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ASSESSING PUBLIC KNOWLEDGE, BELIEF AND BEHAVIOUR OF ANTIBIOTIC USE IN CHENNAI POPULATION

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Abstract:

Aim: The aim of the study is to assess the knowledge, belief and behaviour of antibiotic use among the general public in chennai.

Objective: Appropriate use of antibiotics is essential to ensure treatment efficacy as well as to prevent resistance. Inappropriate use results from various factors and causes adverse effects including the emergence of resistance, adverse reactions, treatment failure, and waste of resources.

Background: A self administered questionnaire will be framed and distributed among various age groups of the general public in Chennai population. The data will be imported to spss online software to obtain the results.

REASON : The emergence and spread of bacterial resistance to antibiotics is a growing problem world- wide, which presents a significant threat to public health globally in the 21st century. A sub- stantial evidence has shown that the general community plays a role in the increase and spread of antibiotic resistance. The present study is designed to determine knowledge, attitude and practice towards antibiotic use.

Introduction:

To prevent resistance as well as treatment efficacy appropriate use of antibiotics is essential. Inappropriate use can cause adverse reactions, treatment failure etc[1.] A common phenomenon is the non-compliance and this would definitely have an adverse impact on the success rate of treatment[2,3.] One of the contributing factors to the antibiotic non-compliance is that it is administered commonly in response to community-acquired infections[4.] A survey on non-compliance conducted by Perchere et al. on 4514 respondents from 11 countries reported that 22% of participants admitted to non-compliance[5.] Other studies conducted in various places resulted in inappropriate use such as sharing of antibiotics[6] and use of left over

antibiotics[7]. Also use of antibiotics without valid prescriptions is prevalent in various countries[8]. There are many common misconceptions regarding antibiotics in case of upper respiratory tract infections as it is believed that use of antibiotics results in fast recovery and prevents serious illness[9,10]. The misconception chain and expectations of effectiveness against minor illnesses can be broke through by assessing the public's knowledge and belief on antibiotic usage[11.] To initiate any sort of effectiveness it is necessary to understand the knowledge, belief and behavior which is well documented in several studies[12.] Focus of such was to assess the use of antibiotics in general or specific diseases.

Materials and Methods:

A self administered questionnaire of 15 questions was developed based on the previously conducted studies. It consisted of 5 knowledge related, 5 belief based and 5 behavior related questions. Knowledge related questions were to assess the knowledge of antibiotic use among the general public, while belief was to evaluate the use of left over antibiotics and the need for compliance in relation to duration and dose. The options given were likert type scale which included agree, disagree and unsure. The questionnaire also contained a section for collecting demographic details such as gender, age, employment status and educational qualification.

Results:

A total of 150 questionnaires were distributed and the responses were collected. The characteristics of the respondents are tabulated. 5 knowledge related, 5 behaviour related and 5 belief related- a total of 15 questions were included in the questionnaire. The questionnaire also included demographic details. There are more females than males included in the study with majority of age group 15-30. 52% of the respondents obtained higher education and majority of them were employed. Responses to questions regarding the knowledge, behavior and belief of the respondents are summarized and tabulated.

Under the behavior related, the expiry date, completion of doses, stocks at home were included. 47.2% of them disagree that antibiotics cannot be taken if the cough continues for more than one week. 27.8% are not sure what can be done in this case. Surprisingly, 8.3% of them are not sure whether they check the expiry date of the antibiotics or not. 27.8% of the respondents keep antibiotics stock at home.

From table, belief related responses are obtained and tabulated. 61.6% of them do not take antibiotics without doctor's prescription. 35% are not sure whether missed doses can be taken along with the next dose. 60.4% of them disagree that

missed doses can be taken along with the next doses. 55.6% disagree that one should antibiotics they feel better even though the given period of time is not completed. Only half of the respondents (i.e 50%) of them complete their doses in the given period of time. 38.9% of them are not sure of the statement whether taking low doses of antibiotics is equal to that of not taking them.

Table 1:

age		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15-30	71	47.3	47.3	47.3
	31-45	54	36.0	36.0	83.3
	46-60	25	16.7	16.7	100.0
	Total	150	100.0	100.0	

Table 2:

S.NO	PARAMETER	TOTAL	PERCENTAGE
1.	Age		
	(a) 15-30	71	47.3
	(b) 31-45	54	36
	(c) 46-60	25	16.67
2.	Gender		
	(a) Male	64	42.6
	(b) Female	86	57.33
3.	Educational qualification		
	(a) Higher Secondary	48	32
	(b) College	78	52
	(c) Post graduation	24	16
4.	Employment status		
	(a) Employed	43	28.66
	(b) Self-employed	76	50.66
	(c) Student	31	20.66

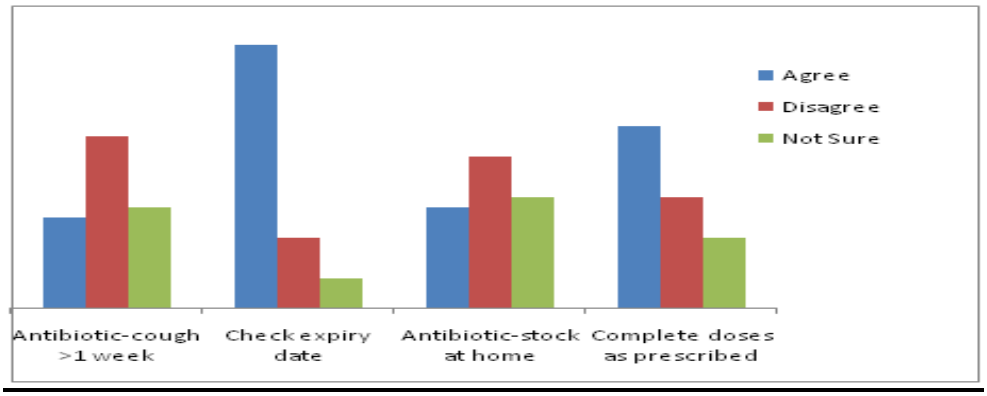

Fig 1: Behavior related questions:

Table 3:Belief related questions:

S.No	***Questions***	***Agree***	***Disagree***	***Not sure***
1.	Antibiotics-without prescription	30.6%	61.6%	8.3%
2.	Missed doses- along with next dose	4.6%	60.4%	35%
3.	Stop antibiotics if you feel better	27.8%	55.6%	16.7%
4.	Completed doses in the given period	50%	33.3%	16.7%
5.	Taking low dose is better than not taking	30.6%	30.6%	38.9%

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Discussion:

At various levels on conception of inappropriate antibiotics can cause adverse consequences. On drug related issues knowledge and belief of patients can greatly influence the way drugs are consumed. From the results, frequent use of antibiotics with majority used atleast once per week were obtained. This frequency was higher than the frequency observed by Cunney et al[13] were only 40% of the patients had repeatedly taken antibiotics in 12 months. A study conducted in North Dakota[14] 52% of the respondence were aware antibiotics are used to treat bacterial infection, similarisms were reported in the current study. In previous studies researchers observed a good percentage of positive responses reported on antibiotics work effectively against cold n cough. Therefore appropriate pubic education on purpose of action antibiotics is required. Although majority of respondents were aware that antibiotics cannot be used without doctors prescription , quiet few percentage still use them. In a study conducted by Cunney et al[13] in Ireland 14% of the patients were reported to use antibiotics without prescription.

In a study reported by Kardas et al[3] 40% of the patients did not ahere to the antibiotic treatment, another study in U.K[11]. only 11% of the patients reported of not having finished their antibiotic course as prescribed. In current study a significant percentage of the respondents were not able to adhere to the antibiotic course. The results demonstrate that appropriate steps should be taken b the physician and the professionals towards proper counselling there was no

significance difference based on gender, age group and educational qualification. In previous studies females exhibited better compilance of antibiotics with low rate of sharing compared to males[6]. Pechere et al observed the negative correlation between non compliance and age[5]. A study by al-ail demonstrated that knowledge increased with increasing age and educational level.

A multididirectional and multidisciplinary approach is needed to improve the use of antibiotics. Various efforts have been implemented to improve the use by educating the public[15]. Workshops, campaigns may be useful in patient education was reported in a study[15,16] while others did not show any benefits from such workshops[11.] Appropriate education intervenes must be designed to educate the public on antibiotic use. Patients as well as professionals have a major role in attaining the above. Media, public educational programs from the physician should be implemented to make the public to realise the important objective.

Conclusion:

The results of the survey show that there is quite frequent use of antibiotics among the general public. But some of the findings indicate that there should be some awareness created about the knowledge of the antibiotics. Many of them take antibiotics without prescription, strict regulatory must be enforced in pharmacies for this purpose. Thus appropriate educational interventions should be designed to reach and educate the people on the important objectives of antibiotics use.

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