh State - Dental Council	1952	Lucknow	Uttar Pradesh.
8.	West Bengal - Dental Council	1950	Calcutta	W. Bengal.
9.	Punjab State - Dental Council	1955	Ludhiana	Punjab
10.	Andhra Pradesh - Dental Council	1958	Hyderabad	Andhra Pradesh.
11.	Dentists Registration Tribunal	1951	Bhubanes- war	Orissa.
12.	Kerala State - Dental Council	1965	Trivan- drum	Kerala
13.	Dentists Registrar Tribunal, Rajasthan	1959	Jaipur	Rajasthan.
14.	Mysore State - Dental Council	1961	Bangalore	Mysore State.
15.	Dentists Registration Tribunal, Himachal Pradesh	1960	Simla	Himachal Pradesh
16.	Delhi State - Dental Council	1953	Delhi	Delhi only
17.	Goa, Daman and Diu Dental Council		Goa	Goa, Daman and Diu
18.	Pondicherry - Registration Tribunal	1963	Pondicherry	Pondicherry

Source: Dental Council of India.

APPENDIX IX

Distribution of Registered Dentists by State as on
April, 1963

S. No.	States and Union Territory	Male		Female		Total	
		No.	%	No.	%	No.	%
1.	Andhra Pradesh	169	3.3	10	3.9	179	3.3
2.	Assam	55	1.1	4	1.6	59	1.1
3.	Bihar	70	1.3	2	0.8	72	1.3
4.	Gujarat	267	5.1	6	2.3	273	5.0
5.	Jammu and Kashmir*	N. A.	N. A.	N. A.	N. A.	N. A.	N. A.
6.	Kerala	310	5.9	12	4.6	322	5.9
7.	Madhya Pradesh	92	1.8	2	0.8	94	1.7
8.	Madras	258	5.0	16	6.2	274	5.0
9.	Maharashtra	1, 213	23.3	119	46.0	1, 332	24.4
10.	Mysore	278	5.3	17	6.6	295	5.4
11.	Orissa	18	0.3	-	-	18	0.3
12.	Punjab	901	17.4	30	11.6	931	17.0
13.	Rajasthan	280	5.4	-	-	280	5.1
14.	Uttar Pradesh	416	8.0	10	3.9	426	7.8
15.	West Bengal	534	10.3	17	6.6	551	10.1
16.	Delhi	286	5.5	11	4.3	297	5.4
17.	Himachal Pradesh	59	1.1	2	0.8	61	1.1
18.	Total	5, 206	100.0	258	100.0	5, 464	100.0

Source: Dental Council of India.

* The Dentist Act of 1948 has not been intended to Jammu and Kashmir.

APPENDIX X

Age-Distribution of Registered Dentists Part A (Degree/
Diploma) April, 1963

Age-Group	Male		Female		Total	
	No.	%	No.	%	No.	%
20-24	70	5.0	5	4	75	5
25-29	365	24.0	39	32	404	25
30-34	290	19.0	34	28	324	20
35-39	183	12.0	14	11	197	12
40-44	143	10.0	10	8	153	9
45-49	171	11.0	10	8	181	11
50-54	149	10.0	8	6	157	9
55-59	74	5.0	3	2	77	5
60 and above	57	4.0	1	1	58	4
All ages	1,502	100.0	124	100	1,626	100

Source: Dental Council of India.

APPENDIX XI

Age-Distribution of Registered Dentists Part B
(By virtue of practical experience)
April, 1963

Age-Distribution	Males		Females		Total	
	No.	%	No.	%	No.	%
20-24	51	1.4	1	1.0	52	1.4
25-29	164	4.4	11	8.2	175	4.5
30-34	325	8.8	12	9.0	337	8.8
35-39	638	17.2	29	21.6	667	17.4
40-44	821	22.2	31	23.1	852	22.2
45-49	738	19.9	20	14.9	758	19.8
50-54	570	15.4	13	9.7	583	15.2
55-59	312	8.4	13	9.7	325	8.4
60 and above	85	2.3	4	2.8	89	2.3
All Ages	3,704	100.0	134	100.0	3,838	100.0

Source: Dental Council of India.