

KNOWLEDGE ABOUT TUBERCULOSIS AMONG PATIENTS ATTENDING FAMILY PRACTICE CLINICS IN KARACHI

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ABSTRACT

OBJECTIVE: Tuberculosis is on the rise throughout the world and better understanding and knowledge about tuberculosis remains an important tool in its control. The objective of this study was to determine the level of knowledge about tuberculosis among patients attending Family Practice clinics in Karachi.

SETTING: Family practice clinics affiliated to a tertiary care hospital in Karachi, Pakistan during July to September 2003.

METHODS: Total 204 subjects aged 18 years and above were interviewed on convenient basis in a cross-sectional survey. Data was collected through a pre-tested structured questionnaire which comprised of socio-demographic variables and questions about cause, transmission, common clinical features and cure of tuberculosis.

RESULTS: Respondents were predominantly female (58%) with an extended family structure (78%). More than one-third (35%) of the respondents were illiterate and almost a similar proportion (31%) had received primary education. Only 39% of study subjects knew that tuberculosis is an infectious disease, 19% reported that there is an asymptomatic stage of infection, 33% said that it is curable with proper treatment while 51% considered tuberculosis as a preventable disease. Forty-five percent of respondents did not know about possible consequences of uncured cases and 61% did not know tuberculosis as one of the major health problems of Pakistan.

CONCLUSION: In this study, majority of study subjects had poor knowledge about tuberculosis, its prevention and magnitude. Proper knowledge and education about tuberculosis is vital to cope the challenge of this devastating disease. Family Practitioner, being first care providers to the community can play a critical role to raise knowledge about tuberculosis prevention.

KEY WORDS: Tuberculosis. Knowledge. Prevention. Family practice.

INTRODUCTION

Tuberculosis is a leading infectious cause of death worldwide. It is responsible for 2 million deaths including 26% of preventable adult deaths annually^{1,2}. One-third of the world population is currently infected with tubercle bacillus, and nearly one percent of the world population is newly infected with tuberculosis each year. It means that every second someone in the world is newly infected with tubercle bacillus.¹ According to World Health Organization (WHO), between the years 2000 and 2020, nearly one billion people will be newly infected, 200 million people will get sick and 35 million will die from tuberculosis, if control is not further strengthened.¹ The burden of tuberculosis mainly lies in the developing countries. Ninety-five percent of tuberculosis cases and almost 98% of deaths from tuberculosis occur in developing countries.³ Pakistan is among the 22 countries with greatest burden of tuberculosis. In 1997, tuberculosis estimates for Pakistan were 261,000 new cases, putting the estimated incidence of 181 cases per

100,000 population⁴ and in some areas of the country, prevalence figures observed were as high as 554/100,000 cases⁵.

A number of factors are responsible for this devastating health problem which includes non-compliance with control programs, inadequate diagnosis and treatment, increasing migration due to natural and man made disasters and emerging epidemic of HIV/AIDS.⁶ All these are fueled by population explosion, rising number of multi-resistance tuberculosis, drug abusers and refugees, poor socio-economic conditions and lack of knowledge and awareness about tuberculosis. Pakistan, where a large number of the population is living below poverty line⁷ and have poor demographic, educational, economic and health indicators⁸ with huge burden of refugees and migrants; prevention is the best safe-guard against the tuberculosis emergence. Prevention and control of tuberculosis need a number of factors to intervene. Provision of specific health information has proved successful in health education campaigns.⁹ Good knowledge about tuberculosis among general

population is of prime importance in this regard. Thus, objective of this study was to assess the level of knowledge about tuberculosis among patients attending family practice clinics at a teaching hospital in Karachi, Pakistan. This work will help to evaluate the level of knowledge and understanding about tuberculosis and thus guide to design health promotion and public awareness programs in this regard.

SUBJECTS AND METHODS

This was a cross-sectional study conducted in family practice clinics affiliated with a tertiary care teaching hospital of private sector in Karachi, Pakistan. A pre-tested structured questionnaire was administered to collect the information. The questionnaire comprised of two sections; one for assessment of personal characteristics and other for assessing level of knowledge about tuberculosis. Personal characteristics included sex, age in years, marital status, first language, educational level, occupational (working) status, family structure (extended/nuclear) and monthly house-hold income. Knowledge assessment sections included questions about cause, sign/symptoms, consequences, cure, prevention and burden of tuberculosis. With an anticipated prevalence of knowledge of 50%, bound of error of 07% and level of significance 05%, at least 196 patients were required for interview. However, we approached a total of 240 adult patients aged 18 years and above, who attended the facility for any reason during the period of July to September 2003. Two hundred and four subjects agreed for interview, gave the consent to participate in the study and were interviewed by trained interviewers. On a convenience basis, about 8 - 10 subjects were interviewed daily. Those who reported present or past history of personal and or family for tuberculosis were excluded. Data was entered and validated by using Epi Info 6, and analyzed by using Statistical Package for Social Sciences (SPSS version 11.5). Descriptive analyses (frequencies and percentages) were calculated for different variables of interest.

RESULTS

The personal characteristics of the study population are presented in **Table I**. Overall, there was female preponderance (58%), age group 26 – 40 years (49%), married (71%), having either no education or only primary education (66%), living in extended family system (78%) and those having total monthly income of £ 10000 Pakistani rupees (55%). Urdu was the first language spoken by (48%) respondents followed by Sindhi (22%), Punjabi (17%); while remaining (13%) were categorized as others (Gujrati, Pushto and Balochi). Knowledge about tuberculosis cause/transmission and signs/symptoms is presented in **Table II**. Thirty-nine percent of the respondents

correctly answered that tuberculosis is an infectious disease and only 19% reported that there is an asymptomatic stage of infection. Overall, 82% of the respondents knew at least one sign/symptom of tuberculosis and cough was the most frequently reported symptom by 66% of respondents. Forty-five percent of respondents did not know about any possible consequence of untreated disease. Knowledge about tuberculosis cure, prevention and burden is mentioned in **Table III**. Only 33% of the respondents were aware that tuberculosis is a curable disease with proper treatment and 31% reported that after cure of disease suffering person can live as a normal life. Fifty-one percent of the subjects knew that it is a preventable disease. In response to question that whether tuberculosis is a major health burden for Pakistan, only 39% of the respondents answered in affirmation.

Characteristic n= 204	Number (%)
Sex	
Male	86 (42)
Female	118 (58)
Age in years	
18 –25	43 (21)
26- 40	99 (49)
> 40	62 (30)
Marital status	
Married	145 (71)
Unmarried	59 (29)
Educational status	
No education	71 (35)
Primary	63 (31)
Secondary/higher secondary	37 (18)
Graduate/post graduate	33 (16)
Family structure	
Extended	159 (78)
Nuclear	45 (22)
Occupation	
Manual worker	63 (31)
Office job/professional	45 (22)
House wife/domestic worker	96 (47)
Total monthly income in Pakistani Rupees	
< 5000	49 (24)
5000 to 10000	63 (31)
> 10000	35 (17)
Did not mention	57 (28)
First language	
Urdu	98 (48)
Sindhi	45 (22)
Punjabi	35 (17)
Others	26 (13)

**TABLE I:
SOCIO-DEMOGRAPHIC CHARACTERISTICS OF
STUDY POPULATION**

Knowledge Variable	Number (%)
Cause of Tuberculosis	
Germs (infection)	79 (39)
Inherited	53 (26)
Cigarette/alcohol	45 (22)
Don't know	27 (13)
Asymptomatic stage of infection	
Yes	84 (41)
No	96 (47)
Don't know	24 (12)
Signs and symptoms of Tuberculosis*	
Cough/haemoptysis	135 (66)
Fever/night sweats	51 (25)
Chest pain	18 (09)
Weight loss/tiredness	35 (17)
Others	16 (08)
Consequences of uncured cases*	
Spread to other parts of the body	53 (26)
Spread to other persons	86 (42)
Don't know	92 (45)

KNOWLEDGE ABOUT THE CAUSE, SIGNS AND SYMPTOMS OF TUBERCULOSIS AMONG STUDY POPULATION

*Multiple response questions, sum not equal to 100%.

Response to questions	Number (%)
Is the Tuberculosis curable with proper treatment?	
Yes	
No	67 (33)
Don't know	94 (46)
	43 (21)
Do you think that after cure to disease patient can live a normal life?	
Yes	63 (31)
No	94 (46)
Don't know	47 (23)
Is Tuberculosis a preventable disease?	
Yes	104 (51)
No	55 (27)
Don't know	45 (22)
Is Tuberculosis a major health problem of Pakistan?	
Yes	80 (39)
No	94 (46)
Don't know	30 (15)

**TABLE III:
KNOWLEDGE ABOUT THE CURE AND BURDEN
OF TUBERCULOSIS AMONG STUDY
POPULATION**

DISCUSSION

This study has identified a big gap of knowledge about tuberculosis in patients attending family practice clinics in Karachi. Majority of study subjects did not know about the cause of disease, mode of transmission and consequences of uncured cases. These findings are consistent with an epidemiological study conducted to assess the knowledge and attitude about tuberculosis among the general population in Philippines, where only a quarter of the respondents knew about the cause of disease and 21% of them knew about its mode of transmission.¹⁰ However, there was better understanding about the sign and symptoms of tuberculosis in our study subjects, where majority of the respondents knew that cough is more frequent symptom and majority also knew about at least one sign/symptom. These findings are consistent with a study conducted in Tanzania,¹¹ where more than 87% of the respondents knew at least one sign/symptom and cough was the most frequently mentioned symptom/sign of tuberculosis. Though, Pakistan is among the countries with higher incidence and prevalence of tuberculosis but only 31% of our respondents knew the tuberculosis as one of the major health problems in the country. It is a significant finding as this lack of knowledge may lead to poor responsiveness to the prevention programs. The results of this study should be interpreted with caution as the study was facility based and not ideally representing the general population.

The community's knowledge and perceptions about tuberculosis are important in influencing health-seeking behaviors considering the peculiar issues related to its long-term medications and compliance. Appropriate knowledge is of prime importance for control and prevention of many diseases and tuberculosis is no exception. This study concludes that knowledge about tuberculosis among the persons attending family practice clinics in Karachi is low and highlights the importance for designing and implementing appropriate programs and interventions to disseminate the knowledge and information about tuberculosis in the general population. We also recommend more studies and research to assess knowledge and understanding about tuberculosis at larger and community basis. This should only be possible with integrated efforts by government and non-governmental health organizations, media and donor agencies alongwith active community participation. Family practitioner, being a backbone of

any health care delivery system and as first contact health person for majority of the patients and their families can play a critical role in availing every opportunity of advocacy and counseling for health promotion and disease prevention specially about tuberculosis.

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