Effect of Sexually Transmitted Diseases Training on the Knowledge, Attitude and Practice of STD Management by Pharmacists in Tanzania

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The aim of the study was to find out if an educational intervention increases awareness of pharmacists in sexually transmitted disease management.

A three day training workshop based on the findings of a previous Knowledge Attitude and Practice survey and focus group discussions involving pharmacists was conducted. A series of lectures were given covering various aspects of sexually transmitted diseases syndromes, the causative organisms, the symptoms, and sexualy transmitted diseases symptomatic treatment algorithm. Two months following the training another Knowledge Attitude and Practice survey was conducted during which a poster based on Tanzania Ministry of Health symptomatic treatment algorithm was designed and pre-tested. A month later it was distributed among the target pharmacies.

Majority of the pharmacists had improved their knowledge in the aetiology of STDs and a significant number could give the correct treatment of sexually transmitted diseases symptoms by using MOH treatment algorithm. Availability and adequacy of the required drugs were not a constraint. The pharmacists' awareness of the consequences of sexually transmitted diseases had sharpened and their knowledge in preventive measures had also improved. They were now more confident and more knowledgeable than before in educating their clients accordingly.

It is concluded that training and provision of reference materials can improve knowledge of pharmacists in the management of sexually transmitted diseases.

Key Words: Knowledge Attitude and Practice (KAP), STD management, Pharmacists, Tanzania.

INTRODUCTION

In a previous study whose aim was to determine the role of pharmacists in managing sexually transmitted diseases (STDs) it was found that about 200 clients per day sought treatment for various STDs from pharmacy shops [1]. It was established that although most pharmacists knew the aetiology of the various STDs in general terms, only a few had the correct knowledge of the specific causative organisms. Furthermore, although the majority of them knew some of the drugs used for STD treatment, a significant number did not know the standard treatment regimen laid down by the Ministry of Health [1,2].

Since educational intervention has been shown to increase the awareness of medical and paramedical personnel [3] an intervention study was developed in order to find out the effect of such training on STD case management by pharmacists.

MATERIALS AND METHODS

Subjects

Invitation to attend a training workshop was sent to all 58 pharmacists working in the 58 privately operating pharmacies in Dar es Salaam in 1992. These pharmacists filled the questionnaires and attended the first workshop organised in the previous study [1] and focus group discussion. Twenty seven of those invited attended the workshop.

Training

A three day workshop was conducted using results of an earlier KAP survey and focus group discussions as major issues for discussion. A series of six lectures were given covering STD syndromes, the causative agents, symptoms and the management of STD as proposed by the Tanzania Ministry of Health STD symptomatic algorithm. A poster based on the MOH STD symptomatic algorithm was designed, pre-tested and distributed among the target pharmacies.

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Two months after the workshops, another KAP survey was done following the same procedure as in the previous study [1]. The poster was also distributed about the same time.

RESULTS

Results obtained from the study are summarised in Tables 1-4. As far as symptomatic treatment of both males and females was concerned, there was a significant increase in knowledge (Table 1). This was markedly so for STDs presenting with genital discharge (vaginal or urethral) and genital warts and ulcers (males). A large increase in knowledge for the aetiology of the diseases was recorded for gonorrhoea, genital herpes, candidiasis, chancroid and syphilis (Table 2). The increase in the knowledge of the aetiology of trichomoniasis and bacterial vaginosis was minimal.

There was also an increase in knowledge with respect to offering of advice on preventive measures. Most of the advice was about practising of safer sex and treatment of sexual partners (Table 3). A significant number of pharmacists discouraged the use of chemoprophylaxis as an effective means of prevention.

TABLE 1: The percentage increase in the pharmacists' knowledge and 95% confidence interval, (C^1) of the treatment of STDs by symptoms in males.

Symptoms	Proportion with correct information: Before training	After training	% change (95% C1)
Genital ulcers	28.2	64.1	46.7 (28 - 65)
Urethral discharge	41.0	66.7	45.6 (26 - 67)
Genital warts	12.8	64.1	38.8 (23 - 37)

TABLE 2: The percentage increase in the pharmacists' knowledge and 95% confidence interval, (C^1) of the treatment of STDs by symptoms in females.

Symptoms	Proportion with correct information: Before training	After training	% change (95% C1)
Lower abdominal pain	30.8	43.6	21.6 (9-42)
Vaginal discharge	41.0	79.5	63.6 (5-28)
Genital ulcers	00.0	35.9	12.6 (5-28)
Genital warts	17.9	66.7	52.6 (34-70)

TABLE 3: The percentage increase in the pharmacists' knowledge and 95% confidence interval in the aetiology of STDs.

Etiology	Proportion with correct information: Before training	After training	% change (95% C1)
Gonorrhoea	97.4	97.4	*
NGU	41.0	56.4	31.8 (15-54)
Chancroid	74.2	76.9	64.9 (28-91)
Syphilis	84.6	84.8	56.5 (18 - 89)
Genital Herpes	74.4	87.2	77.6 (42 - 95)
LGV	38.5	53.8	30.0 (14 - 52)
Granulomainguinale	43.6	51.3	26.7 (11 - 50)
Trichomoniasis	23.1	35.9	7.1 (1 - 33)
Vaginosis	12.8	17.9	7.1 (2 - 32)
Genital candidiasis	87.2	84.6	68.2 (22 - 96)
Genital warts	35.9	41.0	5.4 (5 - 36)
Chlamydia	23.1	43.6	22.2 (10-42)

*There was no change,

NGU = Non-gonococcal urethritis,

LGV = Lymphogranuloma venereum.

TABLE 4: The percentage increase in the pharmacists' knowledge and 95% confidence interval (in giving advice to clients on STD prevention.

Advice	Proportion with correct information: Before training	After training	% change (95% C1)
Usecondom	23.0	53.8	19.9 (8-39)
Use proper treatment	20.3	28.2	7.2 (7 - 24)
Have one partner	12.8	46.2	10.0 (3-26)
Treat your partner	20.5	46.2	18.1 (3-37)
Use prophylaxis	10.3	15.4	*3.6 (0-18)
Others	-	-	-

*The increase is negative. Many pharmacists discouraged the use of prophylaxis.

DISCUSSION

Education has been identified as one of the major factors that influence health care delivery. It has therefore been incorporated in strategies for disease prevention and control in many communities. Education for the purpose of improving health care is targeted at the care giver as well as the recipient. Both need to be well informed of the issues at hand, so that the giver can be able to disseminate correct information, and the recipient is able to take treatment as instructed and incorporate other health care messages into his/her attitudes and practice and translate them correctly to lead a healthy lifestyle.

In the present study the impact of training of pharmacists in various aspects of management of STDs was evaluated.

The number of clients treated by pharmacists went up from the baseline figure of 200 per day found in a previous study [1], to 430 per day after the training workshop. While the actual reason for this increase may not be known, part of the explanation could be an increase in the ascertainment of STDs by the now well informed pharmacists as well as familiarity and accessibility of pharmacies to clients.

After the training there was a significant increase in the pharmacists' knowledge of the treatment of symptoms suggestive of STDs especially syndromes characterised by abnormal genital discharge for both sexes and genital ulcer disease for males. It was also noted that appreciation of genital ulcer disease for males. It was also noted that appreciation of genital warts increased in females.

STDs associated with abnormal urethra and vaginal discharge are usually of acute onset especially in males, in whom they can easily be traced to a sexual episode. The symptoms are also dramatic due to the associated pain on micturition in males and lower abdominal pain in females. Generally, most people associate abnormal genital discharge with STDs. The inference is further strengthened by the observation that the syndromic approach in the treatment of STDs is much more successful in the treatment of genital discharge than for the other STD syndromes [4]. The increase in knowledge of urethral discharge syndrome among the pharmacists, therefore, will further increase the possibility that patients presenting with genital discharge syndrome will be more easily picked up and treated.

As far as the aetiology of STDs is concerned, increase in knowledge was seen mostly in STDs of bacterial origin, except for gonorrhoea. Gonorrhoea is perhaps the most easily recognised STD, thus most of the pharmacists were already aware of this disease even before the training workshop. Increase in knowledge was also elicited for genital herpes and vaginal candidiasis, conditions that have become rather common after advent of the HIV/AIDS pandemic [5,6].

Furthermore, the results obtained in the present study indicate that there was an increase in the pharmacists' knowledge in giving proper advice to their clients on aspects relating to the treatment and prevention of STDs. This observation is of importance in the management of STDs in Tanzania in that this category of health care personnel could also be utilised in STD prevention and control programmes.

Following the training there was a significant increase in the knowledge of treatment of STDs by symptoms. The pharmacists were now treating their clients with correct drugs and according to the MOH STD treatment algorithm. A significant number of pharmacists discouraged the use of chemoprophylaxis as a means of preventing STDs. This change of practice is a significant contribution to efforts aimed at controlling the emergence of micro-organisms, resistant to the common drugs used for the treatment of STDs. Resistance to antimicrobial agents is a growing problem in the treatment of STDs in many parts of the world so much that some of the previously useful drugs are no longer effective in the treatment of common STDs [7,8].

In conclusion, this study shows that pharmacists play a role in STD management in Tanzania, although existing regulations and patient care policy does not allow them to prescribe drugs in part one poisons list. It has also revealed that if pharmacists are well equipped with proper knowledge in the aetiology, treatment and prevention of STDs, they, in collaboration with other health care workers, could make an invaluable contribution in the fight against these diseases.

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