Public's Experiences and Expectations of Pharmacists during Coronavirus (COVID-19) in Saudi Arabia

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ABSTRACT

Goal: To elucidate the public' experiences and expectations of pharmacists during COVID-19 in Saudi Arabia. **Methods:** It is three cross-sectional of convenient sampling and calculated number of the subject with power eighty. It was a self-reported electronic survey for the population in the King of Saudi Arabia. It encompassed all citizens who lived in Saudi with the age of more than 18 years and above. The survey entailed of the demographic data patients actual experiences of pharmacists during COVID-19 and patients actual expectations of pharmacists during any other pandemic situation. Survey monkey, Microsoft Excel, and Statistical Package of Social Science (SPSS) were used for the analysis. **Results:** The total number of responding pharmacists was 461. Of those, 440 (95.44%) were Saudi, and 344 (74.62%) were female, with statistical significance between nationality or gender answers ($p<0.001$). Almost two-thirds of the responders had bachelor's degrees 319 (69.20%) with statistically noteworthy between among all academic qualifications ($p<0.001$). Most of the responders were non-healthcare professionals 338 (74.45%), and physicians and nurses representative high percentages 37 (35.92%) and 31 (30.10%), respectively, with statistically significant among the remaining answers ($p<0.001$). The total average scores of patients' actual experiences of pharmacists during COVID-19 were 3.41. The high scores element was pharmacists routinely counsel me regarding the safe and appropriate use of my medications (3.79), and the pharmacist implemented the MOH covid-19 instructions and guidelines (3.77). The total average scores of patients actual expectations of pharmacists during any other pandemic situation were 3.71 with high scores element was the pharmacist expand their services and will most of my medications request by online and mobile application (3.88) and the pharmacist applied software applications for education for drugs and any pandemic (3.86). **Conclusion:** The public' experiences and expectations of pharmacist during COVID-19 in Saudi Arabia is very optimistic. Therefore, targeting education, training, declaring the pharmacist's role during pandemic situations, emergency public health emphasizing therapeutic guidelines and preventing drug-related problems is highly proposed for implementations in Saudi Arabia.
Keywords: Public, Experiences, Expectations , Pharmacists, COVID-19, Saudi Arabia.

INTRODUCTION

In the last two years, the biggest pandemic and emergency public heath started worldwide. The viral infectious disease instigated in China and then shifted to all countries.[1] World Health Organization referred numerous warnings about the diseases called Coronavirus or COVID-19.[1] Each government recognized preventive measures before the conditions entrance, followed up the cases, and planned the management for their residents and citizens during the pandemic; the Kingdom of Saudi Arabia did an excellent performance.[2] It stopped all travellers from infected countries from entering. It avoids all inside passengers to travellers outside the county. Besides, also includes keeping distance policy, stopping any activity with crowd people, confirms mask warning in public areas.[2] The government has formulated a national committee to meet this pandemic with higher government administration's total financial and logistic support.[1] The Ministry of Health offers pervasive healthcare activities. They follow-up all-new cases with or without symptoms overseas; the infected are acknowledged to hospitals or critical care services.[2] It planned prevention and treatment protocol of COVID-19 implemented at all the health care services.[2] The MOH used an electronic system through numerous applications during pandemic situations. Besides, growing the number of beds, opening new hospitals, and organizing the call centre of 937 to receive all healthcare inquiries linked to the pandemic COVID-19. Moreover, the MOH controlled the clinical trials about COVID-19 management, vaccines organization and delivered free vaccines for all residents and citizens in Saudi Arabia.[1]

Various publications discussed pharmacy-related activities in emergency public health time.[3-8] Healthcare professionals achieve all those activities, counting the pharmacy staff, along with the clinical pharmacist or distributive pharmacist, or pharmacy technician.[9] The pharmacist plays a vital role during a pandemic COVID-19.[9-14] The pharmacist delivers home delivery of medications from hospital, community pharmacies and publications about the COVID-19 diseases and

drug information;[1] also, educational materials by an electronic application and patients education performance. Deliver enough medications, organized disinfectant solution, and hand sanitizer to the patients.[8] Besides, the pharmacists contributed in therapeutic guidelines of the COVID-19 pandemic.[8] The improvement of the pharmacist's activities wants the pharmacist's performance assessment. It needs to discover the patient's experience and future expectations during a pandemic and infectious emergency public health situation. Numerous studies conversed physician or dentist experience and future expectations of pharmacists during regular days.[15-21] Another study talked the perception of pharmacists or drug distribution systems during COVID-19.[22] The authors tried to combine two kinds of tasks by counting patient experience and expectations of the pharmacist and performance during COVID-19: the author is not acquainted with any search about the current topic locally or in Gulf and Middle Eastern countries. The present study purposes to announce the patient experience and expectations of pharmacists during COVID-19 in Saudi Arabia.

METHODS

It is a two-month cross-sectional study of public' experiences and expectations of pharmacists during COVID-19 in Saudi Arabia. It was a self-reported electronic survey for the population in the King of Saudi Arabia. It encompassed all citizens who lived in Saudi with age more than 18 years and above. Any unfinished reports or locations outside of Saudi Arabia will be omitted from the study. The survey resided of demographic data, counting locations, gender, material status, age, responder qualifications, occupational status, and monthly income. It also includes the second part of patients' actual experiences of pharmacist during COVID-19 and patients actual expectations of pharmacists during any other pandemic situation. The 5-point Likert response scale system was used. The sample was intended according to the previous literature with unlimited population's size, population's percentage 50%, the confidence level 95% with z score of 1.96, margin of error 5%, and drop-out rate 10%. As a result, the sample size will equal 420 or above with a power of study of 80%.[23-25] The response rate obligatory of calculated sample size at least 60-70 % and above.[25,26] The survey was dispersed through social media and telegram during July and August 2020. The reminder message had been referred every 2-3 weeks. The survey was authenticated through the revision of expert reviewers and pilot testing. Besides, the reliability tests McDonald's ω, Cronbach's α, Guttmann's 2, and Guttmann's 6 had been done with the study. The data analysis is finished through the survey monkey system, the Statistical Package of Social Sciences (SPSS), and Jeffery's Amazing Statistics Program (JASP). Besides, it is completed by the Microsoft excel sheet version 16 with description and frequency analysis, good of fitness analysis, correlation analysis, inferential analysis of factors affects pharmacist's perceptions of forensic pharmacy. The STROBE (Strengthening the reporting of observational studies in epidemiology statement: guidelines for reporting observational studies) steered the reporting of the current study.[27,28]

RESULTS

The total number of responding pharmacists was 461, with most of them coming from the south area 211 (45.77%), and west area 154 (33.41%) with statistically noteworthy among the regions (p<0.001). Of those, 440 (95.44%) were Saudi, and 344 (74.62%) were female, with statistical consequence between nationality or gender answers (p<0.001). Most of the responders were in age (18-24) years 174 (39.19%) with statistically significant between all ages level (p<0.001). Almost two-thirds of the responders had bachelor's degree 319 (69.20%) with statistically significant between among all academic qualifications (p<0.001). Most responders were students 186 (40.35%) and employees 144 (31.24%), and monthly income less than 3,000 SR was 197 (46.14%) statistically important between among the remaining answers (p<0.001). Most of the responders were non-healthcare professionals 338 (74.45%), and physicians and nurses representative high percentages 37 (35.92%) and 31 (30.10%), respectively, with statistically significant among the remaining answers (p<0.001). The majority of responders contacted with community pharmacies 282 (62.81%) or hospital pharmacies 115 (25.61%) more frequently, while rarely 171 (37.92%) or sometimes 119 (26.39%) communicate with pharmacist statistically significant between among the answers (p<0.001). There is a medium positive relationship between Age (years) and monthly income Kendall's tau_b (0.563) or Spearman's rho (0.677) with statistically significant difference (p>0.05) as reconnoitred in Table 1 and 2.

The total average scores of patients' actual experiences of pharmacists during COVID-19 were 3.41. The high scores element was pharmacists routinely direction regarding the safe and fitting use of medications (3.79), the pharmacist executed the MOH covid-19 instructions and guidelines (3.77), and pharmacists are a reliable source of general drug information (3.74). On the contrary, the lowest score was the pharmacist monitors as a patient response to drug therapy and if a patient encounters any drug-related problem (2.86). In addition, pharmacists routinely notify about less expensive alternatives to the drugs prescribed (3.13), and pharmacists appear willing to take personal responsibility for resolving any drug-related problems they discover with supportive with my doctor (3.14) with statistically significant between answers (p<0.001) as travelled in Table 3.

The total average scores of patients actual expectations of pharmacists during any other pandemic situation were 3.71 with high scores element was the pharmacist expand their services and will most of medications appeal by online and mobile application (3.88). In addition, the pharmacist applied software applications for education for drugs and any pandemic (3.86), and the pharmacist executed the drug therapy guidelines from MOH (3.81). Besides, the pharmacist can make the essential examination (3.81), and the pharmacist expand the home delivery for medications, medical devices, and instruments free of charge (3.81). On the contrary, the lowest score aspect of nuclear pharmacy was the pharmacist can make the advances examination (3.48), and the pharmacist provide vaccines services for adults and geriatrics (3.4). Besides, the pharmacist in the future had the clinical and administrative privilege as part of pharmacy law (3.64) with statistically noteworthy between answers (p<0.001) as reconnoitred in Table 4. The reliability test of McDonald's ω, 0.942, Cronbach alpha 0.942, Guttmann's λ2, 0.944, and Guttmann's λ6, 0.959.

Factors persuading the patients' actual experiences or actual expectations of pharmacist. It might affect the patients actual experiences, for instance; location, employment, age (years), nationality, gender, educational level, monthly income, and whether the responders are from healthcare professionals. Using independent samples Kruskal-Wallis test and the Bonferroni correction for multiple tests have adjusted significant values, the results showed as follows. Five locations exaggerated the actual experiences with the highest average score (3.5770) at the south region with statistically significant differences (p=0.000). The academic qualification and monthly income pretentious the patients actual experiences with statistically significant differences (p=0.041) and (p=0.000), respectively, with non-statistically significant differences between the academic qualification levels in post hoc analysis (p>0.05). Other factors (employment, nationality, gender, and does the responders were from healthcare professionals) did not

Table 1: Demographic, social information.			
Nationality	**Response Count**	**Response Percent**	***P* value**
Central area	54	11.71%	0.000
North area	13	2.82%	
South area	211	45.77%	
East area	29	6.29%	
West area	154	33.41%	
Answered question	**461**		
Skipped question	**0**		
Gender	**Response Count**	**Response Percent**	
Saudi	440	95.44%	0.000
Non-Saudi	21	4.56%	
Answered question	**461**		
Skipped question	**0**		
Gender	**Response Count**	**Response Percent**	
Male	117	25.38%	0.000
Female	344	74.62%	
Answered question	**461**		
Skipped question	**0**		
Age	**Response Count**	**Response Percent**	
< 18	19	4.28%	0.000
18-24	174	39.19%	
25-30	68	15.32%	
31-35	29	6.53%	
36-40	34	7.66%	
41-45	32	7.21%	
46-50	27	6.08%	
> 50	61	13.74%	
Answered question	**444**		
Skipped question	**17**		

affect the patients actual experiences with non-statistically significant differences (p>0.05). The various factors might impact the patients actual expectations of pharmacists, for instance; location, employment, age (years), nationality, gender, educational level, monthly income, and the responders from healthcare professionals. Five locations affected the Actual Expectations with the highest average score (3.7994) at the south region and west area (3.6340) with statistically significant differences (p=0.016) in post hoc analysis. There were eight levels of age exaggerated the patients actual expectations of pharmacist with highest scores (3.8247) in age (18-14 years) lowest scores (3.4530) in age more 50 years with statistically significant differences (p=0.001) in post hoc analysis. The employment and monthly income exaggerated the patients actual expectations with statistically significant differences (p=0.028) and (p=0.015), respectively, with non-statically significant differences in post hoc analysis (p>0.05). Other factors (nationality, gender, academic qualification, and does the responders from healthcare professionals) did not disturb the patients actual experiences with non- statistically significant differences (p>0.05), as discovered in Table 5.

The relationship between the patients' actual involvements of pharmacists during COVID-19 and factors includes location, employment, age (years), nationality, gender, educational level, monthly income, and the responders from a healthcare professional. It was verified through a multiple regression model and measured the patients' actual experiences dependent variable and factors viewed as expletory variables. There was a weak relationship R (0.211) with (p=0.024) between the patients actual experiences and factors. There is no positive or negative relationship between patients actual experiences and all factors with non-statistically significant (p>0.05) through multiple regression model and established by Bootstrap model as explored in Table 7. The relationship between the patients' actual expectations of pharmacists and factors such as location, employment, age (years), nationality, gender, educational level, monthly income, and the responders from healthcare professionals. It was proved through a multiple regression model and measured the patients actual expectations-dependent factors were observed as the expletory variable. There was a weak relationship R (0.217) with (p=0.018) between the patients actual expectations and factors. However, there is one factor only; age clarified 16.5% of the positive relationship of the variation in the patients actual expectations with a statistically significant (p=0.027) through multiple regression model and established by Bootstrap model. The non-existence of multi-collinearity verified the relationship among patients actual expectations and one factor with age Variance Inflation Factor (VIF=2.190), which was less than three[29-31] as reconnoitered in Table 8.

DISCUSSION

The COVID-19 time was a very grave period locally and internationally.[2] Everything was transformed. Regular working altered to online, typical hospital visiting the online clinic, and traditional distribution from patients visit and get the drugs to medication home delivery.[4,10-14] Various things conflicting the public and change their daily lives and standard behaviour switch to something new in healthcare and pharmacy services. Besides, the hospital or community pharmacist's behaviour reformed from passive to active behaviour with mail or home distribution. As a result, the patients faced new looks from pharmacists during the peak pandemic of the COVID-19 period.[10-13] However, the experiences and expectations of patients from pharmacists are highly requested to know to improve the communication skills between patients and pharmacists, declare the role of pharmacists during pandemic situations and the future expectations of pharmacists toward patients in the coming pandemic cases from the public point of view. The contemporary study was completed by distributing an electronic authenticated and high-reliability survey to a convenient sample with an adequate sample. The author dispersed the study mainly from the south and west regions where authors had lived. The majority of responders were female because of same author's gender. The majority of responders were had a bachelor's degree look like the earlier study[22] with low income that's expected because they were the student and young age

Table 2: Demographic, social information.

Responder Qualifications	Response Count	Response Percent	
Doctorate degree	18	3.90%	0.000
Master degree	30	6.51%	
Bachelor Degree	319	69.20%	
Diploma	25	5.42%	
High school	56	12.15%	
Intermediate School	12	2.60%	
Primary School	0	0.00%	
Not educated	1	0.22%	
Answered question	**461**		
Skipped question	**0**		
Occupational status	**Response Count**	**Response Percent**	
Employee	144	31.24%	0.000
Unemployed	70	15.18%	
Student	186	40.35%	
Retried	57	12.36%	
Not written	4	0.87%	
Answered question	**461**		
Skipped question	**0**		
Monthly income	**Response Count**	**Response Percent**	
< 3,000 SR	197	46.14%	0.000
3,001-6,000	33	7.73%	
6,001-9,000	33	7.73%	
9,001-12,000	46	10.77%	
12.001-15,000	49	11.48%	
15,001-18,000	25	5.85%	
18,001-21,000	18	4.22%	
>21,000 SR	26	6.09%	
Answered question	**427**		
Skipped question	**34**		
Are you a health care practitioner (Medical Doctor- Dentist- Pharmacist- Nurse- Others?	**Response Count**	**Response Percent**	
Yes	116	25.55%	0.000
No	338	74.45%	
Answered question	**454**		
Skipped question	**7**		
If you are a health care practitioner, you are a	**Response Count**	**Response Percent**	
Physician	37	35.92%	0.000
Nurse	31	30.10%	
Nutritionist	17	16.50%	
Pharmacist	7	6.80%	
Laboratory	4	3.88%	
Radiology	2	1.94%	
Physiotherapy	3	2.91%	
Other (please specify)	2	1.94%	
Answered question	**103**		
Skipped question	**358**		
Which type of pharmacies are you more frequent communication	**Response Count**	**Response Percent**	
Hospital pharmacy	115	25.61%	
Community pharmacies	282	62.81%	
Primary healthcare pharmacy	60	13.36%	
Private hospital pharmacies	38	8.46%	
Non	12	2.67%	
Answered question	**449**		
Skipped question	**12**		
How do you frequently communicate with the pharmacist?	**Response Count**	**Response Percent**	
Always	31	6.87%	0.000
Most of the time	54	11.97%	
Sometimes	119	26.39%	
Rarely	171	37.92%	
Never	76	16.85%	
Answered question	**451**		
Skipped question	**10**		

Continued...

recently graduated. The study targets were non-healthcare professionals. However, one-quarter had responded from healthcare professionals. Therefore, it was a good opportunity to know their experiences and expectations of pharmacists. The existing results exposed that most patients communicated with community pharmacies. It has been expected to be more reachable to them and safer than the hospital in COVID-19 visiting cases. However, the contact situation was rarely or sometimes. It has echoed that the patients do not need any medications from community pharmacies, get their medicines from the hospital, or receive their medications through home delivery. However, patients did not contact a pharmacist during or after delivery.

The patients had positive experiences with pharmacists during COVID-19 with high experiences with patient's medications education or relating the MOH COVID-19 regulation and reflect the pharmacist as sources of drug information resemble earlier study.[22] The patient analysis through community pharmacy is well known of the prior literature and might upsurge during COVID 19 due to the demand of receive counselling with new pandemic situations.[4,10-14,32-36] The pharmacist displayed positive cooperation with MOH regularly, which was exceptional to prevent any further distribution of pandemic disease. The pharmacist experiences as the sources of drug information for patients, which was part of their active role in society during pandemic situations. However, the patients had negative experiences with numerous activities during

Table 3: Patients Actual Experiences of pharmacist during COVID-19.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly agree		Total	Weighted Average	
In my experience, pharmacists are a reliable source of general drug information	3.84%	17	4.06%	18	27.99%	124	42.21%	187	21.90%	97	443	3.74	0.000
Pharmacists routinely counsel my regarding the safe and appropriate use of my medications	2.94%	13	6.11%	27	21.49%	95	47.51%	210	21.95%	97	442	3.79	0.000
Pharmacists routinely inform me if they discover clinical problems with my prescriptions and contact with the physician for corrections	7.24%	32	17.65%	78	27.83%	123	34.39%	152	12.90%	57	442	3.28	0.000
Pharmacists routinely inform me about less expensive alternatives to the drugs prescribed to me	9.75%	43	17.46%	77	33.33%	147	28.57%	126	10.88%	48	441	3.13	0.000
Pharmacists frequently ask me to clarify the drug therapy objectives for prescribed or my request medications	5.66%	25	12.90%	57	30.09%	133	36.65%	162	14.71%	65	442	3.42	0.000
Pharmacists frequently inform me and my doctor about medications problem properly occurs to me	5.92%	26	12.30%	54	30.07%	132	38.27%	168	13.44%	59	439	3.41	0.000
In my experiences, the pharmacists available to me 24 hr for consultation when I see patients	2.97%	13	10.76%	47	28.38%	124	40.96%	179	16.93%	74	437	3.58	0.000
In my experience, pharmacists appear willing to take personal responsibility for resolving any drug-related problems they discover with cooperative with my doctor	7.74%	34	20.05%	88	33.71%	148	27.11%	119	11.39%	50	439	3.14	0.000
The pharmacist monitors me as patient response to drug therapy and lets me know if a patient encounters any drug-related problem	16.25%	71	21.74%	95	30.21%	132	23.80%	104	8.01%	35	437	2.86	0.000
In my experience, the pharmacist implemented the MOH covid-19 instructions and guidelines	3.19%	14	3.64%	16	26.20%	115	46.47%	204	20.50%	90	439	3.77	0.000
The pharmacist dispense medications through electronic prescribing system	4.12%	18	8.92%	39	33.87%	148	39.36%	172	13.73%	60	437	3.5	0.000
In my experiences, the good quantities of medications available in the pharmacy	2.73%	12	10.25%	45	28.70%	126	44.19%	194	14.12%	62	439	3.57	0.000
The pharmacist participate in education of covid-19 through educational material and software applications	6.38%	28	17.08%	75	32.12%	141	33.71%	148	10.71%	47	439	3.25	0.000
The pharmacist received my medications request by online and mobile application	4.78%	21	7.52%	33	35.31%	155	38.95%	171	13.44%	59	439	3.49	0.000
In my experiences, the pharmacist used home delivery for my medications, medical devices, and instruments	5.95%	26	16.25%	71	35.01%	153	32.72%	143	10.07%	44	437	3.25	0.000
The pharmacist in SFDA guide me about the availability of sanitizer and face mask in the community pharmacies over	5.73%	25	7.80%	34	32.80%	143	40.60%	177	13.07%	57	436	3.47	0.000
Answered												**443**	
Skipped												**18**	

Table 4: Patients Actual Expectations of pharmacist during any other pandemic situation.

	Strongly Disagree		Disagree		Neutral		Agree		Strongly agree		Total	Weighted Average	
The pharmacist in the future had the clinical and administrative privilege as part of pharmacy law	2.98%	13	7.57%	33	27.52%	120	45.87%	200	16.06%	70	436	3.64	0.000
In the future, the pharmacist open to me, especially medications profile to follow up my medications	3.44%	15	5.96%	26	22.71%	99	49.77%	217	18.12%	79	436	3.73	0.000
The pharmacist document any drug related problems in the pharmacy patients profile	3.22%	14	6.44%	28	24.37%	106	47.82%	208	18.16%	79	435	3.71	0.000
In the future, the pharmacist provide vaccines services for adults and geriatrics	6.42%	28	11.70%	51	25.92%	113	38.30%	167	17.66%	77	436	3.49	0.000
The pharmacist implemented the drug therapy guidelines from MOH	1.83%	8	5.73%	25	22.94%	100	48.85%	213	20.64%	90	436	3.81	0.000
The pharmacist follow my situation and medications trough software application	2.52%	11	8.03%	35	26.15%	114	46.33%	202	16.97%	74	436	3.67	0.000
In the future, the pharmacist can make the essential examination	2.08%	9	6.24%	27	22.63%	98	46.42%	201	22.63%	98	433	3.81	0.000
In the future, the pharmacist can make the advances examination (LDL,HDL,TG,INR)	4.36%	19	12.61%	55	29.59%	129	37.61%	164	15.83%	69	436	3.48	0.000
The pharmacist used software applications for education for medications and any pandemic situations	1.83%	8	5.03%	22	20.37%	89	51.03%	223	21.74%	95	437	3.86	0.000
The pharmacist expand their services and will most of my medications request by online and mobile application	1.14%	5	4.12%	18	21.28%	93	52.63%	230	20.82%	91	437	3.88	0.000
In the future, the pharmacist expand the home delivery for my medications, medical devices and instruments free of charge	2.97%	13	7.78%	34	18.31%	80	47.60%	208	23.34%	102	437	3.81	0.000
Answered												**439**	
Skipped												**22**	

pandemic COVID-19 like monitoring drug therapy response that might be linked to insufficient or unviable documentation of medications history, or there was no linking with patient's medications hospital records. The new system of Wasfaty will resolve this problem in the future. Wasfaty is the latest method of community pharmacist distribution medications on behalf of hospital pharmacies from governmental healthcare sectors.[36,37]

Besides, the Wasfaty can solve the other problem of preventing adverse drug reactions and picking the best price for patients. Currently, there are support teams accountable for community pharmacists discussing with physicians or pharmacists any interventions or medication errors. Additionally, the implementation of health insurance might aid the pharmacist set up therapeutic guidelines and a strategic monitoring system of drug therapy.

In the study results, the patients likely several activities from pharmacists in the future. First, the patients wish to enlarge the online requesting of medications by using mobile applications or internet websites. Second, they would like to set up therapeutic guidelines from MOH, which is very supportive in the cost-effective treatment and declining drug-related problems. Third, the patient's wish from pharmacists to deliver vital examinations like checking blood sugar or blood pressure, or cholesterol level, which the MOH allows to deliver by the community pharmacist. Recently, the MOH permits the pharmacist to implement a vaccination program emphasizing COVID-19 vaccines look like the clinical pharmacist role in European countries.[13] The patients are less likely to make advance examinations

Table 5: Factors influencing the perception of Patients Actual Experiences and Expectations of pharmacist (average scores).

		Patients Actual Experiences							Patients Actual Expectations of pharmacist						
	Factors	**N**	**Average scores**	**Std. D**	**Median**	**Lower Bound**	**Upper Bound**	***P*-value**	**N**	**Average scores**	**Std. D**	**Median**	**Lower Bound**	**Upper Bound**	***P*-value**
Region	Central	48	3.3602	.75378	3.3438	3.1413	3.5790	0.000	48	3.7519	.64385	3.7727	3.5649	3.9388	0.016
	North	12	3.1458	.56113	3.1563	2.7893	3.5024		12	3.3939	.84068	3.3636	2.8598	3.9281	
	South	173	3.5770*	.80321	3.6250	3.4564	3.6975		173	3.7994*	.77612	4.0000	3.6829	3.9158	
	East	25	3.2035	.68023	3.1250	2.9227	3.4843		25	3.6349	.68639	3.7273	3.3516	3.9182	
	West	129	3.2969	.57599	3.2500	3.1966	3.3972		129	3.6340*	.60906	3.7273	3.5279	3.7401	
	Total	387							387						
Employment	Employee	136	3.4113	.68850	3.3750	3.2946	3.5281	0.103	135	3.7742	.64292	3.8182	3.6647	3.8836	0.041
	Unemployed	68	3.4480	.79668	3.3875	3.2551	3.6408		68	3.8176	.77306	4.0000	3.6305	4.0048	
	Student	174	3.4738	.67030	3.4375	3.3735	3.5741		171	3.6999	.67255	3.8182	3.5984	3.8015	
	Retried	57	3.2930	.75892	3.2500	3.0916	3.4944		57	3.5946	.71094	3.6000	3.4059	3.7832	
	Not written	4	2.4219	1.00568	2.3750	.8216	4.0221		4	2.5000	1.22980	2.5909	.5431	4.4569	
	Total	439							435						
Age	< 18	18	3.6694	.62624	3.5625	3.3580	3.9809	0.068	18	3.8182	.84414	3.9091	3.4113	4.2250	0.001
	18-24	147	3.5152	.74902	3.5000	3.3932	3.6373		147	3.8247*	.69099	3.9545	3.7182	3.9313	
	25-30	56	3.3650	.74006	3.2500	3.1668	3.5631		56	3.8254	.65579	3.9091	3.6588	3.9919	
	31-35	26	3.3819	.71906	3.3875	3.0915	3.6723		26	3.7806	.53591	3.9091	3.5767	3.9844	
	36-40	29	3.4914	.78822	3.6250	3.1916	3.7912		29	3.8892	.59220	3.9091	3.6757	4.1027	
	41-45	29	3.3125	.56026	3.3750	3.0994	3.5256		29	3.5220	.73742	3.6364	3.2515	3.7925	
	46-50	25	3.1658	.64036	3.2500	2.9015	3.4302		25	3.4471	.77547	3.2727	3.1404	3.7539	
	> 50	57	3.2917	.72967	3.1250	3.0981	3.4853		57	3.4530*	.69981	3.5455	3.2706	3.6354	
	Total	387							387						
Nationality	Saudi	367	3.4152	.72937	3.3750	3.3403	3.4900	0.548	367	3.7103	.70899	3.8182	3.6375	3.7831	0.600
	Non-Saudi	20	3.4938	.66265	3.4375	3.1836	3.8039		20	3.8045	.69000	3.8636	3.4816	4.1275	
	Total	387							387						
Gender	Male	100	3.2678	.76687	3.2500	3.1156	3.4199	0.063	100	3.6034	.77623	3.8182	3.4493	3.7574	0.222
	Female	287	3.4720	.70426	3.3750	3.3902	3.5538		287	3.7541	.67899	3.8182	3.6752	3.8330	
	Total	387							387						
Academic Qualification	Doctorate	18	3.1771	.63675	3.0313	2.8604	3.4937	0.028	18	3.4838	.64591	3.4545	3.1626	3.8050	0.289
	Master	27	3.1667	.64067	3.2500	2.9132	3.4201		27	3.5354	.70793	3.6364	3.2553	3.8154	
	Bachelor	271	3.4174	.72172	3.3750	3.3311	3.5037		271	3.7285	.70706	3.8182	3.6440	3.8131	
	Diploma	20	3.6675	.76945	3.8438	3.3074	4.0276		20	3.7182	.69165	3.8636	3.3945	4.0419	
	High school	43	3.5500	.78165	3.3750	3.3094	3.7906		43	3.8349	.72816	4.0000	3.6108	4.0590	
	Intermediate School	8	3.5547	.67185	3.2813	2.9930	4.1164		8	3.7386	.77663	3.6818	3.0894	4.3879	
	Total	387							387						
Income	< 3,000 SR	179	3.5262	.73539	3.5000	3.4178	3.6347	0.015	179	3.8465	.69236	4.0000	3.7444	3.9486	0.000
	3,001-6,000	29	3.3211	.60682	3.2500	3.0903	3.5519		29	3.5799	.62580	3.7273	3.3419	3.8180	
	6,001-9,000	29	3.4103	.70443	3.3125	3.1424	3.6783		29	3.5442	.61402	3.6364	3.3106	3.7778	
	9,001-12,000	42	3.4003	.71515	3.4063	3.1774	3.6232		42	3.5742	.66083	3.7273	3.3683	3.7802	
	12.001-15,000	44	3.4067	.81044	3.4063	3.1603	3.6531		44	3.8860	.74685	3.8636	3.6589	4.1130	
	15,001-18,000	22	3.1989	.69078	3.1875	2.8926	3.5051		22	3.5992	.65053	3.6364	3.3107	3.8876	
	18,001-21,000	17	3.0515	.69850	2.8750	2.6923	3.4106		17	3.4599	.78102	3.7273	3.0583	3.8615	
	>21,000 SR	25	3.2750	.62656	3.0625	3.0164	3.5336		25	3.3418*	.77285	3.4545	3.0228	3.6608	
	Total	387							387						
Are you from a health care professional	Yes	106	3.4474	.77618	3.5000	3.2979	3.5969	0.402	106	3.7035	.75187	3.8636	3.5587	3.8483	0.799
	No	281	3.4086	.70658	3.3125	3.3256	3.4916		281	3.7196	.69131	3.8182	3.6384	3.8008	
	Total	387							387						

Table 6: Multiple regression of Factors with the Patients Actual Experiences of pharmacist during COVID-19.

Model		R	R Square	F	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
						B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.211[b]	.045	2.236	.024[b]	2.988	0.333		8.986	0.000	2.334	3.642		
	Location					-0.027	0.030	-0.049	-0.912	0.362	-0.086	0.031	0.861	1.162
	Site of work					0.017	0.035	0.026	0.482	0.630	-0.052	0.085	0.848	1.179
	Age (years)					-0.020	0.023	-0.064	-0.859	0.391	-0.065	0.026	0.454	2.202
	Nationality					0.066	0.169	0.020	0.389	0.697	-0.266	0.398	0.944	1.059
	Gender					0.163	0.086	0.099	1.884	0.060	-0.007	0.333	0.898	1.114
	Educational level					0.071	0.042	0.093	1.673	0.095	-0.012	0.154	0.801	1.248
	Monthly income					-0.011	0.023	-0.035	-0.485	0.628	-0.056	0.034	0.468	2.137
	Are you from a health care professional					0.014	0.086	0.009	0.165	0.869	-0.156	0.184	0.874	1.144

a. Dependent Variable: Patients Actual Experiences, Predictors: (Constant), Location, Site of work, Age, Nationality, Gender, Educational level, Monthly income, Are you from the health care professional (Medical Doctor- Dentist- Pharmacist- Nurse- Others),

Bootstrap for Coefficients							
Model		B	Bootstrap[a]				
			Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
						Lower	Upper
1	(Constant)	2.988	-0.025	0.333	0.001	2.290	3.607
	Location	-0.027	0.002	0.031	0.356	-0.084	0.035
	Site of work	0.017	0.000	0.036	0.630	-0.054	0.088
	Age (years)	-0.020	-0.002	0.024	0.396	-0.069	0.025
	Nationality	0.066	0.007	0.163	0.677	-0.249	0.407
	Gender	0.163	0.001	0.089	0.075	-0.014	0.344
	Educational level	0.071	0.001	0.043	0.099	-0.014	0.160
	Monthly income	-0.011	0.001	0.023	0.627	-0.054	0.036
	Are you from a health care professional	0.014	0.007	0.094	0.867	-0.168	0.202

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

or prescribe medications, and this is normal because the patients think that's physicians' job or might need numerous equipment to resemble earlier studies.[22] The patients might be fried to let the pharmacist provide vaccines or prescribe medications not regularly found in local or Gulf countries.[13,38-41] Further, public information and education with the new job of pharmacists can deliver through community pharmacy is recommended in Saudi Arabia.

Numerous factors might touch the patient's experiences or expectations of pharmacists during pandemic situations COVID-19. Factors comprise location, employment, age, nationality, gender, academic qualifications, monthly income, and public or healthcare. There are no factors with non-statistically significant differences moving the patient's experiences or expectations of pharmacists during pandemic situations COVID-19. There is not any difference between public or healthcare professionals. The only south region had more positive involvements and expectations of pharmacists without a known reason. Moreover, age factor with age (18-24 years) had more positive expectations of pharmacists than others might relate more communication and ask drug information to the pharmacists.

The patient's experiences during pandemic COVID-19 was decent and more implementation of new community pharmacy are highly suggested in the Kingdom of Saudi Arabia.

Limitations

Although informatics as information had been discovered from the existing study, various limitations encompassed the responder's unequal distribution in the locations, employment, age, gender, academic qualifications, monthly income, the age levels came from female and a young age with student qualifications. Further studies are mandatory with equal distribution of preceding elements.

CONCLUSION

The public's experiences and expectations of pharmacists during COVID-19 were positive. There were no differences between public or healthcare providers in the awareness between pharmacists' experiences and expectations. There are no factors that mark the responder's patient's experiences and the pharmacist expectations. More pharmacist involvement through setting therapeutic guidelines and close monitoring of drug-related problems during the pandemic situation is obligatory in the future.

Table 7: Multiple regression of Factors with the Patients Actual Expectations of pharmacist during any other pandemic situation.

Model		R	R Square	F	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
						B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.217[b]	0.047	2.349	.018[b]	3.460	0.324		10.668	0.000	2.823	4.098		
	Location					-0.006	0.029	-0.011	-0.195	0.845	-0.063	0.051	0.862	1.160
	Site of work					-0.004	0.034	-0.006	-0.113	0.910	-0.071	0.063	0.849	1.178
	Age (years)					-0.050	0.023	-0.165	-2.223	0.027	-0.094	-0.006	0.457	2.190
	Nationality					0.104	0.165	0.033	0.631	0.529	-0.220	0.427	0.943	1.060
	Gender					0.111	0.085	0.069	1.304	0.193	-0.056	0.277	0.901	1.109
	Educational level					0.016	0.041	0.022	0.390	0.697	-0.065	0.097	0.803	1.246
	Monthly income					-0.011	0.022	-0.036	-0.498	0.619	-0.055	0.033	0.470	2.128
	Are you from a health care professional					0.094	0.085	0.060	1.118	0.264	-0.072	0.261	0.875	1.143

a. Dependent Variable: Patients Actual Expectations of pharmacist, Predictors: (Constant), Location, Site of work, Age, Nationality, Gender, Educational level, Monthly income, Are you from the health care professional (Medical Doctor- Dentist- Pharmacist- Nurse- Others),

Bootstrap for Coefficients							
Model		B	Bootstrap[a]				
			Bias	Std. Error	Sig. (2-tailed)	95% Confidence Interval	
						Lower	Upper
1	(Constant)	3.460	0.011	0.348	0.001	2.758	4.161
	Location	-0.006	-0.001	0.026	0.822	-0.056	0.046
	Site of work	-0.004	-0.001	0.035	0.900	-0.076	0.063
	Age (years)	-0.050	0.000	0.025	0.044	-0.098	0.000
	Nationality	0.104	-0.002	0.168	0.516	-0.230	0.429
	Gender	0.111	0.000	0.090	0.221	-0.067	0.286
	Educational level	0.016	0.001	0.042	0.710	-0.069	0.099
	Monthly income	-0.011	0.000	0.023	0.616	-0.060	0.034
	Are you from a health care professional	0.094	-0.003	0.088	0.292	-0.080	0.267

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

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CONFLICT OF INTEREST

The Authors declare that there is no Conflict of Interest

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Consent for Publications

Informed consent was obtained from all the participants

Ethical Approval

This research was exempted from research and ethical committee or an institutional review board (IRB) approval. https://www.hhs.gov/ohrp/regulations-and-policy/decision-charts-2018/index.html

ABBREVIATIONS

MOH: Ministry of Health; **KSA:** Kingdom of Saudi Arabia; **COVID-19:** Coronavirus; **SPSS:** Statistical Package of Social Sciences; **JASP:** Jeffery's Amazing Statistics Program; **Strobe:** Strengthening the reporting of observational studies in epidemiology statement: guidelines for reporting observational studies; **SFDA:** Saudi Food and Drug Authority; **CBAHI:** Saudi Central Board for Accreditation of Healthcare Institutions.

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