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## KNOWLEDGE TOWARDS DIGITAL LIBRARY AND INNOVATION IN PHARMACY PRACTICE

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**ABSTRACT:** Pharmacy profession has responsibility for ensuring the safe, effective and rational use of medicines. Effective pharmacy practice requires an understanding of the social context which is practiced, innovative and informative. The aim of the study was to find out the Knowledge towards digital library and innovation in pharmacy practice by Questionnaire based Prospective study on pharmacy-medical professionals. The participant subjects to enrolled in study and asks self prepared 30 questions. The information's were obtained on special form and data was analyzed by SPSS software. The result were found that 66.6% of participants were agrees that digital library makes treatment better where as 33.34% were not able to say about digital library role in better treatment outcomes. 53.33% thought that through 40 % slightly agreed. 56.66% study population positive to say the importance of electronic application of digital library minimize adverse drug reaction, 6.66% were not thought so and contents is increasing day by day in health care profession, 43.33% had negative thinking on the same. 73.33% said and agree to say that this digital library were great innovation of digital library and 66.66% agree to say this digital library is one of the best media for drug information. Our conclusion that more awareness required for application of digital library and in better innovation of pharmacy practice so, society will take more benefit in health care managements, minimizing adverse drug reaction, choose the better choice of drug and in minimizing cost of treatment.

**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-wide <sup>1</sup>. 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 care <sup>2</sup>.

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 <sup>3,4</sup>.

Designed for undergraduate and postgraduate pharmacists, Pharmacy Practice provides a background to the social context of pharmacy including development of pharmacy practices, international dimensions of pharmacy practices, health, illness, and medicines uses, meeting the

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pharmaceutical care needs of specific population measuring and regulating medicines use and research methods, evaluation, audit and clinical governance.

A digital library 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 <sup>5, 6</sup>. The Digital library 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 searching <sup>7</sup>.

Beside the above advantages this online curricular resource designed to meet the changing demands of pharmacy education. Access to Pharmacy allows students to select a core curriculum topic, browsed by organ system, review textbooks, or search across leading pharmacy online references. It includes lab tests, calculators, and curricular and organ system quizzes <sup>8</sup>.

**Study Design and Methodology:** Questionnaire based prospective Study performed on entitles "Knowledge towards Digital Library and Innovation in Pharmacy Practice" on Pharmacy/medical student, faculty member, and Pharmacist. Study population is 150 volunteers of Al-Dawadmi/Riyadh region. The interested volunteer's participant, subjects to enroll and ask self prepared 30 questions.

#### Inclusion criteria:

- All Pharmacy Students studying in any university of KSA.
- All Teaching staff who teaching in Medical, Pharmacy and paramedical courses and working in any university of the kingdom.
- All Pharmacists who is working in KSA.

#### Exclusion criteria:

- Mentally retarded and unconscious persons.

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

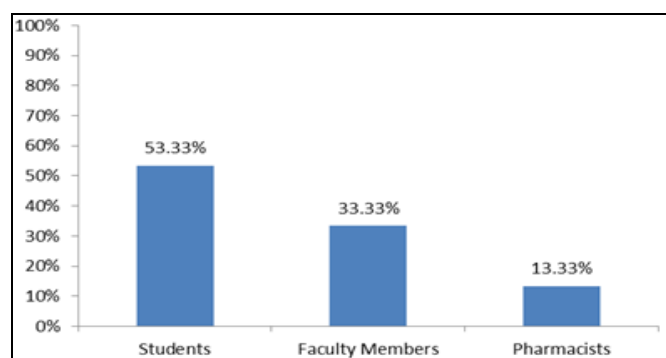
**Enrollment Procedure:** The persons of Riyadh/dawadmi regions enrolled under this study according to the above inclusion and exclusion criteria. The investigator visited to every volunteer and asks a set of questionnaire on that basis check the Knowledge towards Digital Library and Innovation in Pharmacy Practice. All the observations were recorded in a simple pre-designed and pretested semi structured standard monitoring formats.

#### Sources of Data:

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

**Statistical Analysis:** The Knowledge towards Digital Library and Innovation in Pharmacy Practice among Riyadh-Dawadmi 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 2<sup>nd</sup> December 2012 to 29<sup>th</sup> 2013 in Al-Dawadmi/Riyadh region. The study revealed that 97.33 % were male and 2.77 % female among them. The knowledge towards digital library and Innovation in Pharmacy practice according to age group were found in this manner the highest case were observed in aged 25-65 year-old (46.66%) and the lowest was found in patients aged below 18-24 year-old (20%) and in below 17 years of age group were 33.33%. The maximum number of participants was students 53.33% followed by faculty member (33.33%) and Pharmacist 13.33%.



**FIG. 1: BAR CHART OF PARTICIPANTS VS OCCUPATION**

The study shows that a 46.6% volunteer belongs from Riyadh regions by location of birth and least from Al-dawadmi regions (13.33%). According to the study 80 % of participants' were known about meaning of digital library and only 6.66% of study population even don't know the meaning of digital library followed by 13.33% slightly aware about meaning of digital library.

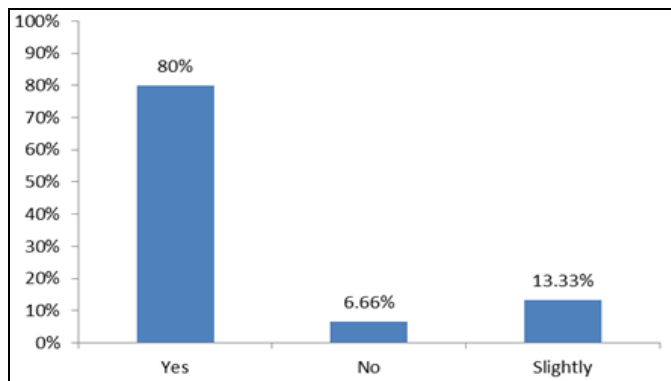


FIG. 2: KNOWLEDGE OF DIGITAL LIBRARY

83.33% volunteers thought that digital library helpful for pharmacist, students and faculty members to enhance the knowledge of pharmacy and 16.66% were not in mood to say anything about that. 33.33% of study population even not visited any digital library, 40% had 0-5 time's frequency of visit and 26.66% had more than 5 times frequency to visit and use of digital library. The 100 % of study population confirmed that to have internet facility at home and majority of them, 66.66% were said that good knowledge of computer skill. The study revealed that 66.66% of participants known that shaqra University have digital library rather 16.66% don't knew that shaqra university have digital library followed by 16.66% is sorry to say that shaqra university have or not digital library.

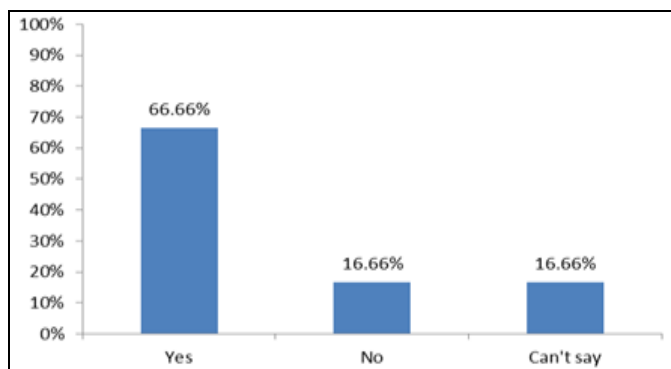


FIG. 3: IDEA ABOUT DIGITAL LIBRARY IN SHAQRA UNIVERSITY

40 % of users were for personal learning purpose, 33.33% for teaching purpose and 26.66% were user for other purposes.

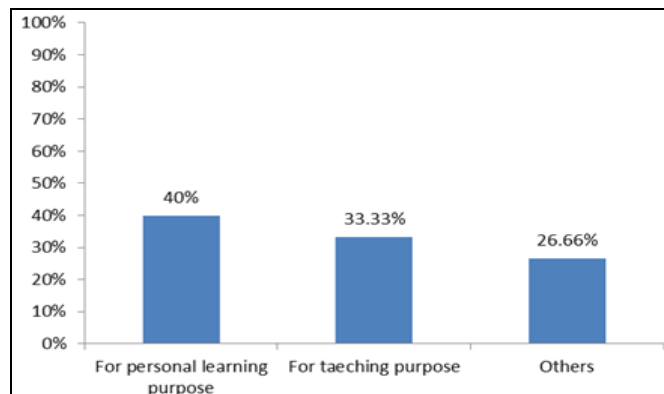


FIG. 4: PURPOSE OF DIGITAL LIBRARY

46.66% learned about existence of digital library through newsletter/journals, 10% through web search engines and 43.33% learned through friend and colleague. According to this study it's clear that 26.66% were user of shaqra university digital library, rest 73.33 were user of other university of kingdom or abroad. Most of the participants agreed that the material provided by digital library is usually relevant to the need.

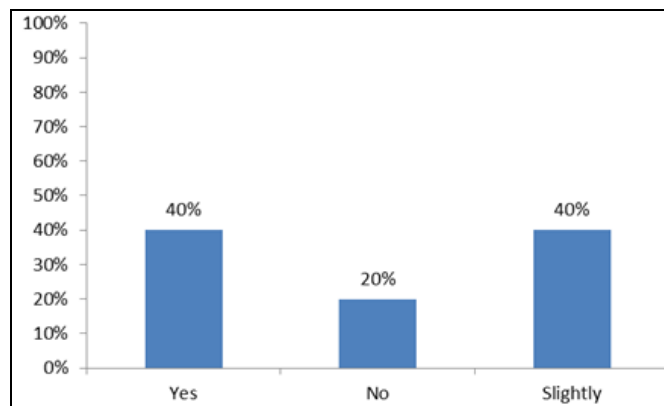
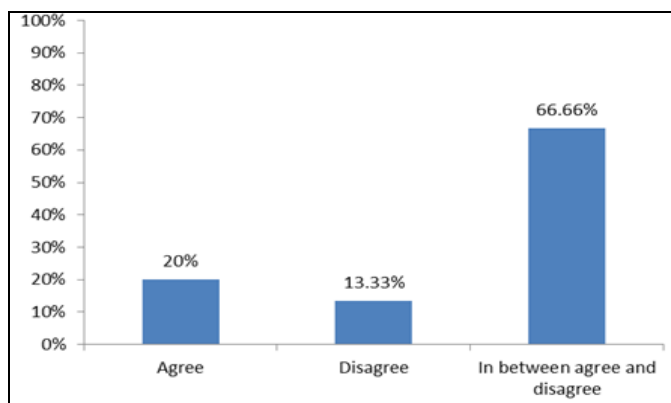


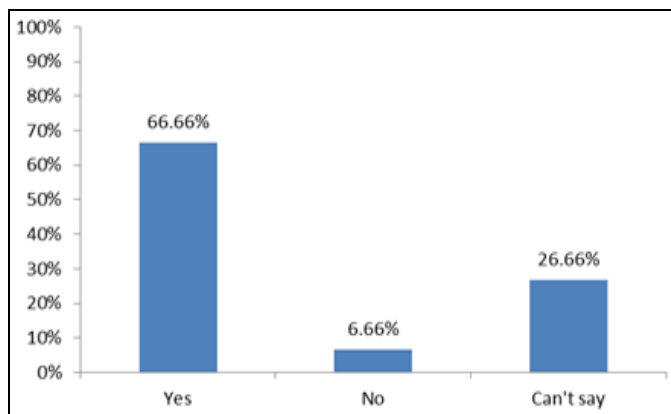
FIG. 5: RELEVANCE OF MATERIAL ON DIGITAL LIBRARY

46.66% participants benefited unexpected result from digital library, and 26.66 % said that no unexpected results followed by 26.66% said can't say about unexpected benefit from digital library. 53.33% said digital library not easy to use, 40% said yes it's easy to use. 66.66 were in between agree and disagree to say about material on digital library quick to download, 20% agree to say yes its quick to download and 13.33% disagree to material on digital library quick to download.



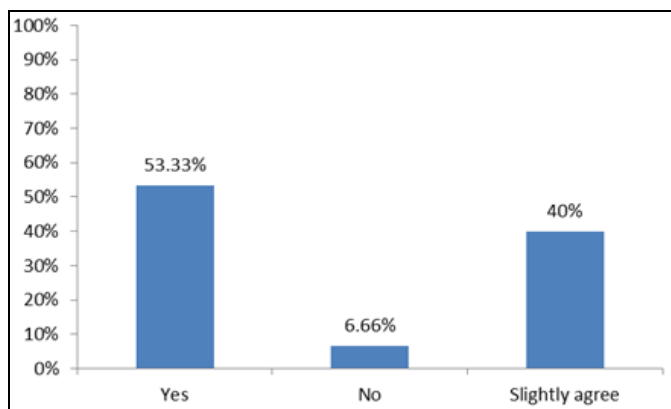
**FIG. 6: MATERIALS ON DIGITAL LIBRARY ARE QUICK TO DOWNLOAD**

60% of population said digital library is sign of better education system of the nation, 26.66% were not agree to say this. 66.66% of population agrees to say that digital library makes treatment better, 33.34% were not able to say about digital library role in better treatment outcomes.



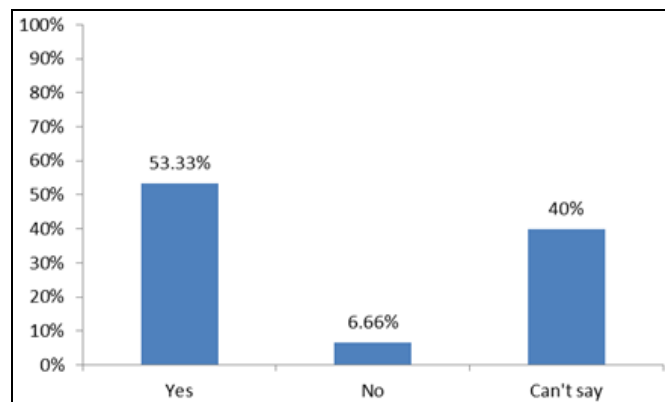
**FIG. 7: DIGITAL LIBRARY MAKES TREATMENT OUTCOME BETTER**

53.33% thought that through application of digital library minimize adverse drug reaction, 6.66% were not thought so and 40% slightly agreed.



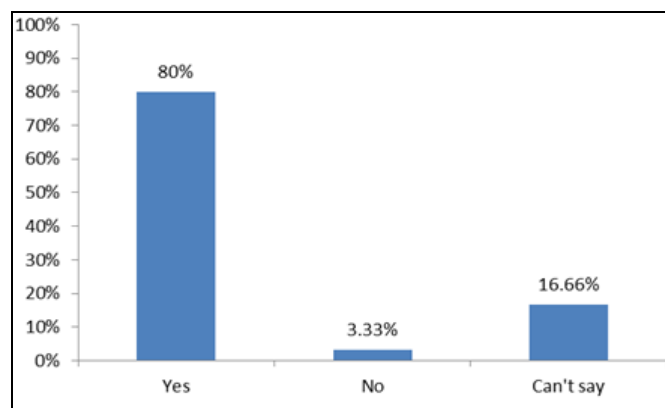
**FIG. 8: DIGITAL LIBRARY MINIMIZES THE ADR'S OF ONGOING TREATMENTS**

Through application of digital library choose the better choice of drug in treatment 53.33% said yes, 46.66% were not able to say exactly yes or no about this. 56.66% study population positive to say the importance of electronic contents is increasing day by day in health care profession, 43.33% had negative thinking on the same. 73.33% said and agree to say that this digital library were great innovation of digital library and 66.66% agree to say this digital library is one of the best media for drug information. Digital library is major source of information for institution said by 60%, 6.66% not agree and 33.33% were not able to say anything about this. 53.33% feel that Innovation of digital library will minimize the cost of treatment, 6.66% said it's not any role in minimizing the cost of treatment, 40% were not able to answer this question.



**FIG. 9: INNOVATION OF DIGITAL LIBRARY MINIMIZES THE COST OF TREATMENT**

Similarly 80% of the present study participants said that digital library should be in every University, Institute and hospital.



**FIG. 10: NEED OF DIGITAL LIBRARY IN EVERY UNIVERSITY, COLLEGE AND HOSPITAL**

**DISCUSSION:** According to the study most of the participants were very good aware about meaning of digital library means that person who participate in study was educated, qualified and aware about digital library, Although mostly were not the frequent visitor of any centre of digital library. Similar result were found by Alasem., 2013<sup>9</sup>. Most of the population of study also knew about existence of digital library of Shaqra University. Person regularly visitor of digital library to enhance the personal knowledge and some also for teaching material purposes.

A big population of study learned about existence of digital library through newsletter/journals and also through friend and colleague. According to present study it's clear that a group of populations were user of Shaqra university digital library and some were user of other university of kingdom or abroad. Most of the participants agreed that the material provided by digital library is usually relevant to the need some participant's benefited unexpected result from digital library. Similar finding were observed by Leroy *et al.*, 2013<sup>10</sup>. many of participants agreed and said that digital library not easy to use and majority agree to say material on digital library quick to download, Major of population said digital library is sign of better education system of the nation that also indicates the role of e-documents in build up and enhance the knowledge related to health care as same finding were also observed by Staggers *et al.*, 2008<sup>11</sup>.

A big population agrees to say that digital library makes treatment better, minimize adverse drug reaction with the help of application of digital library choose the better choice of drug. The working person, students all have positive influence on the importance of electronic contents in increasing day by day in health care profession some also agree to say digital library is one of the best media for drug information. Similar finding were also by Hui *et al.*, 2016<sup>12</sup>. Most of the participants providing their view in and said that Innovation of digital library will minimize the cost of treatment and play important role in minimizing the cost of treatment. Similarly majority were agree and suggesting that digital library should be in every University, Institute and Hospital.

**CONCLUSION:** According to the observation of present study 'knowledge towards digital library and Innovation in Pharmacy practice' it's conclude that the majority of population of Al-Dawadmi/ Riyadh area have well facility of Internet at home as well as good knowledge of computer and basic ideas about health care system. The academician, students and pharmacy professional much aware about digital library of Shaqra University but not they are not frequent visitor of digital library. So, it's our recommendation to campaigning more regarding the application of digital library and how to use? in Innovation of pharmacy practice for everyone. 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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