Assessment of Prescription Writing Skills amongst Dental Professionals of Private Clinics and Governmental Hospitals in Jalalabad City, Afghanistan

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Abstract: This study aimed to assess the prescription writing skills and knowledge of dental professionals in Jalalabad City, Afghanistan. A total of 300 participants, including registered dental surgeons and house officers, were involved in the study. A questionnaire was used to evaluate the participants' prescription writing abilities, and the forms were scored based on 21 parameters that should be included in a professional prescription. The results showed that while most participants had a fair knowledge and awareness of the properties of the prescribed medicines, they often missed important details in their prescriptions, such as diagnosis, route, patient's address or contact number, and degree or registration number. The study highlighted the need for instructional interventions in undergraduate courses and careful supervision during the house job to improve prescription writing skills among dental professionals. The findings also emphasized the importance of training students in prescription writing during their undergraduate education and exposing them to the clinical setting to ensure they have the necessary skills for practicing dentistry. However, the study has limitations, and further research focusing on the accuracy of drug information and general knowledge of prescription writing parameters is needed. Overall, the study concluded that while most dental professionals had decent prescription writing skills, there is room for improvement in certain areas to ensure patient safety and effective healthcare delivery.

Keywords: Prescription writing skills, Parameters, Dental Professionals, Prescription.

Introduction:

A professional dentist needs to have decent knowledge about prescription for it influences a patient's health by providing prescriptions as a result of primary prevention. A prescription can be described as a physician's order to prepare and administer a drug or device for a patient or a prescription is defined as "a prescribed document that comprises detailed instructions about what medication should be given to whom, when, and how often and for how long, as well as the formulation and dose"[1]. A prescription is divided into multiple sections. The words "R" or "Rx" superscribe or head the heading, which means "receipt" (which means "to take" in Latin); the inscription with the ingredient names and amounts; and the subscription or instructions for synthesizing the medication are among them.

"Prescription should include name, address, prescriber's phone number, date, generic name of the drug, strength, dosage form, total amount, label: instructions, warnings, name, address, age of patient, prescriber's signature or initials," said the World Health Organization (WHO).

However, because different criteria are used to assess prescription writing skills, errors have been found to range from 4.2 to 82%. Dental professionals prescribe medications for an extensive number of ailments; nevertheless, if prescribed without full oversight or comprehension, medications have the potential to seriously impair patients' health (2). The majority of adverse medication occurrences (68–75%) are said to have been caused by inappropriate prescription drafting. Even though these incidents might not be lethal, they might cause the patient's condition to worsen [3].

For the purpose of assessing the dental professionals' competency and knowledge developed during their undergraduate dentistry courses with reference to clinical pharmacology and therapeutics, the present research investigation is being undertaken with an emphasis on prescription knowledge among dental professionals in Jalalabad City, Afghanistan.

This research is an approach to creating awareness among fresh graduates and gathering generalized information regarding prescription writing in their respective clinic outpatient departments (OPDs). Additionally, it makes an effort to evaluate the clinical application of information made at the time of prescription writing by house officers and qualified dental surgeons.

Materials and methods:

Participants:
A total of 300 contributors were part of this research, of whom only 209 filled out the forms. The study was conducted in private clinics and governmental hospitals in Jalalabad City, Afghanistan. Dental professionals who had their graduation degrees plus house job certifications and house officers who were yet to complete their house jobs were included in the study; however, the main focus of the study was the general knowledge of the dental professionals about instruction (prescription) writing. Since the study was conducted in different clinics and hospitals and the participants were graduates of different universities, they were selected regardless of their universities and outpatient departments (OPDs).

Time Frame:
The study was conducted from May 1, 2023, until August 1, 2023.

Survey form:
A questionnaire was put together to evaluate one's capacity to write prescriptions. Everyone who responded had to select the appropriate response on the form for each question. In order to maintain a uniform evaluation standard, all forms had the same clinical questions. Prior to the forms being distributed, the participants were not made aware of the subject of the study. Without the use of any materials or technology, survey questionnaires were delivered and collected on the same day in order to assess the skill sets.

Scoring:
There were a total of 27 questions on the forms, 21 of which were to be mentioned precisely and ideally in a prescription that ought to be well-written and professional. The answer for all the prescription parameters was yes or no. Following that, each written participation was analyzed and scored for hospital name and address, date, patient's name, patient's age, patient's sex, patient's address and contact number, doctor's name, degree and registration number, signature or stamp, emergency contact number, symbol Rx, diagnosis, drug name (generic), dose, frequency, route, duration, strength, refill information, quantity to be dispensed, and instructions for labeling. Scoring regarding drug names was only taken out for generic names, though the answer had both generic and brand names.

The focus was on assessing the overall writing abilities of all contributions concerning each parameter, rather than on identifying the person with the highest score.
The information was evaluated using SPSS 22.

Result:

300 registered dental professionals and house officers in Jalalabad City were participants in the study. Out of 300, only 209 survey forms were received. Out of 209 participants, 73.2 percent were registered dental surgeons, and 26.8% were house officers. Course attendance about prescription writing skills among the participants was lower (25.8%). Most of the participants (85.2%) had fair knowledge and awareness about the properties of the medicines they were prescribing (Table 1).

The forms were scored with 28 questions, of which 21 parameters were to be specifically and ideally revealed in a professional prescription. Symbol Rx (90.0%), patient's sex (89.0%), date (89.0%), patient's age (88.5%), and doctor's name (84.2%) were the most frequently listed parameters, followed by patient's name (76.6%), strength of medicine (76.6%), frequency (73.7%), signature or stamp (70.8%), hospital name and address (65.6%), duration (61.2%), generic name of the drug (58.9%), dose of medicine (54.1%), and emergency contact number (50.7%).

Parameters that were least listed include diagnosis (42.1%), route (38.8%), patient's address or contact number (30.1%), quantity to be dispensed (21.5%), degree and registration number (20.6%), instructions for labeling (1.4%), and refill information (0.0%). Table 2 indicates a thorough account of each parameter.

Table 1: Participants		
Subjects	**Total**	**%**
Males	148	70.8
Females	61	29.2
House Officers	56	26.8
Registered Dental Surgeons	153	73.2
Course Attendance	54	25.8
Awareness of Drug Properties	178	85.2

Table 2: Number of Participants Who Listed Each Parameter

Parameters	Total	%
Hospital Name and Address	137	65.6
Date	186	89.0
Patient's Name	160	76.6
Patient's Age	185	88.5
Patient's Sex	186	89.0
Patient's Address and Contact Number	63	30.1
Doctor's Name	176	84.2
Degree and Registration Number	43	20.6
Signature or Stamp	148	70.8
Emergency Contact Number	106	50.7
Symbol Rx	188	90.0
Diagnosis	88	42.1
Medicine Name (Generic)	123	58.9
Dose	113	54.1
Frequency	154	73.7
Route	81	38.8
Duration	128	61.2
Strength	160	76.6
Refill Information	0	0
Quantity to be Dispensed	45	21.5
Instructions for Labeling	3	1.4

Discussion:

The revision aimed to evaluate information and prescription writing skills which highlights the overall knowledge of the dental professionals who are dealing with patients and their clinics or hospitals and the house officers whose house job is yet to be finished regarding each prescription writing parameter. The outcomes of present research as well as others suggest that a majority of participants, either registered dental surgeons or house officers, in writing a prescription, overlook essential information, such as diagnosis, route, patient's address or contact number, and degree or registration number. [4] The kind and frequency of these responses are unknown because no research on adverse drug reactions brought on by improper prescriptions has been done in Jalalabad City.

The parameters registered by more than fifty percent of the contributors are fourteen out of a total of 21, which comprise Sign Rx, patient's sex, date, patient's age, doctor's name, patient's name, strength of medicine, frequency, signature or stamp, hospital name and address, duration, generic designation of the medicine, dosage of medicine, and emergency contact number.

The name and address of the clinic or hospital were mentioned by 65.6% (n = 137), and the emergency contact on the prescription was mentioned by 50.7% (n = 106) of the participants. Only 41.1% (n = 86) of the contributors stated the brand name of the specific drug, and 58.9% (n = 123) considered the generic designation of the medicine, which is quite interesting. According to reports, patients are much less likely to choose a single medication with lower cost savings if a prescription is not prescribed generically. [5]

It's important to note that over half of the participants mentioned the date, suggesting that they were aware of the prescription order's legal significance. [4]

Numerous findings highlight the critical necessity for instructional interventions in undergraduate courses and careful supervision when working from home. Some guidelines to lessen pharmaceutical errors by newly licensed practitioners are provided by the Emerge recommendations. [6] But these can also be applied to dentistry; for example, as research conducted in Nepal found, students can be trained in prescription writing during their undergraduate education and exposed to the clinical setting before they graduate from an internship. [7] Only then will the graduates and house officers have adequate training to use their expertise in a clinical setting.

The revision, however, has its limitations because it does not emphasize much on the precision of the data or how the participants have kept their knowledge but more on the number of parameters recorded. To properly evaluate the abilities of dental professionals, particularly in Jalalabad city, numerous investigations that concentrate on the accuracy of drug information as well as general knowledge of prescription writing parameters are required.

Conclusion:

The current study found that most dental practitioners had decent prescription writing skills.; however, some prescription writing skills among them were deficient in important details, which led to these results highlighting some points regarding the parameters, which makes it a crucial requirement aimed at vital instructive interferences concerning treatment inscription abilities throughout learner lessons and thorough monitoring in the span of a house job.

Acknowledgment:

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