



Research Article

Knowledge towards digital Information and adverse drug reaction monitoring

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ABSTRACT

Background: Pharmacy as a health profession has responsibility for ensuring the safe, effective and rational use of medicines. It's tough to get any medicine which is absolutely safe. Adverse drug reactions (ADRs) contribute to a significant number of morbidity and mortality all over the world. ADRs are common cause of morbidity and mortality in hospital and community settings.

Methodology: Questionnaire based Prospective study on pharmacy-medical student, faculty member and Pharmacist. Study conducted on 150 volunteers of Al-Dawadmi-Riyadh region. Interested participant subjects to enrolled in study and asks self prepared 20 questions. The information's were obtained on special form and data was analyzed by SPSS software.

Result: The maximum numbers of participants were students 60% followed by faculty member (33.33%) and Pharmacist 6.66%. 60% of population agrees and 20% not agree to say that digital Information makes treatment better where as 20% were not able to say about digital information role in better treatment outcomes. 50% thought that through application of digital information minimize adverse drug reaction, 13.33% were not thought so and 36.66 % slightly agreed. 40% of the population were about the Pharmacovigilance centre of SFDA, 40% also not aware and 30% were in cant say categories.

Conclusion: Need more campaign regarding the application of digital data and how to use in health care profession. So that the society will take more benefit in health care like to makes treatment better, minimize adverse drug reaction to choose the better choice of drug and in minimize the cost of treatment.

Keywords: Digital Information, Drug Information, Adverse Drug Reactions and Pharmacy Practice

Introduction:

Pharmacy as a health profession has responsibility for ensuring the safe, effective and rational use of medicines. It plays a vital part in the delivery of health care world-wide¹. In recent years there has been significant convergence, driven by a number of key factors like World Health Organization declarations concerning the role of pharmacists and the pursuit by pharmacists themselves of the goals of medicines management and pharmaceutical care². Pharmaceutical services are patient-oriented rather than drug-oriented. This shift towards patient-centered care comes at a time when healthcare is delivered by an integrated team of health workers. Effective pharmacy practice requires an understanding of the social

context within which pharmacy is practiced, recognizing the particular needs and circumstances of the users of pharmaceutical services and of pharmacy's place within health service provision^{3,4}. A digital information service is an assembling of digital computing, storage, and communications machinery together with the software needed to reproduce, emulate and extend the service provided by conventional libraries based on paper and other material means of collecting, cataloguing, finding and disseminating information. Along with this representation organization information also available to assist user in finding specific information^{5,6}. The Digital drug information application provides peer reviewed, clinically-relevant information on drugs including off-label

uses and dosages, herbal supplements, nutritional products, and new and investigational drugs. Features include drug interaction reports and drug identification searching⁷.

Any drug/medicine during its normal therapeutic use has a potential to produce adverse reaction(s)⁸. It is very difficult to get any medicine which is absolutely safe. Adverse drug reactions (ADRs) contribute to a significant number of morbidity and mortality all over the world⁹. ADRs are common cause of morbidity and mortality in both hospital and community settings. ADRs are responsible for about 5%-20% of hospital admissions^{10,11}. It has major impact on public health by imposing a considerable economic burden on the society and the already stretched health care systems^{12,13}. So the need of the time is to overcome this problem. The aim of the current study is to check the knowledge and awareness regarding adverse drug reaction and its reporting among medical practitioners.

Detection, assessment and understanding of adverse drug events towards prevention have become indispensable perspective of modern drug therapy. This essentially guides appropriate use of drugs and interpretation of safety information by health care providers. The knowledge of risks associated with observed therapeutic benefits in specific patient population facilitates therapeutic choices to suit individual patient requirements. Recognition of adverse effect will help efficient management and offer indications on epidemiologic associations¹⁴. Pharmacovigilance has constantly gained importance in last two decades relating to absolute amount of adverse drug reactions (ADRs) and to the fact that several hospital admissions are due to ADRs^{15,16}. Good pharmacovigilance programs will identify the risks and the risk factors in the shortest possible time so that harm can be avoided or minimized. When communicated effectively, this information allows for the intelligent, evidence-based use of medicines and has the potential for preventing many adverse reactions. Physicians, pharmacist and nurses are in a position to play a major key role in pharmacovigilance programs^{17,18}.

METHODOLOGY

Questionnaire based prospective Study will be performed on entitles "Knowledge towards digital

Information and adverse drug reaction monitoring" general people. Study population will be about 200 volunteers of Al-Dawadmi/Riyadh region. The interested volunteer's participant, subjects to enroll and ask self prepared set of questionnaire, follow up form and Naranjo's scale.

Selection of Volunteers

Inclusion criteria

- All enrolled patients in hospital for treatments.
- All patients who taking medication prescribed by physician.

Exclusion criteria

- Mentally retarded and unconscious persons.
- Persons who are not willing to participate and have any active or chronic disease.

Enrollment Procedure

The persons of Al-Dawadmi/Riyadh regions enrolled under this study according to the above inclusion and exclusion criteria. The investigator visited to every volunteer and asks a set of questionnaire on that basis check the Knowledge towards Digital Information and ADR monitoring. All the observations were recorded in a simple pre-designed and pretested semi structured standard monitoring formats.

Evaluation of Parameters:

- Knowledge of Digital Information
- Most common ADRs
- Method of submission of ADRs
- Type of ADR
- Severity of ADR
- Occurrence of ADR
- Knowledge of ADR managements

Sources of Data

- a. Person's demographic profile.
- b. Person's Identity Card.
- c. Individual interview from volunteers.
- d. Follow up form

Statistical Analysis

The Knowledge towards digital Information and ADR monitoring among Al-Dawadmi/Riyadh region of Saudi Arabia, The information is obtained on special form and data were analyzed by SPSS software.

RESULTS

One hundred and fifty participants participate in the study during Period of September to October 2013 in Al-Dawadmi/Riyadh region. The

knowledge towards digital information and Adverse drug reaction monitoring in medication maximum number of participants was students 90% followed by faculty member (33.33%) and Pharmacist 6.66%.

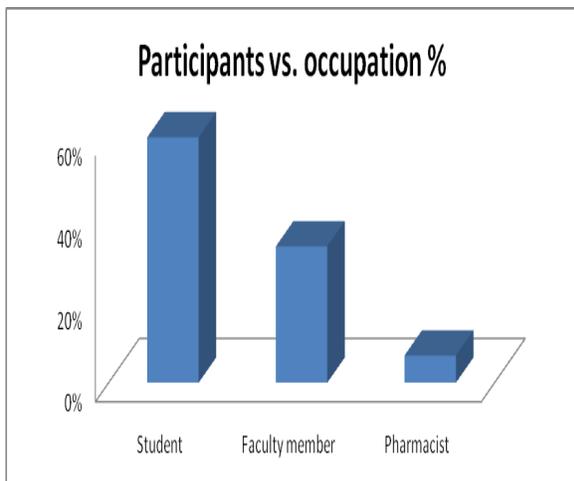


Figure 1:

The study shows that 80 % of participants' were known about knowledge of digital information 6.66% of study population even don't know the meaning of digital Information followed by 13.33% slightly aware about knowledge of digital information.

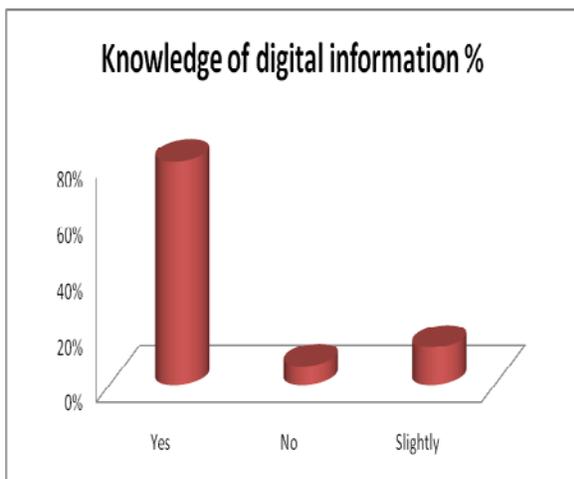


Figure 2:

Through application of digital Information choose the better choice of drug in treatment study population positive to say the importance of digital and electronic contents is increasing day by day in health care profession, 60% had answer that Yes digital information makes treatment outcome better 20 answer no and 20 % answer in cant say.

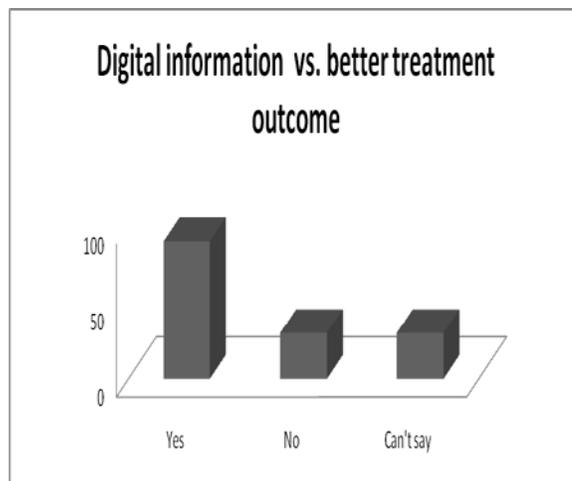


Figure 3

50% thought that through application of digital information minimize adverse drug reaction, 13.33% were not thought so and 36.66 % slightly agreed.

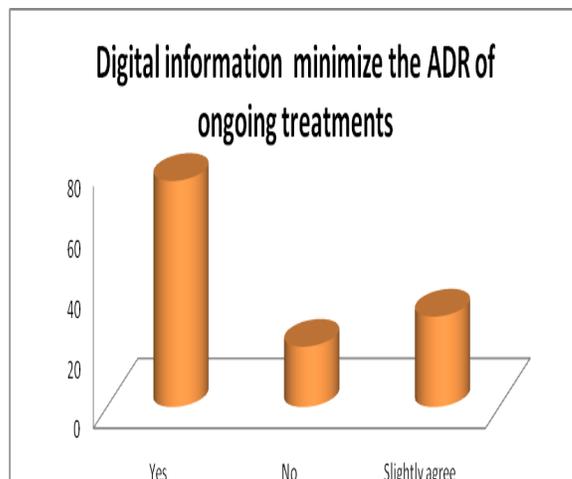


Figure 4

The awareness of pharmacovigilance centre of SFDA their was a mixed response and it was found that 40% of population were yes it, also 40 were unknown towards it and 20% were not aware.

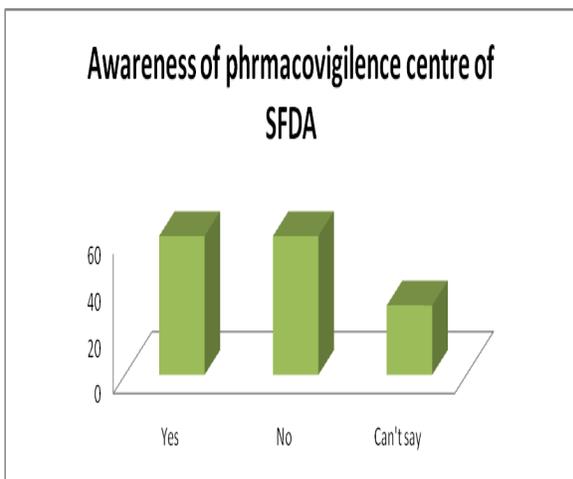


Figure 5:

DISCUSSION

It was observed that the in present study Knowledge towards digital Information and adverse drug reaction monitoring. Majority of participants were student in productive age group that's indicate that this group were learner and trying to make health care profession more effective and use through which was similar reported in¹⁹.

According to the study most of the participants' were very good aware about meaning of digital information means that person who participate in study was educated, qualified and professional as reported from Malaysia²⁰. Most of the participants providing their view in and said that Innovation of digital information will enhance the treatment outcome and minimize the Adverse drug reaction as well as play important role in minimizing the cost of treatment. Same type idea published in An Evidence-Based Handbook for Nurses, Agency for Healthcare Research and Quality (US)²¹. Regarding pharmacovigilance centre of Saudi FDA, It was a mixed reaction in community about knowledge of digital information and its effects in minimizing the ADR as well as reporting system of ADRs²².

CONCLUSION

According to the observation of present study 'Knowledge towards digital Information and adverse drug reaction monitoring' it's conclude that the majority of population of Al-Dawadmi area have well knowledgeable about digitalization and health care awareness. The academicians, students and pharmacy professional much aware

about digital. So, it's our recommendation to campaigning more regarding the application of digital data and how to use in health care profession?. So that the society will take more benefit in health care like to makes treatment better, minimize adverse drug reaction, to choose the better choice of drug and in minimize the cost of treatment.

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