# Self-Medication: Concept, Prevalence & risks in Mukalla City (Yemen) 2004-2005

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**ABSTRACT**:

This is a community based cross sectional study aimed togather information about the prevalence of self-medication (self drug use) at Mukalla city carried out during November to April, 2004-2005.

The chosen volunteers were 740 persons and pharmacies were from Mukalla center, Aldees, Alsharaj and Fowa zones. A designed questionnaire for this study was used.

The total samples are distributed according to volunteers being self-drug users or not. (92%) of the cases were self-drug users and most of them were within the age group of 18-32 years and representing (57.3%) of the total sample of the self-medication.

The majority of cases have university level of education and represent (39.6%). The groups of drugs used by those persons were Non-narcotic analgesic (NSAIDS) (31.5%), Anti-biotic (25.4%) and Anti-tussive drugs (11.6%). The commonest drug, used by self-drug users, was Panadol (45.7%). (61.4%) of cases have got house pharmacies, containing drugs such as (Analgesics, Anti-biotic and Anti-tussive).

The most important mode of drug prescribing among self-drug users was previous medical consultation (50.8%). The way of drug choice was mainly by its trade name (68.2%) and also (15.9%) was according to the price of the drug.

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## INTRODUCTION:

Self-medication is a broad term not limited to drug abuse but also includes herbal, cultural, spiritual treatments as well as alcohol and smoking use. Our study is concerned only with self-drug use.

Self-medication is defined as the process by which some individuals may abuse substances in attempt to relieve problems such as anxiety, pain, sleeplessness or other symptoms of psychological or neurological disorders (1).

Of the so many symptoms an individual experiences, only a small proportion, about 10-30%, are brought to attention of physicians (2).

This presumes that the majority of the symptoms are either tolerated or self- medicated. The decision for self-medication may be influenced by different factors: cultural, economical, psychosocial, etc, that culminate in the utilization of various therapeutic approaches in searching for a relief. Self-medication is a commonly employed practice with an attempt to normalize the perceived illness (3, 14).

The type and extent of self - medication and the reasons for using it may vary from country to country.The prevalence of self- medication in Nepal was 59%, inBambui 54%, in Mexico 34% and in Ethiopia 26.2%. (15).

In developing countries, both modern drugs and traditional medicines are commonly used for self- medication. It was also noted that prescription -only -medication could easily be obtained without prescriptions for self- medication in developing countries like Ethiopia (16).

The use of drugs from informal sectors such as open markets and village kiosks encourage the practice of self-medication. In order not to handle unnecessary health risk or bacterial resistance due to improperly obtained drugs, it is important to consider the ethics of drug availability to consumers (20, 21).

The use of such drugs without the knowledge of physicians can be less beneficial or even be dangerous for the patient. The efficacy and

safety of most traditional medicines is not scientifically proven, and there is a lack of precision in dosages used by traditional healers (13).

Although self-medication is difficult to eliminate, intervention can be made to discourage the abnormal practice. The increasing self-medication practice requires more and better education of both the public and health professionals to avoid irrational use of drugs. If no action is taken, the danger of drug interaction and side effects will increase. It is expected that adverse reactions are mostly under-reported since the use of over- the- counter (OTC) drugs may not be recorded or reported to the doctor. (22-27). There has not yet been any systematic research conducted as to the distribution and use of drugs at the community level. Little is known about self- medication in the third world. Thus overall self-medication with modern pharmaceuticals seems to be a field in which informations are scarce. (22, 26, 28).

The problem of drugs misuse is widely spread in developing countries and Yemen is not exceptional. In Yemen, the quality of health services and health care is in need of continuous improvement and health care is less adequate although Yemen was among the first countries in the region that adopted the concept of essentials drugs (EDC) and the use of National Standard treatment guidelines (NSTG). (27-30).

This study was done because it was noted that there is no control or rules preventing the random use of drugs, and that the spread of drug-stores without having qualified pharmacists was reported as a cause of irrational use of drugs and self-medication practice.

**OBJECTVES:**

GENERAL OBJECTIVES:

- To evaluate self-medication in Mukalla city.

SPECIFIC OBJECTIVES:

- To define the concept and prevalence of self-medication.
- To determine the relationship between age, education and self-medication.

- To identify common types of drugs used in self-medication and ways of choice.
- To identify the causes of self-medication.
- To determine the side effects of self-medication.
- To clarify the role of workers in pharmacies in self-medication by giving drugs without prescription.

**METODOGY:**

This is a community based cross sectional study carried out during November 2004 to April 2005. The sample was selected from Al-Mukalla city randomly through two stages using cluster sampling method.

Al- Mukalla area was divided into four zones: Al- Dees, Al- Sharj, Al-Mukalla center, & Fowa.

The first stage took one direction by simple random and the second stage took all people available in the houses from 18 year and above.

In this study 740 adult persons, including 77 worker in 50 private pharmacies, were interviewed to collect data about self-medication.

Data was collected by interviewing the volunteers for drug use without recent medical prescription. They were interviewed according to a questionnaire prepared specially for this purpose including: age, level of education, type of drugs used, mode of drug prescription, causes of self medication, side effects of drugs, and informations about role of workers in pharmacies in self medication.They were also asked for alternative treatments used as well as other factors such as drugs consumed during khat-chewing sessions and the possession of house pharmacy.

Data was collected, analyzed and represented in tables and graphs by using compeutor programs Excel and Word.

**RESULTS**:

The prevalence of self medication in our study was 92% i.e: 681 cases out of 740.(Figure1).

Among the age groups there were some differences in self drug use; more common in the 18-32 years 57.3%, in the 33-47 years group it was 31.9%, in the 48-62 years was 8%, in 63-77 years was 1.6%, and in the 78-92 years was 1.2%. (Table 1).

The university educated people had the highest level of self medication i.e 39.6%, secondary level was 35.1%, primary and intermediate level was 16.5%, illitrate people 5.1%, and among read and write people 3.7%.(Table 2).

Common types of drug groups used by the self medication cases were: non-narcotic analgesics 32%, antibiotics 25.7%, anti-tussives 11.8%, vitamines 7.4%, anti-diarrhea 5.9%, anti-histamine 5.2%, sedative or psychotic 4%, anti-helmenthics 4%, and other drugs 4%.

The names of specific drugs consumed by the self medicated patients, as the patients themselves mentioned, were: 45.7% paracetamol, 6.8% amoxicillin, 5.3% penicillin, 5% vitamines, 4.4% tussifin, 3.7% tetracyclin, 3.3% anti-histamines, 2.8% voltaren, 2.3% aspirin, 2.2% zantac, and 19.5% other drugs.

The names of the drugs asked by the self medicated patients, according to pharmacists statistics, were 17% paracetamol, 10% amoxicilln, 10% tetracycline, 9% tussifin, 6% ampicilline, 5% penicilline, 5% other antipyretics, 4% aspirin, 4% bruflam, 4% vitamines, and 26% other drugs.

The types of drugs available in the house pharmacies of the patients were: non-narcotic analgesics(NSAIDs) 48.4%, antibiotics 23.2%, anti-tussives 9.8%, anti-diarrhea 4.9%, anti-histamines 2.4%, and anti-helimenthics 0.9%.

The percentage of self medicated patients, who use drugs with Qatt chewing was 31.2%, the majority 68.8% were those who does not take drugs with Qatt chewing. (Figure 8).

The past medical consultation 50.8% was the most mode of prescribing by the self medicated patients, 22% prescribed by themselves, 14.5% prescribed by health assistants, 10.5% prescribed

by relatives, and the last mode was by hearing or following informations from the mass media 1.8%.(Table 3 & fig 9).

The way of the drugs advicing or prescribing: with trade names was 68.2%, with price was 16%, shape and colour was 9%, and according to type of bottle and packet 6.9%. (Table 4).

According to the ways of drugs requested, 36.9% of patients took drugs according to their trade names, 20.8% according to price, 18.4% shape and colour, 10.8% according to the activity, 8.5% bottle or packet, 3.8% according to their described complaints and 0.8% according to recommendations of health assistants. (Table 6)

According to the habit of drug use with Qatt chewing 66.1% of cases were not-satisfied to self drug use, while 33.9% were satisfied. (Figure 12)

The most common causes of self medication were complaining of simple common symptoms 40.7%, previous experience with disease and treatment 23.5%, due to insatisfaction with the quality of doctors 15.6%, due to the expensive rates of visiting doctors 8.2%, unsuitable late or midnight times to meet doctors 5.6%, availability of pharmacist 3%, satisfaction with available nurse or health assistants 1.7%, and afraid of visiting doctors 1.7%.(Table 7).

There are 69.9% of self-medicated cases who had other alternative modes of treatment other than drug use, while 30.1% hadn't other alternative modes.70% of them had alternative medicines, and 30% had medical consultion.(Figure 14+15)

There are 68.7% who have idea about dangers of drugs use, while 31.3% haven't idea about them (Table8). 70% of self medication cases personaly experienced side effects while 30% haven't felt any side effects. (Table 8).

The most common side effects mentioned by patients due to self drug use were 30% allergy, 12.2% diarrhoe, 8.3% nausea, 7.2% vomiting, 15% vertigo, 5.6% abdominal pain, 5% sedation, 3.3% heart burn, 2.8% constipation, 2.8% fever, 2.2% lethargy 1.7%,

tolerance1.1% cough, 1.1%, palpitation, 1.1% ulcer, and 0.6% dyspepsia.

The educational level of pharmacies's workers was 48% university, 45.5% secondary, and 6.5%were intermediate and primary.(Table 9)

There are 50.6% of pharmacy- workers who played roles in self medication by giving drugs without prescription, while 49.4% of them don't give drugs without prescription.

**DISCUSSION:**

In our study the prevalence of self drug users was found to be (92%). In similar study done in Nepal the prevalence was (59%), in Ethiopia (26.2%). {15, 16}

Highest proportion of volunteers were aged between 18-32 years who used self medication, whereas in Nepal they were aged between 20-39 years and in Ethiopia 15-49 years.{16}

In our study the greatest proportion of self medication was among the university level, whereas in Ethiopia more in primary school, this might be a result of education which help patients deciding the appropriate way of self drug use.{16}

Paracetamole and non-narcotic analgesics (NSAIDs) were the most commonly used class of drugs. This is similar what had been found in Nepal. This is because such drugs are use to treat simple common symptoms e.g. headache, pain and fever. {16}

The low severity of symptoms of the illness is frequently reported as a reason for self medication in most of the literature.

In our study, simple common symptoms formed (40.7%) and unsatisfaction with the quality of doctors (15.6%) and those were the major two causes for self medication, in comparison with Ethiopia, poverty (37.4%) and low severity of the symptoms (29.9%) were the two major reasons for reason for self-medication in Ethiopia. {4, 5, 9, 11}

(80%) of the self-medicated users in Ethiopia study reported that they would go to modern health care units if they do not get relief by using self-medication while in our study (30%) would go to modern

health care units if they do not get relief by using self medication. {16}

According to our study allergy (30%), vertigo (15%), and diarrhea (12.2%) were the most common side effects of self-medication.

Both traditional and chemical drugs used in self medication cause side effect and hazards as described in studies conducted in Ethiopia. {16} The availability of modern and potentially dangerous drugs, without control of pubic health ministries {7, 16, 19, 20, 21}, has made self medication more risky practice, use of modern or newly introduced medicine whose efficacy toxicity is not well known scientifically, could be even more dangerous. {13}.

The utilization of both types of medications entail serious risks to the user (patient).The availability of modern and potentially dangerous drugs over the counter orders in Ethiopia.{16}, and elsewhere in the world has made self-medication amore risky practice. {7, 17, 18, 19, 21}.

On the other hand, the use of traditional medicines whose efficacy and toxicity is not well known scientifically could be even more dangerous, requires a reservation provided that there are other alternatives. {13}

(50.6%) of pharmacies's workers play roles in self-medication by give drugs without prescription.

**CONCLUSION**:

1. Self medication (self drug use) is a common health problem in our community.
2. In this study the prevalence of self medication represents 92% of the total sample.
3. The most common group of age that practice self medication is (18-32 years) and university level is the most common groups that used the self medication.
4. The most noticed mode of drug prescribing among self medicated groups was through previous medical consultations.
5. The most noticed way of drug choice by its trade name.

6. The most common alternative treatment were the herbal, religious, and spiritual treatment.
7. The most common groups of drugs used in self medication were non narcotic analgesics (NSAIDs), antibiotics and anti-tussive drugs respectively.
8. Self drug users are more susceptible to the side effects of the used drugs.
9. The most important reasons that lead to self medication is that the treated diseases were not serious
10. There is relation between self medication and Qatt chewing, where more drugs are consumed (31.2%) during or after Qatt chewing sessions, to minimize the unwanted CNS & GIT effects of Qatt.

## RECOMMENDATIONS:

### To Health Authority:

1. Close & proper supervision is required towards the types & quality of drugs in the market.
2. The Ministry of Health Population has to ensure that all drug dispensers are qualified medical personnel.
3. Use the public mass media & public meetings for educational intervention to discuss the proper way of drug use & possible risks and side effects of drugs.
4. To instruct all drug dispensers that all drugs should not be distributed without medical prescription, except the limited safe drug and for short period of time.
5. Implementing Ministry of health pharmaceutical policy as mentioned in the National Essential Drug List (NEDL)& National Standard Treatment Guidelines (NSTG).

### To All Doctors & Health Workers:

1. Proper explanation to the patients about drugs, duration of use, & the possible side effects is very essential factor for good treatment.
2. Avoidance of irrational use of drugs.
3. Advices to the patients for regular checkup specially for the patients of chronic diseases.

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Table (1): Distribution of self medication cases in Mukalla according to age groups

| Age | Frequency | % |
|---|---|---|
| 18-32 | 390 | 57.30 |
| 33-47 | 217 | 31.90 |
| 48-62 | 55 | 8 |
| 63-77 | 11 | 1.60 |
| 78-92 | 8 | 1.20 |
| Total | 681 | 100 |

table (2): Distribution of Self medication cases in Mukalla according to the Educational level

| Educational level | Frequency | % |
|---|---|---|
| University | 270 | 39.60 |
| Secondary | 239 | 35.10 |
| Primary & Intermediate | 112 | 16.50 |
| Illiterate | 35 | 5.10 |
| Read&write | 25 | 3.70 |
| Total | 681 | 100 |

table(3): Distribution of modes of drugs prescription in self medication in Mukalla 2004/2005

| Modes of drug Prescription | Frequency | % |
|---|---|---|
| Past medical consultation | 398 | 50.80 |
| By myself | 172 | 22 |
| By Health assistant | 117 | 14.50 |
| By relative | 82 | 10.50 |
| Information from massm edia | 14 | 1.80 |

table (4): Ways of requesting drugs from pharmacies by self drug rsers (according to opinion of patients):

| Drugs requested from pharmacies | Frequency | % |
|---|---|---|
| By trade name | 592 | 68.20 |
| By Price | 178 | 16 |
| Shape and colour | 78 | 9.00 |
| Bottle or Packet | 60 | 6.90 |

Table (5): Distribution of way how the drugs were requested by drug users "opinion of pharmacists"

| Drugs requested From pharmacies | Freq. | % |
|---|---|---|
| ByTrade name | 48 | 36.90 |
| By Price | 27 | 20.80 |
| Shape and color | 24 | 18.40 |
| Activity | 14 | 10.80 |
| Bottle or packet | 11 | 8.50 |
| Complaint | 5 | 3.80 |
| Health assistants | 1 | 0.80 |

Table(7):Distribution of Pt. having idea about danger of drugs use & side effects due to self medication

| Dangers due to self medication | Freq. | % |
|---|---|---|
| Yes | 468 | 68.70 |
| No | 213 | 31.30 |
| Total | 681 | 100 |
| Side effects due to self medication | Freq. | % |
| Yes | 481 | 70 |
| No | 200 | 30 |
| Total | 681 | 100 |

Table (6): Distribution of causes of self medication in Mukalla 2004-2005

| Causes of self medication | Freq. | % |
|---|---|---|
| Due to simple Common symptoms | 94 | 40.70 |
| Previous experience with disease & treatment | 54 | 23.50 |
| Due to in satisfaction with the quality of doctors | 36 | 15.60 |
| Due to Expensive rates of visiting doctors | 19 | 8.20 |
| Unsuitable late or midnight times to meet doctors | 13 | 5.60 |
| Availability of pharmacist | 7 | 3 |
| Satisfaction with available nurse or health assistants | 4 | 1.70 |
| Afraid of visiting doctors | 4 | 1.70 |

Table (8): Distribution of level of education among worker of pharmacies

| Level of education | Frequency | % |
|---|---|---|
| University | 37 | 48 |
| Secondary | 35 | 45.50 |
| Intermediate & Primary | 5 | 6.50 |
| Total | 77 | 100 |