SELF MEDICATION USING MODERN MEDICINE IN KINONDONI MUNICIPAL DAR ES SALAAM TANZANIA

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A DISSERTATION SUBMITTED FOR PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC HEALTH IN THE UNIVERSITY OF DAR ES SALAAM

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CERTIFICATION

The under signed certifies that he has read and hereby recommends for acceptance by the University of Dar-es-Salaam a dissertation entitled:-

Self Medication Using Modern Medicine in Kinondoni Municipal Dar Es Salaam; **in partial fulfillment of the requirements for the degree of Master of Public Health.**

.....

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DATE.....October 21st, 2003

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Many thanks to the Lord, our heavenly father for the gift he has given us of life, health and all the blessings he is giving us day by day.

DEDICATION

This piece of work is dedicated to my mom Ndenengo, husband Nelson and my two kids Emmanuel and Carine who missed my love during this time when I was doing this course.

ABSTRACT

This was a cross sectional study whose aim was to assess the magnitude of self medication and associated factors at Kinondoni district, Dar-es- Salaam region.

The study involved a total of 402 respondents, of whom 56% were females and the rest were males.

Only 45.3% of people who fell sick go to health facility for care.

Self medication was practiced by about 50.2% of the respondents and medicines used were mainly obtained from medical stores and pharmacies.

Respondents' ability to recall the name of medicine used for treatment was found to be fairly good. Very few respondents were told how to store the medicines dispensed to them.

Nearly half (47.8%) of household involved in the study stored medicines at home.

The major reason for storing drugs at home was the need to use them for self medication incase of emergency. The medicines stored include prescription and non prescription drugs.

Lack of money to pay for these services together with the availability of many pharmacies and medical store in many places are the contributing factors in the magnitude of self medication.

Given the magnitude of this problem there is a need for pharmacists and the general public to be educated on the proper use and storage of drugs in order to minimize potential consequences of practices which were revealed by this study

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CHAPTER ONE.

INTRODUCTION

Health and illness are socially constructed concepts. People develop the meaning of different types of health problems and what to do when one feels unwell during the process of socialization from childhood. Available literature shows that interpretation of symptoms and the type of action to be taken is a function of complex factors in a cultural system where a person grows up (Helman, 1990).

Health behaviour models including The Health Belief Model (Jan and Becker, 1984); Social Learning or Social Cognition Theory (Bandura, 1977) and the Theory of Reasoned Action (Ajzen and Fishbein, 1980) acknowledge that an individual's beliefs about illness influences his/her health behaviour.

Illness behaviour will therefore describe the manner in which persons monitor their bodies, define and interpret their symptoms, take remedial actions and utilize the health care system (Good, 1994).

Illness conceptually is the subjective response of the patient and those around him of being unwell, particularly how he and they interpret the origin and significance of this event; how it effects his relationship with others and the various steps he takes to remedy the situation (Helman,1990).

Both the meanings given to the symptoms; and the emotional response to them are influenced by someone's background and personality; as well as the cultural, social and economic context in which they appear. In other words, the same problem (such as pain) may be interpreted completely differently by two patients from different cultures or from the same culture but in different contexts (Helman, 1990).

In most developing countries, medical pluralism or the existence of several distinct therapeutic systems in a single cultural setting is an important feature of the health care system (Ahmed et al, 2000).

The popular sector refers to the lay, non professional arena of care, where the symptoms of ill health are first recognized and health seeking initiated (Helman, 1990). It includes all the therapeutic options that people employ without re-course to paid consultation with folk or professional practitioners. Among these options is self care or self medication, whereby people function in their behalf in health promotion and disease prevention including disease detection and treatment (Ahmed et al, 2000). They may for example, decide to rest or take a home remedy, or ask advice from a friend, a relative or neighbour, or consult a local priest, folk healer or wise person or consult a doctor provided one is available (Helman, 1990).

Available literatures show that symptoms will not necessarily be identified in biomedical terms nor will their recognition necessarily result in actions of the variety that "scientific medicine" deems most appropriate (Ahmed et al, 2000). Treatment choice might involve a myriad of factors related to illness type and severity, pre-existing lay beliefs about illness causation, the range and the accessibility of theraupetic options available and their perceived efficacy (Ahmed et al, 2000).

Self treatment using either modern or traditional medicines is among options which people take when they feel ill. Self treatment is based on lay beliefs about the structure and functioning of the body, and the origin and the nature of ill health.

It includes a variety of substances and treatments such as patent medicines, traditional folk remedies or old wives tales as well as changes in diet or behavior (Helman, 1990).

Self medication is the selection and use of medicines by an individual to treat a self recognized illness or symptoms. It includes the use of non prescription/over the counter medicines and a range of different alternative medicines such as herbal remedies, food supplements and traditional products (Sinikka, 2001). Further use of left over prescription drugs and other kind of self regulatory use of prescription drugs can be included in this concept (Sinikka, 2001).

An estimated 70% of all illnesses are managed without the intervention of a physician (Dean,1987; Segal and Goldstein, 1989). Worldwide the public health importance of self medication using modern medicines has increased since the late 1980's when more drugs were changed from prescription status to drugs that could be sold over the counter (Sinikka, 2001). Self medication encompasses not only symptomatic relief of minor self limiting condition, but also many common illnesses that can be self assessed (WSMI, 1999). Treatment can either be curative or just for relief of symptoms.

In self medication, the individual bears the responsibility for the use of self medication products. Furthermore, to limit the potential risks involved in self medication, it is important for health professionals who look after patients to provide education regarding medicines and their appropriate use. Risks and benefits regarding

The reasons why people choose different places to obtain their drugs may depend on past experience, cost, the type of illness, advice from friends and relatives or their beliefs about a particular source. There are some problems when drugs are used in the absence of proper information among users (Abula and Worku, 2001).

Due to lack of adequate information and proper advice people often make irrational choices when buying drugs. For example, they might buy drugs that will not help their condition, choose the wrong drugs for their illness, choose the correct drug, but buy too much or too little or even choose a drug which is unsuitable for them, due to their age, medical condition or other drugs they take (WHO, 2002).

Tanzania is poor and is faced by several problems. It has very few health facilities given the size of the population. The few available health facilities are not adequately staffed and medicines, reagents and other important supplies are generally inadequate at all levels of care. Faced with many communicable and non communicable diseases, high costs of medical care, and poorly equipped health facilities, most people resort to self medication whenever they encounter a health problem.

For example, malaria is common in many African countries. It is the number one killer in our country (Kilama and Kihamia, 1991). Due to high prevalence of malaria in several areas in the country, coupled with poorly equipped health facilities, some years ago, the government allowed antimalarials to be sold through various sources including ordinary shops. The decision was taken presumably on the grounds that people could easily access antimalarials when they suspected they had malaria.

Probably such policy changes on antimalarials were based on the assumption that shopkeepers knew the correct dosage for different age groups and also the public would buy the drug according to the dose they needed to be cured. However, there is hardly any empirical data to support these assumptions. Indeed there was pulpable evidence that the antimalarials especially Chloroquine were being used for inducing abortions and even for committing suicide rather than for curing suspected malaria (Kopoka, 1988).

In this case the intention of the government to reduce the number of people suffering from Malaria by making antimalarials easily available resulted in serious abuse of the drug. This is just one of the many examples that may show how self medication can have some harmful effects to the community if people are not well informed about the effects ie (therapeutic and dangerous) which can be brought about by medicines. The extent to which people go to health care facilities when they feel ill is not clearly known. The same applies to the extent to which people treat themselves. It is for these reasons this study was designed.

Definition of Problem

In Tanzania where the ratio of one doctor to population is 1: 23,000 (MOH, 2002) it is not easy for many people to get access to a doctor whenever they fall sick. Consequently, self medication is presumed to be one of the major ways people resort to when feeling unwell. Given that the country has only 4990 health facilities; 35,750 health workers currently working in the government institutions (MOH, 2002), access to health care by the majority especially in the rural areas is a problem. Self care including self medication which is fairly common in many countries (FIP, 1996), appear to be a better alternative for many people.

Self care involves the steps that are taken by individual to promote, restore or solve temporarily or definitively the illnesses or health related problems of a micro-group, usually a family, without the intervention of an outside provider (Gasman, 1999). Self medication encompasses use of different medications ranging from traditional to modern medicines; to treat self recognized illnesses or symptoms (WHO, 1998).

The decision by a person either to self medicate or to seek care from other sources is determined by several factors. These include: interpretation of symptoms, knowledge about treatment options, and their availability including accessibility. Advice may be sought from doctors, pharmacists, pharmacy clerks, traditional healers, family, or friends at any time during an illness. Each group of advisers has its own specific characteristics, advantages and disadvantages (Radyowijati and Haak, 2002).

There are some advantages and disadvantages which are attributable to self medication, which may make a person to resort to this kind of treatment. Advantages for the patient are, convenience and easy access to medications, no consultation fee, saving of time, and empowerment of individuals in taking care of his/her own health. The disadvantages of this practice for an individual may be delayed diagnosis, unnecessary medication, incorrect self-diagnosis, habituation to use of medicines and increased costs (Sinikka, 2001).

In Tanzania most people not only resort to self medication for the purpose of relieving minor ailments, but also for treating all the illnesses they think they can handle without consulting a doctor. Medicines left over at home are sometimes used for self treatment. Left over drugs could be from previous episodes of illness where the person or his relative stopped using medicines after symptoms of the problem subsided or they could result from other sources where drugs were given above the required dose.

The other source of medicines, which can be used for self-medication, could be pharmacies and medical stores that sell medicines to the community. In a study which was conducted in Dar es salaam, it was found that over 40% of prescription medicines were obtained from pharmacies without prescription (Chambuso et al, 2003).

The other potential sources of medicines used for self medication, include ordinary shops, hawkers, and even some health workers who happen to stock medicines in their homes legally or illegally. These health workers may illegally sell the medicines to neighbours, or sometimes give them to help a person seeking treatment.

The major problem with self-medication using modern medicines in our setting is that little is known about the extent of self medication and its associated factors. There is some evidence that many people do not even know the names of drugs they keep at home for self treatment (Mlavwasi, 1994). The majority of people in the developing world are also not aware that drugs can harm them if they do not use them correctly (Okumura et al, 2002). For these reasons this study was designed in order to explore and establish the extent of self medication and associated factors with Kinondoni district as an entry point.

Rationale of doing the study.

Results of this study will provide information which will be of much use in developing policies on self medication in the country. It will also enable health care providers to know the extent of self medication and facilitate development of interventions which address this problem at various levels in the society. Since not much is known about problems associated with self medication in the country, results of this exploratory study will also precipitate other areas for further research in order to improve drug utilization by the general public.

OBJECTIVES OF THE STUDY.

Broad Objective:

To assess the magnitude of self-medication and associated factors at household level.

Specific Objectives:

1. To determine the proportion of people who seek medical attention when sick.

2. To determine the proportion of people who practice self-medication when sick.

3. To determine the proportion of people who know the name of the medicines they use for self-medication.

4. To find out why some people resort to self medication when they fall sick.

CHAPTER TWO.

LITERATURE REVIEW

The type and extent of self medication and the reasons for it may vary from country to country. In developing countries both modern drugs and traditional medicines are commonly used for self medication (WSMI, 1999). Prescriptions only medications can easily be obtained without prescriptions for self medication in many of these countries.

Studies in Spain showed that 76% of the patients who attended health centers had already taken medication when they arrived (Gasman, 1999). The main reasons for taking these medicines were a previous medical prescription for a similar problem.

In another study conducted in Western Nepal it was observed that 59% of the respondents had taken some form of self medication during a six month period preceding the study. Analysis of reasons for self medication revealed that, 25% felt that the illness was too mild and did not require the services of a doctor (Shankar et al, 2001). It was also observed that 19% of the respondents reported that they had previous experience in treating a similar condition and believed even if they go to the doctor they will be prescribed similar medicines. Non-availability of prescribers was also cited as another reason for self medication in this area.

A study that was conducted in Dar es Salaam between December 1995 and March 1996 revealed that out of the 323 patients interviewed, 51% of them had practiced self medication (Anthony et al, 1995). Twenty seven percent of those who self medicated could not say the type of medicines they had used.

Differences in interpretation of illnesses by different groups of people may also influence their health seeking behaviour as well as their final decision on whom to consult (Helman, 1990).

In a study conducted in Thailand, it was reported that, 47% of households reported to have practiced self medication due to the perception that they had minor illnesses. Hospitals were mostly frequented for both moderate and severe illness by 55%. In another study conducted in Ethiopia, the magnitude of self medication was observed to be 50%. In this study, perceived low severity of the disease and poverty were the major reasons for self medication (Abula and Worku, 2001).

A study conducted in 13 villages in Bagamoyo district, Tanzania revealed that the most frequently mentioned illness was 'homa', (fever) which was mentioned both as a symptom of almost every illness, and as the illness itself (Winch et al, 1996). In this study the term used by health workers for malaria was 'homa ya malaria' or malaria fever. For residents of this area 'homa ya malaria' was least likely treated at home or by neighbour and more likely to be treated at the dispensary or hospital. There are other different interpretations of fever "homa", which are treated in different ways. These are: Fevers of problems "homa za matatizo", periodic fevers "homa za vipindi"; ordinary fever "homa za kawaida"; and fever from boils "homa ya vidonda". These fevers are said to be mild and either go away on their own without treatment, or can be cured with drugs. There is another type of fever which occurs in children, local terminology for it being "degedege."

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In a study conducted in Spain, it was observed that for persons with acute disorders, self medication increased with increasing level of education (Figueiras et al, 2000). Self medication was twice as common among those 40 years and older compared to those who were 27 years and younger.

Another study from Benin West Africa, revealed that the desire to avoid the expense of consultation was one of the reasons for self medication (Gomes do Espirito et al, 1998).

Studies in Mexico revealed that, 68% of clients bought their medicines without a prescription. In this study, it was observed that analgesics and antibiotics were the therapeutics groups most frequently bought (Gasman, 1999).

A study conducted in India revealed that eleven percent of the medicines that were consumed by the households were antibiotics (Saradamma et al, 2000). This study also revealed that the risk of buying these medicines was associated with education at secondary level or below and also the perception that consultation with a doctor was expensive.

Some studies have shown that in areas where malaria is prevalent, self medication is about fifty five percent (Levya, 1997). Drug groups involved included antipyretics, antibiotics, and antimalarial drugs.

A study conducted in Gezira state in Sudan where malaria is very common, revealed that about 56.6% of the patients had self medicated themselves with antimalarials (Adeel, 1995)

Hoarding of drugs at homes is also another aspect to be looked into on self medication. As far as drug hoarding is concerned a study conducted in Dar es salaam, revealed that about 73.3 percent of households had medicines stored in their houses, an average of three types of drugs per household (Mlavwasi, 1994).

A study conducted in Addis Ababa revealed that of the households that were visited, 20% of them hoarded drugs and the most common ones being oral antibiotics and antipyretics/ analgesics (Abula and Worku, 2001).

In other areas, societies which frequently run short of basic supplies develop a tendency to hoard drugs in anticipation of shortages. In Tanzania shortages of medicines are fairly common and this may account for reasons why hoarding of drugs at home occurs.

CHAPTER THREE

METHODOLOGY

The Study site

The study was conducted in Kinondoni district in the city of Dar es salaam.

This district has been selected due to its high population density, many government and private hospitals, large variety of commercial pharmacies, medical stores and many other sources of medicines.

The district has one government hospital, 25 government health facilities and 142 private health facilities. It has 80 registered commercial pharmacies, 612 medical stores and many ordinary shops (District profile, 2002).

The cultural diversity present in this district as well as large variety of health facilities creates a high potential for self medication when people fall sick.

Kinondoni district is composed of four divisions, namely Kinondoni, Kibamba, Kawe and Magomeni. It has a total population of about 1,088,867; with an average household of 4.2 persons (Census,2002). The divisions are divided into 27 wards which in turn are subdivided into villages for the rural areas and sub wards (commonly known as mitaa) in the urban areas. There are 113 mitaa and 14 Villages.

It is estimated that 360,000 residents of Kinondoni municipality are employed in both public and private sectors. A working force of 200,000 people is self

employed. Many people are involved in petty business, fisheries, livestock, keeping and agriculture including horticulture. The per capita income of Kinondoni municipality is estimated at Tsh. 150,000/= per annum.

Sample size.

The sample size (n) was determined using the formula:

$n=z^2 p q/e^2$

where:

n= the desired sample (where population is greater than 10,000)

z=standard normal deviate, usually set at 1.96 which corresponds to a 95% confidence interval.

P=proportion in the target population estimated to have a particular characteristic.In this case the prevalence of people who do self medication with unprescibed modern medicine was assumed to be 50%.

q=1-p

e=degree of accuracy is set at 0.05 (5%)

The above formula gives a minimum sample size of 384 people, consequently a total number of 400 respondents will be involved in order to cater for missing and other unexpected problems during data collection.

Study Design

This was a cross sectional descriptive study conducted in Kinondoni district, Dar-es-salaam region.

Study Population.

The study population was of individuals with a history of illness one month prior to the day the interview was conducted. Focus was on people aged six years and above. This age group was taken because of the assumption that these are individuals who are thought to be above the cut off point of five years for which kids get sick frequently, and there was a tendency of parents to give medications to the kids before doctor's consultation for a kid aged six years and above.

Terminally persons were not included in this study. People with a history of mental disorders were also not included in the study. This is because the study aimed at looking at the use of medicines that are commonly used to self-treat minor illnesses, which occur to the individuals, and when medications are taken, the disease stops or subsidy. People with terminal illness tend to be on long term medication and, in this case they would not provide a true picture of self medication patterns required by the study.

Children who were aged between six years up to fifteen years the information was obtained from the mother or the guardian of the kid concerned. Above this age the information was obtained from the person who was eligible.

Selection of Study sample.

Multistage cluster sampling method was used to obtain the study subjects. A sampling frame consisting of 27 wards in the district was made from which 4 wards were selected randomly. From the selected four wards, 8 sub wards were selected randomly for the study. From the selected sub wards (mitaa), households were visited, and from, these 402 individuals who had a history of illness one month before the date of interview were selected and interviewed.

In depth information was obtained from the key informants, who were selected because of their ability to respond to issues concerning self medication as well as their interest in the subject of self medication.

Ethical Consideration.

Ethical clearance was obtained from MUCHS, which also wrote a letter of the introduction of the researcher to the officials in the study area. In response to the introduction from the college, District officials wrote letters of introduction to the wards where the study was conducted. The Ward officials then wrote a letter to introduce principal investigators and the research assistants to the sub wards officials who in turn introduced them to the household members. The head of each household was first interviewed to determine if there was a sick member in the household a month before the date of the interview, where more than one person was eligible for

the study, one of them was randomly selected and interviewed. An oral consent was obtained from the person who was selected for interview.

Privacy was observed when interviews were conducted with the individual by sitting away some distance from other members of the family as well as from the general public. Each respondent was assured that the information obtained was confidential and that the information obtained was purely for research purposes and nowhere would respondent's identity be revealed b the research team. The potential participant was also told that he/she was free not to answer the questions they felt uncomfortable with and were free not to participate further should he/she wish to do so.

The name of the respondent was not required, and one person handled all the materials carefully. After completion of the study, the principal investigator destroyed all the materials used for data collection.

Data Collection Process:

Two research assistants together with the principal investigator did data collection. One of the research assistants was obtained from Muhimbili National Hospital and the second one was hired from a private hospital in Ubungo. Both had medical background; one being a doctor and a second one is a clinical officer. They were given a short training before the study commenced, whereby they were exposed to the objectives of the study and the general questions that were to be answered.

Data collection instrument.

The interview schedule consisted of open ended and closed questions. It was designed in English and translated to Swahili. The schedule consisted of questions on demographic characteristics, steps taken by the person who was ill one month time prior to the date of interview, source of medicines kept at home and reasons by which people resort to self medication.

Key informants interviews

After data collection procedure was completed, some information about reasons for which people resort to self medication was obtained from key informants. These were selected by the interviewer on the basis of their interest as well as their ability to contribute on the subject of self medication. A total of ten key informants were involved in the study.

Data management / quality assurance:

For consistency purposes, the written information was re-checked for completeness everyday after fieldwork. There was a brief discussion between the principal investigator and assistant researcher to see if there were any problems observed during the day. The responses of closed ended questions were pre-coded while the ones for open-ended questions the coding was done after completion of the study. . Data was then entered in the computer, and cleaning was done. Frequencies for all the questions were run, as well as cross tabulation for some variables. This process of data analysis was done using EPI-INFO Package. Analysis of the in depth

interviews was done manually. Results of the data generated are summarized in the next chapter.

CHAPTER FOUR.

RESULTS

This study involved a total of 402 respondents, of whom 56.2% were females and the rest were males. About 8% were children 10 years and younger. Nearly 8% of the respondents were between the ages of 11-17 years. Adults above the age of 36 years constituted about one third of the study sample. Married couples were 48% while 44.0% were singles. The remaining were widowed, divorced or cohabiting. About 55% of the respondents had primary level education while almost 6% had no formal education.

Table one: Sociodemographic characteristics of the study sample.

Age (Years))	**Frequency (%)**		**Total**
	Female N=226	**Male n=176**	**n=402**
6-17	12.8	19.3	15.7
18-24	19.0	18.2	18.7
25-35	38.5	30.7	35.1
36-ABOVE	29.6	31.8	30.6
Total	99.9	100.0	100.0
Marital Status			
Single	38.5	51.1	44.0
Married	50.0	45.5	48.0
Others	11.6	3.4	8.0
Total	100.1	100.0	100.0
Occupation			
Self employed	20.8	37.5	28.1
Employee	17.3	20.5	18.7
Not working	43.8	17.0	32.0
Students	18.1	25.0	21.1
Total	100.0	100.0	99.9
Educational Level			
No education	7.2	4.0	5.8
Primary education	59.3	48.9	54.7
Secondary education	33.6	47.2	39.5
Total n=402	100.1	100.1	100.0

Although the proportion of male children was slightly higher than that of females and the proportion of female adults aged 25-35 years was higher than that of males in the same age group, distribution of age across males and females was not significantly different (Chi square=4.57, p=0.21).

Females in the study sample were more likely to be unemployed compared to their male counterparts and the observed variation in occupation by sex was significant different (Chi square =34.64, p=0.000).

4.1.0: Health seeking behavior.

In a society like Tanzania, which has different types of health care systems, people usually seek assistance from various sources when they feel ill. In this study respondents were asked to mention the kind of illnesses they had experienced one month before the day they were interviewed together with duration in weeks.

About 41% reported to have an illness one week prior to the day the interview was conducted. The rest were sick between two and four weeks before the day of interview. The major health problems reported were malaria (35%), headache/ fever (27%), upper respiratory infections (15%), gastrointestinal infections (13%), injuries including burns (6%) and skin infections (4%).

It was also of interest to find out who people first consult when they felt ill.

Results of this study revealed that episodes of illness were mostly revealed to spouses (30%), parents (24%), and other relatives (16%). Some revealed the problem to neighbors and friends (10.5%) and about (20.1%) did not reveal their health problems to anybody.

Table two: Variation of person consulted for advice during illness by sex.

Sex	Nobody	Parents	Relatives	Neighbors / friends	Spouses (Husb/wife)	Total
Female	15.9	23.5	17.2	8.4	35.0	100.0 n= 226
Male	25.6	23.9	14.8	13.1	22.7	100.0 n= 176
Total	20.1	23.6	16.2	10.5	29.6	100.0 n=402

Chi square=24.09, p=0.0005

When asked what advice was given by the confidant to whom the problem was first revealed, it was found that 67.6% were advised to seek medical consultation and about 12% were advised to go to pharmacy outlets.

The rest were advised either to use left over drugs (3.1%) or buy medicines from nearby shops (8.8%). Very few (0.3%) were advised to visit traditional healers.

4.1.1: Action taken:

Steps taken by the respondents for their illness are summarized in table three. About 45% of the respondents went to health care facilities for care while about a third went to pharmacy shops. About 3% did nothing for their condition while 6% reported to

use left over drugs, a proportion which is fairly high compared to those advised to do so by confidants first consulted for the problem.

Use of modern health services for care was more common among male than female respondents. Female respondents were more likely to use left over drugs or do nothing for their illness compared to males. However these variations were not statistically significant (Chi square=6.87, p=0.23).

Similarly, there was no significant difference by age in the type of action taken by the respondents (Chi square=19.50, p=0.49).

Table three: Variation (%) between actions taken during illness by sex.

Sex	Nothing	Health care facility	Medical store	Pharmacy	Traditional healers and other means	Drugs left over	Total
Female	3.5	43.4	15.9	27.4	1.7	7.9	100.0 n=226
Male	1.7	47.7	11.4	33.5	1.7	4.0	100.0 n=176
Total	2.7	45.3	13.9	30.1	1.7	6.2	100% n=402

While only 0.3%of the respondents were advised to consult traditional healers for their problem, nearly 2% eventually consulted them for assistance.

Use of health facilities and consulting pharmacies increased with increased level of education. Use of traditional healers and doing nothing about the health problem decreased with increased level of education and these variations were statistically significantly (Chi square=21.10, p=0.02).

Table four: Variation (%) of actions taken by education level of respondents

Education level	Nothing	Health care facilities	Medical store	Pharmacy	Traditional healers and other means	Drugs left over	Total
No education/ Adult education	4.3	39.1	26.1	21.7	8.7	0.0	100.0 n=23
Primary education	3.6	43.6	15.9	27.3	1.4	8.2	100.0 n=220
Secondary education/ Higher education	1.3	48.4	9.4	35.2	1.3	4.4	100.0 n=159
Total	2.7	45.3	13.9	30.1	1.7	6.2	100% N=402

4:2 The Extent of self medication in Kinondoni district.

Of the 402 respondents who were interviewed, 50.2% agreed that they had practiced self medication the last time they were sick. Self medication was found to be more common among females (51.3%) compared to males (48.9%).

Left over drugs were consumed by a higher proportion of females than males. However there was no significant difference between males and females in their self-medication practices.

Table Five: Variation (%) in self medication practices by sex of the respondent.

Sex	Medical store	Pharmacy	Left over drugs	Total
Female	31.1	53.4	15.5	100.0 n=116
Male	23.3	68.6	14.0	100.0 n=86
Total	27.5	59.3	13.2	100.0 n=202

Chi square=8.48, p=0.29.

When self medication pattern were analyzed across different age groups, the findings summarized in table six indicate that, about 66.0% of youth aged 18-24 years went to the pharmacies for care, and children aged 11-17 years were more likely to use left over drugs than any other age groups. These variations were not statistically different (Chi square=19.50, p=0.49).

Table Six : Variation (%) of sources of drugs for self medication by age of respondents,

Age group	Medical store	Pharmacy	Left over drugs	Total
6-10	23.0	61.5	15.4	100.0 n=13
11-17	40.0	26.6	33.3	99.9 n=15
18-24	22.0	65.8	12.2	100.0 n=41
25-35	27.8	61.1	11.1	100.0 n=72
36-above	29.5	62.3	8.2	100.0 n=61
Total	27.5	59.3	13.2	100.0 n=202

The tendency to buy medicines for self medication from pharmacies increased with increasing level of education while buying drugs from medical stores for this purpose decreased with increasing level of education and these variations were statistically significant.

Table Seven: Variation (%) of sources of drugs for self medication by education level of respondent.

Educational level	Medical store	Pharmacy	Left over drugs	Total
No education/ Adult education	54.5	45.5	0.0	100.0 n=13
Primary education	30.9	53.1	16.0	100.0 n=113
Secondary education/ Higher education	19.2	71.8	9.0	100.0 n=76
Total	27.5	59.3	13.2	100.0 n=202

Chi square=40.83, p=0.0000

Injuries including burns (41.7%) were the most common health problems for which self medication were used. Other symptoms included headaches, fevers, general body malaise (35.2%) and upper respiratory infections. It was also revealed that some people used kerosene for treating wounds.

4.3: Respondent's recall of the name of medicines used.

This study also intended to find out the extent to which patients were told the names of the medicines they obtained from various sources. The major sources of medicines were medical stores and pharmacies. These accounted for about 66.4% of all the drugs which were consumed by all the study subjects. Others (33.6%) obtained their medicines from health facilities.

About two thirds of the respondents could recall the names of the medicines they used from the source of the drugs and only 8.2% said the person who dispensed the medicine did not tell them the name of the medicine.

About one quarter of the respondents self prescribed their drug treatments. These people went to the source of medicines with the intention of buying specific brands, these medicines were prescription only medicines mainly antibiotics such as Amoxil, Cloxacillin, etc antimalarials like Artesunate, Metakelfin etc and others were non prescription medicines which could be obtained anytime without the prescription of a medical doctor.

Nearly 88% of the respondents who went to the health care facilities for treatment were told the names of the medicines they were prescribed compared to only 44.5% of those who went to the pharmacies for consultation and advice. Of the respondents

who went to a medical store to buy medicines, 55.4% were told the name of the medicine they were buying.

Nearly 93% of the respondents who bought medicines from all these sources were given instruction on how to use them and 95% of them said they understood the instructions. However less than 29% were given instructions on how the medicines should be stored.

4.3.2: Storage of medicines at homes for self medication.

Out of 402 respondents in this study, 47.8% stocked different types of medicines in their homes. Among the households which stock drugs, 16.7% could not mention the names of the medicines they had and almost the same proportion (18.7%) did not know the correct use of the drugs they had.

The types of drugs kept at home were verified during the study and the general pattern was as summarized in figure one.

Analgesics (paracetamol, aspirin etc) were found to be stocked by the majority of the respondents, followed by antibiotics and syrups.

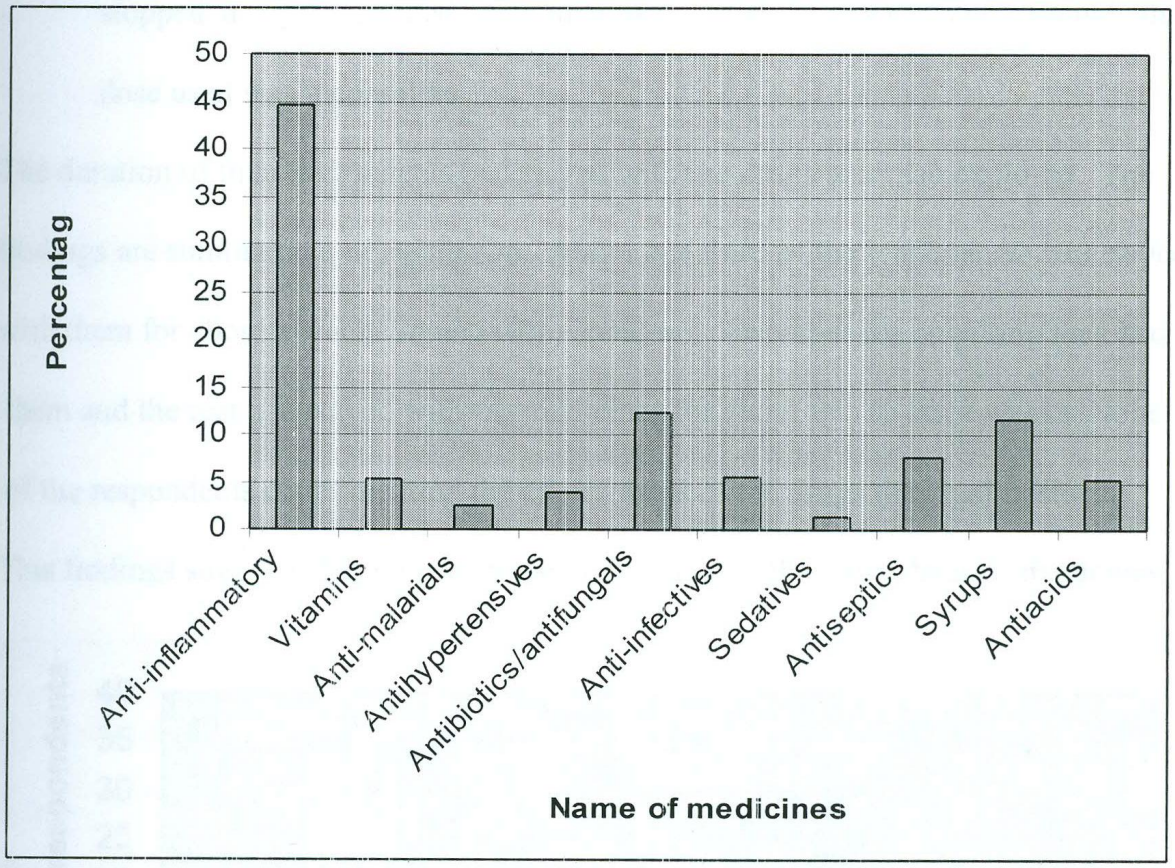


Figure one: Proportion of the respondents with different groups of Medicines stored at home.

The major sources of the medicines stocked at home were medical stores (67.2%) followed by hospitals or dispensaries (21.4%) and pharmacies (10.9%) and the rest (0.5%) were obtained from ordinary shops.

The major reasons mentioned for keeping medicines at home were:

- Potential emergencies at night (58.4%).
- Lack of money for hospital consultation (4.9%.)
- Others (37.6%) were left over from previous prescriptions. It is possible this was either due to dispensing more medicines than prescribed or patients

stopped using prescribed medicines when they felt better even though the dose used was incomplete.

The duration of time respondents had stayed with the drugs was also explored. The findings are summarized in figure two. About one third of the respondents had stayed with them for about a week. Some (10%) could not remember for how long they had them and the rest had stayed with the medicines for about two to three weeks. None of the respondents could mention the expiry dates of the drugs they had in stock. This findings suggests that few people are concerned with expiry dates of medicines.

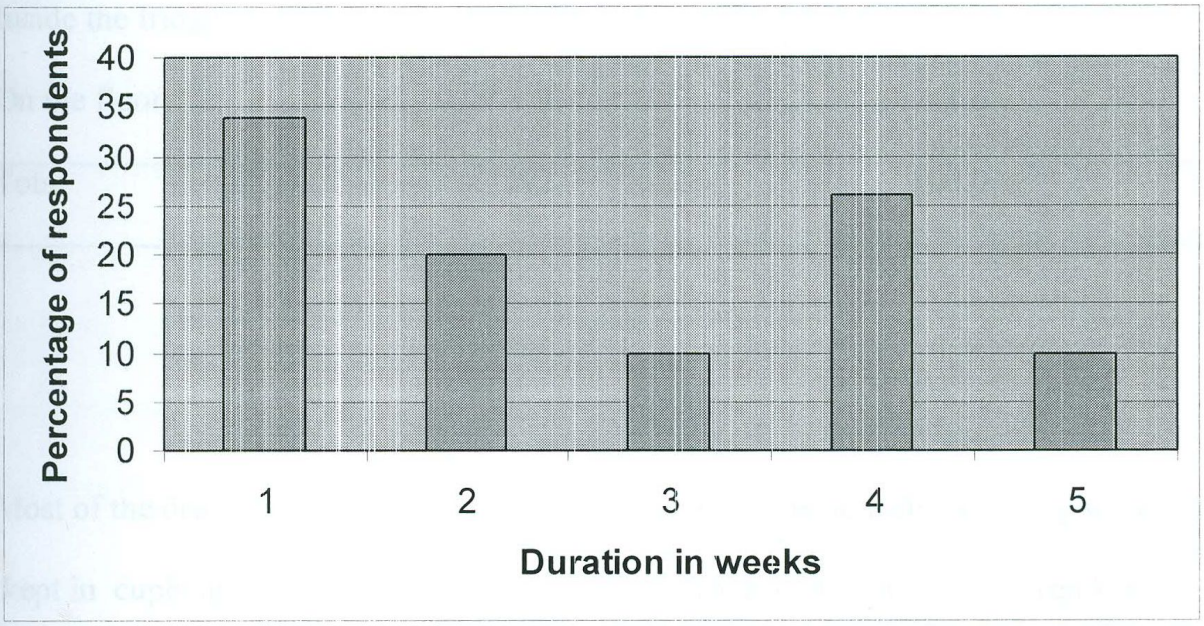


Figure two: Proportion of respondents with respect to duration of staying with medicines at home.

Information on where the medicines were stored was also collected and the responses obtained are summarized in table eight. As can be seen from this table, most medicines were stored in cupboard or dressing tables. The habit of storing medicines haphazardly not only raises the possibility of some of them to deteriorate in quality but also raises the potential for children to use them without the knowledge of parents

consequently posing serious health problems.

Table Eight : Places by which drugs are kept at home

Storage Place	Frequency	Proportion of respondents who stock medicines (%)
Cupboards/Drawers	97	50.5
Dressing table	62	32.3
Tables	23	12.0
Inside the fridge	7	3.6
On the floor	3	1.6
Total	192	100.0

Most of the drugs stocked at home were in tablet and capsule form, and they were mainly kept in cupboards and drawers located in living rooms and some were even kept in dressing tables. Some medicines that were in syrup form which were supposed to be kept in the fridge, were kept in the cupboards for more than the 14 days recommended and some of the respondents mentioned that they would continue using them. Medicines kept in dressing tables where cosmetics are also kept are at risk of contamination from spillage of cosmetics which are in use.

4.4: Major reasons for self medication.

There are several reasons, which made individuals resort to self medication when they felt ill. This study had an interest to find out the major reasons that made people resort to self medication, therefore interviews were conducted with key informants.

The major reasons mentioned by key informants were:

Lack of money to pay for treatment in private health care facilities which made majority of respondents to opt for government health services. In these government facilities workers are reported to be very few and therefore not able to cope with the demands of the patients, resulting into patients waiting for many hours in health facilities for services. The time spent waiting for services in these government facilities made some people resort to self treatment the next time they are faced by a health problem.

The other reason which was mentioned by these key informants was the perception that introduction of private hospitals and dispensaries in many places for made owners employ less costly and hence unqualified staff to run the service. As a result, the nature of services provided by less qualified health workers made some users of the facilities to loose faith in these providers and therefore decide to self treat when faced by ill health.

The introduction and presence of commercial pharmacies and medical stores were reported by informants to encourage self medication. Some informants' reported that the presence of medical stores and pharmacies has brought some kind of convenience to them and the environment in the pharmacies is friendly also.

Some of the people resort to self medication due to their feelings that they can know the disease symptoms and all they need to do is to buy the appropriate drugs for the condition from drug stores.

It can therefore be summarized that, the tendency to seek care from modern health facility was by about 45.3% of the respondents, self medication is observed to be practiced by about 50.2% of the respondents interviewed. The remaining (4.5%) sought help from traditional healers or did nothing to the health problem they had.

Among the respondents who stock medicines at home, 16.7% could not give the correct names and 18.7% could not give the correct indications of medicines they had.

The major reasons for self medication were the lack of money to pay for the services in the health facilities as well as introduction of commercial pharmacies and medical stores in the places where people live.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS.

The study looked at the magnitude of self medication at household level and associated factors. The findings of the study on the extent of self medication are almost similar to those observed by researchers within the country and in other countries worldwide.

5:1 Health seeking behavior.

When people fall sick, they take several steps before deciding to either visit a health facility or pharmacy for care. One of the steps which majority of the people takes is consultation. Consultation is a common practice done by most of the people. This study revealed that spouses were the most consulted persons, such consultation being more common among female compared to male respondents. This may be due to the fact that, normally people do consultation to people who are close to them, the consultation can be for the purpose of getting some advice from the person consulted on what to do with the situation, or for the purpose of getting support from this person. Females were observed to consult more than males, probably due to the fact that women tend to speak out their personal problems (feelings) as compared to men who are very reserved when it comes to the matters which are personal.

From the consultations made by respondents, about 67.6% were advised to seek medical attention from a health facility and among them only 45.3% did so; and about 12% were advised to seek help from the pharmacies but the results showed that, about one third (30.1%) of the respondents went to the these facilities for

treatment. These findings indicate that, an individual who is advised does not always take advices provided from lay consultation. There are several reasons to this, one of them can be health and illness are socially constructed concepts, different people have different ways of interpreting their illnesses in such a way that, when advised to seek certain kind of help, their interpretation of the illness will influence where they will go for help (Helman, 1990). The other reason can be economic status of the individual who is being advised, that is the ability of the person to afford the kind of service being advised. These are just some of the reasons that may account for the observed differences between the advices given by person consulted and the actions taken by the person who was sick.

Use of modern health services for care was more common among males than female patients. Female patients were more likely to use left over drugs or do nothing for their illness compared to males. Interpretation of illness by different sexes can contribute to the differential trend of the males in seeking health care than females; this can be one of the reasons. The other contributing factor for this difference can be since most of the respondents interviewed were women whom majority had no occupations, and therefore depend on support from their husbands, there is likelihood that some women could not afford to pay for the consultation fees in the hospitals every time they were ill and therefore their first action when they suspect to be ill was to use left over medicines.

5.2: Self Medication Practices.

Self medication was practiced by about half of the respondents interviewed, the practice was more common among females (51.3%) compared to males (48.9). These results were not different from what was found from a study conducted in Dar es salaam between Dec 1995 and early 1996 whereby it was found out that 51% of the respondents had practiced self medication (Anthony et al, 1996) and a similar study conducted in Ethiopia, which revealed the magnitude of self medication to be 50% (Abula and Worku,2001).

Use of left over medicines for self medication can have some negative effects if little is known about the medicines to be used. It was observed that left over drugs were mostly used by the age group 11-17 years. This group consisted mostly of students whom majority had injuries or illnesses for which majority thought they did not need attention of medical personnel. Another explanation can be that most of the teenagers are risk takers and also like to simplify things such that they try things even those that may harm their health, in this case they would rather use any medicine available at home or from neighbors when they suspect to be ill before they seek help from proper health care systems.

The study also revealed that majority of the respondents who had secondary education and above consulted pharmacies for care compared to the rest of the respondents. This was similar to the studies done in India and found out that graduates were more self prescribers compared to the rest of the respondents (Deshpande and Tiwari , 1997). Similar study conducted in Spain revealed that self

medication practices increased with increasing level of education (Figueiras et al,2000). It is expected that as the person becomes more educated he/she would follow channels which are required when seeking care, but this is not the case. This can be contributed by the fact that such people believe they know their problem and what to do about it.

5.3:Respondents'recall of the name of medicines used.

The study revealed that about two third of the respondents could recall the names of medicines they had used for treatment. Less than ten percent of the respondents (8.2%) were not told the names of medicines they were prescribed.

For any medications that are taken by a person, it is important that a person can at least know the name of the medicine he/she has used. This has got an implication in such cases where the person has to seek help from one place to another due to either failure of the treatment from the first place visited and therefore the need to visit another place, whereby there is a need to explain the kind of medications already used by this person. In this case if a person can not remember the medicine which she/he has used, there is a danger of being given the same drugs, making the problem to persist. There are some people who react to certain ingredients present in certain drugs. In order to avoid getting some allergic reactions from certain medicines, which have already been known to the person, it is important a person understands the name of medicine he/she is taking. Such drugs are example Sulphur containing drugs, Fansidar, Metakelfin etc.

Storage of medicines at households.

Concerning the storage of the medicines, the findings have revealed that less than one third (28.8%) of the respondents were told how to store medicines they obtained from these facilities. The rest were not told anything about where to keep the drugs they obtained from these facilities.

Storage conditions are important from the point a medicine is manufactured to the end user that is, the patient. Medicines can easily deteriorate due to moisture, light and even the heat if not stored correctly. It is therefore important that patients are told how to keep medicines in a proper condition in order to avoid their deterioration. The major reason for which majority of the people store drugs at home was for self medication as first aid and in case of health related emergencies (58.4%), some were left over from previous prescriptions (37.6%) and lack of money for hospital consultation (4.9%). The drugs stored include prescription and non prescription drugs. This was not different from what was found in study conducted in Ethiopia (Abula and Worku, 2001) where it was found that drug hoarding was very common and the major reason for keeping drugs was to cater for treatment at the next episode of illness.

Duration of keeping medicines was also to be a problem. More than one quarter of the respondents had stayed with the medicines for more than a month and some could not remember for how long they had stayed with the medicines.

Keeping drugs for more time than required could result in production of toxic degradation products and therefore loose the therapeutic potency of a drug. These drugs which are kept at home some of them were not kept in the appropriate places, and some were found to be in use. Examples of medicines which were not kept in the appropriate places

are syrups. Some drugs can expire without the knowledge of the person concerned, leading to consumption of toxic products by the person who happened to stock it. It is therefore important that people who keep medicines at home make sure they enquire for the expiry date of the drugs when buying them from any outlets.

5.4: Major reasons for self medication

Lack of money to pay for services was a major problem that made the majority of respondents to find some other means of treatment. Self medication was one of the options taken by many of them.

Lack of sufficient numbers of health workers in the government health facilities, beaurocracy in getting assistance and lack of drugs and medical supplies were factors influencing respondents to opt for alternative treatment. Long waiting times at government health facilities was influence the decision to self medicate when ill.

After health sector reforms were introduced in our country, number of private hospitals and dispensaries were increased to serve the population. The services provided in these dispensaries are questionable by some people since most of the owners are businessmen who intend to make profit. In this way, some people loose trust from these providers and therefore decide to do self treatment when faced by ill health.

Introduction of trade liberization in 1994, made way for the introduction of many commercial pharmacies and medical stores all over the country. The convenience of

the medical stores and pharmacies close to residences, is noted from the findings of this study to influence decision on where to first seek drug treatment when one falls ill. This has increased the trend for many people to skip a medical consultation and practice self medication.

CONCLUSION.

The study looked at magnitude of self medication and associated factors in Kinondoni Municipal.

Generally less than half of the respondents (45.3%) who are sick go to modern health facilities for care.

Proportion of people who practice self medication was observed to be 50.2% and among them females constituted about 51.3% while males were 48.8%. Tendency to buy medicines for self medication from pharmacies was found to increase with increased level of education.

About 8.2% were not told the name of medicine they bought and of these who were told, only 66% could recall what they were told. One quarter of the respondents had self prescribed their medications.

Information about storage of medicines was given to only about one third of the respondents.

Major reasons which make people to resort to self medication were mainly influenced by the nature of the health services available in the system. Lack of money to pay for these services together with the availability of many pharmacies and medical store in many places were some of the contributing factors in the magnitude of self medication.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

1. Proper education of the public and proper regulation of potent drugs dispensed is very important. Public awareness on what people should know on the medicines they are taking for self medication is also mandatory.

2. Pharmacists should also be given skills on how best they should handle the patients who come to them for treatment. This recommendation is based on the fact that pharmacists are supposed to dispense medicines already prescribed, but in reality patients go to the pharmacies to buy medicines, before doctor' consultation therefore pharmacists' advice to the patients who come to them has to be helpful and worthwhile.

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APPENDIX I

QUESTIONNAIRE ON USE OF MEDICINES FOR SELF MEDICATION

WARD.....
STREET/KITONGOJI.....
TEN CELL LEADER.....
NAME OF HEAD OF HOUSEHOLD.....
STUDY NUMBER.....