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THE PREVALENCE OF DISABLING CONDITIONS IN INDONESIA
(A preliminary report)

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Disability is a major health, economic and psychological problem and affecting no less than 10% of the world's population. Although it may be estimated that about half of all disabilities can be prevented or postponed, such preventive methods have not received sufficient emphasis within the health services in most countries.

Preliminary figures from Indonesia show that 40 50% of the population have chronic impairments and 15 20% chronic functional limitations and disabilities. Studies carried out in other developing countries confirm these prevalence figures.

At the present time there are no reliable surveys in any country, giving figures or estimates that could be used for planning of disability prevention and rehabilitation Therefore as a preliminary stage in order to obtain some data a survey was undertaken in 1975 in the sub-district of Guntur, regency of Demak, Central Java under the auspices of the Department of Health in co-operation with the WHO project SF ICP SHS 011. The results indicated that of the 3317 persons surveyed 306 (9.22%) were identified as having a limitation or disability As the survey was limited and as persons having mental retardation or functional psychiatric disturbances were not included, the number of persons affected by functional limitations and or disability should be no less than about 12% of the population in Indonesia.

In the next 5 year plan, Repelita III, the Department of Health will in the development of health services give priority to those at the community level. Steps have been foreseen which would make it possible to include the primary stages that could reduce the high impact of disability.

Therefore a survey of health problems related to disabilities, the first of its kind in any developing country is now being undertaken in co-operation between the National Institute of Health Research and Development and the World Health Organization in order to get information of the prevalence of the proportion of the population having long term impairments; functional limitations; disabilities and their causes in order to find possible preventive actions to diminish or if prevention is not feasible, what is needed in terms of simple rehabilitation at the community level to serve as a basis for the national health planning implemented in the primary health care.

OBJECTIVES

The objectives of this survey are :

1. To get information of the prevalence of the disability problem i.e., persons having long term chronic impairments, functional limitations and disabilities.
2. To assess the social and economic impact of disabilities.
3. To identify the main common causes of chronic impairments, functional limitations and disabilities, with a view to find out the most effective preventive measures.
4. To look especially into areas of interests such as the importance of accidents and psychiatric impairments in causing disabi-

lities.

5. To identify traditional social welfare services provided for the disabled at the community level.

Information that will be available from this survey

Disabilities are caused by a multitude of factors and rarely by a single disease entity. Sometimes it is difficult to determine the chain of events leading to the final condition. Medical causes relating to the individual, his envoirnment, attitudes and social demands and many other factors play an important role in the origin of impairment and in its progress to functional limitation and eventual disability.

Data related to chronic impairment include causes present during the last 3 months, more or less persistent symptoms such as a permanent or transitory psychological, physiological or anatomical loss and or abnormality for example chronic lung conditions causing restricted pulmonary capacity, arthritic conditions causing restricted movements, paralysis due to poliomyelitis, myocardial infarction hemiplegia, neuritis, abdominal conditions, chronic skin infections, ear and eye ailments, mental retardation, hypertension and hypertensive heart disease, functional psychiatric disturbances, nutritional deficiency, ageing process and others.

When the impairment progresses, it may cause functional limitation which is partial or total inability to perform those activities necessary for motor sensory or mental functions within the range and manner of which a human being is normally capable such as, walking, lifting loads, seeing, speaking, hearing, reading, writing, counting, taking an interest in and making contact with surroundings. Functional limitation may last for a short time, be permanent or reversible, progressive or regressive.

Disability is defined as a difficulty in performing one or more activities which are normally carried out by the person having regard to his age, sex and social role It is caused by a congenital or acquired functional limitation or chronic impairment depending in part on the duration of the functional limitation, the disability may be short term or permanent. In this only the long term and permanent disability is dealt with.

SAMPLING PROCEDURES

The study area has been divided into 2 areas of investigation, urban and rural based on the 1971 population census criteria. Eighteen provinces have been selected for this survey. A representative population sample based on clusters of households has been drawn from the main areas i.e., Sumatra, Java, Bali and Sulawesi. From these areas, the sample covers about 90% of the population while the remaining 10% live in the remote sparsely populated areas of Borneo, Malukus, Irian Jaya, East and West Nusa Tenggara Islands.

The rural area of each province in Java and Madura is divided into several domains. Each of the domain consists of regencies (Kabupatens) ranging from 2 to 8 regencies. The grouping of the rural regency into domain depends on the location and on its socio-economic conditions. The rural area of each province outside Java is also considered as a domain. Similarly, the urban area of each province in the whole province is considered as a domain

In this presentation data from the island of Sulawesi has been excluded as the field work has not yet been completed. Moreover, in a preliminary report such as this, it is not possible to report all the results in detail.

The present sample drawn is from 11 provinces. A five stage sampling design has been used in this survey The smallest unit is a cluster of 9 to 12 households in a neighbourhood, called an RT.

a) In each province divided into urban and rural certain number of regencies/municipalities were selected with probability proportional to the number of population
b) From each regency/municipality one sub-district was selected with probability to the number of population.
c) From each selected sub-district certain number of villages were selected with probability proportional to the number of

population.

d) From each selected village an enumeration unit was selected at random.

e) And finally from each selected enumeration unit certain number of households were selected randomly. The self weighting design has been used and the sampling fraction is about 1/4800.

SURVEY POPULATION

The total sample size when the survey is completed will be about 4000 households or about 20.000 individuals, but at this stage the number of households presented in this paper is 1793 households or 9658 individuals, from a total of 130 subdistricts, only 42 have been analysed.

RESULTS

The areas from where the data is presented is shown in the table 1 below. Average size of a household consists of about 5 individuals. Table 2 shows the percentage of sickness by area and sex, 37.6% of males and 39.6% of females have one or more persistent symptoms of a chronic impairment during the last 3 months.

Table 3 shows the percentage of the chronically ill by age and sex. As age advances the percentage also seems to become higher, only the 10–19 years age group have a slightly lower prevalence.

Table 4, 5 and 7 show the percentage of chronic impairment, functional limitation (disability) and the handicap. Table 6 shows the percentage of cases with mental impairment.

Table 8 shows the percentage of the classical rehabilitation cases, and about 3% of the

Table 1 Total number of subdistricts and households with average size of HH in both urban and rural areas combined in 11 provinces, Indonesia

Province	No. of subdistricts U	R	No. of H H	No. of individuals	Average size of H H
Aceh	1	2	82	470	4.5
North Sumatra	1	5	317	1890	5.9
West Sumatra	1	2	129	756	5.8
Riau	1	2	76	503	6.6
Bengkulu	1	1	25	156	6.2
Jakarta	5	--	210	1168	5.5
Jogyakarta	1	2	112	541	4.8
West Java	1	4	354	1869	5.2
Central Java	1	3	166	781	4.7
East Java	2	3	234	1033	4.4
Bali	1	2	88	491	5.5
11 Provinces	16	26	1793	9658	5.3

H H = household

U = urban

R = rural

Table 2 Percentage of sickness by sex and area (province)

Area	Male			Female		
	Number Examined	Sick	%	Number Examined	Sick	%
Aceh	232	111	45.9	791	114	47.5
North Sumatra	944	389	41.2	946	375	39.4
West Sumatra	357	176	49.3	399	222	56.2
Riau	260	131	52.4	243	141	58.0
Bengkulu	82	53	63.9	74	54	70.1
Jakarta	577	184	30.9	591	206	34.3
Jogyakarta	272	76	26.2	269	80	27.5
West Java	980	297	30.0	889	283	31.4
Central Java	399	134	32.0	382	136	33.7
East Java	509	174	34.6	524	188	35.9
Bali	255	107	42.0	236	98	41.5
	4867	1832	37.6	4791	1897	39.6

Table 3 Percentage chronically ill by age and sex

Age group in years	Male			Female		
	Number Examined	Number Sick	%	Number Examined	Number Sick	%
0 – 4	700	235	33.0	631	203	31.6
5 – 9	759	267	33.8	718	286	41.2
10 – 14 } 15 – 19 }	911	244	21.8	1171	287	24.1
20 – 29	707	187	26.2	807	266	32.8
30 – 39	565	254	44.0	552	270	47.9
40 – 49	434	238	53.1	424	239	56.1
50 – 59	314	199	63.3	262	166	62.1
60 – 69	189	150	74.6	177	140	77.7
70 and above	71	58	81.6	49	44	89.7

Table 4 List of the most common chronic impairments by sex

Impairment	SEX			
	Male		Female	
	No. examined	%	No. examined	%
Teeth problems	570	14.3	674	14.1
Chronic cough	399	12.2	295	6.2
Pain in arms and legs	277	6.9	324	6.8
Backache	265	6.6	201	4.2
Breathlessness at rest or effort	262	6.6	204	4.3
Headache	262	6.6	422	8.8
Abdominal pain & diarrhoea	262	6.6	309	6.4
Skin symptoms	221	5.5	212	4.4
Chest pain	200	5.0	163	3.4
Malnutrition	171	4.3	157	3.3
Eye symptoms	153	3.8	151	3.1
Ear symptoms	106	2.7	79	1.6
Missing limbs, fractures & accidents	69	1.7	33	0.7
Lame, weak, spastic muscles	60	1.5	65	1.4

Table 5 List of the most common functional limitation by sex

Functional limitation	SEX			
	Male		Female	
	No. examined	%	No. examined	%
Difficulty to walk long distances	208	4.1	137	2.9
Difficulty to see	104	2.1	105	2.2
Difficulty to squat	104	2.1	67	1.4
Cant stand, walks & use arms & legs	68	1.4	46	1.0
Difficulty to hear	68	1.4	59	1.2
Cannot get up from bed	58	1.2	32	0.7
Others	14	0.3	35	0.7

Table 6 List of mental impairment by sex

Type of mental impairment	SEX			
	Male		Female	
	No. examined	%	No. examined	%
Senile dementia	29	0.6	22	0.5
Pyschopathy	25	0.5	7	0.1
Schizophrenia	25	0.5	30	0.6
Neurosis (auxiety)	20	0.4	35	0.7
Mental retardation	18	0.4	18	0.4
Depression	17	0.3	29	0.6
Sexual deviations & others	14	0.3	12	0.3
Psychosis	9	0.2	21	0.4
Epilepsy	9	0.2	15	0.3
Speech problems	1	0.0	11	0.2

Table 7 List of the most common disabilities by sex

Disabilities	SEX			
	Male		Female	
	No. examined	%	No. examined	%
Unable to do social activities	454	9.3	251	5.2
Unable to do household activities	313	6.4	389	8.1
Unable to do work activites	186	3.8	92	1.9
Unable to do daily life activities	131	2.7	101	2.1

chronic impairment require one form or the other rehabilitation services while the rest of the cases require long term medical treatment.

DISCUSSION

The fact that the data presented is not complete but only represent a preliminary report of 9658 individuals from 1793 households table 1 indicate that about 40% of both males and females do suffer from one type or more of a chronic illness, (symptoms of more than 3 months duration) and that the highest prevalence occurs in the age group from 0–9 years and then again from 20 years and above, table 2. The lowest prevalence is seen in the 10–19 years age group. This low figure may be due to the fact that the young population

Table 8 Classical Rehabilitation Cases

DIAGNOSIS	SEX			
	Male		Female	
	No. examined	%	No. examined	%
Poliomyelitis	6	1.2	7	1.5
Xerophthalmia	19	3.8	9	1.9
Senile Dementia	26	5.2	38	7.9
Psychosis	2	0.4	11	2.3
Mental Retardation	14	2.8	12	2.5
Drug abuse	1	0.2	—	—
Hemiparesis	7	1.4	6	1.2
Paraparesis	1	0.2	—	—
Cerebral palsy	1	0.2	—	—
Blindness	55	11.3	59	12.2
Deafness	13	2.6	19	3.9
Amputated limb.	5	1.0	1	0.2
Congenital	—	—	—	—
	149	30.6 or 3.1%	162	33.8 or 3.4%

migrate to the cities for education or work.

A part of the reason for the high prevalence of the chronic illness especially in females, table 3 is that most of the population live in the rural areas where they are deprived of good health services and also because of poverty and ignorance they are reluctant to go to the health centers that have now been provided by the Department of Health during the last few years.

Dental caries seems to be one of the most widely occurring disease in both males and females, table 4. This is likely to be due to lack of dental hygiene, the ingestion of a high intake of carbohydrates and the shortage of dental manpower in the rural areas.

The other important feature of impairment is chronic lung disease, with a higher prevalence ooccuring in males. A very general indication of the extent of this problem may be due to fact that the early symptoms of the disease are overlooked and taken for granted as a minor illness, but due to the low resistance, improper food, poverty and the chronicity of the disease in later years result in chronic impairment leading to functional limitation and even to disability (handicap). Other chronic diseases also play a discernible trend in the occurrence of the most common chronic impairments.

What has just been stated above indicate that those who become handicapped, table 8 rehabilitation services have to be provided and the costs for these services become sky rocketing. One of the main concerns today is to establish a suitable system for reliable data by carrying out surveys to know the extent of individual prevalence of chronic diseases in

the community, the effect of disease control that will be carried out so as to enable a proper evaluation and how to modify health plans when indicated. Primary prevention, early detection of illness, intervention programs in the disease chain, promotion of health aimed at determing the need for improovement in the diet and epidemiological surveys to determine the health status of the population are urgently needed.

In the health centers case finding should be regularly done to find cases of latent or unreported disease with a view to bringing individual patients to treatment and if the disease is communicable (eg tuberculosis) to protecting the rest of the population from infection. Further studies are urgently needed in order to establish sound reliable data and basic health needs implemented in the primary health care.

SUMMARY

A sample survey of health problems in about 4000 households related to disabilities has been carried out. In this presentation only 1793 households have been analysed and the results indicate that about 40% of both sexes suffer from one or more persistent symptom of a chronic impairment during the last 3 months.

The most common impairment seems to be one of those involving the teeth, then come the chronic lung infections, followed by bone and joint conditions.

It is urgently felt that epidemiological surveys are needed so as to establish reliable data, and basic health services implemented in the primary health care.

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