



Epidemiological Survey on Self-Medication among Patients of the Dental Consultation and Treatment Center, Casablanca, Morocco

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Abstract

Self-medication, often defined as the use of non-prescription medications to treat minor ailments or self-diagnosed symptoms, has become a common practice worldwide. This approach to healthcare is widely adopted due to various factors, including the ease of access to over-the-counter medications, reduced costs compared to medical consultations, and the perception of increased control over one's own health. However, while self-medication may offer benefits in terms of convenience and time savings, it also carries potential risks such as diagnostic errors, harmful drug interactions, and delays in appropriate management of underlying conditions. This introduction explores the various aspects of self-medication, including its motivations, practices, implications for public health, as well as measures to promote responsible and safe self-medication. When we tackle this problem, it naturally prompts a discussion on additional underlying social issues such as poverty, lack of education, challenges in healthcare accessibility, availability of medical insurance, and the significant economic strain. To achieve this, it seemed opportune for us to conduct a descriptive cross-sectional study on the subject of self-medication in order to speak, with concrete data, about everything that has been mentioned previously, and also to elucidate the levers on which action must be taken to stem the problem and reduce the resulting harm.

Subject Areas

Dentistry

Keywords

Self-Medication, Descriptive Study, Side Effects, Oral Health

1. Introduction

Medication is defined as “any substance or composition presented as possessing therapeutic or preventive properties with regard to human or animal diseases, as well as any product that can be administered to humans or animals for the purpose of establishing a medical diagnosis or restoring, correcting, or modifying their organic functions” [1]. Therefore, taking medication should follow a precise diagnosis, made during a medical consultation, aiming to choose rationally the molecule while minimizing side effects.

However, this process is often bypassed by patients who take medication on their own initiative or even non-medication products to relieve symptoms they consider “common”, thus underestimating the potential risks and endangering their health.

Addressing this issue inevitably leads us to discuss other inherent social phenomena, including poverty, ignorance, difficulty in accessing healthcare, medical coverage, and the heavy economic burden. Nor should we overlook the medical dimension of the issue, namely the danger of medication poisoning, interactions, and above all, the dramatic emergence of multi-resistant bacteria.

Several studies have been conducted worldwide to better understand this issue. However, some have focused particularly on self-medication in relation to oral health problems, perhaps due to the severity of pain and discomfort they cause.

The main objective we set for ourselves is:

- To estimate the prevalence of self-medication among patients consulting at CCTD Ibn Rochd.

Secondly, we were interested in another objective:

- To determine the reasons behind the practice of self-medication.

2. Materials and Methods

2.1. Study Design

To achieve our objectives, we chose a descriptive cross-sectional study. We have chosen a descriptive cross-sectional study that holds scientific interest by enabling a rapid and efficient assessment of prevalent characteristics within a population at a specific point in time. It provides an instantaneous perspective of variables of interest without requiring long-term follow-up, making it practical for establishing preliminary associations and generating hypotheses for further investigation.

2.2. Study Location

Our study was conducted across various departments within the Ibn Rochd Dental Consultation and Treatment Center. Approval and authorization for the survey were obtained from the center’s director. The selection of the survey location was dictated by the diversity of patients that the center receives over a rela-

tively short period, facilitating the attainment of a representative sample.

2.3. Study Population

The study encompassed patients seeking consultation at the Ibn Rochd Dental Consultation and Treatment Center.

- Inclusion Criteria: Included were adult patients aged 18 years and above who visited the center for consultation or treatment.
- Exclusion Criteria: Physicians, dentists, pharmacists: considered competent to prescribe medications appropriately.

Patients seeking consultation at other private or public dental care facilities.

Patients under the age of 18.

2.4. Survey Instrument

To gather data for our study, we designed an 18-question questionnaire initially drafted in French and later translated into dialectal Arabic by the two doctoral candidates.

Implicit consent was obtained from participants by completing the questionnaire.

2.5. Studied Variables

- Patient Profile
- Gender: Male or female.
- The participants in the survey were randomly selected over a defined period, with particular consideration given to the gender variable to assess the influence of sex on self-medication choices.
- Age: Categorized into age groups (18 to 20), (21 to 30), (31 to 40), (41 to 50), and over 50.
- Marital status: Qualitative variable indicating whether the patient is single, married, or divorced.
- Place of residence: Qualitative variable differentiating patients by rural or urban habitat.
- Level of education: Qualitative variable indicating the patient's educational level.
- Monthly income: Quantitative variable distinguishing between low economic level (earning below the minimum wage) and medium or high-income patients.
- Presence or absence of a general pathology: Qualitative variable showing the patient's general health status, including the type of pathology, medication taken, and follow-up with a treating physician.
- Self-Medication Practice for Oral Health Problems 8) Self-medication practice: Qualitative variable revealing whether the patient took a medicinal or non-medicinal product to alleviate their oral health problem without a prescription from a doctor or dentist.
- Oral health reasons prompting medication use: Qualitative variable revealing

the symptom or anomaly that prompted the patient to take the product.

2.6. Survey Procedure: Operation Schedule

- Questionnaire preparation: July 07, 2022, to October 28, 2022.
- Pre-survey: October 31, 2022, to November 04, 2022. A pre-survey was conducted with a random sample of ten patients. This exploratory and preparatory phase allowed us to verify the clarity of the questionnaire.
- Data collection: November 07, 2022, to December 07, 2022. The survey was conducted with patients by the two investigators (doctoral candidates), who asked questions in colloquial Arabic and marked the responses themselves. We chose this method due to the presence of scientific terms requiring clarification.
- Statistical Data Analysis: Data analysis was conducted at the Epidemiology and Biostatistics Laboratory of the Faculty of Dental Medicine in Casablanca using SPSS software.
- Difficulties and Limitations: Throughout the various stages of this survey, we endeavored to overcome the difficulties encountered to ensure the validity of our results. However, we faced certain challenges:
 - Non-cooperation of some patients.
 - Patients' lack of knowledge about the names of their general pathologies or medications taken.
 - Patients' inability to accurately express the symptoms that prompted self-medication

3. Results

• Analytical Results

The relationship between self-medication practice and various sociodemographic characteristics. Approximately 54.85% of women and 52.08% of men practiced self-medication. The comparison of these two percentages showed a statistically non-significant difference ($P = 0.653$) in **Table 1**.

The highest percentages of self-medication were found among middle-aged patients: between 31 and 40 years (66.67%) and between 21 and 30 years (60%). However, the comparison between self-medication rates in different age groups did not show a statistically significant difference ($P = 0.097$).

The rate of self-medication was significantly higher among patients residing in rural areas (65.22%) compared to urban areas (50.03%), but this difference was not statistically significant ($P = 0.26$).

Illiterate patients or those with primary education reported the highest self-medication practices (55.91% and 55.88% respectively) compared to other patients, but this difference was not statistically significant ($P = 0.826$).

The relationship between monthly income and self-medication practice is statistically significant ($P = 0.034$). Patients with a monthly income between 3500 and 10,000 dhs (62.81%), as well as those with an income exceeding 10,000 dhs (66.67%), reported the highest self-medication rates.

Table 1. Socio-demographic and descriptive data of patients.

General characteristics of the population	Effectif	Percentage (%)
Sexe		
Female	206	68.2%
Male	96	31.8%
Total	302	100%
Age		
Between 18 - 20 years	18	6.0%
Between 21 - 30 years	45	14.9%
Between 31 et 40 years	60	19.9%
Between 41 et 50 years	61	20.2%
Plus de 50 years	118	39.1%
Total	302	100%
Marital status		
Single	95	31.5%
Married	177	58.6%
Divorced	30	9.9%
Total	302	100%
Place of residence		
Urbain	279	92.4%
Rural	23	7.6%
Total	302	100%
Education level		
Analphabet	93	30.8%
Primary	68	22.5%
Secondary	75	24.8%
High studies	66	21.9%
Total	302	100%
Monthly income		
-3500 Dhs	178	58.9%
Between 3500 - 10,000Dhs	121	40.1%
+10,000 Dhs	3	1%
Total	302	100%

4. Discussion

According to the World Health Organization (WHO), “self-medication is the use, without medical prescription, by individuals for themselves or for their relatives and on their own initiative, of drugs considered as such and having received marketing authorization (MA), with the possibility of assistance and advice from pharmacists” [2].

Our cross-sectional descriptive study aimed to determine the prevalence of self-medication among patients consulting at the Ibn Rochd CCTD. This study

also aimed to evaluate the different factors associated with this practice and to attempt to estimate its consequences.

Self-medication is a common practice worldwide, often driven by factors such as convenience, accessibility, and perceived minor health issues. Understanding its prevalence and associated factors is crucial for healthcare professionals to devise appropriate interventions and policies to mitigate potential risks.

Our findings revealed that self-medication was prevalent among both genders, with no statistically significant difference between men and women. Similarly, age did not significantly influence self-medication practices. However, it was noteworthy that middle-aged individuals were more likely to self-medicate, suggesting a potential need for targeted interventions in this age group.

While there was a higher prevalence of self-medication in rural areas compared to urban areas, this difference was not statistically significant. This highlights the need for further investigation into the socio-economic and healthcare access factors influencing self-medication practices in different geographical settings.

Education level did not significantly affect self-medication practices in our study. However, it is essential to recognize that patients with lower levels of education may face barriers to accessing healthcare services, leading them to resort to self-medication more frequently.

The significant association between monthly income and self-medication practice underscores the importance of socio-economic factors in healthcare utilization behaviors. Patients with higher incomes were more likely to self-medicate, possibly due to greater healthcare autonomy and purchasing power. However, the potential consequences of self-medication, including adverse drug reactions, drug interactions, and delays in seeking appropriate medical care, cannot be overlooked.

The general condition of the patient: 48% of the surveyed patients presented with general pathologies, primarily cardiopathies (10.3%) and endocrine diseases (9.9%) (Predominantly diabetes). The study by Chafi I. *et al.* reports a percentage of 31% of patients with chronic pathologies, of which 21% are patients with cardiopathies and 24% are diabetic patients [3].

Oral and dental reasons prompting medication intake among patients: According to our study, the vast majority of patients (84.7%) practiced self-medication due to pain, which correlates with the findings in the literature. Indeed, pain as the primary reason for self-medication is unanimous in studies. For example, A. Bah *et al.* [4] reported a very high percentage (92%), Bhattarai *et al.* with a rate of 60.8% [5], Haif A. AlQahtani *et al.* (56.60%) [6], and KomalRaj *et al.* reported a percentage of 52.6% [7]. Our study revealed that there are other symptoms that prompt self-medication, notably the presence of swelling with a percentage of 16% or an abscess with a percentage of 17.2%. These figures are significantly higher than those found by Bhattarai *et al.* [5] (6%) and KomalRaj *et al.* [7] (3.4%).

5. Conclusion

This study effectively demonstrated that self-medication is widespread in our country, practiced by both women and men, with socioeconomic status emerging as the primary determinant. Consequently, the most suitable recommendation involves providing the population with a comprehensive medical approach focused on social coverage, prevention, and awareness regarding the detrimental effects of this practice on individual health.

Further research is needed to explore the motivations behind self-medication practices and their impact on individual health outcomes. Healthcare providers should emphasize the importance of seeking professional medical advice and promote responsible medication use among patients to ensure optimal health outcomes.

Conflicts of Interest

The authors declare no conflicts of interest.

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