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Assessment of Self-Medication among Healthcare Professionals in Walvis Bay, Namibia

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Abstract

Healthcare workers are more likely to self-medicate due to their extensive knowledge and experience with different medical problems and medications. This study aimed to ascertain the prevalence of self-medication and its associated characteristics among healthcare practitioners. One hundred eighty-nine healthcare personnel were selected for this cross-sectional study via random sampling at two hospitals in Walvis Bay, Namibia. Data collection used a researcher-designed questionnaire on self-medication. The gathered data were analyzed using descriptive and inferential statistics in SPSS 25 software, namely the Chi-square test and Fisher's exact test. The prevalence of self-medication among healthcare professionals was 89.98%. Out of the 189 participants, 73.01% were female. Most of them were at least 26 years old (68.3%), unmarried (75.13%), held a bachelor's degree (93.65%) primarily in nursing (49.74%), resided at a considerable distance from a health institution (71.96%), possessed medical insurance (87.3%), and had a monthly income over NAD 20,000 (95.1%). The most prevalent conditions leading to self-medication were the common cold (86.4%), headache (84.7%), and gastrointestinal problems (39.7%). There was no significant difference in self-medication rates across gender, marital status, age, educational level, health insurance, or proximity to a health facility. However, there was a significant difference in self-medication rates between participants earning more than NAD 20000 monthly (95.1%) and those earning less than NAD 20000 monthly (83.7%). Self-medication is common among healthcare professionals in Walvis Bay. It is imperative to actively address the adverse consequences of this practice with them through education, awareness campaigns, and policy changes.

Keywords*: Healthcare, Practice, Professionals, Self-medication, Walvis Bay.*

Introduction

Self-medication is a crucial aspect of daily self-care and a significant issue in healthcare systems [1, 2]. It is obtaining and utilizing medications without consulting a doctor for diagnosis, prescription, or treatment supervision [3]. It can also involve using medicines based on recommendations from pharmacists, relatives, or friends without consulting a medical professional, sharing prescriptions with family or friends, or using leftover medications stored at home [4]. Multiple factors influence it, including age, gender, income, spending patterns, self-care inclinations, level of education, health consciousness, contentment with medical services, and perspective [5-7].

Self-medicating with non-prescription or over-the-counter medications is a widespread practice worldwide, easily accessible in pharmacies and retail stores [8, 9]. It eases pressure on medical facilities, decreases waiting times for doctor visits, and lowers costs, particularly in countries with limited healthcare resources [8]. Over-the-counter medications are usually safe and efficient for self-treatment. However, improper use or abuse

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can lead to grave consequences, especially in children, older adults, pregnant women, and breastfeeding mothers [10, 11]. Self-medication presents multiple risks, including inaccurate self-diagnosis, delayed access to appropriate medical advice, improper selection of treatment, failure to recognize potential drug hazards, uncommon but severe side effects, disregarding contraindications, incorrect dosage and administration, the potential for addiction and aggression, all of which can increase rates of illness and death [12].

Many individuals resort to self-medication to alleviate minor health problems, symptoms, and discomfort [3]. In the healthcare setting, self-medication and misuse of medications are prevalent, with doctors and pharmacists being identified as some of the main culprits [13]. Doctors often struggle to assume the role of a patient due to time constraints, the severity of the illness, confidentiality concerns, and professional pride [8]. According to Balbisi et al. [14], easy availability of medications and a prominent level of drug awareness can result in pharmacists self-medicating. Multiple studies have demonstrated substantial rates of illicit drug use among these pharmacists [15, 16]. Self-medication for acute sickness is acceptable, but healthcare professionals have a high rate of engaging in self-medication despite being aware of the harmful consequences and dangers involved [8, 13]. Inappropriate self-medication by healthcare professionals can lead to legal, ethical, health, and quality-of-care issues for patients and the healthcare delivery system.

In Namibia, healthcare professionals have ready access to a wide range of pharmaceuticals, which may contribute to self-medication. Despite this, there is a notable lack of empirical data on the prevalence and patterns of self-medication among healthcare professionals in the country. Addressing this gap is essential for informing public health strategies and regulatory frameworks. This study, therefore, seeks to generate baseline data on self-medication practices among Namibian healthcare professionals. Specifically, it aims to assess the prevalence of self-medication within a randomly selected sample and to identify the key factors influencing this practice, thereby supporting targeted interventions and policy development to promote safe medication practices.

Materials and Methods

Study Design

The study employed a quantitative approach to comprehend the research data and achieve its objectives [17, 18]. This paradigm posits that reality exists as an objective entity that can be identified and acknowledged, enabling observers to accurately measure and make inferences about anything that exists. The epistemological premise was that the researcher did not influence healthcare professionals' decisions to participate in the research or their responses. The data-gathering tool was thoroughly verified for reliability and validity to ensure impartiality and reduce biases. Scientific approaches were used for data collection. The focus was on quantifiable and objective numerical data. The sample was sufficient and representative of healthcare professionals at the study sites. Statistical analysis was beneficial for extrapolating the study findings. This research employed a positivist perspective to investigate aspects related to self-medication among healthcare professionals. The phenomenon is not random, as these components can be analyzed and recognized.

Research Strategy

A quantitative and descriptive cross-sectional study was conducted to fulfil the research objectives. The aim was to analyse self-medication and examine potential correlations between contributing factors and self-medication practices. The study design's strength lies in its potential to generate new hypotheses for further research [17, 19, 20]. It enables meticulous planning, monitoring, and

assessment of strategic initiatives [17]. Various results and factors can be evaluated easily and inexpensively to gain an accurate understanding of the current situation in a short period. These benefits rendered the design suitable for this study.

Study Setting

The study was conducted at Walvis Bay State Hospital and Welwitschia Hospital in Walvis Bay, a seaside town in the Erongo region of Namibia, from February to March 2024 to achieve the set objectives. This town, the largest in the area, has a population of approximately 105,000 residents [21], whom the two hospitals primarily serve. Both facilities are equipped with healthcare personnel from various professions.

Population, Sample Size, and Sampling

The target population consisted of doctors and nurses employed at the two hospitals mentioned during the study period. Altogether, the two sites comprised approximately 426 nursing and medical staff members, who formed the target group. From this group, 197 professionals freely participated in the study by completing and submitting the research questionnaire, making up the source population or sampling frame [17]. Participants who did not complete the questionnaire were excluded from this study. Of the total population, 39% (77 professionals) were from Welwitschia Hospital, and 61% (120 professionals) were from Walvis Bay Hospital. Of the initial group of 197 professionals, only 189 completed the questionnaire in full, forming the sample population.

Data Collection Method

The researcher gathered primary data from study participants by providing them with an anonymous, pre-validated, and structured questionnaire containing both open- and closed-ended items for self-completion. The questionnaire was given to the two health facilities, and a concise presentation detailing the study's objectives and goals was given. The questionnaire was distributed to each institution before the presentation and collected immediately afterwards. One hundred eighty-nine (189) healthcare professionals who voluntarily attended the presentation and completed the questionnaire in full were selected as study participants. This survey collected information from participants regarding their demographic characteristics, reasons for self-medication, and the kind of pharmaceuticals they used for self-medication. The gathered data were stored on a password-protected computer in an encoded file (database) using the IBM Statistical Package for Social Sciences (SPSS) version 25. A double-data-entry process was conducted on 10% of the data, followed by a comparison of the two databases to assess agreement [17].

Data Collection Instrument

The research questionnaire was created in English and modified from a previous study by Ramazani et al. [22]. It consisted of 17 questions, split into two sections. The first section included demographic information regarding age, gender, marital status, academic level and field, income, and residential location. Participants were also asked about their health insurance coverage. The second section focused on self-medication behaviours, both overall and within the last 6 months, and the ailments individuals could treat independently.

Symptoms included bronchospasm, diarrhoea, vomiting, headache, cough, unexplained weight loss, sore throat, backache, indigestion, sleeplessness, tiredness, flu, disorientation, skin issues, toothache, painful menstruation, elevated blood pressure and blood sugar levels. Participants' self-care attitude was evaluated by examining the medications they used for self-medication. They were given a selection of medicines to choose from. The list comprised pain relievers, ulcer treatments, pharmaceuticals for diarrhoea or constipation, herbal remedies such as anise,

chamomile, sage, cinnamon, and cumin, antibiotics, prescriptions for allergies or congestion, topical therapies, sedatives, antihypertensives, antidiabetics, and other items. Participants were also required to choose and justify their self-medication behaviours. They were provided with a list of reasons, including the simplicity of the conditions, the absence of the need for professional medical assistance, prior encounters with similar symptoms, distrust in medical services, cost-cutting, and other factors identified by the participants. They were also asked about the origin of the self-medication recommendation. The options provided were self-determination, family and friends, media, herbalists, or other sources.

Data Analysis

The data were coded, entered, and analyzed using the Statistical Package for Social Sciences (SPSS) version 25. The descriptive findings were presented as frequencies and percentages. P-values less than 0.05 were considered statistically significant. Pearson's Chi-squared Test was employed to assess the presence of a substantial correlation between self-medication and dichotomous variables. Fisher's Exact Test was used in 2x2 contingency tables to complement the Chi-squared Test when expected frequency counts were below 5.

Ethical Issues

Permission was granted by the management of Welwitschia Hospital and Walvis Bay Hospital to deliver a brief overview outlining the study's aims and goals and to administer the questionnaire to participants. All participants completed the consent form before submitting the necessary information, acknowledging the research goals, the voluntary nature of participation, and their right to withdraw from the study at any time. The questionnaire did not include participants' names to maintain anonymity and confidentiality. Respondents did not experience any procedures or processes that could cause discomfort. All healthcare professionals who attended the brief presentation on the study's goals were given an equal opportunity to participate in the research. The completed surveys were stored in a secure, lockable cabinet, and the electronic databases were saved on a password-protected laptop accessible only to the researcher.

Study Limitations

Using a self-completed data-gathering instrument may lead to recall bias. Estimating the degree to which selection bias arises and affects the interpretation of results is arduous.

Results

Of the 189 participants recruited for this study, 170 used self-medication, giving a self-medication prevalence of 89.94%. In Table 1, out of 189 survey participants, 138 were female, or 73.01% of the total. Most of them were 26 years old (n=129, 68.3%), unmarried (n=142, 75.13%), held a bachelor's degree (n=177, 93.65%) primarily in nursing (n=94, 49.74%), resided a considerable distance from a health institution (n=136, 71.96%), possessed medical insurance (n=165, 87.3%), and had a monthly income over NAD 20,000 (n=97, 95.1%).

Table 1. Sociodemographic Characteristics of Respondents by Self-medication

Variables		**Total N**	**Self-medicating N (%)**	**Non-self-medicating N (%)**	**Pearson's Chi-squared Test (X^2)**	**Df**	***p*-value (2-tailed)**
Gender	Male	51	46 (90.2)	5 (9.8)	0.0048	1	0.9448 > 0.05
	Female	138	124(89.9)	14 (10.1)			
Age	20-25	60	54 (90)	6 (10)	0.0003	1	0.9868 > 0.05
	≥26	129	116 (89.9)	13 (10.1)			

Marital state	Single	142	128 (90.1)	15 (9.9)	0.1239	1	1 > 0.05 (Fisher's Exact Test)
	Married	46	42 (91.3)	4 (8.7)			
Field of study	Medicine	36	35 (97.2)	1 (2.8)	N/A	N/A	N/A
	Nursing	94	91 (96.8)	3 (3.2)			
	Midwifery	27	21 (77.8)	6 (22.2)			
	Dentistry	9	3 (33.3)	6 (66.7)			
	Pharmacy	14	13 (92.9)	1(7.1)			
	Paramedics	9	7 (77.7)	2 (22.2)			
Graduation level	BSc	177	159 (89.8)	18 (10.2)	0.0419	1	1 > 0.05 (Fisher's Exact Test)
	Masters	12	11 (91.7)	1 (8.3)			
Location	Near a health facility	53	45 (84.9)	8 (15.1)	2.0703	1	0.1502 > 0.05
	Far from HF	136	125 (91.9)	11 (8.1)			
Insurance	Yes	165	147 (89.1)	18 (10.9)	1.0534	1	0.4760 > 0.05 (Fisher's Exact Test)
	No	24	23 (95.8)	1 (4.2)			
Monthly income (NAD)	≤20,000	87	73(83.7)	14 (16.3)	6.5019	1	0.0108 < 0.05
	>20,000	102	97 (95.1)	5 (4.9)			

The data in Table 2 show that the most prevalent conditions leading to self-medication were a common cold (n = 163, 86.4%), headache (n = 160, 84.7%), gastrointestinal problems (n = 75, 39.7%), and hematological diseases (n = 64, 33.9%).

There was no significant difference in self-medication rates between male participants (90.2%) and female participants (89.9%), married participants (91.3%) and single ones (90.1%), and participants below 26 years old (90%) and those above 26 years of age (89.9%). Similarly, there was no notable disparity in self-medication rates among participants who graduated with a master's degree (91.7%) and those with a BSc degree (89.8%), participants living far from a health facility (91.9%) and those living near a health facility (84.9%), and those who are insured (89.1%) and those who are not insured (95.8%). The prerequisites for conducting the chi-square test were not satisfied to examine the association between self-medication and the field of study. There was a significant difference in self-medication rates between participants earning more than NAD 20000 monthly (95.1%) and those earning less than NAD 20000 monthly (83.7%).

Table 2. Reported Diseases/Conditions which lead to Self-medication

Disease/Symptoms	**Number (%)**
Common clod	163 (86.4)
Headache	160 (84.7)
Gastrointestinal disorders	75 (39.7)
Hematological disorders	64 (33.9)
Cardiovascular diseases	55 (29.1)
Skin disease	39 (20.6)
Menstrual disorders*	29 (21)

Prevention of osteoporosis	27 (14.29)
Musculoskeletal disorders	25 (13.2)
Metabolic disorders	17 (9)
Joint disorders	15 (7.3)
Neurologic diseases	13 (6.9)

*(*Only females)*

The participants identified the main reasons for self-medication as their previous knowledge of the condition (n = 149, 78.8%), the perception that the illness was not serious (n = 143, 75.7%), and the accessibility of drugs (n = 133, 70.4%), as indicated in Table 3. The data in this section did not meet the requirements for doing the chi-square test.

Table 3. Reasons for Self-medication

Reasons	**Number (%)**
Prior experience with the illness	149 (78.8)
Non-seriousness of the illness	143 (75.7)
Availability	133 (70.4)
Prior experience with the drug	122 (64.6)
Inadequate time to attend the doctor's office	92 (48.7)
Saving time	81 (42.9)

The most utilized pharmacological groups were common cold remedies (n = 163, 86.2%), analgesics (n = 139, 73.5%), and antibiotics (n = 138, 73.0%), as shown in Table 4 below.

Table 4. Classes of Drugs used for Self-medication

Class	**Number (%)**
Common cold	163 (86.2)
Analgesics	139 (73.5)
Antibiotics	138 (73)
Vitamins	129 (68.3)
Anti-allergic	123 (65.1)
Gastrointestinal drugs	117 (61.9)
Antipyretics	116 (61.4)
Skin	110 (58.2)
Tranquillizers	49 (25.9)
Psychoactive	47 (24.9)
Antihypertensives	45 (23.8)
Ophthalmic	43 (22.8)
Antidiabetics	38 (19.6)
Hypnotics	14 (7.4)
Herbal remedies	13 (6.9)

Discussion

This study revealed an extremely high prevalence of self-medication among healthcare professionals (89.94%), consistent with findings across comparable populations. Previous studies have reported self-medication rates of 89.3% in southern Nigeria [23], 79.2% among healthcare students in Eritrea [24], and 79.6% in tertiary hospitals in the South-South region of Nigeria [25]. Such persistently elevated rates indicate that self-medication is a normative practice among health professionals worldwide.

Demographic and Socioeconomic Factors

Interestingly, there were no significant differences in self-medication prevalence based on gender, marital status, or age. Males (90.2%) and females (89.9%) exhibited nearly identical rates, as did married (91.3%) and unmarried participants (90.1%) and those below (90%) and above 26 years of age (89.9%). These findings align with previous research suggesting that demographic characteristics may have limited influence on self-medication behaviors in healthcare populations [24, 25]. Similarly, no substantial variation was found in self-medication between bachelor's degree (89.8%) and master's degree holders (91.7%), those insured (89.1%) versus uninsured (95.8%), or those living far from (91.9%) versus near a health facility (84.9%). These findings reinforce prior assertions that self-medicating is driven more by professional confidence and practical considerations than by socioeconomic or educational disparities [23, 26].

However, a significant difference in self-medication behaviour was observed by income level. Those earning over NAD 20,000 monthly reported a higher prevalence (95.1%) than those earning below NAD 20,000 (83.7%). This may reflect the influence of financial empowerment on access to medications, as higher-income individuals may be more likely to purchase pharmaceuticals without consulting a doctor [26].

Motivations for Self-Medication

Participants most frequently cited their prior knowledge of the condition (78.8%), the perception that the illness was not serious (75.7%), and the ease of access to drugs (70.4%) as the primary reasons for self-medication. These motivations are consistent with prior research, which found that health professionals cited familiarity with symptoms, confidence in diagnosis, and busy schedules as reasons for bypassing formal consultations [24, 25, 27]. Despite 87.3% having health insurance and the majority earning above NAD 20,000 (95.1%), 71.96% lived far from healthcare facilities. Similar studies identified convenience, provider distance, and busy schedules as key motivators of self-medication [23, 25, 29], indicating that logistical rather than economic barriers play a crucial role.

Drug Classes and Conditions

The most frequently used drug classes were common cold remedies (86.2%), analgesics (73.5%), and antibiotics (73.0%). These closely parallel findings in prior studies from Nigeria and India, which highlight analgesics and antibiotics as the dominant categories of self-medicated drugs among healthcare workers [23, 26]. The high use of antibiotics is particularly concerning, given the global threat of antimicrobial resistance and the well-documented risks associated with non-prescription antibiotic use [28]. The main illnesses prompting self-treatment included the common cold (86.4%), headache (84.7%), gastrointestinal problems (39.7%), and hematological conditions (33.9%). This reflects a trend in the literature showing that mild, recurring symptoms are most often managed through self-medication [24, 27]. It mirrors patterns observed among healthcare personnel in Nigeria [23, 25] and Eritrea [24], where non-

serious, recurring symptoms are often treated independently.

Risks and Implications

While self-medication can reduce strain on healthcare services, inappropriate use risks misdiagnosis, polypharmacy, and antimicrobial resistance, particularly with prescription drugs [23-25]. The high engagement of knowledgeable individuals highlights the normalization of this behaviour, raising concerns about its public health and ethical implications for professionals involved.

Statistical Limitations

Some associations, such as those involving the field of study and perceptions of illness seriousness, could not be statistically assessed due to the violation of chi-square test assumptions. This suggests the need for larger and more stratified samples in future studies to enable more robust inferential analyses.

Conclusion

This study reveals a widespread practice of self-medication among healthcare professionals in Walvis Bay, driven by factors such as prior medical knowledge, perceived minor illnesses or triviality of symptoms, easy access to medications, affordability, and time constraints. Frequently used medicines included cold remedies, analgesics, and antibiotics. While knowledge of pharmacology may support safe use, these findings highlight the importance of developing targeted public health interventions and educational strategies to promote responsible medication use and mitigate the risks associated with self-medication among this professional group. Further research is warranted to explore the broader implications for patient safety and healthcare systems.

Conflict of Interest

There is no conflict of interest.

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