

THE PROBLEM OF VENEREAL DISEASES IN TEHERAN — A RETROSPECTIVE STUDY*

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SUMMARY

Rapid spread of venereal diseases in advanced countries has prompted the authors to undertake this study on venereal diseases in Iran, a fast growing country, with a view to finding ways for dealing with these diseases. Data available at the VD centre in Teheran, the rapidly developing capital of Iran, have been used for this preliminary study. A retrospective analysis of available data for the period 1964-1973 has shown that VD cases in Iran has been increasing and that composition of clientele of VD centre has substantially changed over time.

The need for an effective and efficient control programme based on a time limited epidemiological-behavioural survey of general population and on functional analysis of health units presently catering to the demand of population has been brought out.

INTRODUCTION

Recently studies and surveys are being undertaken to understand alarming rates at which venereal diseases are spreading globally and in particular in

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developed parts of the world. (Idsoe, O. et al, 1973, Willcox, R.R., 1972). The Director General of the World Health Organization has also drawn the world's attention to this new development through his address at the World Health Assembly (WHO, 1973). It has also been shown that, beyond a certain threshold value, the level of living of the population is associated with increased prevalence of venereal diseases possibly due to increased social and capital mobility (Willcox, R.R., 1972).

Iran has been experiencing a very rapid economic growth in recent years. Naturally this would result in improved living conditions of people over time with associated concomitants of development. The present study has been undertaken to explore the situation of venereal diseases in Iran against this background and following our realization that with improved living standards there exists a possibility of VD prevalence becoming a major public health problem. This study follows closely the earlier study by Syadat but relates to a more recent period when developments have been more rapid and widespread. (SYADAT 1970)

OBJECTIVES

The overall objective of the present study is to find ways for an efficient, effective and feasible programme to control venereal diseases in rapidly developing Iran. Achievement of this objective implies a proper understanding of VD problem as is in Iran and as it likely to be in the near future. For a proper understanding of VD problem in Iran, it is necessary to have valid information from data generated through a statistically designed epidemiological survey of general population with a follow-up of the surveyed population longitudinally overtime to observe variations in magnitude and pattern of VD. However, in view of the cost and resources needed in carrying out such a survey the approach that has been taken in this paper is to utilize available data to get an idea about the situation and as a basis for further investigation. This study is thus confined to an analysis of data related to those attending the venereal diseases centres organized and operated by the Ministry of Health of Iran, to cater to the needs of those making demand on these centres. It is recognized that the demand on Ministry of Health VD centres forms only a part of those making demand on available services including private sector physicians and hence the findings have a number of limitations. Even at the outset it has thus been realized that any generalization of results based on data belonging to those special group of persons to general population will be highly questionable. The primary question has been to find variations in the pattern of demand overtime and its impact on the prevalence of VD among that demand. The study is intended to reflect at best the situation among those making demand on government VD centres in the area concerned and is the first step in any overall investigation of VD problems in a community.

To minimize information cost for this phase of the study on dynamics of VD problem in Iran, it is desirable to concentrate our attention on data

related to rapidly developing parts of Iran. From available information, Teheran, with an estimated population of 3.8 million in 1972 appears to be th fastest developing area in the country. The immediate objective has thus been formulated as to understand the trend of venereal diseases prevalence amongst those attending government organized venereal diseases centres in Teheran and examine variations overtime in magnitude and pattern of venereal diseases among them.

MATERIALS & METHODS

For this study, data relating to those attending the Ministry of Health VD Centres in Teheran have been analysed. It should be noted that under government regulations every one getting married, entering employment as also the prostitutes and shopkeepers, have to obtain a clearance certificate from the VD centre. In addition pregnant women and suspected or confirmed VD cases attend these centres. Attendance at the VD centre is composed of these groups of persons and both clinical records and laboratory results for the period 1964-1973 relating to these persons have been taken up for analysis. For each year the following information was collected:

1. Number of attendances by
 - 1.1 Sex
 - 1.2 Reason for attendance
2. Number of VD cases by
 - 2.1 Type of VD
 - 2.2 Reason for attendance
3. Number of laboratory positive results by
 - 3.1 Type of VD

In addition, from official publications, reported number of VD cases in Iran for the period of 1962-1971 have also been extracted.

In view of year to year variations ascribable possibly to reporting time-lag, data were smoothed by taking three-year moving averages and analysis has been confined to these smoothed observations only. Unless otherwise stated, in the tables 'reference year' is the middle of the three-year period considered and the corresponding value is the three-year moving average one. In so far as analysis of distribution of positives are concerned, smoothed data related to three reference years — 1965, 1968 and 1972 — will only be considered. Data for the three reference years at nearly equal time intervals is intended to simplify the issue with a view to assist in clearer and better understanding. In view of limitations associated with these data, sophisticated statistical techniques have not been used in the analysis of thes data at this stage of study.

FINDINGS

Number of reported cases of gonorrhoea and syphilis for the period 1962-1971 is given in Table 1. Three-year moving averages have been com-

puted and each value has been expressed as an index of the base value for 1963. Fig. 1 gives these index values for gonorrhoea and syphilis as also the population trend. From these data it is clear that the prevalence of venereal diseases in Iran as reflected by the reported cases has been increasing at a terrific rate over the decade and in particular gonorrhoea faster than syphilis. Fall in the number of cases during 1965-1966 has been noted but this has been ascribed to cholera epidemic when all health services personnel, including those belonging to the VD centres, were mobilised on an emergency basis to tackle the epidemic.

With this overall national perspective we can look at the prevalence of VD cases amongst those attending the VD centre organized and operated by the Ministry of Health in rapidly developing Teheran, the capital of Iran. Table 2 gives, for the period 1965-1972, the number of those attending VD centres and of VD cases among them. It should be noted that these data are the three-year moving averages of values for the period 1964-1973. The number of cases amongst those attending the VD centres is nearly constant over the period but the known prevalence rate, based on positive cases among those attending the VD centre, has decreased from .17% to .09% during the same period. This finding, in relation to the above-noted increasing trend in the number of VD cases in Iran, suggests the possibility that a large number and a relatively higher proportion of cases may be going to private sector physicians and to health units other than the VD centre under consideration. Unfortunately no information is available on this aspect.

Table 3 gives the prevalence rate of VD cases by sex among those attending the VD centre for the period 1965-1972. Prevalence rates among females have increased from 5.3% to 11.1% while those among males have decreased from 7.0% to 4.6% during the same period. Sex ratio among attendances is fairly stable during this period. This suggests that female positive cases have a greater propensity to use VD centres than male positive cases. This can only be validated through epidemiological-behavioural survey of general population of Teheran. It is possible that the purpose of visit of these attendances might have influenced the above figures.

Table 4 gives the distribution of positive cases by reason of attendance for three selected reference years — 1965, 1968 and 1972. In cases of males, proportionate contribution to total positives has been decreasing for those coming to obtain a health certificate as a prerequisite for employment and for those coming for premarital VD check up, but has increased from shopkeepers and 'others' including those coming to VD centre with suspected VD. For the females also, there has been a reduction in contribution of these two groups — health certificate and premarital check up visit to the total cases. In addition, 'pregnant women' group has shown a reduction in its contribution to total cases over time. However, an increase can be observed for 'workers', 'prostitutes' and 'others'. How far this reduction in contribution of those coming

for employment health certificate and for premarital check up is real is not known. It is quite possible that these two groups might have gone to private physicians earlier so as to be able to obtain a negative VD certificate from the Ministry of Health VD centre.

Table 5 gives the prevalence rates of VD cases by sex and reason for attendance. For males prevalence rates have been decreasing overtime for all groups but the trend has been increasing for the female workers, prostitutes and 'others'. Actually in respect of these groups of females, the rates have almost doubled during the period 1965-1972. Overall, not only the distribution of positives by reason of attendance that has changed overtime but also the prevalence rates among these groups. From these data it appears that the type of clientele of VD centres has been changing overtime and based on these findings it is possible that the clientele of VD centres *now* may be different from the one a decade ago.

Table 6 gives the distribution of different types of venereal diseases by age for three reference years — 1965, 1968 and 1972. Data relate to laboratory results of samples from those attending the VD centre. From each individual for diagnostic laboratory examination a sample of blood for serological test was taken and in case of suspected cases, a smear for gonorrhoea was also taken. Thus when an individual gets diagnosed as positive for both syphilis and gonorrhoea it will be counted as two positives even though it relates to a single individual. It can be seen from this table that the ratio of gonorrhoea positives to syphilis positives is 1.3 in 1965 and 1.6 in 1972. This suggests an increase overtime in the combined occurrence (super-imposed infection?) of both infections. In case of syphilis, contributions of 15-19 and 40 and above age groups have been increasing, the former from 4.8% in 1965 to 8.0% in 1972.

CONCLUSION

Based on these findings, following tentative conclusions can be drawn subject to their validation through an epidemiological-behavioural survey of general population:

1. There is an increasing trend in the prevalence of VD cases in Iran.
2. There has been a shift in the type of demand on the VD centre.
3. There has been a change in the type of cases observed among those coming to VD centre.

Over a decade in so far as the VD centre in Teheran is concerned, there has been a qualitative change in the demand on the VD centre though quantitatively the situation is almost stable. While there has been a substantial population increase, total attendances at the VD centre has not increased appreciably possibly because demand gets harmonized with supply. Such harmony cannot last long.

With the changing pattern of demand on the VD centre and increasing trend in cases among 15.19 age group it is necessary to intensify case finding and contact tracing and implement rigorous control measures with similar momentum and action as was undertaken for smallpox and malaria. Mere expansion of services through establishment of more VD centres but performing present functions will result in little impact on the problem. With the anticipated rapid development of the country, the problem of VD may become serious unless adequate and effective control measures are undertaken. An epidemiological-behavioural survey of general population and a functional analysis survey of the existing health institutions will assist in designing an effective and efficient VD control programme provided such a survey is time-limited and designed to yield information primarily on those factors that are essential in designing a VD control programme. The time has come when the problem of Venereal Diseases has to be taken seriously and effective and efficient control measures designed and implemented to prevent, control and eradicate this problem.

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FIG. 1: NUMBER OF REPORTED CASES OF SYPHILIS AND GONORRHEA EXPRESSED AS AN INDEX WITH BASE YEAR 1963. IRAN 1963-1970

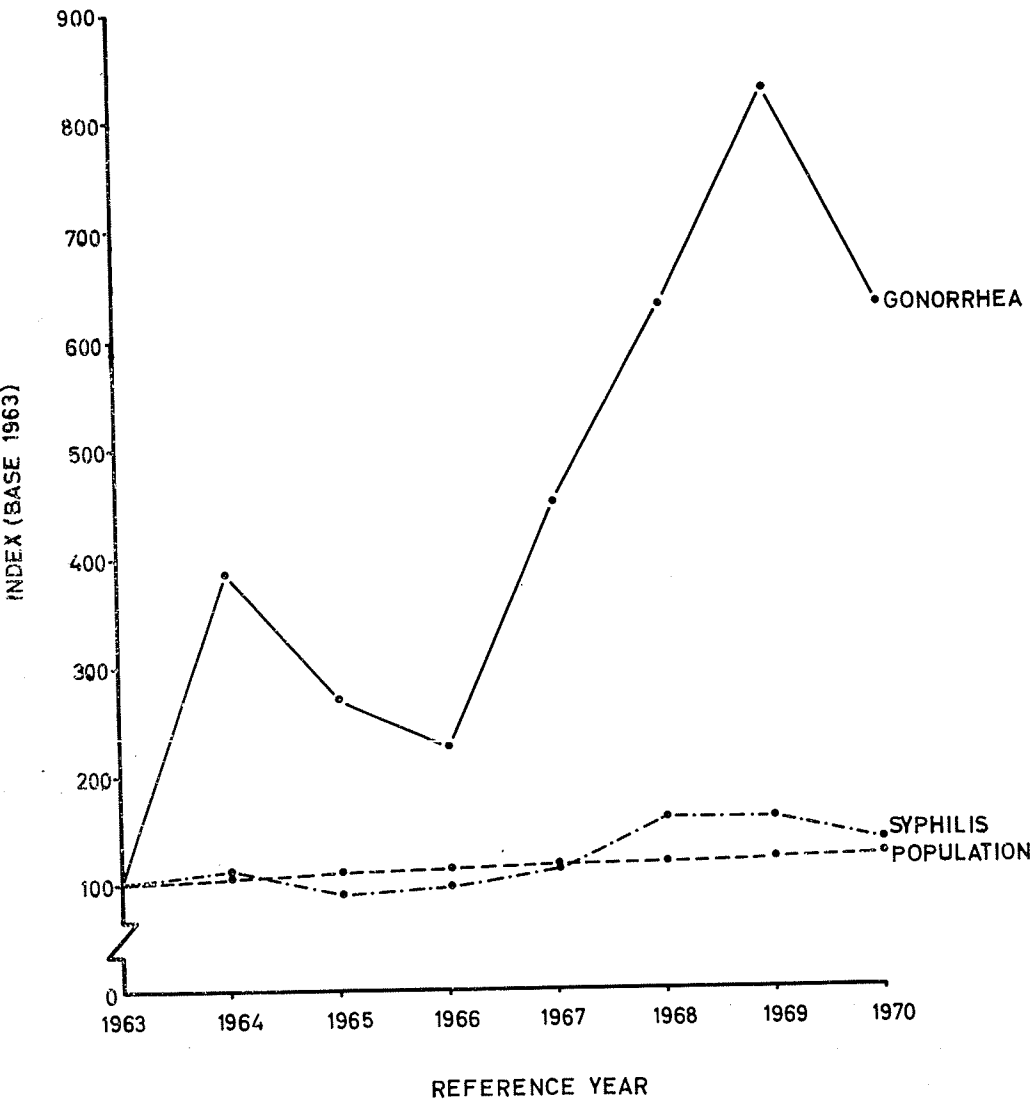


Table 1: REPORTED CASES OF VENEREAL DISEASES IN IRAN, 1962-1971

Type of Case	Number of Cases in										
	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	
Syphilis	2102	2349	1499	1916	617	809	5318	3359	3755	2370	
Gonorrhoea	11239	37774	11667	13396	3805	12590	18161	18837	12710	11225	

Source: Annual Statistics of Iran, 1350. Serial No. 326, 1351

Table 2: PREVALENCE OF VENEREAL DISEASES AMONG THOSE ATTENDING VENEREAL DISEASES CENTRES, TEHRAN CITY, THREE-YEAR MOVING AVERAGE, 1964-73

Reference Year*	Population** (in Millions)	Number attended	Positives	Rate per 100 persons	
				General population	Clinic attendance
1965	2.90	78732	4933	.172	6.3
1966	2.93	79161	5991	.201	7.6
1967	3.13	79497	6304	.198	7.9
1968	3.33	78010	5430	.162	7.0
1969	3.62	71724	4881	.135	6.8
1970	3.86	65954	4839	.125	7.3
1971	4.12	64830	4666	.113	7.2
1972	4.39	67599	3889	.089	5.8

*Mid point of three-year period

**Personal communication

Table 3: PREVALENCE OF VENEREAL DISEASES AMONG THOSE ATTENDING VENEREAL DISEASE CENTRES BY SEX, TEHRAN CITY, THREE-YEAR MOVING AVERAGE, 1964-1973

Reference Year*	Number of attendances		Positives			
			Male		Female	
	Male	Female	No.	%	No.	%
1965	47826	30906	3350	7.0	1638	5.3
1966	54305	24856	4213	7.8	1778	7.2
1967	61606	17891	4534	7.4	1770	9.9
1968	63740	14270	4076	6.4	1404	9.8
1969	59804	11920	3639	6.1	1242	10.4
1970	55359	10595	3420	6.2	1419	13.4
1971	54061	10819	3196	5.9	1470	13.6
1972	55824	11775	2582	4.6	1307	11.1

Table 4: DISTRIBUTION OF POSITIVE CASES AMONG THOSE ATTENDING VENEREAL DISEASES CENTRES BY REASON FOR ATTENDANCE, TEBEYAN CITY, SELECTED YEARS

Reference Year*	Number of positives										% distribution of positives										
	Male					Female					Male			Female							
	Marr.	Empl.	Shop.	Other	Total	Marr.	Empl.	Shop.	Other	Total	Marr.	Empl.	Shop.	Other	Total	Marr.	Empl.	Shop.	Other	Total	
1965	950	685	23	1693	3351	235	139	220	1	713	23.4	20.4	.7	50.2	100	17.8	10.6	17.5	0.1	54.1	100
1972	625	170	146	3603	4134	117	27	33	16	904	15.9	4.1	3.5	76.6	100	10.7	2.1	2.0	1.5	92.7	100
1977	450	60	179	1391	2580	57	9	3	37	774	17.4	2.3	6.9	73.3	100	6.4	1.0	0.9	4.2	37.5	100

*Mid-point of three-year period

Table 5: PREVALENCE RATE OF VD POSITIVE CASES AMONG
THOSE ATTENDING VENEREAL DISEASES CENTRES
BY TYPE OF ATTENDANCE, TEHRAN CITY.
SELECTED YEARS

Reference Year*	Prevalence rate per 100 attendances											
	Male					Female						
	Marr.	Empl.	Shop	Other	Total	Marr.	Empl.	Freg.	Work	Pros.	Other	Total
1965	4.3	5.6	3.4	13.3	7.0	4.5	3.3	1.5	1.5	32.1	14.2	5.3
1968	2.7	2.3	4.9	12.7	6.9	3.3	1.1	2.7	1.6	34.0	16.3	9.9
1972	1.5	1.2	3.9	11.8	4.6	1.3	0.5	1.0	3.0	58.2	28.7	11.0

*Mid-point of three-year period

Table 6: DISTRIBUTION OF POSITIVE VD CASES BY TYPE AND AGE. VENEREAL DISEASES CENTRAL, TEHRAN CITY, SELECTED YEARS

Reference Year	Positive VD Cases																													
	Syphilis										Chancroid																			
	Age Group					Age Group					Age Group					Age Group														
	Less 15	15-19	20-39	40+	Total	Less 15	15-19	20-39	40+	Total	Less 15	15-19	20-39	40+	Total	Less 15	15-19	20-39	40+	Total										
No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%									
1965	3	0.2	93	4.8	1112	57.2	735	37.3	1943	100	13	0.7	531	19.8	1785	66.6	345	12.9	2679	100	1	0.2	98	17.8	401	72.9	50	9.1	550	100
1968	5	0.2	165	6.9	1187	49.0	1023	43.0	2390	100	32	0.6	1124	22.4	3927	67.9	457	9.1	5010	100	2	0.6	69	20.2	238	69.6	33	9.6	342	100
1972	7	0.4	153	8.0	917	48.0	833	43.6	1910	100	29	0.9	706	22.7	2030	66.8	297	9.5	3114	100	7	7.1	22	22.2	63	63.6	7	7.1	99	100