

Original Research Article

Knowledge and Attitude of Nursing Students towards Pharmacovigilance and Adverse Drug Reactions

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Abstract

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Adverse drug reactions affect individuals of all ages and cause unnecessary morbidity and mortality. Pharmacovigilance is a vital component of healthcare that aims to improve patient safety. Nurses have a critical role to play in ensuring patient safety throughout medication administration. Assess the knowledge of nursing student's towards Pharmacovigilance and adverse drug reaction. Assess the attitude of nursing student's towards Pharmacovigilance and adverse drug reaction. A descriptive cross sectional study was used in this study. Convenient sampling was used for data collection. Sample size was 110 from the University of Lahore. Conduct and utilization of research in nursing questionnaires was used for nurse's knowledge regarding Pharmacovigilance and Adverse Drug reaction. Data analysis was done by entering the data on SPSS software. Data analysis was done by entering the data on SPSS (statistical package for social science studies) software version 21. The findings of the study revealed that the majority of participants 11.8% (n=13) have good knowledge regarding pharmacovigilance and adverse drug reaction, 48.2% (n=53) have moderate knowledge and 40.0% (n=44) have poor knowledge. 23.6% (n=26) students have a positive attitude, 50.0% (n=55) students have a moderate attitude and 26.4% (n=29) students have a negative attitude towards Pharmacovigilance and adverse drug reaction. The result of the present study shows that nursing students who participated in this study had insufficient knowledge towards adverse drug reaction and pharmacovigilance and moderate practice level. Due to lack of knowledge there is a barrier in reporting adverse drug reactions. As a result, nursing students' understanding of pharmacovigilance and adverse drug reactions must be expanded.

Keywords: Knowledge, Attitude, Nursing students, Pharmacovigilance, Adverse Drug Reactions

INTRODUCTION

According to WHO defines an adverse drug response as any unexpected and unfavorable reaction to a medicine that occurs at levels used in humans for prevention, identification, or therapy, without failure to achieve the planned goal. (Sivadasan, Chyi et al., 2014). Adverse drug reactions (ADRs) are a well-known danger of medication therapy and one of the most common difficulties connected with it (Shalini and Mohan, 2015).

Adverse drug reactions (ADRs) afflict individuals of all ages across the world, causing morbidity and mortality in varied degrees (Ganesan et al., 2016b). Adverse Drug Reactions account for a considerable percentage of hospital admissions, ranging from 0.3 percent to 11% (Sivadasan et al., 2014).

According to WHO defines pharmacovigilance as "a multidisciplinary discipline that investigates the science

and activities related to the detection, evaluation, understanding, and prevention of adverse drug reactions" (Obi et al., 2018). Pharmacovigilance is a vital component of good clinical practice and plays an important role in ensuring the general health and safety of the public (Obi et al., 2018). Pharmacovigilance is a vital component of healthcare that aims to improve patient safety. A nurse's major role is to report any adverse medication reactions and to enhance the country's pharmacovigilance programme. Punjab is the first province in the country to establish a provincial office of the Directorate General of Health Services, Pharmacovigilance Center in Pakistan (Shoukat et al., 2021).

In Pakistan, pharmacovigilance (PV) is still in its early stages. A counterfeit antihypertensive drug killed over 100 patients at the Punjab Cardiology Institute (PIC) hospital in Lahore, Pakistan, in 2012. Following the PIC scandal, the Punjab Provincial Government (Pakistan) pursued a number of short- and long-term initiatives before deciding to build the WHO-recommended Pharmacovigilance Centre in Pakistan (Hashmi et al., 2020).

Nurses are generally stationed at hospitals to provide nursing care to patients. Pakistan is one of the nations with a nurse-to-doctor ratio of 1:2.7, which jeopardizes the role of nurses in healthcare. A nurse at a hospital in Pakistan is responsible for the dispensing of medications, adherence to physicians' orders, and other administrative duties (Shoukat et al., 2021).

Nurses have been essential in reporting adverse medication responses and have been able to independently report adverse drug reactions in hospitals due to their unique capacity to document observational effects of drug usage as drug administrators. Reports make a significant contribution. Create resources because they are close to patients and have a thorough understanding of their health, symptoms, medications, and drug responses. They're frequently used to notify the person in charge of probable medication interactions. Nurses should be involved and encouraged to engage in medication adverse reporting systems for a variety of reasons (Shoukat et al., 2021).

Research Questions

- What is the level of knowledge of nursing student's about pharmacovigilance and adverse drug reaction?
- What is the nursing student's Attitude about pharmacovigilance and adverse drug reaction?

Significance

For researcher

This study will be helpful for researchers to learn about

pharmacovigilance and adverse drug reaction. It will be a source of information for me to know about how to report adverse drug reactions.

For Participants

This study will be helpful for the nursing students in that they should learn how to report adverse drug reactions and it will also improve the safety level of the patients.

For institute

This result of the study will be discussed with the policy maker of this organization. This thing will be helpful to know about the knowledge of nursing students regarding pharmacovigilance and policy makers will take suitable actions according to study results for improvement of Patient care. It will enhance the organizational image in the community through quality of Patient care. This will also reduce the patient morbidity and mortality rate due to Adverse Drug reactions.

Purpose of the study

The aim of the study is to determine the Knowledge and attitude of nursing students towards Pharmacovigilance and adverse drug reaction.

Research Objectives

To determine the nursing students knowledge towards Pharmacovigilance and adverse drug reaction.
To determine nursing students' attitudes about pharmacovigilance and adverse drug reactions.

LITERATURE REVIEW

The study's goal was to analyses doctors' and nurses' knowledge, attitudes, and practices regarding spontaneous Adverse Drug Reaction reporting in a tertiary care teaching hospital in South India. The study population and sample size were 318 health care professionals. The research was conducted in a cross-sectional manner. Doctors made up 46.2 percent of the group, while nurses made up 53.8 percent. (Ganesan et al., 2016b).

In the year 2021, Hussain et al. did another research in Lahore, Pakistan. The study's goal was to assess health care professionals' (HCPs) knowledge, attitudes, and behaviors related pharmacovigilance operations in Lahore. This study was conducted in a public tertiary care facility on 384 health care professionals. The research

was conducted in a cross-sectional manner. 346 health care workers answered the 384 questionnaires that were delivered (90.10 percent response rate). The majority of participants knew a lot about ADR reporting, although pharmacists knew a lot more than other healthcare practitioners about ADR (89.18 percent), pharmacovigilance system (81.08 percent), centers (72.97 percent), and function (91.89 percent). The majority of members had a favorable attitude toward ADR reporting, with 49.1% of doctors (P0.05), 70.2 percent pharmacists, and 76.1 percent nurses stating that They are the most critical health care practitioners to notify in the event of an ADR.. Before reporting an ADR, 64.3 percent of physicians (P0.05) stressed the need of consulting other peers. Overall, 77.7% of physicians, 75.7 percent of pharmacists, and 68 percent of nurses believe that ADR reportage is a professional obligation, with 67.6% of pharmacists reporting ADRs at their work and 77.2 percent of nurses orally reporting ADRs to the concerned staff or section. (Hussain et al., 2021).

The study's goal was to see how a pharmacovigilance (PV) educational programme affected healthcare professionals' knowledge, attitude, and practice (KAP) (HCPs). A total of 221 health-care professionals were involved in the study. The study was at an Egyptian hospital. Only 153 of the 221 HCPs who were asked to participate completed the pre- and post-education surveys. Physicians, nurses, and pharmacists had median (range) total KAP scores of 1 (0-7), 1 (0-4) and 4 (0-14) at the start of the study. At the start, all HCPs had low KAP scores, with pharmacists scoring much higher than doctors and nurses in terms of knowledge and attitude (P.001).After schooling, all scores improved dramatically, and HCPs reported 13 ADRs, compared to only two at baseline .(Ibrahim et al., 2021).

METHODOLOGY

Study Design

A quantitative descriptive cross sectional study design to measure nursing students' knowledge and attitudes on pharmacovigilance and adverse drug reactions.

Study Site

The study was conducted at University of Lahore, Lahore.

Target Population

The nursing students at the University of Lahore were the target population.

Sample Size

The sample size of the research population was determined using Slovin's sampling formula. There were 110 people in total.

Sample Technique

A convenient sampling technique was used to collect data.

Inclusion Criteria

Following was included in Data collection

- Nursing students of 4th, 6th, and 8th semester.
- Both male and female participants were included.

Exclusion Criteria

Following was excluded in data collection

- General and midwifery Nurses were excluded.

Data Analysis Plan

Data collection plan is one of the main sources to collect data. A self-administered questionnaire was used to collect data from the study participants. The permission was taken from the Principal of Lahore School of Nursing. There was given time and a free hand to complete it and return it.

Data Analysis

Data was analyzed by SPSS version 21. Data was evaluated in the form of frequencies and percentages.

Ethical Consideration

The ethics committee of the Lahore School of Nursing granted permission to perform the study. The study was held in The University of Lahore, Lahore School of Nursing by getting permission from the head of the department. No personal identities of participants are revealed. Consent forms are attached with each questionnaire. The rules and regulations of the department are followed. No participants are forced to take a part in research work. All the confidential data is treated with confidentiality.

Time Duration

This research was taken around 3-4 months, from Sep 2021 to Dec 2021.

RESULT

Demographic Analysis

This study depicts that the gender of the participants was 27.3% male and 72.7% female. Age of the participants was 20-25 years of age 48.2%, 25-30 years of age 35.5%, 30-35 years of age 16.3%. Year of the study of the participants was 35.5% 2nd year, 46.3% 3rd year and 18.2% 4th year students. Degree of the participants was 81.8% BScN students and 18.2% Post RN students.

Knowledge toward Pharmacovigilance and adverse drug reaction

In study shows that 62.7% students have heard the term adverse drug reaction and 37.3% have not heard. 49.1% students have heard the term Pharmacovigilance and 50.9% not. 60.9% of students know about the consequences of serious adverse drug reactions and 39.1% do not. 40.0% students know who can report adverse drug reactions in Pakistan and 60.0% do not know. 46.4% students know the important purpose of pharmacovigilance and 53.6% do not know. 60.0% students know that all adverse drug reactions are known before a drug is marketed and 40.0% do not know. 35.5% students know that adverse drug reactions caused by herbal medicine are neither documented nor reported and 64.5% students do not know. 36.4% students know which type of medication is a candidate for adverse drug reaction reporting and 63.6% students do not know. 51.8% students know that a noxious and unintended response to a drug at doses normally used in man is called adverse drug reaction and 48.2% students do not know. 40.9% students know that the detection, assessment, understanding and prevention of adverse effects is called Pharmacovigilance and 59.1% do not know.

Attitude toward Pharmacovigilance and adverse drug reaction

In study shows that 21.8% students strongly agree that Pharmacovigilance should be added as a core topic in the curriculum, 26.4% agree, 28.2% neutral, 18.2% disagree and 5.5% students strongly disagree. 17.3% students believe that the topic of Pharmacovigilance is well covered in my curriculum, 32.7% agree, 28.2% neutral, 17.3% disagree and 4.5% students strongly

disagree. 17.3% students have no idea of how to report adverse drug reaction to the relevant authorities in Pakistan, 17.3% agree, 23.6% neutral students, 20.0% students disagree and 21.8% students strongly disagree. 18.2% students know that students can perform adverse drug reaction reporting during their internship, 15.5% students agree, 26.4% students neutral, 24.5% students disagree and 15.5% students strongly disagree. 19.1% students believe that adverse drug reaction reporting is a professional obligation for all health care providers, 17.3% agree, 26.4% neutral, 17.3% disagree and 20.0% strongly disagree students. 17.3% students said that information on how to report adverse drug reaction should be taught to students, 15.5% students agree, 27.3% neutral, 23.6% disagree and 16.4% students strongly disagree. 18.2% students said that reporting of known adverse drug reaction makes no contribution to the reporting system, 20.0% agree, 19.1% neutral, 24.5% disagree and 18.2% students strongly. 18.2% students know that with my present knowledge, I am very well prepared to report any adverse drug reaction notice in my future practice, 20.0% agree, 23.6% neutral, 21.8% disagree and 16.4% students strongly disagree. 18.2% students believe that I have easy access to adverse drug reaction reporting forms, 16.4% agree, 26.4% neutral, 23.6% disagree and 15.5% students strongly disagree. 17.3% students believe that I have acquired enough knowledge to enable me to report adverse drug reaction, 20.0% students agree, 22.7% students neutral, 22.7% students disagree and 17.3% students strongly disagree.

DISCUSSION

This is a cross sectional analysis. This thesis is being conducted at University of Lahore. Data was obtained through the questionnaire from a student at the University of Lahore. In this study (n=110) participants was 27.3% male and 72.7% female. Age of the participants was 20-25 years of age 48.2%, 25-30 years of age 35.5%, 30-35 years of age 16.3%. Year of the study of the participants was 35.5% 2nd year, 46.3% 3rd year and 18.2% 4th year students. Degree of the participants was 81.8% BScN students and 18.2% Post RN students.

The questionnaire consists of two sections, the first section containing the nursing students knowledge toward Pharmacovigilance and adverse drug reactions and the second part containing the nursing students attitude towards Pharmacovigilance and adverse drug reaction. In our study, 40.0 percent of students had a poor understanding of pharmacovigilance and adverse medication reactions, 11.8 percent had a strong understanding, and 48.2 percent had a moderate understanding. Only 49.1% of the students in this research were aware of the phrase pharmacovigilance. According to another study, 34.5 percent of pupils had heard of PV. It's comparable to a study done among

health-care workers in Northeast Ethiopia (20.2 percent) (Masho et al., 2021). According to another research performed in Iran, nurses' understanding of PV definition (34 percent), ADR reporting (50 percent), ADR reporting form (26.3 percent), and the national PV system is not at the necessary level (31.6 percent) (Salehi et al., 2021).

According to our findings, 26.4 percent of students have a negative attitude regarding pharmacovigilance and adverse medication reactions, whereas 50.0 percent have a moderate attitude and 23.6 percent have a favourable attitude. Another survey found that over 82 percent of our nurses feel ADR reporting is not a professional duty, highlighting the need for adequate education on this topic, which will likely result in a large reduction in the number of reports we submit. In contrast, in a research done in the United Kingdom, 86.1 percent of hospital pharmacists believed that reporting ADRs was a professional duty (Hanafi et al., 2012).

Limitation

The study's limitation is that it was conducted in a single area of Lahore and hence could not be applied to the entire population of dispensing healthcare professionals in the city. If the study had been conducted in more than one area and included more participants, the findings would have been more generalizable. Due to lack of time, the study was unable to verify the change in the study population's practice.

CONCLUSION

The findings of this study suggest that nursing students who took part in it had insufficient understanding of adverse drug reactions and pharmacovigilance, as well as a moderate degree of practise. There is a barrier to reporting adverse drug reactions due to a lack of knowledge. As a result, nursing students' understanding of pharmacovigilance and adverse medication reactions must be expanded.

RECOMMENDATION

Increasing awareness among these students in the health-care professions through educational intervention or training can help them learn more. Educational campaigns, training, financial rewards, and a simple reporting mechanism are all recommended as approaches to affect students' knowledge and attitudes.

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