

NEEDS AND DEMANDS FOR DENTAL CARE IN INDONESIA

Ch. M. Kristanti¹

KEBUTUHAN DAN PERMINTAAN PERAWATAN GIGI DI INDONESIA

Abstract. Informasi tentang kebutuhan dan permintaan perawatan gigi dapat diperoleh melalui analisis lanjut data Susenas 1998 dan SKRT 1995. Hasil analisis menunjukkan sebesar 63% penduduk Indonesia memiliki karies/lubang pada giginya yang belum ditumpat dengan rata-rata 1,89 gigi karies per orang. Jumlah gigi karies tersebut meningkat pada umur yang lebih tinggi. Rata-rata jumlah gigi ditumpat sangat rendah, hanya 0,16 gigi per orang dan tidak mengalami perubahan pada umur yang lebih tinggi. Jumlah gigi dicabut mencapai rata-rata 4,4 gigi dan peningkatan yang cukup tajam terjadi pada umur 35-44 tahun dan 65 tahun ke atas (SKRT 1995). Dengan demikian dapat dibayangkan besarnya kebutuhan akan perawatan gigi penduduk Indonesia (dental treatment needs). Namun kenyataannya hasil Susenas 1998 menunjukkan hanya 1,3% dari penduduk yang mengeluh sakit gigi (potential demand) dan diantara mereka yang mengeluh hanya 13% berobat ke fasilitas pelayanan kesehatan (effective demand for dental care). Di antara yang mengeluh, 35,5% berobat ke Puskesmas, 25,2% ke dokter praktek, dan 17,8% ke tenaga kesehatan. Penggunaan fasilitas lainnya sangat kecil. Perbedaan yang mencolok antara kebutuhan (need) dan permintaan (demand) mencerminkan perbedaan cara pandang antara dokter gigi dan pasien dalam melihat keseriusan penyakit gigi dan konsep status kesehatan gigi yang dapat diterima.

Kata kunci : perawatan gigi, kebutuhan dan permintaan, analisis lanjut.

INTRODUCTION

The occurrence of disease may be measured as prevalence (the total disease existing in the population at any one time) or incidence (the number of new cases occurring in a given period of time). Because of the chronic nature of most dental diseases, prevalence rate, which reflects both recently occurring cases and the backlog due to neglect, is much higher than incidence rate. Prevalence data provide an estimate of the total treatment requirements at the time of study⁽¹⁾.

A realistic appraisal of treatment needs must include consideration of the influence of patient attitudes and the degree to which dental care will be sought or accepted. A clinical examination of the detectable disease in a patient may suggest to the dentist the need for extensive restorative procedures and periodontal therapy. The patients, however, may view their oral health status in a completely different light and perceived needs for treatment which include only extraction of the teeth and replacement by dentures. In this instance, there would be some difference between

¹ Researcher at National Institute of Health Research and Development, Ministry of Health, Republic of Indonesia

absolutable need and a marked difference between “need” for treatment and “demand” for care. At least, the disparity between “need” and “demand” reflects differences between the dentist and the patient in their assessment of the severity of dental diseases and their concept of acceptable oral health status.

The need for dental service is often confused with the demand for care. Obviously, one can be aware of a need and not demand care for it. Or one can be aware of a need, desire care for it, but does not have the ability to obtain dental services to satisfy the need. The unqualified desire for dental care is defined as “potential demand” whereas the desire plus the ability to obtain dental service is defined as “effective demand”. (figure 1) The needs, desires, wants, and demands both potential and effective are a complicated webs of factors, all bearing in various degrees and inter-relations on the utilization of dental services and the availability of those services. For purposes of discussion, utilization is equated with effective demand ⁽¹⁾. Information about dental treatment needs, potential demand, effective demand, and utilization of dental health services can be obtained from

National Household Health Survey (NHHS) 1995, and extended analysis of data Core and Module National Socio Economy Survey (SUSENAS) 1998.

The total number of samples of Core is 879.936 individual, and module is 275.747 individual. To reflect the total population of Indonesia, those samples are inflated to 202.605.066 individuals. The information was about indicators of dental health status, and indicators of behavior. The two indicators together with indicator of services are the very important indicators to measure how far the goal of dental health program is achieved.

Since this information is national and of community-based data, and provided periodically, the Dental Health Program could use them as sources of information for monitoring, planning, and evaluation.

The objectives of the study are: 1) to identify dental treatment needs of the community, 2) to identify perceive illness/potential demand for dental care, 3) to identify effective demand for dental care, 4) to identify patterns of utilization, 5) to identify patterns of contact the profession.

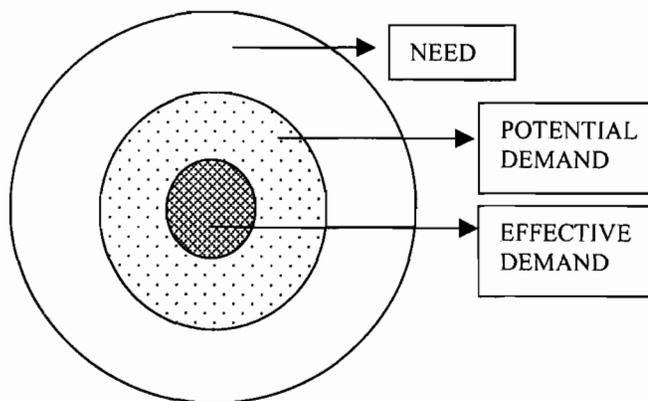
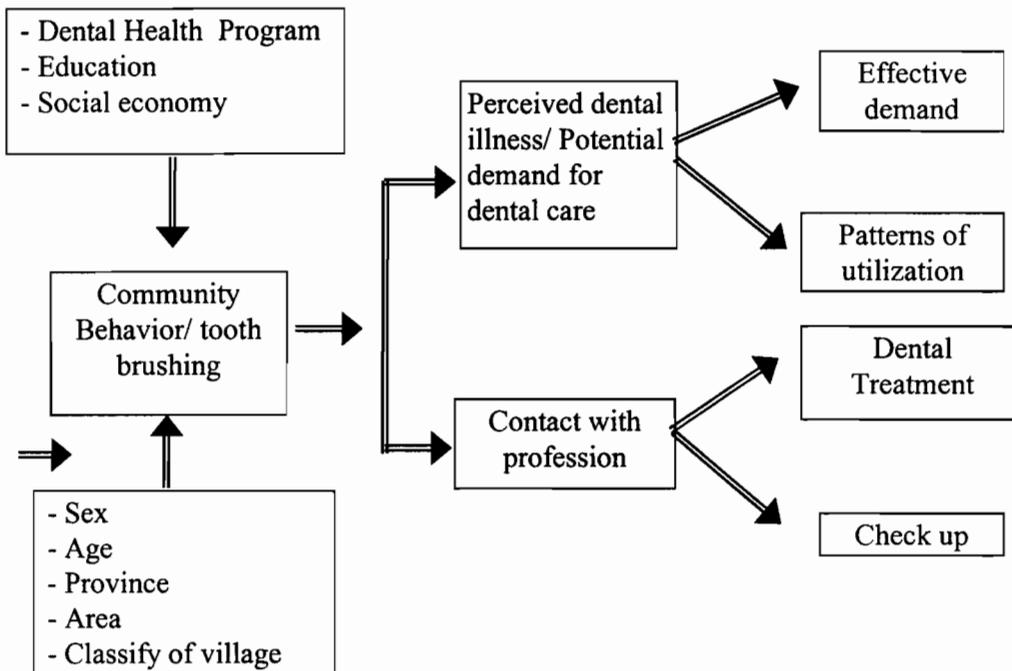


Figure 1. Interrelation of the Three Factors (Need, Potential Demand, and Effective Demand) ⁽¹⁾

The conceptual framework of the study is as follows:



The concept of the study shows the kinds of indicators of dental health behavior. Firstly this paper discusses indicators of Dental Health Care Behavior (i.e. perceived illness/potential demand for dental care, perceived dental illness with treatment/ effective demand for dental care, contact with profession) from data National Socio Economy Survey/Susenas 1995 and 1998. Secondly discusses indicators of dental health status (i.e. prevalence of decayed teeth/need for dental treatment, DMF-T index/need for dental treatment) from National Household Health Survey/NHHS1995.

MATERIALS AND METHODS

The information about need and demand was obtained from NHHS 1995 and SUSENAS 1998 which are national and

community based data. Need is dentist assessment which determine what dental treatment is needed, demand is patient assessment which determine perceived need for treatment, and Effective demand is the desire and ability to obtain dental services.

In analyses 'need' is measured through two indicators i.e. prevalence of decayed teeth, which describe the hugeness of problems in community, and DMF-T index which describe the degrees of seriousness of teeth destruction. Meanwhile 'demand' is measured through indicators of perceived dental illness/potential demand for dental care, effective demand for dental care, patterns of utilization, and patterns of contact with profession. The indicators are very important to measure how far the goal of Dental Health Program is achieved.

RESULTS

Dental Treatment Need

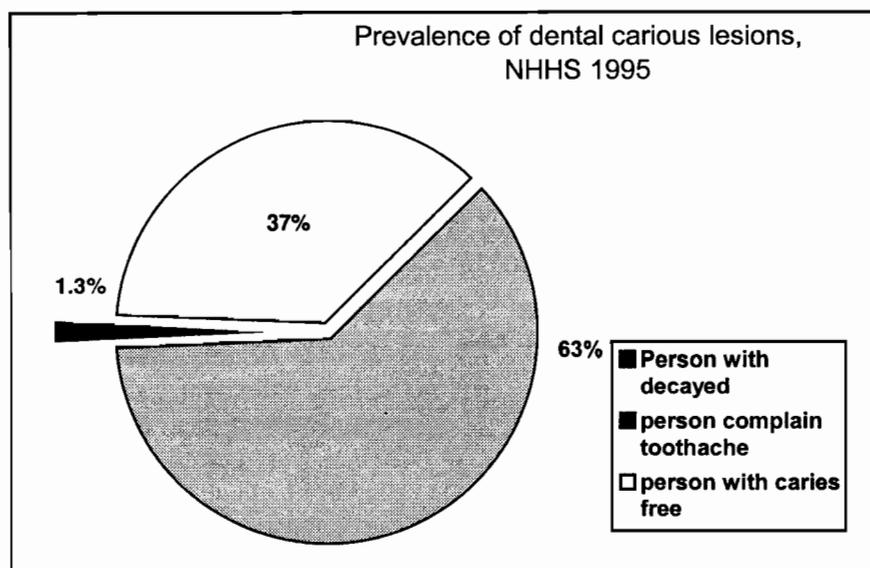
According to the National House Hold Survey 1995, a total of 63.0% of the Indonesian population had unfilled carious lesions or decayed, but only 1.3% of them complain of toothache ⁽²⁾. Besides, the average number of decayed teeth or the number of teeth needed to be filled was 1.89 per person (figure 2, 3). The numbers above show an estimate of the total treatment requirements in 1995. On 10-14 years old groups, the prevalence of decayed/unfilled carious lesions was 66.8%, while on 15-24 years old groups, the prevalence was 69.5%. Then, the prevalence of person with decayed decreased on the higher age groups, until at the age of 65 or more, the prevalence was only 43.8%.(figure 4)

The average number of decayed teeth per person increased on the higher age, but the increase was not sharp. In contrast, the average number of missing /

extracted teeth increased sharply particularly in the age group of 35-44, and finally reached the highest point, that is 16.33 teeth extracted in the age group of 65 or more. While the average number of filled teeth was only about 0,1-0,2 teeth per person, and there was no significant different on the number of filled teeth among the age groups (Table 1).

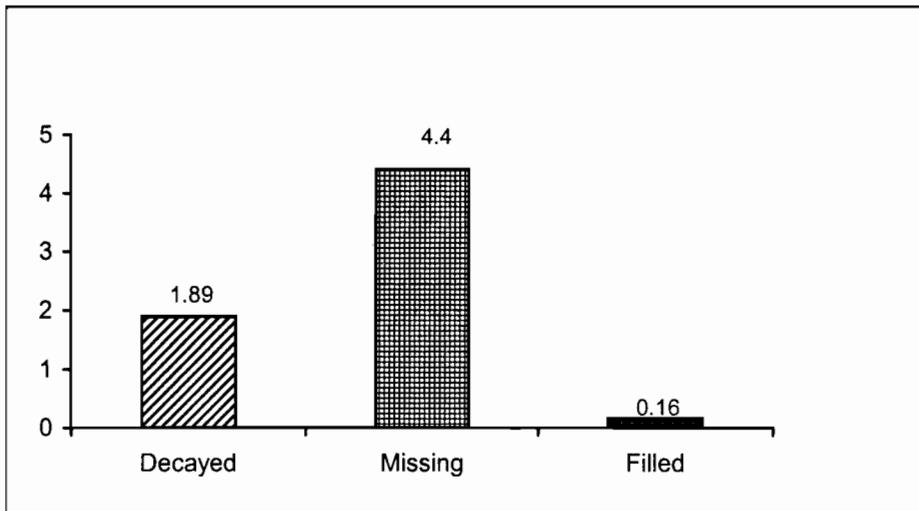
Potential Demand

According to the National Socio Economic Survey/SUSENAS 1998, a total of 25.3% of Indonesian population perceived an illness at the last one month ⁽³⁾. That showed a large number of population who has potential demand. Various illness were complained, among them perceived about dental illness. The proportion of population who perceived dental illness was 1.6% in 1995 and 1.3% in 1998 (figure 5).



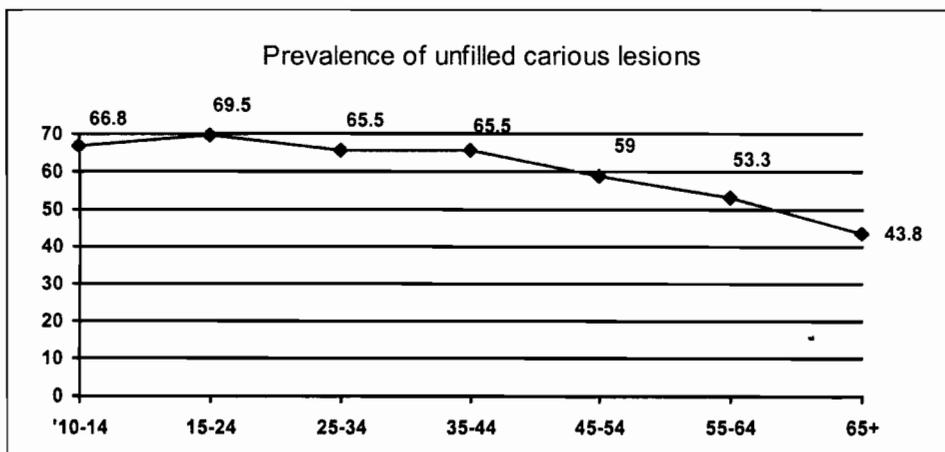
Source: Status of dental and Oral Health in Indonesia, NHHS 1995

Figure 2. Prevalence of Dental Carious Lesions, NHHS 1995



Source: Status of dental and Oral Health in Indonesia, NHHS 1995

Figure 3. Component of Decayed, Missing and Filled Teeth Per Person, NHHS 1995



Source: Status of Dental and Oral Health in Indonesia, NHHS 1995

Figure 4. Prevalence of Unfilled Carious Lesions by Age Group, NHHS 1995

Table 1: Component of Decayed, Missing and Filled Teeth by Age Groups, NHHS 1995

Age (years)	Decayed	Missing	Filled	DMFT
12	1.68	0.42	0.10	2.21
15	1.57	0.73	0.11	2.41
18	1.68	0.91	0.08	2.68
35-44	2.05	3.81	0.23	6.09
65+	1.97	16.33	0.17	18.43
total	1.89	4.40	0.16	6.44

Source: Status of Dental and Oral Health in Indonesia, NHHS 1995

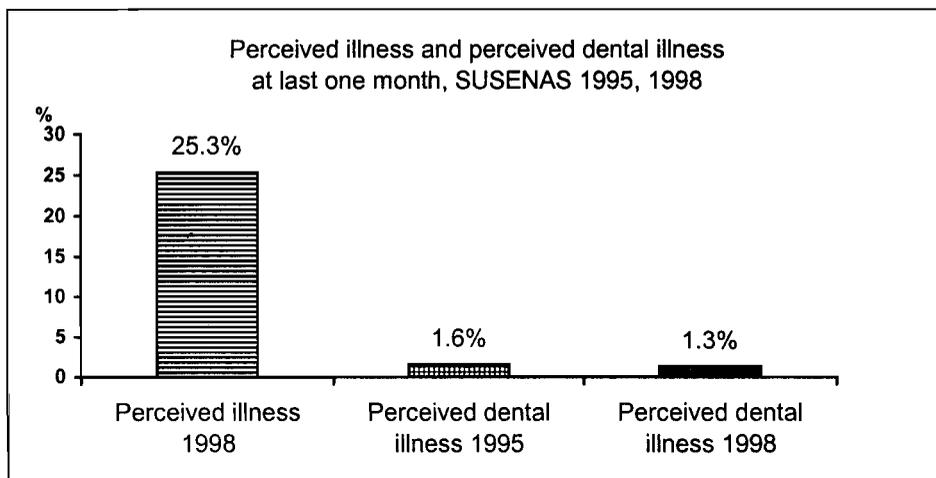
Effective Demand

Among population who perceived about dental illness, only 13.1% utilized health service facilities. In other words, the effective demand was $13.1 \times 1.3\% = 0.17\%$.

Patterns of Utilization

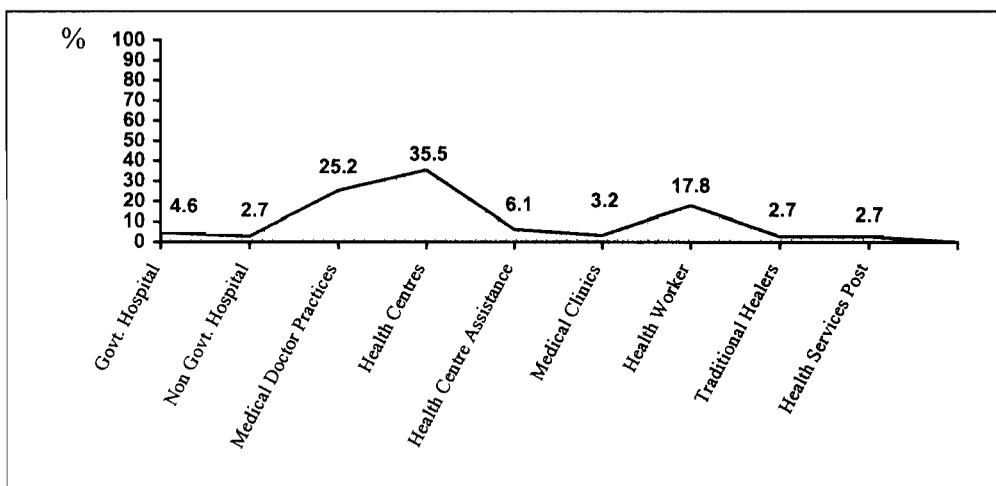
There were significant differences in the rate of utilization of dental services.

Most of them went to health centers (35.5%), and medical doctor practices (25.2%), while 17.8% visited health worker practices. Utilization of other facilities such as the government hospitals, health center assistance, non government hospitals and traditional healers/midwives, were very low (4.6%-2.7%). These differences provide clues about why individuals do, or do not value optimum oral health and seek professional care to achieve it (Figure 6).



Source: Dental Health Statistic SKRT/ SUSENAS 1995⁽³⁾
 Perception and Motivation of the Community for Dental Treatment, SUSENAS 1998⁽⁴⁾

Figure 5. Prevalence of Perceived Illness and Perceived Dental Illness, at the Last One Month, SUSENAS 1995,1998



Source: Perception and Motivation of the Community for Dental treatment, SUSENAS 1998

Figure 6: Patterns of Utilization Among Population Who Perceived Dental Illness, Susenas 1998

Table 2. Contact with Profession (Dentist or Dental Nurse)

	# 202.605.066	100%
Contact the profession	6.329.715	3.2
• To release painful	3.207.281	50.7
• To make denture	403.064	6.4
• To have dental treatment	277.588	4.4
• Check-up	151.260	2.4
• others	193.714	3.1

DISCUSSION

A total of 63% of Indonesian population had unfilled carious lesions. Furthermore, the number of teeth needing fillings was 1.89 per person. It showed a magnitude of the total treatment requirements in 1995, that was about 126 millions person requiring treatment or 238 millions of teeth requiring feeling.

The prevalence of person with unfilled carious lesions tend to decrease on the higher age groups. This condition might be good if the decrease of prevalence was caused by filling action of the dental program. However, the condition is bad if the decrease of prevalence was caused by extraction of the teeth.

The average number of decayed teeth per person increased slowly in the higher age groups. The average number of filled teeth per person was very low (0.16 teeth per person), and not showing a significant difference. Besides the average number of extracted teeth increased sharply in the age of 35-44 and 65+. Those findings indicated that the activities of dental health program were not qualified while the total treatment requirements of filling was huge, there was no incremental care done and the only activity was extraction of the teeth.

The perceived dental illness was very low, only 13 out of one thousand

persons. Comparing with other diseases, such as influenza, cough, fever, headache, the prevalence of dental illness was far below them ⁽⁴⁾. The seriousness of the infectious diseases commonly attacks individual urgently, and painfully. In contrast, the low visibility of many symptoms of dental disease and the gradual and often painless progress of these diseases, make dental problems seem more likely than other health problems to be ignored. For that reason, the dental health program recommended persons to contact with the profession every 6 months.

Actually there was only 3% of the population who contacted the profession during the last 6 months. Among them who contacted the profession, only 2,4% had a purpose to check up. Those indicated that the awareness of dental health care was still low.

A total of 63% of population had unfilled carious lesions. But, only 1,3% of the population perceived about their dental illness, and only 13,1% among the perceived or about 0,17% of the population seeking dental health services. This situation bear the wide discrepancy between need and demand.

When individual needing dental care are not aware of that need, when they do not

understand the potential seriousness of dental problems, or when they are not aware of the availability of dental services, they experience the effect of cognitive barriers to obtaining dental treatment. While these factors can generally be thought of as education deficits or lack of information.

There were significant differences in the rate of utilization of dental services. These differences provide clues about why individuals do, or do not value optimum oral health and seek professional care to achieve it. In a report of perception and motivation of dental care according to the 1986 NHHS, there are 3 barriers: the expensive cost, the feeling of fear and the long distance ⁽⁵⁾.

It could be concluded that there was a wide discrepancy between need and demand. The need for dental treatment was very high. The potential demand was low. The effective demand was very low. The quality of dental program was poor. There was no incremental care. Program activities were mostly limited to tooth extraction.

REFERENCES

1. Young & Striffler. The Dentist, his practice, and his community. Second edition. W.B. Saunders Company; 1969.
2. NHHS Series. Oral and Dental Health Status in Indonesia, NHHS 1995. Ministry of Health, National Institute of Health Research and Development; 1997.
3. NHHS Series. Dental Health Statistics, NHHS 1995. Ministry of Health, National Institute of Health research and Development; 1997.
4. Kristanti. CM, Soemantri S. *et al.* Perception and Motivation of Dental Treatment, National Socio-Economic Survey (SUSENAS) 1998. Ministry of Health, National Institute of Health Research and Development; 1999.
5. Kristanti. CM and Budiarmo LR. Perception and Motivation of Dental Treatment, National Household Health Survey 1986. Ministry of Health, National Institute of Health Research and Development; 1988.