

**EVALUATION OF UNDER-GRADUATED CLINICAL PHARMACIST  
KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS PATIENT  
COUNSELING, EASTERN REGION AL-AHSA, KINGDOM OF SAUDI  
ARABIA**

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### **INTRODUCTION**

Patient counseling provision of comprehensive and accurate about disease state and medication information orally or, in written form and use visual aids or demonstrations to the patient or their representatives to guide appropriate, effective, side effects, precaution, storage of used medication, diet and life style modifications to get optimal pharmacotherapy plan for the patient.(ASHP) (Terry Schwinghammer 7th edition).

Clinical pharmacy one of the most expert training and knowledge of physical, pharmacokinetic and pharmacodynamics properties of medicines and pharmacotherapy plane to the patient.

Clinical pharmacists are therefore uniquely placed to influence outcome of use of medicines. Patient counseling is primary duty of clinical pharmacist therefore patient counseling, education and communication courses should be part of pharmacists training to providing pharmaceutical care entails accepting responsibility for patient pharmacotherapeutic outcomes. Clinical pharmacy can contribute to positive outcomes by educating and counseling patient to prepare and motivate them to follow their pharmacotherapeutic regimens and monitoring plans. (Terry Schwinghammer 7th edition) (ASHP).

ASHP believes these patient education and counseling guidelines are applicable in all practice settings—including acute inpatient care, ambulatory care, home care and long-term care whether these settings are associated with integrated health systems or managed care organizations or are freestanding. (ASHP).

**Rational**

*Regarding some articles published in Saudi Arabia and specific in al-Ahsa region* The most of the community pharmacist were unaware of the adverse drug reactions reporting system in Saudi Arabia.(Tahir 2013).

Pharmacists working on community pharmacies in Al-Ahsa region were not well knowledgeable about the optimal method for used MDIs.(tahir Mehmood Khan 2012).

Community pharmacists should improve themselves with appropriate knowledge and professional performance to tender efficient and advice. guide, direct and persuade the patient to comply correct usage of drugs.(Al-Arifi 2012).

Hospital pharmacists in the Riyadh region are actively engaged in monitoring medication therapy and providing patient medication education, although there is considerable opportunity for further involvement. (Mohammed S. Alsultan and Al-jedai 2013).

Majority of community pharmacists indicated that the risk of dispensing errors was increasing. It is show from the study result that dispensing errors is a major concern for community pharmacy practice in Saudi Arabia. However, there is urgent need for the professional organizations and pharmacy boards in Saudi Arabia to establishment of standards for the profession and dispensing process. (Al-Arifi 2014).

The study outcomes had revealed a practical guidance to be considered for instituting preferred modes of instruction to upgrading students' capacities for better understanding and acquiring academic and professional skills. (Mirghani A. Yousif a 2014).

Pharmacists, with expertise have general idea about providing women with positive beliefs about medications during pregnancy and in optimizing drug therapy outcomes, are valuable components of the healthcare team but should be increasingly involved in public health efforts. Health-care professionals should be improved awareness of women's attitudes when advising them to take medication during pregnancy to providing the optimal pharmacotherapy regimen for pregnant woman.(Noha M. Zaki a 2014).

The majority of community pharmacists in Riyadh have poor knowledge of the ADR reporting process and believe that ADR reporting is the responsibility of physicians and hospital pharmacists Although there is a reporting system in Saudi Arabia that deals with

ADRs in both paper and electronic format, the majority of community pharmacists are unaware of where and how to report ADRs.(Mansour Adam Mahmoud a, Tahir Mehmood Khan b et al. 2014).

*The therapeutic goals from use of medicines cure, reduction or elimination of clinical features, arrest or slow down disease progression, prevention of disease. Depended on appropriate selection of medicines based on indication, age, weight, medical status (co-morbidity), medication history (prescribed & self-medication), socio-economic status information and counsel to patient on dose, frequency, duration, benefits of treatments, harms / dangers of non-treatment, possible side effects and what action should take by patients.*

*Most of these studies mention in conclusion the hospital pharmacist and community pharmacist poor knowledgeable about patient counseling, education and communication skill to achieve therapeutic goals.*

The level of satisfaction with the health services provided by the pharmacist at in hospital eastern region al -Ahsa, kingdom Saudi Arabia was low.(Mansour Alturki a 2013).

The use of OTC medication during exams was more among high school and university students. Which indication the students unaware about dangers of use uncorrected medication or unneeded medication.(Haya Almalak a 2014).

The prevalence use of non-prescribed antibiotics in the eastern region al-ahsa is increased without unawares of purchase antibiotics and this required immediate attention of the stake holder to prevent the incidence of antibiotic resistance from further rising. The consequence of this could be that infections would be difficult to treat and subsequent intervention will be more expensive and recalcitrant. (Promise M. Emeka a 2014).

*Also these studies show the patient low knowledgeable about accurate use of medication. The patient not satisfied with the hospital and community pharmacy services.*

The clinical pharmacist becomes a crucial element of healthcare team and promotes patient care by interacting with physician and patient. The features of interactions occurring between clinical pharmacists and physicians influence the teamwork between pharmacists and physicians which lead improved the outcome of pharmacotherapy plane for patient care.(Jolly Francis 2014).

Clinical pharmacy play major roles economic value of pharmacy services. Clinical Pharmacists should be encouraged to engage in direct patient's care services not to be given administrative positions. The study demonstrate the value and the benefits of involving Clinical Pharmacists and the clinically oriented Pharmacists in immediate patient's care. Clinical Pharmacist show positive services at King Khalid University Hospital and its impact on the quality of healthcare provided. (Saddique 2012).

This studies the show the clinical pharmacists positive outcome on a pharmacotherapeutic plan for the patient so the question does the clinical pharmacist have the ability to improve the patient education, counseling?.

Therefore no study previous described the ability of clinical pharmacist skill about patient education and counseling in Saudi Arabia in al-Ahsa region due to this gab. I will establish this study to investigation the pre-graduated clinical pharmacist have taken a good course about patient education, counseling and communication to provide patients best a pharmacotherapeutic plan and improved the patient knowledgeable about use of medication generally improved the pharmacy services in once the pharmacist graduate.

### **Purpose**

The aim of study to evaluate the awareness under-graduated clinical pharmacist in 3<sup>th</sup> and 4<sup>th</sup> year and clerkship student different hospital in al-Ahsa about knowledge and how to perform patient counseling.

### ***Hypotheses***

H0: low awareness of under-graduated clinical pharmacist about patient counseling with patients.

H1: good awareness of clinical pharmacist about patient counseling with patients.

### **Method**

This study is questionnaire-based survey. The questionnaire language was English language.

### ***Study sites***

The study was conducted in King Faisal University College of Clinical Pharmacy eastern region Al-Ahsa, kingdom of Saudi Arabia.

### *Target population*

The target population was undergraduate pharm D (who on clerkship and who recently finished clerkship) King Faisal University College of Clinical Pharmacy, eastern region, Al-Ahsa, kingdom of Saudi Arabia.

### *Aim of questionnaire*

The aim form questionnaire was used to evaluation the awareness of undergraduate pharm D (who on clerkship and who recently finished clerkship) about basic knowledge of patient counselling.

### *Questionnaire development*

The questionnaire contained **41** items and required approximately **15-20 min** to complete. The questionnaire collected information on respondent's demographics such as age, gender, months of rotations, education level, performance patient counseling during your rotations and resource use when performance patient counselling.

The questionnaire was divide to two sections **A and B**. Section **A** which include **11** items was closed- ended questions (true or false or I don't know) and section **B** which include **30** items was multiple choose questions.

The **26** questions was related to each other written in different statement but have the same outcome, the aim form these questions to prevent possibility of chance answer question to insure who answer these questions well knowledgeable about this information not by chance answer these questions or partial knowledge.

The questionnaire discussion the basic knowledge about patient counselling which include knowledge about the resource for the patient counseling, knowledge about the ASHP guideline for patient education and counselling, knowledge the type of question to ask patient during patient consoling and when use of them. Knowledge about the outcome for the patient consoling. Knowledge about basic skill required to perform the patient counselling such as empathy, effective listening. Knowledge about how to contact the session of patient counselling which information should be provide to patient. knowledge the basic body language should be consider during performance patient counselling, knowledge about how to overcome communication barriers during patient counselling, knowledge how to deal with specific patient like mentally ill or children patients.

**Respond to questionnaire**

A total of **thirty four** undergraduate students pharm D (who on clerkship and who recently finished clerkship) are conducted from **23 July 2015** to **15 august 2015**. The evaluation of the undergraduate student awareness was performed by distributing the paper handwriting questionnaire. The responders should be fill all the questionnaire by handwriting.

**Data analysis**

During this study, the data were collected from the filled questionnaires and entered to **Microsoft Excel Program to analyze the results**. Descriptive statistics include percentages; means and frequency distribution variables were calculated for each of the variables. Also for continuous variable and two independent sample the use unequal variance t- test.

<b>Table 1</b>		
<b>Demographic characteristics of participants (n 34)</b>		
Demographic information of respondents	Frequency	Percentage (%)
<b>Gender</b>		
Male	25	(73.52)
Female	9	(26.47)
<b>Age ( years)</b>		
<b>Age (mean±SD)</b>	<b>23.67647 ± 1.753276</b>	
(22)	6	(17.64)
(23)	11	(32.35)
(24)	13	(38.23)
(25)	2	(5.88)
(26)	1	(2.94)
(32)	1	(2.94)
<b>Which months of rotations?</b>		
2	24	(70.58)
10	2	(5.88)
Finished intern	8	(23.52)
<b>Education level</b>		
Took course about patient counseling	19	(55.88)
Never took course about patient counseling	15	(44.11)
<b>Performance patient counseling</b>		
Number performance patient counseling during rotations <b>(mean±SD)</b>	<b>3.636364 ± 7.690286</b>	
Number never performance patient counseling during rotations	17	(50)
<b>Recourse used to perform patient counseling</b>		
		Frequency (%)
Text books	Patient counselling book	1 (2.94)
	Pharmacotherapy	2 (5.88)

website	Medscape Up to date Drug .com Medline SFDA*	3 (8.82)
		9 (26.47)
		2 (5.88)
		1 (2.94)
Journal	Pubmed New england Science Direct	1 (2.94)
		2 (5.88)
		2 (5.88)
Applications in your phone	Lexicomp	12 (35.29)
	Medscape	1 (2.94)
Booklet	NONE	0 (0)

\*SFDA :Saudi food and drug authority.

### ***Characteristics of the study population***

During the **3** weeks of the survey, **34** person completed the questionnaire were **25** male and **9** female. The percentage of male **73.52%** participants are higher than female **26.47%** participants to completed the questionnaire due to **8** male of them were finished the clerkship which I have ability to access of them but the female section who finished the clerkship was difficult to access of them as personally.

The age of our sample variability was from to **22** years to **32** year and most of them between **22** to **24** year, the variability come from most of them how recently enter the clerkship. On other hand how recently finished the clerkship, only **2** person are age **25** and **one** person age **26** and **one** person age **32** these due to not complete the courses required from our college to enter the clerkship year or any reason I don't know.

The percentage **70.58%** of our responders on the questionnaire were on the **second** rotation of clerkship year.

### ***Education level***

Education level of study was consider the participant have took course about patient counselling or not took any course have related to patient counselling.

On the college of clinical pharmacy curriculum plane second year fourth semester should the student take course pharmaceutical care-1 which include some topic related to patient counselling also third year first semester should the students take course pharmaceutical care-2 which include specific topic about patient counselling and some of their topic related to patient counselling.

The questionnaire show only **55.88%** how took course about patient counseling during study on college and **44.11%** never took course about patient counselling or any course related to patient counseling and most of them were on female section. The **44.11%** how never took course about patient counselling or any course related to patient counseling when consider this percentage was higher which expected percentage which mean the affect the result of questionnaire because the our questionnaire evaluation the awareness of participate about patient counselling which mean most of them will answer the questions depends on general knowledge or by chance will be answer these questions.

#### ***Performance patient counseling***

The mean of performance patient counseling **3.636364** times almost **4** times. The **50%** never performance patients counseling during rotation and some of them on **10<sup>th</sup>** rotation and some of them how finished the clerkship. The **50%** don't' performance patient counseling this percentage reflected these may have knowledge about patient counselling but poor attitude and practice toward patients counseling.

#### ***Resourced used to preparation for performance patient counseling***

The **46.98%** were used website to preparation for performance patient counseling and **38.23%** used application on iPhone there was two programs (Medscape and Lexi comp).

The text book, journal and booklet or other resource was very low percentage. There was one mention on text books (patient counselling book) I don't find any books have this title also in journal there was two persons mention on (PubMed) they don't specific name of the journal just they wrote as general website for primary literate and there was one mention (science direct) this not journal this website to research about primary literature. The **5.88%** used New England journal to preparation for performance patient counseling but no one mention specific journal for patient education and counseling.

Never one mention the booklet (Arabic or English) used to performance patient counselling. There was two programs available on application on Phone and available on website (Medscape) and (Lexi comp) same website up to date when make collect between this percentage for website and application on phone the percentage was **61.76%** for Lexi comp and **11.76%** for Medscape. These date show **61.76%** used Lexi comp to preparation and performance patient counselling.

## RESULT

The questionnaire was divide to two sections **A** and **B**. Section **A** which include **11** items was closed- ended questions (true or false or I don't know) and section **B** which include **30** items was multiple choose questions.

(The **26** questions was related to each other written in different statement but have the same outcome, the aim form these questions to prevent possibility of chance answer question to insure who answer these questions well knowledgeable about this information not by chance answer these questions or partial knowledge.

In addition will collect the right answer with/without (considering the **26** question) ware related to each other and subdivide to four group: Group **1** who answer **41 to 30** true answer will consider **very well knowledge** about patient counselling, group **2** who answer **30 to 20** true answer will consider **well knowledge** about patient counselling, group **3** who answer **20 to 10** poor **knowledge** about patient consoling group **4** who answer **10-0** **very poor knowledge** about patient counselling.

The final result will be compared between two groups (who on clerkship and who recently finished clerkship).

## Section A

Table 2: For section A questionnaire.

Statement	T	T%	F	F%	D	D%	W	W%	C	C%
During counseling session do think important to discuss with patient's action to be taken in case of missed dose.	28	82.35	3	8.82	3	8.82	0	0	T	82.35
The show- and-tell questions start by showing the medication to the patients than the patient respond the three questions by telling the pharmacist how he used the medications.	18	52.94	5	14.70	11	32.35	0	0	T	52.94
The outcome using effective consultation skills pharmacy is committed to putting patient at the center of their own healthcare enabling them to share decision and make informed choices about their own health.	25	73.52	5	14.70	4	11.76	0	0	T	73.52
Example of patient barrier if patients perceive clinical pharmacist not being knowledgeable about disease and medication they will tend to not ask questions or listen to the advice being offered.	17	50	9	26.47	8	23.52	0	0	T	50
Example of personal barrier is the internal conversation you may be having within yourself while talking with others.	19	55.88	9	26.47	6	17.64	0	0	T	55.88
Prime questions are a series of three structured questions that help clinical pharmacist assess patient's understanding of how to properly use the prescribed medications.	17	50	7	20.58	10	29.41	0	0	T	50
Empathy defined the messages patient send involve the way they feel about their illnesses or life situations.	14	41.17	10	29.41	10	29.41	0	0	T	41.17
The patient should be counseled in semi-private or private area away from other people and distractions depending on the 18medications. The patient should perceive the counseling area as confidential, secure and conducive to learning.	20	58.82	7	20.58	6	17.64	1	2.94	T	58.82
The best resources for the patient counseling it is lexicomp	18	52.94	10	29.41	6	17.64	0	0	F	29.41
Explain the purpose and expected length of the session is very important process during patient counseling	24	70.58	6	17.64	4	11.76	0	0	T	70.58
When conducting the consultation with children the pharmacy should consider to speak to the child directly and the mother or other adult may be the real patient.	19	55.88	9	26.47	6	17.64	0	0	T	55.88

**T** = frequency answer true

**F** = frequency answer false

**D** = frequency answer I don't know

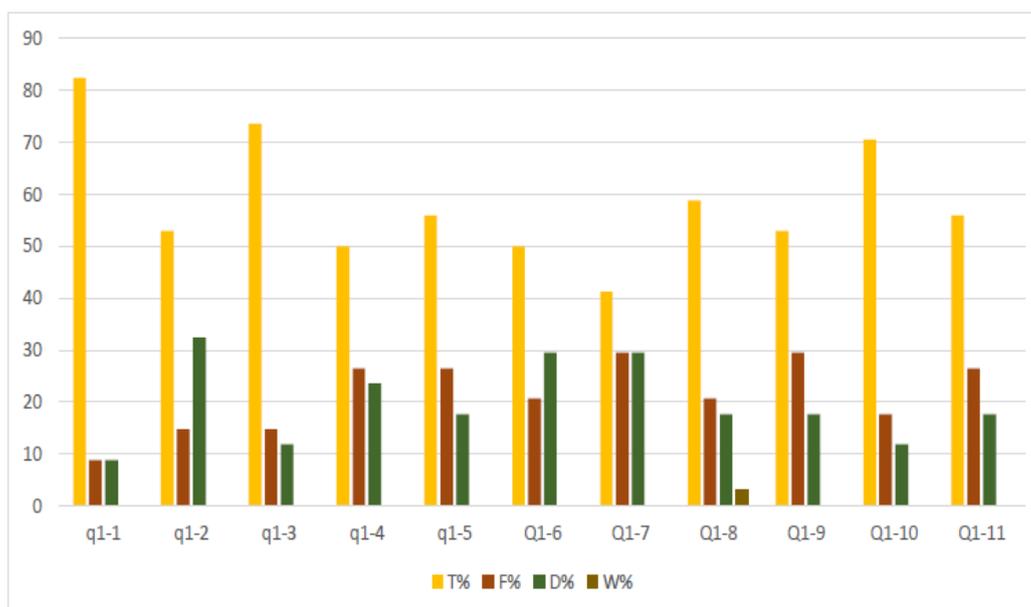
**w** = frequency missing answer

**T%** = percentage of answer true

**F%** = percentage of answer false

**D** = percentage of answer I don't know

**w%** = percentage of missing answer



**Figure (A): Section A questions result.**

**T%** = percentage of answer true

**F%** = percentage of answer false

**D** = percentage of answer I don't know

**w%** = percentage of missing answer

### **Section A Question 1**

This question was used to insure the pharmacist knowledgeable about which points should be discusses with patient during session of patient counseling. The **82.35%** answer the correct answer and question 1 on section **A** have related to question 4(table-3) and question 16(table-3) on section **B**. Only **11.76%** (table-4) answer three question correctly. The result show **70.59%** not answer all three question correctly which mean the **70.59%** don't well knowledgeable about which points should be discusses with patient during session of patient counseling according ASHP guidelines just put answer by chance or partial knowledge

general information about some points discusses with patient during session of patient counseling.

### *Question 2*

This question was used to insure the pharmacist used appropriate technique of question with appropriate patient also knowledge about the outcome of question and how to used question appropriate with specific condition. The show and tell question used old patient with new prescription and start by showing the medication to the patients than ask three question the patient. The **52.94%** answer the correct answer. The question **2** on section **A** have relate to question **11** (table-3) and question **18** (table -3) on section **B**. The **2.94%**(table-4) answer the three question correctly.

### *Question 3*

The main idea form this question to provide the responded on questionnaire the outcome when using effective consultation skills and why patient counselling is important during the patient receive the health service on hospital. The **73.52%** answer the true answer which mean most of the students agree on putting patient at the center of their own healthcare enabling them to share decision and make informed choice about their own health. Which help the clinical pharmacist to choose appropriate pharmacotherapy plane to patient. This question **3** on section **A** have related on question **1** on section **B** I putting this two question related to each other to insure the student have sufficient background about patient centered care process not just know the general information about outcome of consultation skills only **17.64%** answer both questions correctly which mean the students have the basic idea but need more education about five dimension of patient-centered care medical care.

### *Question 4*

This question taking about specifically about patient barrier within the communication process, numerous barriers exist the could disrupt or even eliminate interpersonal interaction. The potential number of barriers in any pharmacy practice setting is so large is it a wonder that any communication takes place at all. This question specifically ask the students about patient barrier to insure the students have knowledge about patient barrier that lead to disrupt communication between clinical pharmacy and patient. The **50%** answer the correct answer but this have related to question **25** on section **B** to insure the student answer both question correctly not by chance or partial knowledge about barrier in communication but only the **14.70%** (table-4) answer both questions. This reflatd **35.3%** have partial knowledge but not

insure about answer or by chance answer questions.

#### *Question 5*

Many personal characteristics can lead to distractions in communication one of them the internal conversation you may be having within yourself while taking with others. The **55.88%** answer the correct answer more than **50%** aware about the personal barrier may occur within patient counseling but insure this percentage come from the student well informative about information or by chance or any other factor. This question have correlation with question **5** on section **B** of question and the **5.88%** (table-4) only answer both question correctly this reflected two persons well informative about personal barrier.

#### *Question 6*

As discussing on question 2. The **50%** answer the correct answer but to insure the percentage really reflect the knowledge of student about information the make correlation with question **9** on section **B** and the **14.70%** (table-4) the answer both questions correct which means **35.30%** well not have completed idea about prime question and when to used prime question technique.

#### *Question 7*

The importance of empathy that you understand another person's feelings is a powerful way of establishing rapport and is a necessary ingredient in any helping relationship. This question defined of the concept of empathy to insure the student's well knowledge about empathy which means. The **41.71%** answer the correct answer to make sure also attitude about empathy the made correlation with question **7** on section **B** to ask student about beneficial from performance empathy response during communications and only the **11.76%** answer two questions correct. Which means the students well knowledge about empathy concept **29.95%** but not well informative about outcome using empathy technique during patient counselling.

#### *Question 8*

The **58.82%** was aware about environment factor which affect the patient counselling process and more **50%** respond ware aware about private or semi-private area away from other people and distraction to provide the patient counseling area as confidential, secure and conducive to learning.

**Question 9**

A question the resource used by clinical pharmacy to preparing for specific drug for patient counseling but actually I was consider the Lexi comp is wrong answer when looking to lexicomp is very excellent resource for patient counseling but actually not everyone can used lexicomp because not free access not all pharmacist ability to get access and second of thing here of this question and question **30** on section **B** I was considering the resource of pharmacist and the patient two way not only the pharmacist the lexicomp can't be used from patient only the healthcare have ability used lexicomp the best resource for the patients which is important part in patient counselling and pharmacist was medline plus drug information. The **52.94%** answer the correct answer which mean more than **50%** have knowledge the lexicomp not the best resource but I made correlation with question **30** on section **B** only the **5.88%** answer both questions correct. The reflatd the student well aware the lexicomp not the best resource for patient counseling but **50%** unaware about good resource for patient counselling.

**Question 10**

The mean idea from this question to insure the student exposure during took patient consoling course or during rotation to ASHP guidelines and read about the patient education and patient counselling or not. The **70.58%** the answer the correct answer to make sure the student really read this guidelines or not the make correlation with question **17** and question **20** on section **B**. The out of **70.58%** only the **14.70%** (table-4) answer three questions correct which means the student may have general knowledge about information of process during patient counseling but actually not exposure to ASHP guideline during took patient counselling course at college or on clerkship at hospital by the preceptor.

**Question 11**

Applying communication skill to pharmacy practice situations is not always easy. It can be especially difficult in situations in which patients have special communication needs. One of them when communication with children. The mean idea of this question to evaluation the students have this skill to communication with children. The **55.88%** was aware about this situation and how to deal with the children.

## Section B

Table 3: For section B questionnaire.

question	A	A%	B	B%	C	C%	D	D%	E	E%	W	W%	correct answer
1	5	14.706	9	26.471	12	35.294	8	23.529	-	-	0	0	D
2	7	20.588	3	8.8235	6	17.647	6	17.647	12	35.294	0	0	E
3	5	14.706	7	20.588	7	20.588	15	44.118	-	-	0	0	D
4	5	14.706	9	26.471	4	11.765	5	14.706	10	29.412	1	2.9412	E
5	9	26.471	4	11.765	11	32.353	9	26.471	-	-	1	2.9412	B
6	6	17.647	3	8.8235	9	26.471	16	47.059	-	-	0	0	D
7	4	11.765	8	23.529	11	32.353	11	32.353	-	-	0	0	D
8	8	23.529	8	23.529	4	11.765	14	41.176	-	-	0	0	D
9	10	29.412	9	26.471	5	14.706	10	29.412	-	-	0	0	A
10	1	2.9412	8	23.529	8	23.529	17	50	-	-	0	0	D
11	7	20.588	2	5.8824	6	17.647	19	55.882	-	-	0	0	D
12	8	23.529	10	29.412	9	26.471	7	20.588	-	-	0	0	D
13	8	23.529	4	11.765	7	20.588	15	44.118	-	-	0	0	D
14	5	14.706	8	23.529	4	11.765	3	8.8235	14	41.176	0	0	E
15	3	8.8235	5	14.706	11	32.353	15	44.118	-	-	0	0	D
16	6	17.647	6	17.647	5	14.706	8	23.529	9	26.471	0	0	E
17	10	29.412	5	14.706	6	17.647	2	5.8824	11	32.353	0	0	E
18	14	41.176	7	20.588	4	11.765	8	23.529	-	-	1	2.9412	B
19	5	14.706	9	26.471	15	44.118	4	11.765	-	-	1	2.9412	C
20	10	29.412	7	20.588	5	14.706	3	8.8235	9	26.471	0	0	E
21	4	11.765	13	38.235	6	17.647	11	32.353	-	-	0	0	D
22	14	41.176	6	17.647	8	23.529	6	17.647	-	-	0	0	B
23	13	38.235	11	32.353	7	20.588	3	8.8235	-	-	0	0	C
24	2	5.8824	9	26.471	15	44.118	8	23.529	-	-	0	0	B
25	9	26.471	11	32.353	3	8.8235	11	32.353	-	-	0	0	D
26	7	20.588	13	38.235	8	23.529	6	17.647	-	-	0	0	B
27	9	26.471	12	35.294	8	23.529	5	14.706	-	-	0	0	A
28	10	29.412	1	2.9412	12	35.294	8	23.529	-	-	3	8.8235	D
29	8	23.529	15	44.118	6	17.647	5	14.706	-	-	0	0	A
30	20	58.824	3	8.8235	8	23.529	3	8.8235	-	-	0	0	D

A= choose a A%= percentage how choose A, B=choose b B%= percentage how choose B

C=choose c C%= percentage how choose C, D=choose d D%= percentage how choose D

E=choose e E%= percentage how choose E W= missing the answer w% = percentage how missing the answer

■ not available choose in this question ■ = Correct answer

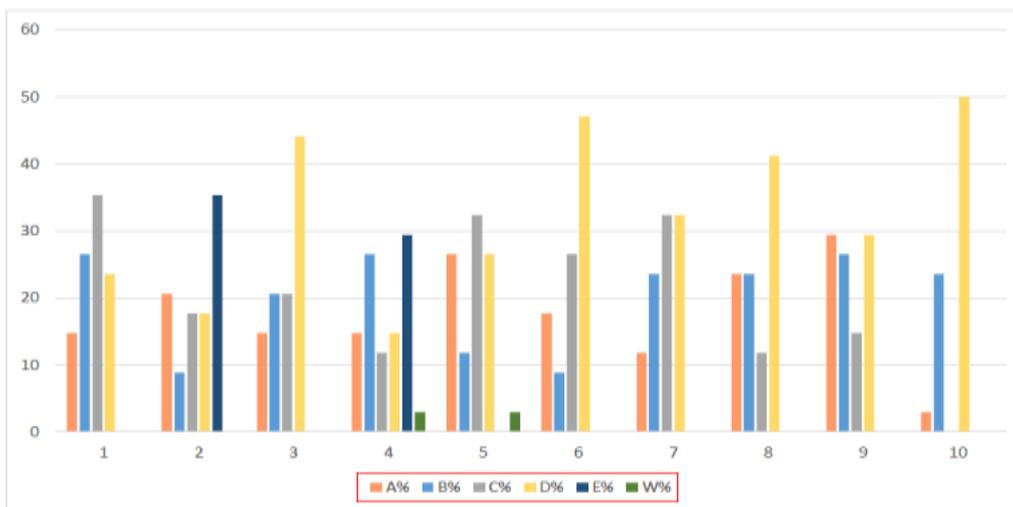


Figure (B): Section B result of questions (1-10).

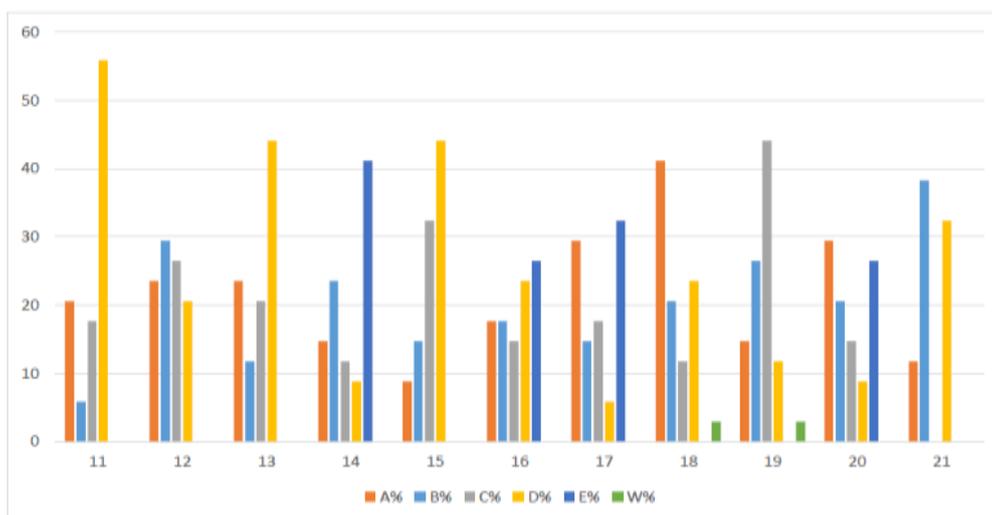


Figure (C); Section B results questions (11-21).

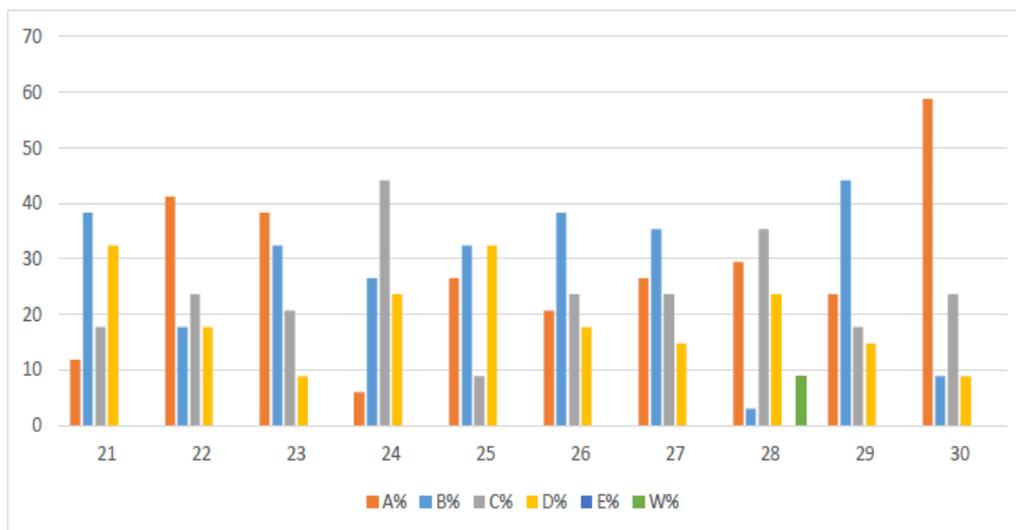


Figure (D); Section B results questions (21-30).

***Section B: result***

Questionnaire of section B available on appendix of article.

***Question 1***

To meet their professional responsibilities, pharmacist have become more patient-centered in providing patient counselling. Pharmacist are accepting more responsibility in ensuring that patients reach desired outcomes with their medication therapy. This changing role requires pharmacist to switch from a medication- centered or task –centered practice to patient centered care. This question evaluation student's about knowledge patient centered care concept and what pharmacist must be able to understand the illness experience of the patient, perceive each patient's experience as unique, foster a more egalitarian relationship with patients, build a –therapeutic alliance – with patient to meet mutually understood goals of therapy, develop self –awareness of personal effect on patients. This ask which one is not describe five dimensions of patient-centered care medical care. The correct answer D (the pharmacist's goal is to get patients to do as they are told not to help them reach intended treatment outcomes) this statement not describe five dimensions of patient –centered care medical care. This statement can be changed to (the pharmacist goal is not to get patient to do as they are told but to help them reach intended treatment outcomes). The **23.52%** answer the correct answer.

***Question 2***

This question was used to evaluation students about awareness the about information should performance by pharmacist to provide complete information about pharmacotherapy plan during the patients during counseling. However the information are: The medication's trade name, generic name, common synonym, or other descriptive name(s) and when appropriate, its therapeutic class and efficacy, The medication's use and expected benefits and action. This may include whether the medication is intended to cure a disease, eliminate or reduce symptoms, arrest or slow the disease process, or prevent the disease or a symptom, The medication's expected onset of action and what to do if the action does not occur, The medication's route, dosage form, dosage and administration schedule (including duration of therapy, Open the medication containers to show patient the colors, sizes, shapes and marking on oral solids. For oral liquids and injectable show patient the dosage marks on measuring devices, Demonstrate the assembly and use of administration devices such as nasal and oral inhalers, supplement to face-to-face oral communication, provide written handouts to help the

patient recall the information. The all of this information should be performed but not all depended on as appropriate for each patient's pharmacotherapeutic regimen and monitoring plan. The decision to discuss specific pharmacotherapeutic information with an individual patient must be based on the pharmacist's professional judgment. The correct answer all of them which was choose E. The **35.29%** was choose the right answer.

### *Question 3*

Words are not the only way in which pharmacist communicate. Interpersonal communicate involves both verbal and nonverbal expression. Words normally express ideas, whereas nonverbal expressions convey attitudes and emotions. One of the most Important nonverbal expression eye contact with the patients at during patient counselling the pharmacist should keep varied eye contact (consistent, but not a stare) during patient counselling. this question if pharmacist lack the eye contact with patients during patient counseling what this mean. The aim of the question to assessing student attitude about nonverbal barrier in communication may occur. The correct answer was D and only **44.11%** answer the correct answer.

### *Question 4\**

As discussing on question 2 section b. the correct answer was E. The 29.41% answer the correct answer.

### *Question 5*

Within the communication process, there are many factors can affect the communication process. one major of barrier exist that could disrupt or even eliminate interposal interaction. Personal barriers many personal characteristics can lead to distractions in communication such as low self –confidence, shyness, dysfunctional internal monologue, lack of objectivity, cultural difference, discomfort in sensitive situations, conflicting values to pharmaceutical care practice. the question was asking which of the following is not personal barriers. The correct answer was semantics which help to resolve the barrier on communication which was the B option. the **2.94%** answer the correct answer.

### *Question 6*

Credibility is one of the common denominators of their success at influencing others. Credibility are the –judgments made by a perceiver concerning the believability of a communicator. Credibility is critical to your being recognized as a person of influence. In many situations, pharmacist must try to influence the decisions of patient, physicians and

others. The pharmacist may need to convince a patient that he must take the full course of medication. Or the pharmacist may want to convince a pharmacy and therapeutics committee in a hospital to delete a certain drug from the formulary. In the search to find the variable that makes one person more persuasive than another, research points to only one factor – perceived credibility. Being perceived as credible will enhance the pharmacist's ability to be persuasive more effectively than spending hours polishing an impressive style. This question was ask students what constitute the perception of credibility. There is agreement that perceived credibility is the combination of three factors: a safety or trustworthiness element, an expertness or qualifications elements and a personal or dynamism element. The trustworthiness factor is a subjective response to the warmth friendliness, ethic, fairness and sociability. This element is important even when conversation requires little or no expertise. Thus, pharmacist who are trusted may find patients asking advice on non-health matters such as personal finance, relationship, choosing a college or any number of subjects. the expertness factor involves a perception about the competence or education of a sender. It is factor independent of the other two. one can be labeled trustworthy and highly personable, but sadly lacking expertise.

Naturally, we wish to be perceived as competent by all those who seek our advice. The personal dynamism factor related to overall personal characteristics of the sender as perceived by the receiver. For instance, if a pharmacist who counsels a patient for the first time happens to stumble over administration instructions, is slow to respond and is quite shy than the pharmacist credibility may be ranked low despite his great credentials and extensive knowledge base. This question used to determination the level students of awareness about concept of credibility and what are the elements should be available on pharmacists to perception of credibility with patients. The correct answer was the D which include the safety or trustworthiness element, expertness or qualifications element, personal or dynamism element. The **47.05%** answer the correct answer.

### *Question 7*

In counselling, empathy is an expression of the regard and respect the counsellor holds for the client whose experiences maybe quite different from that of the counsellor. The client needs to feel "held", understood as well as respected. To hold a client therapeutically means the counsellor is capable to accept and support the client through any issues, concerns, problems she/he can brings. The ability to empathize with another is enhanced by an alert attentiveness

to facial expressions, body language, gestures, intuition, silences and so on. This question used to insure the student have really understand the concept to empathy used during patients counseling and understand the outcome of use the empathy skills during patients counselling.

The correct answer was D. The 32.35% they had answer the correct answer. Which means more than 50% of responder's not well knowledge about the beneficial from performance empathy response during communications.

### *Question 8*

Interpersonal communication is best described as a process in which messages are generated and transmitted by one person and subsequently received and translated by another.

Interpersonal communication combines five important elements; sender, message, receiver, feedback and barriers. This question consider about feedback. Feedback is the process whereby receivers communicate back to senders their understanding of the sender's message. This question describe the action of pharmacist should be performance when the receiving feedback. The objective of the question to evaluation of knowledge of student about the provide appropriate feedback actions to do during patient counseling. The correct answer was **D** which mean the first steps on feedback respond should listen to the patient (rather than prepare your response/defense) and the second step ask for it to be repeated if you didn't hear it clearly, the finally step pause and think before responding. All these process should be consider when provide feedback responding. The **41.17%** answer the correct answer it was **D**. which mean more than **50%** not well awareness about interpersonal communication model.

### *Question 9*

The interactive technique for consulting on medications consists of two sets of open-ended questions. One set is for new prescription (prime questions) and the other set for refill prescription consultation (show-and-tell questions). Using these questions makes counseling an interactive process the engages the patient, thereby making him or her an active participant.

The question provide an organized approach to ascertain what the patient already know about the medication, such a systematic approach is associate with improved recall of prescription instruction. The pharmacist can praise the patient for information correctly recalled. Clarify

points misunderstood and add new information about each medication when the needed.

However the aim of prime questions the provide the patient probe understanding of proper medication use. The **92.41%** only answer the correct answer most of our responded not well knowledge about open ended question.

#### *Question 10*

Delivering patients counselling concept required both strong technical and people skills. one of the most important techniques to effective provide the students with objective behind use patients counseling. This question used to insure the students well studies about the objectivity of patient counseling. They are many objectivity for patient counselling the main of them ensure patients recognition of the importance of appropriate use of an appropriately prescribe medications in resolving a well-defined medical problem, provide a framework for pharmacist to establish a professional relationship and a foundation for continuous interaction with patients, facilitates patient's understanding of strategies to deal with medication-related challenges or problems and so on. The 50% get correct answer.

#### *Question 11*

Two sets of open-ended question are used in the consultation. One of them is for refill prescriptions (show-and-Tell questions). The show-and-tell question verify patient understanding of proper use of chronic medication or medications that the patient has used in the past. The pharmacist being the process by showing the medication to the patient: that is, by opening the bottle and displaying the contents. Than the patient tells the pharmacist how he used the medication by answering the three questions (what do you take the medication for, how do you take it, what kind of problems are you having. The show-and-tell technique enables the pharmacist to detect problems with compliance or unwanted drug effects. If the patient answer incorrectly to the (how do you take it), the patient may be noncompliant or the physician may have changed the dosage. The pharmacist will need to further define the reason for the discrepancy. The second show and-tell question also allows the pharmacist to ask the patient to demonstrate proper us of an ophthalmic solution, inhaler or how measure liquid dose to assure proper usage. This question was used to evaluation the student have basic idea about using question (what do you take the medication for) with refile prescription patient's. The **55.88%** from responded get correct answer.

**Question 12**

When we think about skills of –effective communication we probably think first of the skills involved in speaking clearly and forcefully, that is in having an effect on other based on what we say. However, an equally critical part of the communication process and perhaps the most difficult to learn, is the ability to be a good listener. Listening is an ability which effectively enhances the communication process. Listening to patients-trying to understand their thoughts and feelings is crucial to effective communication. The patient feeling of being understood is therapeutic in and of itself. It helps to ameliorate the sense of isolation and helplessness that accompanies a patient's experience in negotiating the health care system. Your ability as a pharmacist to provide your patients with this sense of being understood is a crucial part of your effectiveness in communicating with them. Listening well involves understanding in both the content of the information being provided and the feeling being conveyed. Skills that are useful in effective listening include (1) summarizing (2) paraphrasing (3) empathic responding. In addition, nonverbal communication that shows caring and attention to the patient is a crucial component of effective listening. Examples of nonverbal communication for effective listening: leaning slightly forward if sitting, maintaining appropriate distance and using eye contact and so on. This question was used to detect the level of students' knowledge about effective listening. The **20.58%** of students got the correct answers.

**Question 13**

Courteous communication is friendly, open and honest. There are no hidden insults or passive-aggressive tones. A pharmacist should be showing politeness in one's attitude and behavior towards a patient during patient counseling's. The most critical skill you will need to develop courtesy and rapport during patient counseling are they: How to address patients, Introducing yourself, Learning patient names, Being aware of your appearance, attitude, issues, Respecting patient privacy issues, Avoiding stereotypes, Using appropriate body language and so on. This question was used to determine the knowledge of students about attitude that should be considered during patient counseling. The **44.11%** answered the correct answer.

**Question 14**

The pharmacist should provide the patient information related to his illness and medication. Also the pharmacological and non-pharmacological aspects depend on the

patient need of these information in addition the pharmacist include the information required future plane for specific medication required monitoring plan. This question discussing the information should the pharmacist well knowledgeable before content of counseling secession with patients. This question main idea to insure the students have general background about the information provide to patient depend on his pharmacotherapy regimen and monitoring plan. Some of these information like the medication trade name, generic name, common synonym, or other descriptive name(s), The medication's use and expected benefits and action. This may include whether the medication is intended to cure a disease, eliminate or reduce symptoms, arrest or slow the disease process, or prevent the disease or a symptom, The medication's expected onset of action and what to do if the action does not occur, The medication's route, dosage form, dosage, and administration schedule (including duration of therapy and so on. the **41.17%** will have good background about information provide the patient before conducted the consoling session with patients.

### *Question 15*

A barrier to communication is something that keeps meanings from meeting. Meaning barriers exist between all people, making communication much more difficult than most people seem to realize. It is false to assume that if one can talk he can communicate.

Because so much of our education misleads people into thinking that communication is easier than it is, they become discouraged and give up when they run into difficulty.

Because they do not understand the nature of the problem, they do not know what to do. The wonder is not that communicating is as difficult as it is, but that it occurs as much as it does. Pharmacists are confronted by many barriers when trying to make effective communication a part of their daily activities. Identifying these barriers is the first step to overcoming them. The most commonly encountered barriers are those related to the pharmacist's environment, themselves and their patients. Once barriers are identified, the pharmacist will be better able to create and implement solutions to overcome them. The purpose of question to determine the level knowledge of student about how to overcome the communication barrier may occur during patient counselling. The question provide some of the strategic may follow to overcome of barrier, such as being aware that barriers exist, taking appropriate action to overcome them and so on. However only **44.11%** get the right answer.

**Question 16**

ASHP guidelines provide the pharmacist guide to establishment of patient education and patient counselling on organization and provide the basic knowledge must the pharmacist follow up during pharmacy practices to provide the patient comprehensive and valuable information to patient. The purpose of this guidelines is to help pharmacist provide effective patient education and counseling. One of the most valuable information provide the pharmacist instructions should be follow up with patients during consulting session. Such as prescription refill authorization and process for obtaining refills, instructions for 24 hour access to a pharmacist and so on. The main idea of question to determine the level of student have look it to this guideline during the clerkship year and apply this information during daily practice on hospital with patients. The **26.47%** they answer the correct answer.

**Question 17**

As discussion on question **16** but this question consider the process steps recommend by ASHP guidelines to the pharmacist about the patient counseling process. These steps in the patient education and counseling process will vary according to the health system's policies and procedures, environment and practice setting. These steps appropriate for patients receiving new prescription or returning for refills. The objective of this question to insure the student successfully apply this steps during rotation on hospitals. The **32.35%** have well knowledge about this process.

**Question 18**

As discussion on question **11**. the main objective of this question to use the appropriate technique open end question with appropriate patients. The show and tell technique used with old patient with new prescription. The **20.58%** of student answer the correct answer.

**Question 19**

Case senior question dissuasion the putting of word and their right context of the message. In general, individuals assign meaning to verbal and nonverbal messages based on their past experienced and previous definitions of these verbal and nonverbal elements. If two persons do not share the same of definitions or past experience, misunderstanding may occur. Often patient understand the words that we are using but place them in a different context, thus they assign a meaning to our message that is different from the on intended. In this case the mother interpreted the direction to mean (give the medication until the infection is all gone) the pharmacist intended to communicate that the medication (10 days) should be continued

until all the medication was gone. She understood word used by the pharmacist, but she put them into a different context and thus derived a different meaning from the one intended by the pharmacist. The main purpose of this question to determine the student using appropriate word and appropriate context during do patient counselling. The **44.11%** they get the right answer.

### *Question 20*

Optimal medication management requires an effective relationship between the patient and health care professional. As pharmacists move from the traditional dispensing role to become more actively involved in patient care, the provider–patient relationship has become the topic of concern for many health care professionals. Building a good relationship between patients and their health care professionals is the essence of providing optimal care; in addition, this relationship is often thought to influence patient health outcomes. Good provider–patient relationships enable patients to ask questions, to share decisions with the providers and to reach an agreement with their providers about the problem and the need for follow-up. The main objective of this question which the actions should the pharmacist follow up to establish caring relationship with patients. The correct answer was E which include the pharmacist first of all introduce yourself as pharmacist, than explain the purpose and expected length of the session in addition obtain the patient’s agreement to participate, finally determine the patient’s primary spoken language and so on. The **26.47%** the get the right answer.

### *Question 21*

The patients are variables on education level some of them on advance level of education and the other may have basic education level depend on the level of patient the pharmacist provide appropriate information about medication and diseass. in addition the pharmacist first of all determine the level of patient education than discussion the pharmacotherapy plan with patients. They are many methods to determine the patient level of knowledge about medication and disease. The most popular methods are ask open –ended question about each medication purpose and what the patient expects, or ask the patient to describe or show how her or she will use the medications. The objective of this question to determine the student have ability to assess the patient’s knowledge about his or her health problem and medications. The **32.35%** of our students get the right answer.

**Question 22**

In general, people are better senders of information than receivers. We have been taught how to improve our verbal and written communication skills, but not our listening skills. Thus we must concentrate much hard on the listening component of communication process. Nothing ends an interview faster than having patient realize that you are not listening to them. Poor listening skills result in ineffective communication, which will usually have an adverse impact on the productivity of the individual, the team and the organization. Poor listening skills definitely make a huge, negative impact on patient counseling and productivity of pharmacotherapy plan. This situation usually results in conflicts and misunderstandings among pharmacist and it creates a negative environment. The objective of this question the student should awareness about the hinder effective listening to avoid the poor listening skills during patient counselling. Example of hinder effective listening (acting distracted, telling your own story without acknowledging theirs first, no response, criticizing, judging, diagnosing, giving advice/solution, changing the subject and so on. However only the 17.64% only the answer the correct answer, which means more than 50% our student not well knowledge about the effective listening process and the hinder effective listening.

**Question 23**

Medicines use today is too often suboptimal. Studies have shown that many patients (between **30** and **50** percent) do not take their medicines as intended.as few as **16** percent of patients prescribe a new medicine take it as prescribed, experience no problems and receive as much information as they need, improving adherence is likely to contribute to the reduction of medicines wastage, as well as to improved patient outcomes and reduced costs of medication. Pharmacy professionals need to adopt the principles of medicines optimization to everyday practice, which includes trying to understand the patient's experience of their medicines and health and offering an evidence-based choice of medicines. Thy way a consultation is conducted influences patient adherence. Medicines adherence: involving patient in decisions about prescribed medicines and supporting adherence. NICE define adherence as the extent to which the patient's behavior matches agreed recommendations from the prescriber. The main objective of question to determine the level of student's knowledge about the reasons for non-adherence of medication. Non-adherence has consequences for both the patient and the healthcare system. For patients, the costs are a missed opportunity for treatment gain and potentially impaired health outcome. Non-adherence inevitably increase the risk of treatment failure and disease progression. adherence is not simple to achieve and non-adherence should

not be viewed simply as the patient's problem. one of the most useful conceptual distinctions in understanding why adherences low for patient is to think about whether the reasons are intentional or unintentional, unintentional non-adherence may reflect patients wanting to take their medicines in the right way and being quite happy to discuss any problems or barrier they are facing, may patient who show intentional non-adherence have their own reason and belief for this. Patient who show unintentional non-adherence may be willing to take the medicine as prescribed, but there is a barrier or problem that prevents them. Examples of unintentional factors include forgetfulness and inability to open containers (for example, (a patient with Parkinsonism to open a foiled pack of tablets), tablets being too big to swallow, dosing regimens that do not match their lifestyle, devices they cannot operate. Patients who show non-adherence intentionally have made a decision not to take the medicine as prescribe. Their reasons for deciding not to adhere could include : a general concern about taking a medicine and the associated risks, their health beliefs, feeling that the doctor has not really listened to them or understood their problem, taking the medicine and suffering unacceptable side-effects, being unconvinced of the necessity of the medicine. The **20.58%** answer the correct answer.

#### ***Question 24***

An open-ended question is designed to encourage full, meaningful answer using the subject's own knowledge and/or feelings. Open-ended questions also tend to be more objective and less leading than closed-ended questions. The pharmacist should be very well about open-ended question and how to use on accurate situation. The objective of this question to determine the level student knowledge what is mean open-ended question. However the **26.47%** get the right answer.

#### ***Question 25***

Sever variable barrier relate to patients. For example, patient perceptions of pharmacist are critical in establishing communication rapport. If patients perceive us as not being knowledgeable, they will tend to not ask questions or listen to the advice being offered. Also, if they perceive that we do not want to talk with them, they will not approach us. On the other hand, if patient perceive us as being knowledgeable and have had positive experience in the past talking with pharmacist, they will tend to seek out information.

Therefore, we must alter negative patient perceptions by teaching the patient that we sincerely want to communication with them and by actually doing so. Another patient

perception that hinder communication is their belief that the health care system is impersonal. Some patient sense that health care providers are not concerned about them as individuals but rather as cases or disease states. Thus. Perception of an impersonal atmosphere may make patient less willing to talk with you or other health care professionals. You can convince patient that they need to learn more about their medications, and you can correct some of the patient's inappropriate perceptions about their condition or medications. Therefore to correct these perception first of all the pharmacies to know the patient barrier and how to deal with barrier to give the best outcome of pharmacotherapy plane. The objective of this question to evaluation the student well awareness about patient barrier and how to resolve this barrier. For example of patient barrier, believe that their condition is a relatively minor one requiring no further discussion with you or other health care professional, shyness, discomfort in sensitive situations and so on. The **32.35%** get the correct answer.

### *Question 26*

The pharmacist have to apply the Listening techniques to use during the interview process to get best outcomes of patient counseling's. The process include stop talking. you can't listen while you are talking, get rid of distractions, these break your concentration, use good eye contact that is, look at the other person to help you concentrate and show the other person that you are indeed listening, react to ideas, not to the person. Focus on what is being said and not on whether you like the person, read nonverbal message, there may communicate the same or different message than the one given verbally, listen to how something is said. the tone of voice and rate of speech also transmit part of the message, provide feedback to clarify any messages. This also show that you are listening and trying to understand. These techniques helps the pharmacist to be very good effective communication skills during patient counselling.

The objective of this question to determine the level of knowledge of student about listening techniques. The **38.23%** the get right answer.

### *Question 27*

Many pharmacist admit that they have difficulty in communicating with another group of patients; those with mental health disorders. by the same token, many mental health patients may be reluctant to interact with other individuals. Some pharmacist feel that they do not know what to say t mental health patients. They are afraid to say the wrong thing or something that might cause an emotional outburst by the patient in the pharmacy. Some

pharmacist are also unsure of how much information or instruction to provide to such patient about their condition and treatment. Many time it is unclear what patient already understand about their condition and what their physician have told them. Once again, open –ended question are good tools to use to determine the level of patient understanding before you counsel the about their medications. Asking open-ended question also helps you determine patient cognitive functioning. The main idea of question the student on clerkship have psychiatric rotation to ensure the student have sufficient information how to counseling the patient with mental illness.

The **26.47%** the answer the correct of answer. Which mean more than **60%** not well awareness how to communicate with the mental ill patient.

### *Question 28*

In the context of patient counseling, pharmacist have the ethical issues obligations to patient and to our community. To know how to resolve ethical issues and to make ethical decision. Pharmacist must understand general ethical principles and their application to patient care situations. Briefly written about each principles. First **beneficence** is the principle that health professionals should act in the best interest of the patient. Second **autonomy** is the principle that establishes patient rights to self- determination –to choose what will be done to them, third **honesty** principle states that patients have the right to the truth about their medical condition, the course of disease, the treatment recommended and the alternative treatment available. Fourth **informed consent** has occurred and treatment can be implemented if all relevant information is provided, if the patients understand the information and if consent is given freely without coercion. fifth **confidentiality** serves to assure patients that information about their medical conditions and treatment will not be given to individuals without their permission, finally **fidelity** is the right of patient to have health professional provide services that promote patient interests rather than their own.

Ethically. The responsibilities of pharmacist should be directed towards the patient rather than directed at the financial well-being of the clinic. The objective of this question to looking for student have the basic idea about concept of ethical principle during practice patient counseling. The **23.52%** show having the basic knowledge about ethical issue for patient counseling.

**Question 29**

As discussing on question 23. The results of this question only 23.52% of respondent get the right answer.

**Question 30**

Today The are huge number available of books, website, program and booklet to guide the practitioner and student pharmacist about patient counseling process also provide the patient accurate information with simple way. The best website for practitioner pharmacist and for the patient it is Medline plus drug information when you compare with other websites. However only the 8.82% get the right answer. Most of the student the choose the Lexi comp 58.82% this program was provide by college and most of the student and preceptor use this program during performance patient counselling but this program only helpful for practitioner and student pharmacist not the patient as resource for patients.

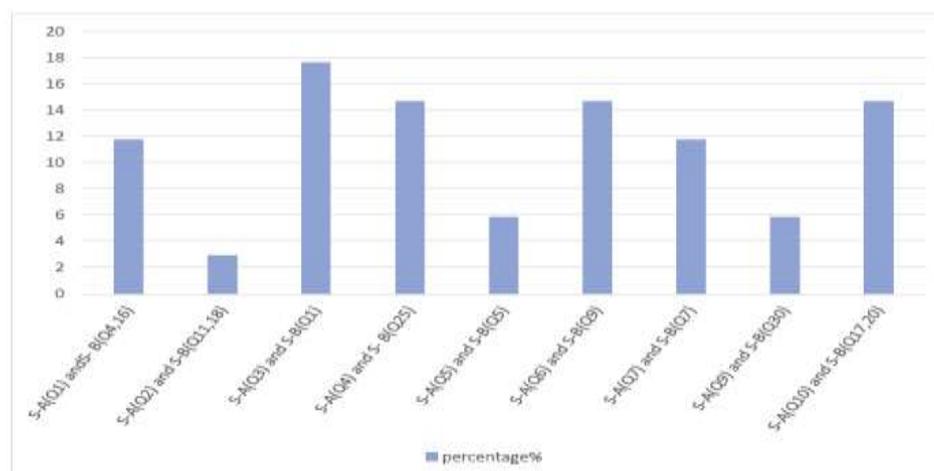
**Table 4: Correlation between section A and B.**

Related questions	Frequency	percentage%
S-A(Q1) and S- B(Q4,16)	4	11.76470588
S-A(Q2) and S-B(Q11,18)	1	2.941176471
S-A(Q3) and S-B(Q1)	6	17.64705882
S-A(Q4) and S- B(Q25)	5	14.70588235
S-A(Q5) and S-B(Q5)	2	5.882352941
S-A(Q6) and S-B(Q9)	5	14.70588235
S-A(Q7) and S-B(Q7)	4	11.76470588
S-A(Q9) and S-B(Q30)	2	5.882352941
S-A(Q10) and S-B(Q17,20)	5	14.70588235

S-A = Section A of questionnaire.

S-B= section B of questionnaire

Q= question number Figure (E); section A and section B correlation question.



***Correlation between section A and B***

The 26 questions was related to each other written in different statement but have the same outcome, the aim form these questions to prevent possibility of chance answer question to insure who answer these questions well knowledgeable about this information not by chance answer these questions or partial knowledge. The result show most of question when was calculate alone was higher percentage of accurate answer but when made the correlation between question was lower percentage of accurate answer. Which the reflected the responders answer the question by chance or evenly may not read the questions just to complete questionnaire put any option. However the idea of correlation the prevent the percentage of chance and provide clear and accurate results which reflected really the knowledge of students about patient counselling.

**Table (5): Total of correct answer of questionnaire.**

<i>responseds</i>	<i>WO correlation S(A and B)</i>	<i>W correlation S(A and B)</i>	<i>level of knowledge WO</i>	<i>level of knowledge W</i>
1	6	4	very poor knowlege	very poor knowlege
2	13	6	poor knowledge	very poor knowlege
3	8	2	very poor knowlege	very poor knowlege
4	7	5	very poor knowlege	very poor knowlege
5	25	21	well knowlege	well knowlege
6	21	16	well knowlege	poor knowledge
7	11	6	poor knowledge	very poor knowlege
8	13	10	poor knowledge	poor knowledge
9	27	23	well knowlege	well knowlege
10	17	10	poor knowledge	poor knowledge
11	29	25	well knowlege	well knowlege
12	15	12	poor knowledge	poor knowledge
13	14	10	poor knowledge	poor knowledge
14	14	10	poor knowledge	poor knowledge
15	18	14	poor knowledge	poor knowledge
16	9	7	very poor knowlege	very poor knowlege
17	15	10	poor knowledge	poor knowledge
18	12	6	poor knowledge	very poor knowlege
19	16	10	poor knowledge	poor knowledge
20	17	9	poor knowledge	very poor knowlege
21	14	9	poor knowledge	very poor knowlege
22	11	8	poor knowledge	very poor knowlege
23	17	11	poor knowledge	poor knowledge
24	10	10	poor knowledge	poor knowledge
25	10	9	poor knowledge	very poor knowlege
26	26	25	well knowlege	well knowlege
27	16	12	poor knowledge	poor knowledge
28	16	13	poor knowledge	poor knowledge
29	14	10	poor knowledge	poor knowledge
30	14	10	poor knowledge	poor knowledge
31	10	6	poor knowledge	very poor knowlege
32	12	5	poor knowledge	very poor knowlege
33	20	20	well knowlege	well knowlege
34	26	24	well knowlege	well knowlege

WO correlation S (A and B): Total answer without consider correlation with section (A and B)  
W correlation S (A and B): Total answer with consider correlation with section (A and B)  
Level of knowledge WO: level of knowledge without consider correlation with section (A and B)  
Level of knowledge W: level of knowledge with consider correlation with section (A and B)  
Very well knowledge: 41-30 total true answer

Well knowledge: 29-20 total true answer  
Poor knowledge: 19-10 total true answer

Very poor knowledge: less than 10 true answer

### *Total of correct answer*

The count the correct answer for each individual responded on two way. First the count the correct answer with (considering the **26** question) were related to each other and the second way the count the correct answer without considering correlation between section A and subdivide to four group: Group **1** who answer **41 to 30** true answer will consider **very well knowledge** about patient counselling, group **2** who answer **30 to 20** true answer will consider **well knowledge** about patient counselling, group **3** who answer **20 to 10** **poor knowledge** about patient consoling group **4** who answer **10-0** **very poor knowledge** about patient counselling.

### *Level of knowledge for student's without consider 26 questions*

The result show the highest number get correct answer was 29 out of 41 and the lowest was 6 out of 41. The average number get correct answer was 15 out of 41. the 4 students were evaluated as very poor knowledge , the 23 student were evaluated as poor knowledge and the 7 students were evaluated as well knowledge about patient counselling. in general the more than 75% were poor knowledge about patient counselling.

### *Level of knowledge for student's with consider 26 questions related to each other*

The result show the highest number get correct answer was 24 out of 41 and the lowest was 2 out of 41. The mean of number get correct answer was 11.4 out of 41. the 13 student were evaluated as very poor knowledge, the 15 students were evaluate as poor knowledge and the 6 students were evaluated as well knowledge about patient counselling. In general the more than 80% were poor knowledge about patient counselling.

The results show 17.64% were well knowledge about performance of patient counselling. Which mean more than 75% don't performed the patient counselling on appropriate way

which will affected the beneficial and outcome of the pharmacotherapeutic plane for the patients.

**Table (6): Compare between finished intern and on the clerkship students.**

<b>t-Test: Two-Sample Assuming Unequal Variances</b>		
	<i>Total answer students finished intern</i>	<i>total answer students on clerkship</i>
Mean	8.75	12.23076923
Variance	43.07142857	35.70461538
Observations	8	26
Hypothesized Mean Difference	0	
df	11	
t Stat	-1.339036424	
P(T<=t) one-tail	0.103786058	
t Critical one-tail	1.795884819	
P(T<=t) two-tail	0.207572116	
t Critical two-tail	2.20098516	

***Compare between finished intern and how still on clerkship rotation students***

The have continues variables and two group independent were used T-test unequal variances to test if there statistical significant between finished intern students result and how are still on clerkship rotation students result. it is assumed that there is a statistically significant difference if p-value is less than 0.05.

They was no statistically significant difference between the student finished intern and how still on intern (P=0.103). Which mean the student during training on hospital don't receive sufficient knowledge and skill to performance patient counseling. However the result show they are clear defect on system of learning or training of clerkship year. Many factors can play the reason of the defect on system of learning or training of clerkship year. The defect may result from preceptor not provide the student's sufficient knowledge and skill to perform patient counseling. Or the defect may result from student's not responded will to the training program. Or the defect may result from site of training not good place to conductive learning.

***Over all of result***

The result show more than 85% under-graduated clinical pharmacist poor knowledge, attitude and practice towards patient counseling. Many factors can interpretation the result poor knowledge, attitude and practice toward patient counselling. The study consider the major factors the can give us interpretation of our results. The most important factor the course

provide the students about patient counselling, did the student's receive sufficient course about patient counselling in both language Arabica and English. The second major factor the doctors on college and doctors on hospital may they are not qualified for teaching student's knowledge and skill required to performance good patient counseling. The third factors the students may not response well for course and interaction provided by doctors during teaching on college or hospital clerkship year. The fourth factor the college may not provide sufficient labs and hospital not good place for conductive learning about patient counseling. Finally, may the patient barrier, environment barrier, personal barrier and so on may affect the students receive the appropriate knowledge and skill to performing the patient counseling.

### ***Recommendation to development the patient counselling***

The are many ways to development the pharmacy knowledge, attitude and practice of patient counseling. This article will mention the names of guide which are responsible about development of patient counselling. These guides discussing how to development of patient counselling for undergraduate and postgraduate pharmacist also for the organization and colleges responsible for pharmacy practice in details: they are two major guide. First the counselling and communication concordance, innovative for pharmacist education edited by Tana Wuliji and Marja Airaksinen, copyright 2005 by FIP and IPSF. The second guide consultation skills for pharmacy practice: taking a patient-centered approach a CPPE distance learning programmer for pharmacy professionals.

### ***CONCLUSION***

*The image and professional performance of pharmacist about specifically patient counseling are low level of attitude and their practice about patient counselling in AL-Ahsa. The majority of undergraduate clinical pharmacy indicated the most of them were unaware about the patient counselling process. The current practice of Saudi pharmacists needs further improvement about performance of patient counselling. National pharmaceutical organizations and the colleges of pharmacy should organized optimal standard educational programs for the undergraduate and postgraduate pharmacist to equip them for their main role in hospital practices and community practice: promoting rational of performance of patient counselling. The Saudi patients show not satisfaction and appreciation of pharmacist's role in the healthcare team. The current study demonstrates specific opinions that are to be considered for improved type of instruction to enable Saudi pharmacy students for better understanding of taught patient counselling.*

**Appendix**

Read the following question and then choice the right answer

- 1- Which one is not describe five dimensions of patient-centered care medical care?
  - a) The pharmacist must be able to understand the illness experience of the patient.
  - b) Pharmacist must share power and responsibility. The ideal relationship is more egalitarian than is traditionally seen, with patients more actively involved in dialogue and in the decision making surrounding treatment.
  - c) Build a (therapeutic alliance) with patients to meet mutually understood goal of therapy.
  - d) The pharmacist's goal is to get patients to do as they are told not to help them reach intended treatment outcomes.
  
- 2- Which one of the following action should performance by clinical pharmacist to provide information to the patients during counseling?
  - a) Open the medication containers to show patient the colors, sizes, shapes and marking on oral solids.
  - b) For oral liquids and injectables show patient the dosage marks on measuring devices
  - c) Demonstrate the assembly and use of administration devices such as nasal and oral inhalers.
  - d) supplement to face-to-face oral communication, provide written handouts to help the patient recall the information
  - e) all of the above
  
- 3- If clinical pharmacists during patient counseling lack the eye contact what this mean ?
  - a) The clinical pharmacist are not really confident about what you are saying
  - b) Limits clinical pharmacist ability to assess how the information you are providing is affecting the patients
  - c) Limits clinical pharmacist ability to receive feedback from the patients
  - d) All of the above
  
- 4- Which one of the following is important to share with patients during consulting session according ASHP guidelines?
  - A- Potential common and severe adverse effects that may occur, actions to prevent or minimize their occurrence and actions to take if they occur, including notifying the prescriber, pharmacist, or other health care provider.
  - B- Techniques for self-monitoring of the pharmacotherapy.

C- Potential drug–drug (including nonprescription), drug–food and drug–disease interactions or contraindications.

D- The medication’s relationships to radiologic and laboratory procedures (e.g., timing of doses and potential interferences with interpretation of results).

E- All of them

5- Which of the following is not personal barriers ?

- a) Low self confidence
- b) Crowded, noisy prescription areas
- c) Dysfunctional internal monologue
- d) Cultural differences

6- What constitutes the perception of credibility ?

- a) A safety or trustworthiness element
- b) An expertness or qualifications element
- c) A personal or dynamism element
- d) All of the above

7- What are the beneficial from performance empathy response during communications?

- a) It helps patients come to trust you as someone who cares about their welfare
- b) Helps them understand their own feeling more clearly
- c) The facilitates the patient's own problem solving ability
- d) All of the above

When you receiving feedback during consulting session which of the following action should be consider ?

- A. Listen to it (rather than prepare your response /defecne)
- B. Ask for it to be repeated if you didn't hear it clearly
- C. Pause and think before responding
- D. All of the above

9- When use the prime questions technique during counseling ?

- a) Whit new patient with new prescription
- b) Whit old patient with new prescription
- c) With old patient with refill prescription

d) Non of above

10- What objective of patient counseling ?

- a) Ensure patients' recognition of the importance of appropriate use of an appropriately prescribed medications in resolving a well defined medical problem.
- b) Provide a framework for pharmacists to establish a professional relationship and a foundation for continuous interaction with patients.
- c) Facilitates Patient's understanding of strategies to deal with medication-related challenges or problems
- d) All of above

11- When use show and tell questions and asking *patient (what do you take the medication for)* this question help the clinical pharmacist ?

- a) Explore patient understanding of his medical condition
- b) Knowledge of the goal of therapy and the desired outcome
- c) Knowledge of dose, frequency and /or duration
- d) A and B

12- Which one of the following don't support effective listening?

- a) Leaning slightly forward if sitting
- b) Maintaining appropriate distance
- c) Using eye contact
- d) Giving advice/solutions

13- Which one of the following development of courtesy and rapport?

- a) Introducing yourself
- b) Learning patient names
- c) Being aware of your appearance, attitude, issues
- d) All of the above

14- The content of counseling session which information may include as appropriate for each patient's pharmacotherapeutic regimen and monitoring plan ?

- a) The medication's trade name, generic name, common synonym, or other descriptive name(s).
- b) The medication's use and expected benefits and action. This may include whether the

medication is intended to cure a disease, eliminate or reduce symptoms, arrest or slow the disease process, or prevent the disease or a symptom.

- c) The medication's expected onset of action and what to do if the action does not occur.
- d) The medication's route, dosage form, dosage, and administration schedule (including duration of therapy).
- e) All of the above

15- To overcome communication barriers requires?\*

- a) Being aware that barriers exist
- b) Taking appropriate action to overcome them
- c) Discontinuous conversation once discovery barriers exist
- d) Both A and B

16- Which one of the following is not important to discussed with patients during consulting session according of ASHP guidelines?

- a) Prescription refill authorizations and the process for obtaining refills.
- b) Instructions for 24-hour access to a pharmacist.
- c) Proper storage of the medication.
- d) Proper disposal of contaminated or discontinued medications and used administration devices
- e) non of above

17- Which one of the following process steps recommend by ASHP guidelines in the patient counseling process ?

- a) Establish caring relationships with patients as appropriate to the practice setting and stage in the patient's health care management.
- b) Assess the patient's knowledge about his or her health problems and medications, physical and mental capability to use the medications appropriately, and attitude toward the health problems and medications.
- c) Provide information orally and use visual aids or demonstrations to fill patients' gaps in knowledge and understanding.
- d) Verify patients' knowledge and understanding of medication use
- e) All of the above

18- When use start asking the show and tell questions during counseling?

- a) Whit new patient with new prescription
- b) Whit old patient with new prescription
- c) With old patient with refill prescription Non of above

19- Read the follow in case and answer the question

A 9 month old baby had to be admitted to the hospital with a severe infections due to the fact that his mother misunderstood the labeled instruction for an antibiotic (take one half teaspoonful three times a day for infection until all gone) the mother continued the drug for about three days until the baby appeared to be getting better. The mother than stopped giving the antibiotic; a super infection developed; and the baby was hospitalized. The pharmacist intended to communicate that the medication (10 days supply).

Regarding this case what problem that happened during communication between pharmacist and mother?

- a) The pharmacist speak in medical terminology which lead the mother misunderstood the prescription.
- b) The mother misunderstood the prescription due to dialects different than pharmacist
- c) The mother understood the pharmacist instruction but place the word (gone) in different context which lead to different meaning
- d) Non of the above

20- Which one of the following actions help to establish caring relationship with patients?

- a) Introduce yourself as pharmacist
- b) Explain the purpose and expected length of the session
- c) Obtain the patient's agreement to participate
- d) Determine the patient's primary spoken language
- e) All of the above

21- Which one of the following action help the clinical pharmacist to assess the patient's knowledge about his or her health problems and medications?

- a) Ask open-ended questions about each medication purpose and what the patient expects
- b) Ask the patient to describe or show how her or she will use the medications
- c) Obtain the patient's agreement to take medications
- d) A and b

22- Which one of the following don't hinder effective listening?

- a) Changing the subject
- b) Facing person squarely at eye level
- c) Reassuring without acknowledgment
- d) Criticizing

23- Which one is reasons for non adherence intentional ?

- f) Carer does not understand how to give medicines
- g) Misunderstanding relating to the need to continue the medicine for long term conditions
- h) Thinking the medicine is not helping
- i) Poor memory

24- What is mean open –ended question ?

- A- Questions elicit yes/no response sand limit the information's sought from the receiver
- B- Questions that start with who, what, where, when, how and why and require more than yes /no response
- C- Question that start with who, what, where, when, how and why sand limit the information's sought form the receiver
- D- Non of above

25- Which one of the following consider as patient barrier?

- a) Believe that their condition is a relatively minor one requiring no further discussion with you or other health care professional
- b) Shyness
- c) Discomfort in sensitive situations
- d) All of the above

26- Which one of the following is not apart of the Listening techniques ?

- A- Stop talking. You can't listen while you are talking.
- B- Don't provide feedback to clarify the message until the finished talking.
- C- Get rid of distractions.
- D- Use eye contact to show you are listening**

27- Which step it is important during communication with Patients who are mentally ill?

- 1) Open-ended questions would be more effective

- 2) Closed –ended questions would be more effective
- 3) Mentally Ill Patients might not always understand their treatments or medication purposes.
- 4) Simply being honest with them can improve their interaction with them.

28- What are the difference between Confidentiality and Fidelity?

- A. Confidentiality** serves to assure patients that information about their medical conditions and treatments will not be given to individuals without their permission But **fidelity** has occurred and treatment can be implemented if all relevant information is provided, if the patients understand the information and if consent is given freely without coercion.
- B. Confidentiality** principle states that patients have the right to the truth about their medical condition, the course of disease, the treatments recommended and the alternative treatments available but **fidelity** is the principle that establishes patient rights to self-determination- to choose what will be done to them.
- C. Confidentiality** is the principle that health professionals should act in the best interest of the patient **but fidelity** is the right of patients to have health professional provide services that promote patients' interests rather than their own. Ethically, the responsibilities of physicians should be directed towards the patients rather than directed at the financial well-being of the clinic.
- D. Confidentiality** serves to assure patients that information about their medical conditions and treatments will not be given to individuals without their permission. But **Fidelity** is the right of patients to have health professional provide services that promote patients' interests rather than their own. Ethically, the responsibilities of physicians should be directed towards the patients rather than directed at the financial well-being of the clinic.

29- Which one is not reason for non adherence intentional?

- A- Difficulty in obtaining repeat medicines
- B- Fear of side-effects
- C- The patient disagrees with the doctor's diagnosis
- D- Fear of dependence'

30- Which one of the following best resource help patient and clinical pharmacy about patient counseling ?

- A. Up to date (lexicomp)
- B. Micromedex

- C. DynaMed
- D. Medline plus drug information

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