

Patient's Knowledge of Medications Misadventure Information in Saudi Arabia

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Abstract

Objective: To explore the Patient's Knowledge of Medications Misadventure Information in Saudi Arabia.

Methods: It is a 4-months cross-sectional survey of patient and Drug-related problem information in Saudi Arabia. The survey consisted of two-part, demographic data and second part forty-nine questions divided into four domains. It included domain 1: necessary information about patient medication, domain 2: patient information about the drug-related problem, domain 3: patient information about drug-related cost and domain 4: patient perception of medications. Midline Plus health information and DailyMed elements information from National Institute of Health United State of America used. The 5-point Likert response scale system was used. The survey was distributed through social media and at 500-bed pediatrics and maternity hospital in Asir region, at ambulatory care pharmacy. The authors did the patients interview with electronic survey documentation. The survey was made in an electronic format and it analyzed domain two through survey monkey system. **Results:** The total responders were (614) Saudi patient, the gender distribution 523 (86.7%) were females and 91(13.3%) were males. The majority of them in age (18-44) 78.3% and located at Asir region 325 (115%) and Riyadh region 163 (46.9%). The responders showed no adequate knowledge either complete or incomplete information about the adverse drug reaction either a general side effect of medications 343 (58.5%) only or potential adverse event about their medications 295 (51.2%). The responder showed that they are not aware of contraindication of medicines used with other diseases condition 253 (43.2%), drugs 264 (45.4%), food 277 (47.6 %) or laboratory test 285 (49.5%) and 320 (55.4%) with the herbal drug. The responders showed no adequate knowledge either complete or incomplete information about usage of medications for children 322 (56.46%) or elderly 301 (51.45%), drug use during pregnancy 329 (56.52%) or breastfeeding 319 (54.71%). **Conclusion:** More than fifty percent of the patients were not familiar with the essential drug-related problems information. It is potential to drug misadventures and cost burden in the society. Very comprehensive and urgent implementation of the patient medications education program in Saudi Arabia is needed.

Key words: Patient, Knowledge, Misadventure, Medications, Ministry of Health, Saudi Arabia.

INTRODUCTION

A drug-related problem (DRP) defined as an event or circumstance involving drug therapy that actually or potentially interferes with the desired health outcome.^[1] The drug-related problem prevention as part of pharmaceutical care services provided to the patients.^[2] The drug-related problem included eight problems including medications errors, adverse drug retraction, a drug without indication, indication without medications, medication noncompliance, drug interaction, failed to receive medications and drug poisoning.^[2-3] Drug-related problems are most common in patients taking more than one drug at the same time, patients with chronic illnesses or elderly patients were found to use about three times more drugs than younger patients.^[4] Some studies have identified different risk factors for developing

at least one DRP in patients with cardiovascular diseases and the use of multiple medications is one of the variables most commonly identified.^[1] The pharmacists should check with work patient and other medical team members to prevent during drug therapy. The patient has to get drug information and knowledge of drug-related problems may occur or how to deal with them if they occur. Several studies investigated the patient's medication knowledge including drug-related problems among them.^[5-8] Also, all the studies discussed a specific group of medications. There is no study discussed drug-related knowledge with patients. It is hard to find local studies or Gulf and Middle East counties about patient's drug-related problems knowledge. The goal of the study was to explore the patient's drug-related knowledge in Kingdom of Saudi Arabia.

METHODS

It is a 4-months cross-sectional survey of patient and basic knowledge of medicines. The survey consisted of two-part, demographic information and second part forty-nine questions divided into four domains. It included domain 1: Primary or essential information about patient medication, domain 2: patient information about the drug-related problem, domain 3: patient information about drug-related cost and domain 4: patient perception of medications. Medline Plus health information and DailyMed-INH elements information from National Institute of Health United State of America were used.^[9-10] The 5-point Likert response scale system was used. The questions were open and closed-ended. The survey was distributed through social media and at 500-bed pediatrics and maternity hospital in Asir region, at ambulatory care pharmacy. The hospitals were accredited by Saudi Center for Healthcare organization (CBAHI) and Joint Commission on Hospital Accreditation from the United States of America (USA).^[11-12] The hospital's several departments were included such as Pediatrics, Obstetrics and Gynecology. It had Adults, Pediatrics and Neonatal critical care, with the separated nursing unit. In addition to medical and surgical sections for adults, pediatrics and neonates. The pharmacy departments distributed the medication through unit dose system according to CBAHI standards and American Society of Health-System standards. Also, the pharmacy had inpatient pharmacy, outpatient pharmacy, Intravenous Admixture services with professional Total Parenteral Nutrition. The clinical pharmacy services did not entirely exist except some programs for an instant; drug information center, patient-counseling services and medication safety program. The authors did the patients interview with electronic survey documentation. The survey was made in an electronic format and it analyzed domain two patient information about the drug-related problem through survey monkey system.

RESULTS

The total responders were (614) patients with Saudi 564 (96.1%) and Non-Saudi 23 (3.9%) nationalities. The gender distribution 523 (85.2%) were females and 91 (14.8%) were males. The majority of them in age (18-44) 78.3% and located at Asir region 325 (52.93%) and Riyadh region 163 (26.54%). The most patients had the Bachelor Degree 311 (50.65%) followed by High school 138 (22.48%) and Diploma 47 (7.65%). The most type of medications used was anti-diabetic and anti-hypertension medicines, Skin medications and drugs for Respiratory Diseases. Also, the total patient currently taking medication were 249 (43.23%). Of those the most number of medication taken either one 96 (38.55%), two medications 79 (31.73%), three medications 25 (10.04%) and four medications 24 (10.04%) as explored in Table 1. The responders showed no adequate knowledge either complete or incomplete information about the adverse drug reaction either a general side effect of medications 343 (58.5%) only or potential adverse events about their medications 295 (51.2%). More than half of responders were not familiar with drug overdose behaving 377 (64.1%) or first aid of drug poisoning 381 (65.2%) as explored in Table 2. The responder showed not aware of contraindication of medicines used with other diseases condition 253 (43.2%), drugs 264 (45.4%), food 277 (47.6%) or laboratory test 285 (49.5%) and 320 (55.4%) with the herbal drug as explored in Table 3. The responders showed not adequate knowledge either complete or incomplete information about the use of medications for children 322 (56.46%) or elderly 301 (51.45%), drug use during pregnancy 329 (56.52%) or breastfeeding 319 (54.71%). Moreover, during exercises 258 (44.56%) or practicing the job 270 (46.4%) as explored in Table 4.

DISCUSSION

The pharmacy administration at Ministry of health established several programs within pharmaceutical care department around hospitals and primary care center to prevent drug misadventures and complicated related

Table 1: Demographic responder qualifications information.

Characteristics	Response N	Response %
Sex		
Female	523	85.2%
Male	91	14.8%
Answered question	614	100%
Skipped question	0	
Nationality		
Saudi	564	96.1%
Non-Saudi	23	3.9%
Answered question	587	100%
Skipped question	27	
Age		
<18	34	9.9%
18 - 29	267	103.0%
30 - 44	214	60.9%
45 - 59	87	22.5%
60+	12	3.6%
Answered question	614	100%
Skipped question	0	
Total Experiences		
Doctorate degree	7	1.14%
Master degree	17	2.77%
Bachelor Degree	311	50.65%
Diploma	47	7.65%
High school	138	22.48%
Intermediate School	33	5.37%
Primary School	27	4.40%
Not educated	34	5.54%
Answered question	614	100%
Skipped question	0	
The current medications		
Diabetic Medication	79	12.91%
Antihypertensive Medication	64	10.46%
Cardiac Medication	13	2.12%
Asthma Medication	50	8.17%
Derma Medication	57	9.31%
Anti-Rheumatic	32	5.23%
Do not take anything now	412	67.32%
Others	87	14.22%
Answered question	612	100%
Skipped question	2	
Number of current medication taken		
Nothing	327	56.77%
1	96	38.55%
2	79	31.73%
3	25	10.04%
4	24	9.64%
5	13	5.22%
6	5	2.01%
7	3	1.20%
8	0	0.00%
9	1	0.40%
10	2	0.80%
more than 10	0	0.00%
Answered question	576	
Skipped question	38	

Table 2: Adverse drug reaction information of medications used.								
No.	Answer Options	Complete information	Incomplete information	Weak information	I do not have information	I do not need this information	Rating Average	Response N
1	The adverse drug reaction information	200	143	82	126	35	3.59	586
2	The potential or dangerous adverse drug reaction	162	133	93	147	41	3.40	576
answered question:588 and skipped question:26								
The overdose or poisoning management information on medications used								
No.	Answer Options	Complete information	Incomplete information	Weak information	I do not have information	I do not need this information	Rating Average	Response Count
1	The information of facing of drug overdose or poisoning	62	118	113	264	31	2.86	588
2	The first aid when poisoning occurs	51	121	116	265	31	2.82	584
answered question:589 and skipped question:25								

Table 3: The contraindications information on medications used.								
No.	Answer Options	Complete information	Incomplete information	Weak information	I do not have information	I do not need this information	Rating Average	Response N
1	The usage of medications with diseases are forbidden	163	121	90	163	48	3.32	585
2	The use of medication with other drugs are forbidden	138	130	89	175	50	3.23	582
3	The use of medicines in certain foods are forbidden	128	129	98	179	48	3.19	582
4	The use of medicines with Laboratory tests are forbidden	130	112	83	202	49	3.13	576
5	The use of medicines with herbs are forbidden	79	119	81	239	60	2.86	578
answered question:590 and skipped question:24								

Table 4: The medication information used in a unique situation.								
No.	Answer Options	Complete information	Incomplete information	Weak information	I do not have information	I do not need this information	Rating Average	Response N
1	The medication used for children	189	143	88	106	62	3.49	588
2	The medication used for elderly	143	158	112	106	66	3.35	585
3	The medication used for pregnancy	219	110	71	88	94	3.47	582
4	The medication used for breast feeding	192	127	71	88	105	3.37	583
5	The medication used for sport	108	150	108	141	72	3.14	579
6	The medication used for practicing job	122	148	98	139	75	3.18	582
answered question:589 and skipped question:25								

issues.^[13] The prevention started at patient's home during patient medications counseling during discharge from the hospital or ambulatory care visiting. Also, during the emergency visit or hospital admission or transfer from upper to lower hospital facilities through medications reconciliation program. The pharmacist provides primary medications education session to all patients during National Diabetic or National Asthma or National psychiatric awareness days.^[14] The education courses were part of the patient counseling program. All those programs will strength background medication knowledge of the drug-related problem and subsequently prevent drug-related problems. The actual background or knowledge of patient is not well known in Saudi Arabia. The author wishes to evaluate the current knowledge of drug-related problems with patients in Kingdom of Saudi Arabia. The results of patient and drug-related knowledge information were inadequate that included adverse drug reaction, drug overdose information or first aid of drug poisoning. In addition to contradicted informatics with medication and disease or drugs or, food lab test or herbal medication. That is related to patient education about medications at Ministry of Health organizations is not well competed and pharmacy public education is absent most of the time. The results are better than what reported by other study. The finding of use of medications during a unique situation like pediatric or geriatrics or pregnancy and breastfeeding and practice exercises or jobs is not adequate due to same previous reason.^[5,7] Those results could not compare with them; most of the studies did not discuss these issues. Further studies about patients and drug-related problems in Kingdom of Saudi Arabia are highly recommended.

CONCLUSION

Missing knowledge of the drug-related problems can implicate to occur with cost and effort burden in the society. Educating the patient of drug-related problems reduces risk. It is also essential to educate and train the medical staff to avoid such problems. It is also possible that early detection of harmful drug interactions will help to reduce problems related to drug therapy.

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None

CONFLICT OF INTEREST

None

ABBREVIATIONS

KSA: Kingdom of Saudi Arabia; MOH: Ministry of Health; CBAHI: Saudi Center for Accreditation of Healthcare Institutions.

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