

# Community Pharmacists' Attitude and Practice in Providing Personal Care Products Services: A Comparison between Southern and Eastern Regions of Saudi Arabia

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**Abstract Background:** Cosmetics and Personal care products are substances used to improve human appearance. Community pharmacists play essential roles in dispensing and counseling. **Objective:** The study aimed to compare the attitudes and practices of community pharmacists in the Southern and Eastern regions of Saudi Arabia regarding personal care products services. **Method:** A cross-sectional study was conducted between September 2019 and March 2020. Community pharmacists from the Southern and Eastern regions of Saudi Arabia responded to an online survey. **Results:** Two hundred and two community pharmacists from the Southern and one hundred and six from the Eastern regions have completed the questionnaire. Most of the respondents in both areas were males (96% & 99%, respectively). Most of them were aged between 23 and 35 years old (91% & 83%, respectively). The number of non-Saudi pharmacists was slightly higher in the Eastern region (97%) is compared with the Southern part (91%).

The responses of pharmacists from the two areas were comparable. More than (40%) of participating pharmacists in both regions have six to ten years of experience. More than (98%) communicate directly with customers. More than half of pharmacists serve approximately one hundred customers daily (51.89 in eastern and 57.92 in southern). Pharmacists from Eastern regions spend more time counseling than their counterparts. They were more likely to agree that their customers were willing to listen to counseling about their products. However, a higher proportion of them reported workload as a barrier for counseling (34.9% versus 23.76%). Most pharmacists from both regions strongly agree that they must keep developing their communication skills with customers/patients. **Conclusion:** Community pharmacists in both Eastern and Southern regions have comparable good practices about personal care products. It is essential to continue the development of both educational and communication methods.

**Keywords** Community Pharmacists, Cosmetic, Personal Care, Attitude, Practice

## 1. Introduction

Worldwide, most of pharmacists working in the community practice settings have a diploma degree or graduated with B. Pharm. Degrees [1]. Pharmacists are midway between doctors and the patients as they provide them free medical advice and medicines without an appointment and for some consumers, pharmacists can be the first point of contact [2, 4].

For healthcare and patients, community pharmacists are valued information resource [3]. They can play a significant role in increasing medication compliance, so helping decreasing morbidity, mortality, and economic burden on the society [2, 4].

An essential role of community pharmacists is to provide counseling; that is why communication skills are essential in achieving the leading ethical role in maintaining the privacy and health of every patient. Thus, pharmacist-patient communication is the cornerstone in the success and effectiveness of consultation and the reinforcement of the pharmacist career efficiency [2, 4].

The role of community pharmacists is to enable customers to enhance their drug use for safe and active pharmacotherapy use through their knowledge and skills. Thus, they can improve patients' prognosis and health-related quality of life (HRQOL) [5]. Of the non-traditional services the community pharmacists can provide are counseling, and health education for disease prevention [6].

As stated by the World Health Organization (WHO), "when the right medicines are given to patients in suitable doses, for the passable duration, at the lowest price, this is called as the "rational use of drugs" [7]. In the kingdom of Saudi Arabia (KSA), the Ministry of Health (MOH), educating and training more Saudi health care providers locally and through funded scholarships as an effort exerted to increase the Saudi national health workforce including pharmacists and pharmacy technicians [8].

Pharmacists can have a crucial role to solve the problem of patients' non-compliance and adherence to treatments through upgrading their pharmaceutical care practices and through the engagement of the customers in easing the patient-physician communication, counseling, deciding drug-related complications, and monitoring [9].

Of the consumer marketer's critical fields, the cosmetic products [10]. The cosmetic was defined by (FDA) as a product (excluding pure soap) applied to the body to cleanse, beautify, promote, attract, or alter the appearance [11], whereas any consumer good used to wash, change, or improve the body appearance is called "personal care product". Personal care could be a drug (acne medicines

gargles, steroid ointments, lip balms, hand antiseptics, and cleansers, etc.), or a cosmetic as (makeup, lotions, fragrance, etc.) [12]. Nowadays, many of these products are present from the various manufacturers and of different qualities [13].

Compared to the Arab world, West, and Gulf region, Saudi women spend more on makeup in KSA. It was found that continued cosmetics use has many side effects as fungal infections, dry eye, hair loss, faintness, and an impact on the reproductive health [14]. However, previous studies have found that cosmetic products can be a possible way of toxic metals access to the body [13]. Many chemical compounds are added to cosmetic products as preservatives and perfumes. Some of these additives are toxic, and their use is forbidden as it can cause reproductive toxicity, endocrine, cancer, and genetic disorders [15].

A Knowledge, attitude, and practice (KAP) survey is a study that targets a specific population to collect data on what is known, believed and done concerning a health topic [16].

In KSA, community pharmacists are allowed to dispense over the counter medications besides medical devices, cosmetics, and personal care products without restrictions. The community pharmacies are well equipped with all facilities helping in providing counseling services effectively including plenty of spaces and presence of private areas. The size and the structure of the community pharmacies and the available policies are all supportive of pharmacists to play an effective role to promote patients' self-care. What is needed to complete the required setup is the readiness of pharmacists themselves.

### Problem statement:

Despite the importance of having personal care products controlled and having their use rationalized, it appears that there are some gaps in the completeness and quality of services provided by community pharmacists regarding counseling and educational activities provided to the users of those products. To our knowledge, no studies were conducted before in Saudi Arabia to assess the community pharmacists' knowledge and attitude towards providing counseling and assistance services to the public to control and rationalize the use of personal care products. Assessing the service provided by community pharmacists and knowing the strengths and limitations in this area provide the bases for further improvement and sustainability.

### Research questions:

The present study was aiming at answering the following questions: what would be the awareness level and the attitude of community pharmacists in Saudi Arabia towards their role in personal care products and what is the quality of service provided by them to the customers and would there be differences in the presence

and quality of this service by different geographical regions?

## 2. Objective

To assess the knowledge, attitude, and practice of community pharmacists towards providing personal care products service in Saudi Arabia. To assess the presence of any differences in such service by geographic regions we recruited samples from the southern and eastern regions of Saudi Arabia and compared the responses provided by pharmacists.

## 3. Method

A cross-sectional study was conducted between September 2019 and March 2020. The sample population was from community pharmacists from the Southern and Eastern regions of Saudi Arabia and the distribution and response process followed an online survey.

### Inclusion criteria

It comprises of all community pharmacists from the Southern and Eastern regions of Saudi Arabia. In this study, Saudi and non-Saudi in both genders, who are between 23-60 years and who have a license from the Saudi Commission for Health Specialties, were included.

### Study procedure

An online questionnaire that consisted of three parts was used. These parts included items on demographic characteristics, attitude, and practice—each section contained 10 to 15 questions. The questionnaire was developed specifically for the purpose of this study; however, most of questions items were compiled from the literature. The questionnaire was written in Arabic and English and reviewed by two experts from the College of Pharmacy, Taif University to be validated for face and contents. After receiving their feedback, the questionnaire items have been edited and finalized by a final check from them. A pilot study was tested on 50 community pharmacists from the same age group to ensure its validity. The aim of pilot testing was to check for suitability, length, absence of ambiguity, or difficulty to fill responses by

pharmacists.

### Ethical considerations

The research ethics committee of Taif University approved this study (reference number 41-35-0028). Before participating in the study, informed consent was obtained from all participants. Participants were told that participation is voluntary and that data will be treated anonymously.

### Statistical considerations and data analysis

The collected data entered, processed, and analyzed using Excel program and Statistical packages for Social Sciences software, analyzed demographic characteristics based on descriptive statistics. To determine practices and attitudes towards providing personal care products services from southern and eastern regions of Saudi Arabia used a Friedman test, pairwise comparison test, and Wilcoxon test.

## 4. Results

### Demographic characteristics

Two hundred and two community pharmacists from the southern region and one hundred and six from the eastern region completed the questionnaires: a total of 308 respondents. According to age, most were between 23-34 years; 91.09% and 83.02% respectively. Besides, based on their gender, most were male and non-Saudi represented by 99.06% and 97.17% in the eastern region compared to 96.53% and 91.09% in the southern region. There was a higher percentage of community pharmacists holding a bachelor's degree in the southern region than in the eastern region, represented by 90.59% against 86.79%.

Most participants from both regions worked in a chain pharmacy 99% while 97% were working with a full-time job. In comparison, there was a higher percentage of community pharmacists in the Southern region who work in shifts; 95%. More than 40% of participants in both areas have from 6-10 years' experience; 48.11% and 43.07% in the eastern and southern regions and were satisfied with their work 46.23% against 44.55%, respectively (Table 1).

**Table 1.** Distribution of the participants according to their Demographic characteristics:

Characteristics		Eastern		Southern	
		N	%	N	%
Age	23-35 years	88	83.02	184	91.09
	23-44 years	17	16.04	18	8.91
	45-54 years	1	0.94	0	0.00
Gender	Female	1	0.94	7	3.47
	Male	105	99.06	195	96.53
Nationality	Saudi	3	2.83	18	8.91
	Non-Saudi	103	97.17	184	91.09
Work location	In a city	106	100.00	147	72.77
	In a village	0	0.00	55	27.23
Highest qualification	Bachelor	92	86.79	183	90.59
	Master	1	0.94	2	0.99
	Pharm .D	13	12.26	16	7.92
	Diploma	0	0.00	1	0.50
Years of experience	<2 years	2	1.89	17	8.42
	2-5 years	26	24.53	76	37.62
	6-10 years	51	48.11	87	43.07
	>10 years	27	25.47	22	10.89
Job satisfaction rate	Very unsatisfied	1	0.94	2	0.99
	Unsatisfied	2	1.89	9	4.46
	Fair	19	17.23	34	16.83
	Satisfied	49	46.23	90	44.55
	Very satisfied	35	33.02	67	33.17

**Knowledge regarding personal care products**

**Table 2.** Knowledge of the respondents in eastern and southern regions:

Characteristics		Eastern		Southern	
		N	%	N	%
How do you rate your knowledge about cosmetics and personal care products?	Fair	1	0.94	5	2.48
	Good	17	16.04	22	10.89
	Very good	67	63.21	124	61.25
	Excellent	21	19.81	51	25.25
Have you ever taken any courses about cosmetics and personal care products?	No	26	24.53	57	28.22
	Yes	80	75.47	145	71.78
How many cosmetics courses have you got?	0	0	0.00	1	0.69
	1	11	13.75	32	22.07
	2 to 3	20	25.00	42	28.97
	4 to 5	7	8.75	21	14.48
	> 5	42	52.50	49	33.79

More than 60% of participating pharmacists have very good knowledge about cosmetics and personal care products in both regions; 63.21% and 61.25%. Besides, 52.50% from eastern and 33.79% from southern had taken

more than five courses about cosmetics and personal care products.

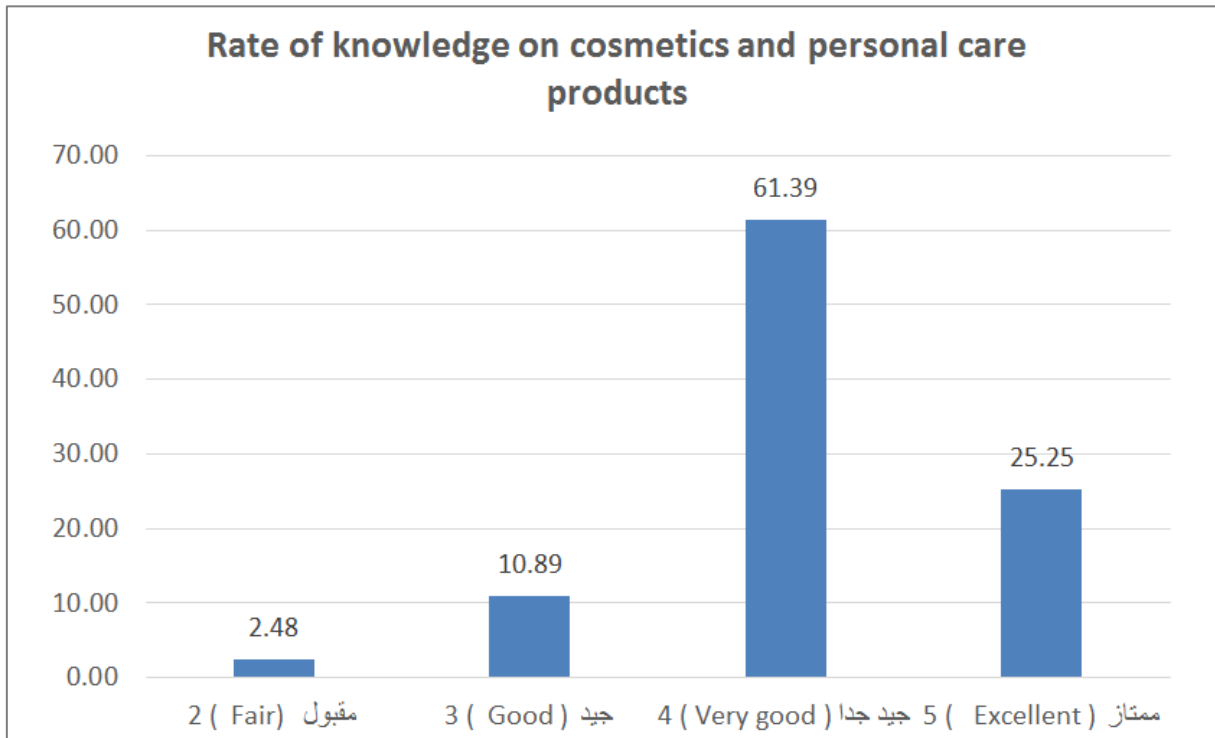
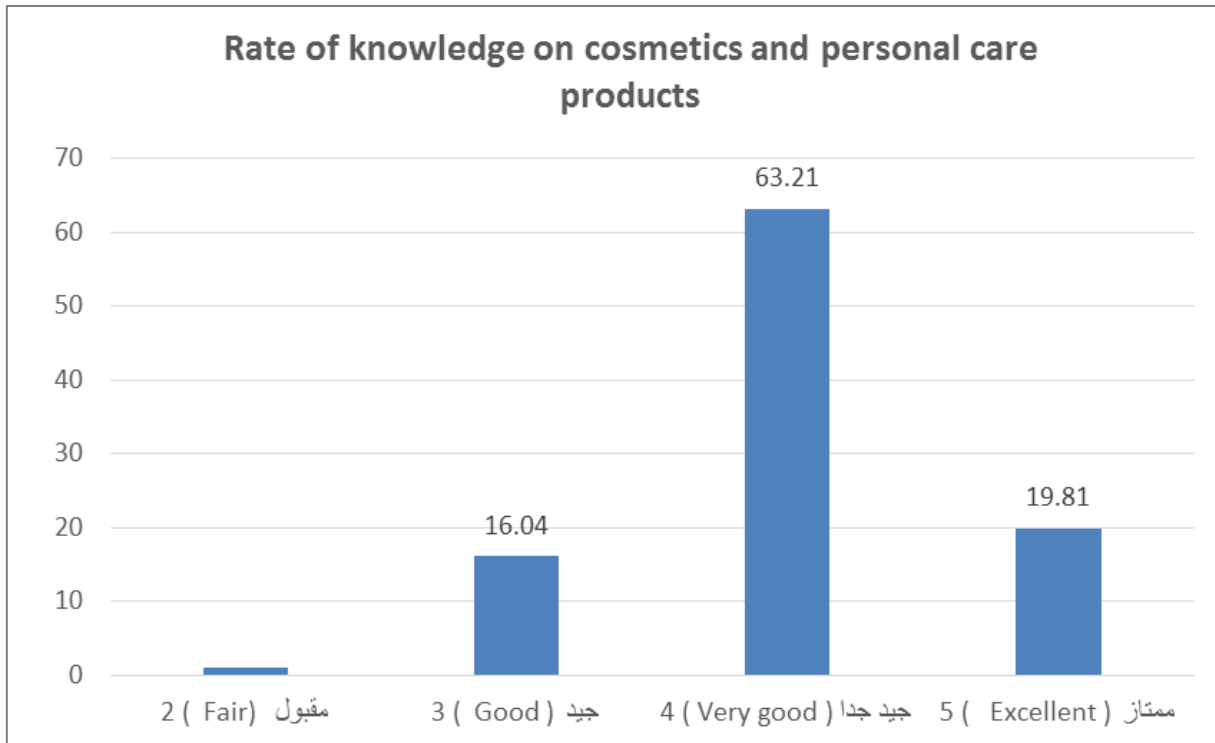
Some pharmacists in eastern and southern can update their knowledge by the courses and conferences attending

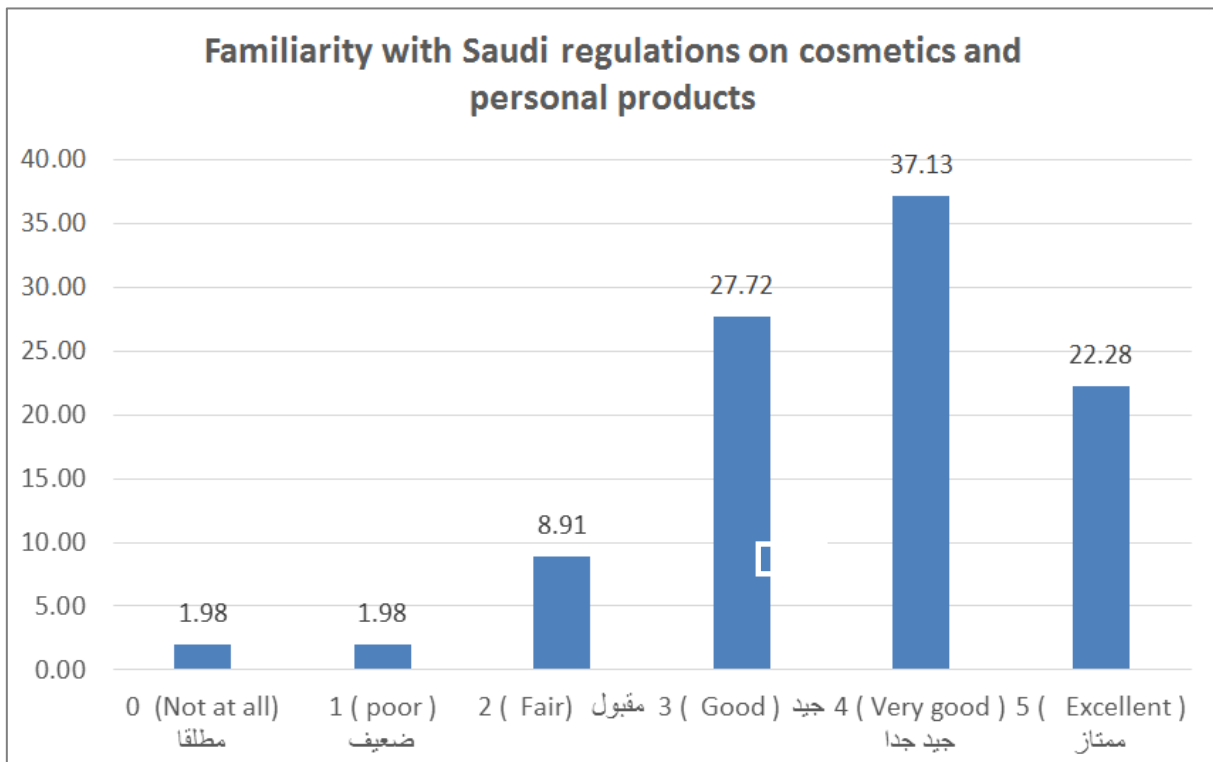
and newsletters 25% and 18%, respectively.

Almost half of the pharmacists in both regions reported that the most selling products are associated with skin care. The customers preferred appropriate prices and physician/pharmacist recommendations based on the average number of repeat purchases per purchaser; 12% in

the eastern and 9% in the southern regions.

There were more than 30% of pharmacists in both regions familiar with the Saudi food and drug authority regulation of cosmetic and personal care products (Table 2).





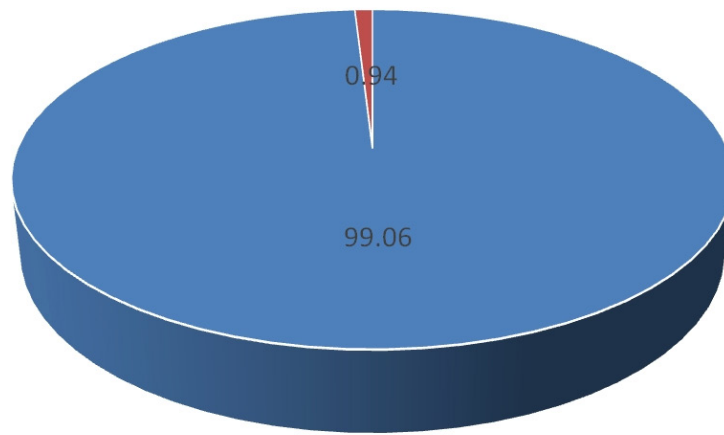
**Attitudes and practices about providing personal care products services:****Table 3.** Attitudes and practices of the respondents in the eastern and southern regions in SA

Characteristics		Eastern		Southern	
		N	%	N	%
How do you communicate with customers/ patients?	Direct face to face	105	99.06	198	98.02
	Indirect Telephone etc	1	0.94	2	0.99
	No communication	0	0.00	2	0.99
How many customers/ patients do you serve daily?	Less than 50	6	5.66	23	11.39
	50-100	45	42.45	62	30.69
	More than 100	55	51.89	117	57.92
From the previous question, how many of them ask for cosmetic and personal care products?	Less than 10	17	16.04	16	7.92
	10 to 15	28	26.42	51	25.25
	16 to 20	28	26.42	51	25.25
	More than 20	41	38.68	90	44.55
How long do you spend in counseling for each customer/patient?	Less than 10 min	53	50.00	147	72.77
	10-15 min	47	44.34	2	0.99
	16-30 min	4	3.77	4	1.98
	31-45 min	1	0.94	2	0.99
	More than 45 min	1	0.94	2	0.99
Do you ask the customers/patients if they have sensitivity from any components in the products?	No	12	11.32	25	12.38
	Yes	94	88.68	177	87.62
Do you use generic names, brand names, or both during the dispensing process?	Both	88	83.02	164	81.19
	Brand name	14	13.21	25	12.38
	Generic name	4	3.77	13	6.44
Do you support the idea of selling cosmetics and personal care products in other places than community pharmacies?	Strongly disagree	61	57.55	115	56.93
	Disagree	19	17.92	28	13.86
	Natural	15	14.15	30	14.85
	Agree	5	4.72	12	5.94
	Strongly agree	6	5.66	17	8.42

In the eastern region, 99% of the community pharmacists communicate directly; (face-to-face) with more than 100 customers or patients daily; 51.89%) while in the southern region, 98% with more than 100 customers or patients daily; 57%. More than 20 customers ask for cosmetic and personal care products; 38% in the eastern while 44% in the southern. Also, 50 percent of pharmacists spend less than 10 minutes in counseling each customer in the eastern while in the southern, it is 72%. Additionally, less time and workload are cited as the most common barriers to proper counseling; 34% in the eastern and 23% in the southern region.

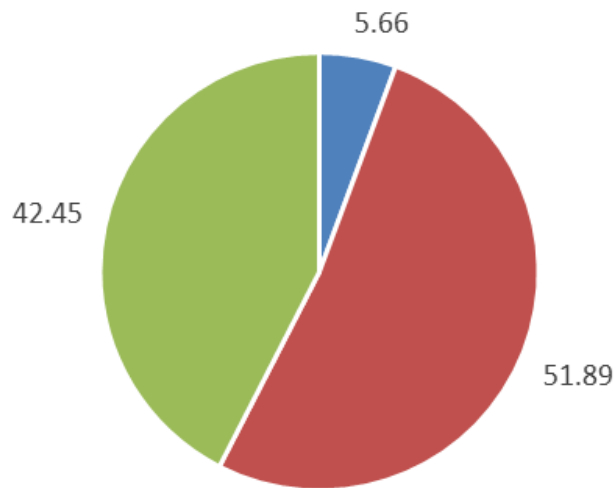
Besides, 88.68 percent of the community pharmacists in the eastern region ask customers or patients about their sensitivity towards components in the products before the counseling while in the southern, it is 87.62%. Further, in the eastern region, 83 percent of pharmacists use both brand and generic names of products compared to 81% in the southern. More than 57% of the pharmacists from the eastern region strongly disagreed with selling cosmetics and personal care products in other places compared to 56% from the southern part. Similarly, more than 70% of pharmacists know that they have to keep in developing their communication skills with customers/patients. (Table 3).

### Communication with Customers/Patients



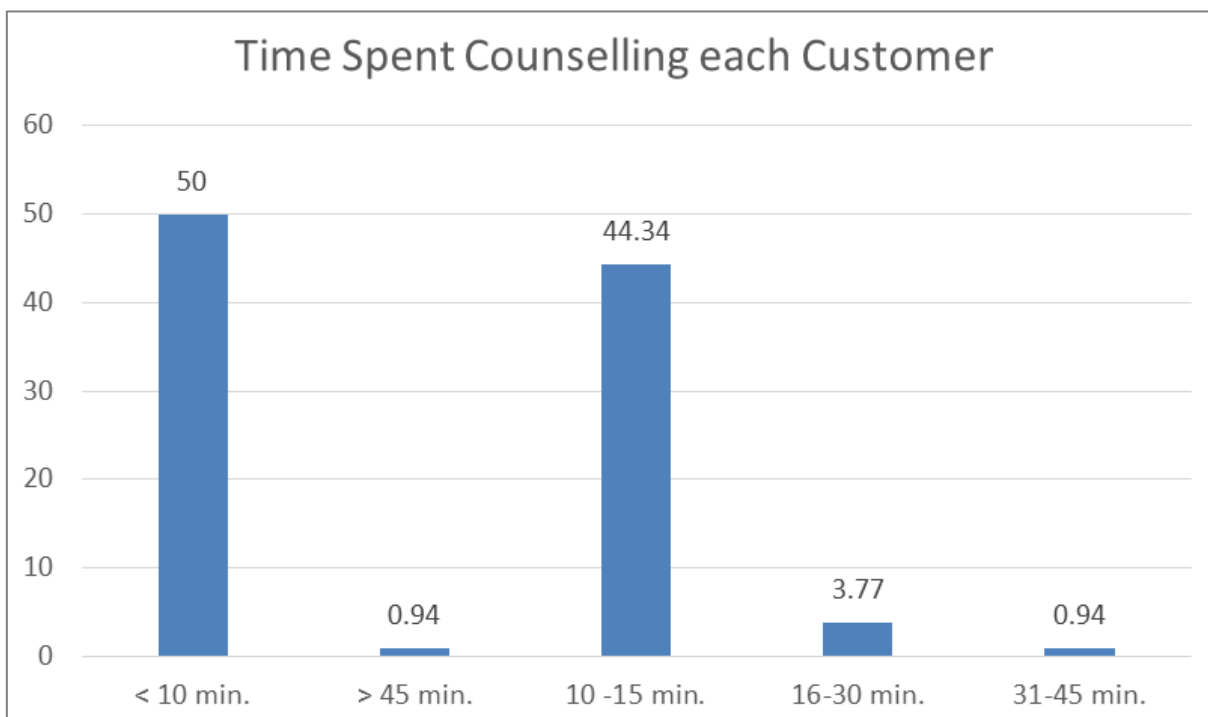
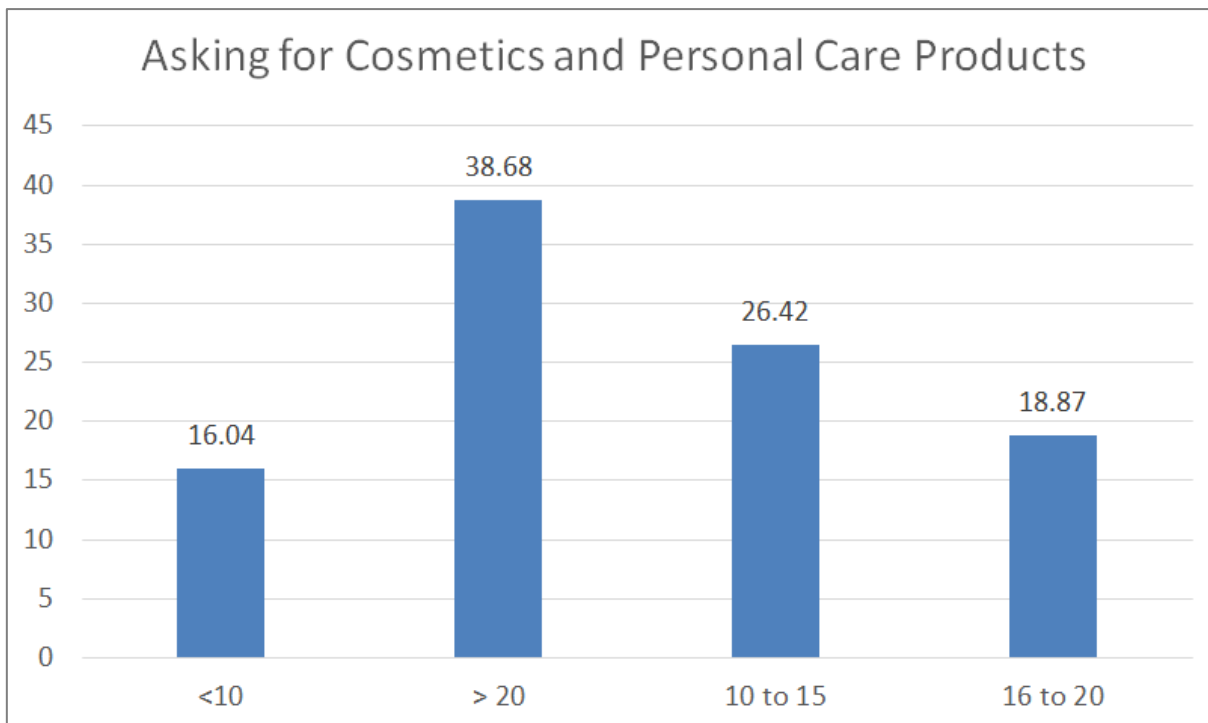
- مباشر وجها لوجه ( Direct Face to face )
- غير مباشر ( Indirect Telephone - Email - medical brochures )

### Patients Served Daily

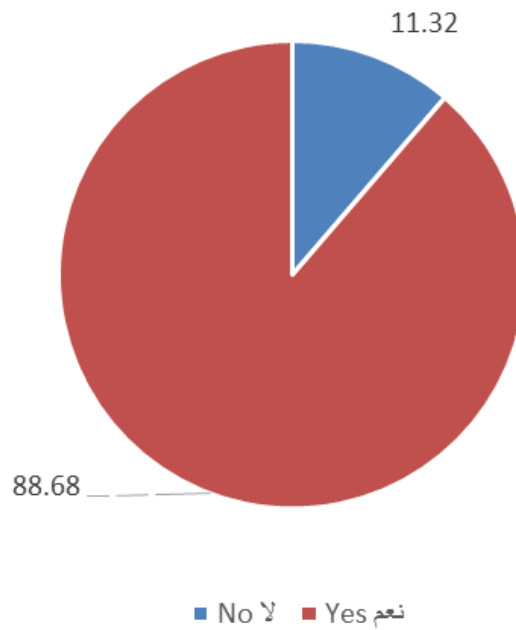


- < 50
- > 100
- 50 - 100

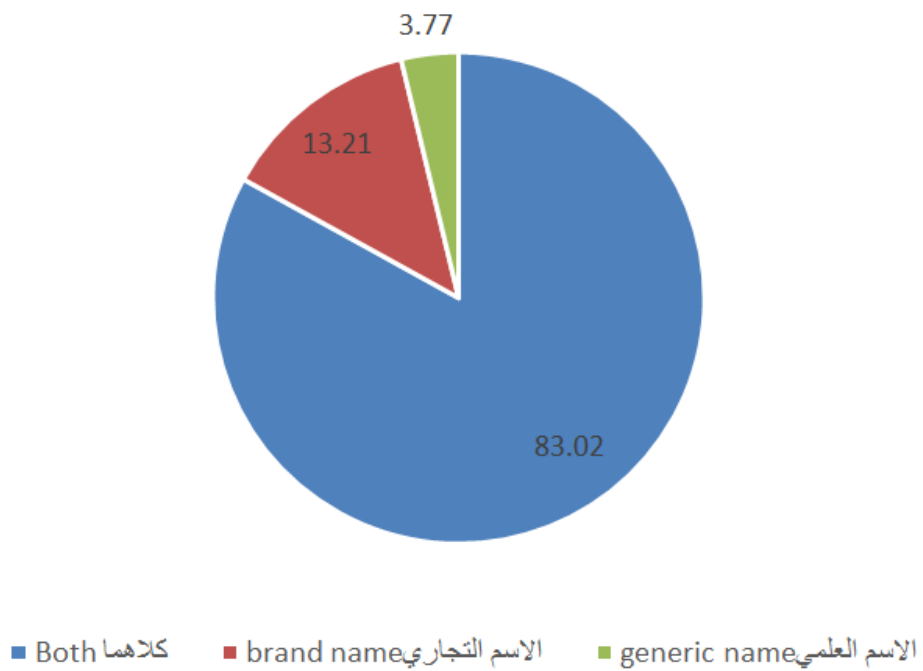


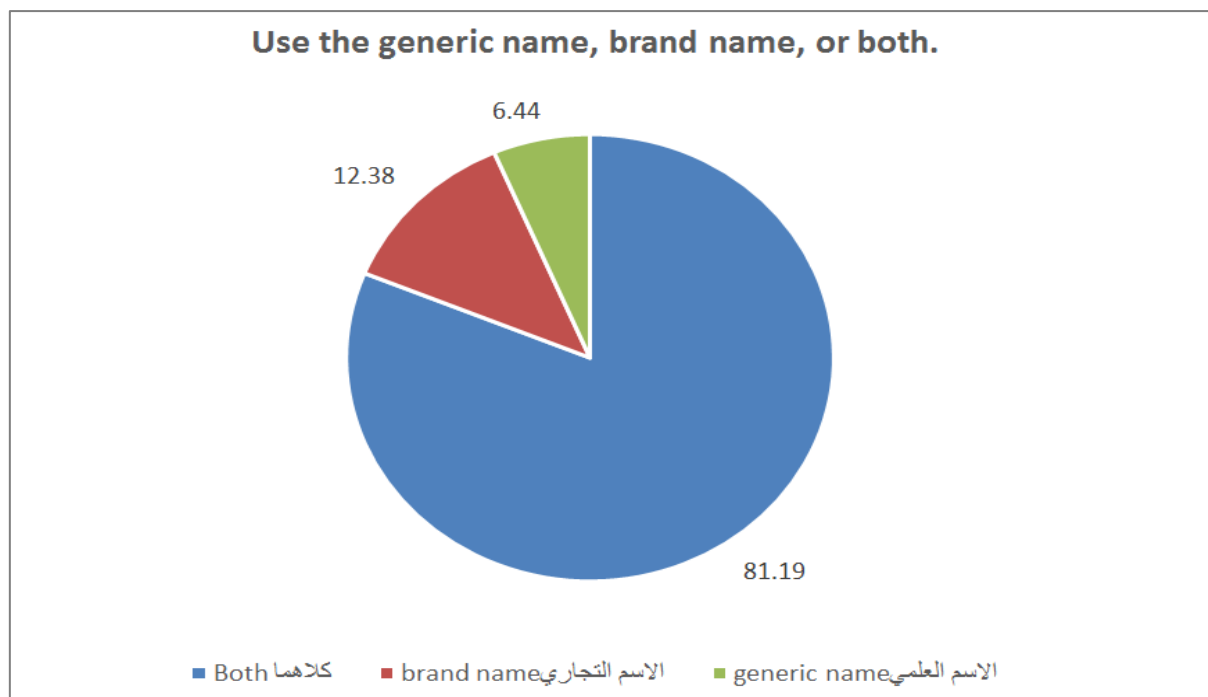


### Customers' sensitivity in the products



### Use generic name, brand name, or both





### Friedman Test

**Table 4.** The practices and attitudes of community pharmacists in the eastern and southern regions indication by Friedman test.

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
15. How would you rate your job satisfaction?	1228	3.91	0.936	1	5
32. Do you support the idea of selling cosmetics and personal care products in other places than community pharmacies?	1228	2.02	1.275	1	5
33. Pharmacists must keep in developing their communication skills with customers/patients?	1228	4.62	0.892	1	5
34. Are Customers / patients willing to listen to the counseling about their products?	1228	3.95	0.950	1	5

Ranks	
	Mean Rank
15. How would you rate your job satisfaction	2.59
32. Do you support the idea of selling cosmetics and personal care products in other places than community pharmacies	1.39
33. Pharmacists must keep in developing their communication skills with customers/patients	3.37
34. Are Customers / patients willing to listen to the counseling about their products	2.64

Test Statistics <sup>a</sup>	
N	1228
Chi-Square	1843.651
df	3
Asymp. Sig.	0.000

a. Friedman Test

In table 4, the Friedman test indicated that the practices and attitudes of community pharmacists in the eastern and southern regions were rated different with  $\chi^2(3) = 1843.651, p = 0.000$ . Since the sample size is large enough for the statistical analysis, it is right to conclude that community pharmacists have a very good attitude and practice when providing personal care products services in Saudi Arabia.

Since the group sizes for the eastern and southern regions' respondents were different, the Hochberg's GT2 Post hoc test was used. The results are indicated in table 5.

The p-value resulted as  $<0.05$  implying that the means for both groups of data sets were significant. Ultimately, the practice and attitude of community pharmacists in the eastern and southern regions of Saudi Arabia collectively indicated that they are very good and satisfied at their job (Table 6) (Table 7)

**Pairwise Comparison Test**

**Table 5.** Hochberg's GT2 Post hoc test

One-Way ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
<b>15. How would you rate your job satisfaction?</b>	<b>Between Groups</b>	37.051	4	9.263	10.933	0.000
	<b>Within Groups</b>	1038.649	1226	0.847		
	<b>Total</b>	1075.699	1230			
<b>33. Pharmacists must keep in developing their communication skills with customers/patients</b>	<b>Between Groups</b>	169.355	4	42.339	64.146	0.000
	<b>Within Groups</b>	807.225	1223	0.660		
	<b>Total</b>	976.580	1227			

**Table 6.** Community pharmacists job satisfaction

15. How would you rate your job satisfaction?			
Hochberg <sup>a,b</sup>			
34. Are Customers / patients willing to listen to the counseling about their products	N	Subset for alpha = 0.05	
		1	2
<b>2</b>	63	3.57	
<b>1</b>	12	3.67	3.67
<b>3</b>	333	3.73	3.73
<b>4</b>	395	3.91	3.91
<b>5</b>	428		4.12
<b>Sig.</b>		0.549	0.168
Means for groups in homogeneous subsets are displayed.			
a. Uses Harmonic Mean Sample Size = 46.695.			
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.			

**Table 7.** Communication skills with customers/patients

Pharmacists must keep in developing their communication skills with customers/patients				
Hochberg <sup>a,b</sup>				
34. Are Customers / patients willing to listen to the counseling about their products	N	Subset for alpha = 0.05		
		1	2	3
<b>1</b>	11	2.45		
<b>2</b>	63		3.49	
<b>3</b>	332			4.51
<b>4</b>	394			4.64
<b>5</b>	428			4.90
<b>Sig.</b>		1.000	1.000	0.223
Means for groups in homogeneous subsets are displayed.				
a. Uses Harmonic Mean Sample Size = 43.604.				
b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.				

**Table 8.** Wilcoxon Test

Ranks				
		N	Mean Rank	Sum of Ranks
<b>34. Are Customers / patients willing to listen to the counseling about their products</b> - 22.What are the most popular selling products by customers /patients?(You can order products from bestseller 1 to leastseller 4) [Skin care products	<b>Negative Ranks</b>	85 <sup>a</sup>	219.92	18693.50
	<b>Positive Ranks</b>	976 <sup>b</sup>	558.09	544697.50
	<b>Ties</b>	170 <sup>c</sup>		
	<b>Total</b>	1231		
a. 34. Are Customers / patients willing to listen to the counseling about their products .What are the most popular selling products by customers /patients?(You can order products from bestseller 1 to leastseller 4 ) [Skin care				
b. 34. Are Customers / patients willing to listen to the counseling about their products .What are the most popular selling products by customers /patients?(You can order products from bestseller 1 to leastseller 4 ) [Skin care products				
c. 34. Are Customers / patients willing to listen to the counseling about their products 22.What are the most popular selling products by customers /patients?(You can order products from bestseller 1 to leastseller 4 ) [Skin care products				

### Wilcoxon Test

Ranks table 8 indicates that 85 respondents had a higher rate of interacting with customers/patients for voluntary counselling. Similarly, 976 responses indicated that the most popular or bestseller product was for skin care.

The Test Statistics table (table 9) helps us in identifying

the level of customer/patient willingness for counselling about a certain product. Since the Asymp. Sig. (2-tailed) is equal to 0.00; the p-value for the test, the Z statistic is -26.575 meaning that t is statistically significant. Therefore, the attitude and practice of community pharmacists in both the eastern and southern regions of Saudi Arabia are highly acceptable by customers/patients.

**Table 9.** The Test Statistics table to identifying the level of customer/patient willingness for counselling about a certain product

Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
22.What are the most popular selling products by customers /patients ?(You can order products from bestseller 1 to leastseller 4 ) [Skin care products	1236	2.14	1.211	1	4
34. Are Customers / patients willing to listen to the counseling about their products	1231	3.95	0.953	1	5

Test Statistics <sup>a</sup>	
	34. Are Customers / patients willing to listen to the counseling about their products 22.What are the most popular selling products by customers /patients ?(You can order products from bestseller 1 to leastseller 4 ) [Skin care products
<b>Z</b>	-26.575 <sup>b</sup>
<b>Asymp. Sig. (2-tailed)</b>	0.000
a. Wilcoxon Signed Ranks Test	
b. Based on negative ranks.	

## 5. Discussion

According to a careful literature review, no previous study was done in KSA to investigate community pharmacists' KAP towards providing counseling on personal care products.

The present study revealed that about (60%) of the participants had an outstanding knowledge level regarding cosmetics and personal care products in both studied KSA regions. At the same time, (75%) and (71%) reported taking courses about cosmetics and personal care products in the eastern and southern regions, respectively.

Rasheeda *et al.* conducted a review study and observed insufficient knowledge and attitude to provide quality patient-centered care services of most of the studied community pharmacists in KSA [13].

Amienet did another study, *et al.* that the reported community pharmacists practice easy gained through years of the traditional provision of medication to a larger number of customers and their involvement in health care that is appreciated by the community [17].

In KSA, a new vision of pharmacy practice was established in 2012 and issued by the MOH. This vision aimed to improve the pharmaceutical care services and clinical pharmacy and train patients to decrease waste and stop drug-related problems (DRPs) [18]. The majority pharmacists in practicing lack knowledge about the continuing progression in pharmacy professional that will eventually lack the appropriate level of expertise [19].

The present study showed that most of the studied community pharmacists were males (96%), from the southern region, and (99%) were from the eastern one. It was observed that among the participants, non-Saudi

pharmacists were higher in the eastern region compared to the southern region (97%).

According to the participants' responses, Saudi pharmacists were willing to avoid community settings due to the insufficient salary and job satisfaction when compared to other settings. Other causes were the exclusion of the community pharmacist from a lot of responsibilities as prescriptions writing and the follow up of the treatment plan of the patient [20].

In KSA, the community pharmacists had insufficient practice, training, and clinical skills on diagnosis and prescription. The pharmacists can firmly adhere to the law on one occasion, where a situation is related to controlling narcotic substances due to the seriousness of the legal penalties [8].

Our study showed that more than (40%) of the participants in both studied regions had a duration of experience that ranged from 6-10 years. Of the participants, more than (98%) reported that they directly communicate with customers. In both regions, more than half of them stated that they serve about 100 customers; twenty of them asked about personal care products.

The main barrier for effective counseling reported by the studied participants was that most community pharmacists were of non-Saudi nationality (90%), and they received their B. Pharm degree from foreign countries. Besides, there was insufficient practice-based learning in the training they received. More than half of the participants (52%) in the eastern region reported that they spend less than ten minutes in counseling for cosmetics and personal care products compared to (72%) in the southern region.

Al Laif *et al.* reported that the most hospital

pharmacists observed barriers towards services delivery in community pharmacy settings were; insufficient of knowledge, inadequate privacy, poor self-confidence and training, absence of regulating policies, improper patient behavior, scarce pharmacy staff number, lack of time, and gender inequalities [21].

Of the previously mentioned intervention strategies to improve counseling practices and proved effectiveness was the continuous long-term post-graduate education [4, 22]. In addition to the encouraging patient visits to assess the current practice followed by the feedback [4, 23, 24].

Longer-term changes in counseling practices were suggested in previous studies that included proper coordination at different levels between stakeholders. Also, to upgrade the present training, the owners of the pharmacies and pharmacists need adequate support and resources. These resources include databases, management systems, medical information systems, and primary and continuing training and education. Community pharmacists should update their competencies to ensure that the needed patient-centered practice requirements are met.

In the present work in both regions, more than half of the participants (57.55%) strongly disagreed on selling personal care products in places other than community pharmacies. More than (70%) of them in both regions strongly agreed on the importance of keeping in upgrading their communication skills with customers/ patients.

It was reported that Americans use about ten personal care products daily, and among the most commonly used products were hair products, toothpaste, deodorant, lotions, and cosmetics [25]. The present study showed that in both studied regions, only (30%) of the participant community pharmacists strongly agreed that the customers/patients are eager to listen to their product counseling.

One of the limitations of the present study is an online survey that did not enable authors to contact all pharmacies in both studied regions of KSA. The small number of participating females was another limitation as they are forbidden from working in community pharmacies. The last barrier was that most of the studied pharmacies were a chain pharmacy that frequently provides employee training more often than independent pharmacies.

## 6. Conclusions

Community pharmacists in both eastern and southern Saudi Arabia have comparable good practices about personal care products. Community pharmacists in both regions have excellent knowledge and attitude about cosmetics and personal care products. Furthermore, they are willing to take a step further asking about sensitivity of customer/patients towards certain components contained in the products.

## Recommendations

Future research should explore the feasibility of providing specialized training to community pharmacists on personal care products to raise their knowledge and competencies in the subject area and then evaluate the clinical, humanistic, and economical outcomes. Regulators may consider making such sort of training obligatory required among other topics for continuing professional development and license renewal requirements.

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### Funding:

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### Institutional Review Board Statement:

The study was conducted according to the guidelines for ethical scientific research at Taif University. The study was approved by the biomedical research ethics committee of Taif University (Approval No. 41-35-0028).

### Informed Consent Statement:

Informed consent was obtained from all subjects involved in the study.

### Conflicts of Interest:

The authors declare no conflict of interest.

## Supplementary Section

**Table 1.** Demographic characteristics of the participant

**In Eastern region:**

Age	Number	Percent
23-34 years	88	83.02%
35-44 years	17	16.04%
45-54 years	1	0.94%
<b>Gender</b>		
Female	1	0.94%
Male	105	99.06%
<b>Nationality</b>		
Non-Saudi	103	97.17%
Saudi	3	2.83%
<b>Marital status</b>		
Married	88	83.02%
Single	18	16.98%
<b>Work location</b>		
In a city	106	100%
<b>Region of work</b>		
Ash Sharqiyah	106	100%
<b>What is your highest qualification?</b>		
Bachelor	92	86.79%
Master	1	0.94%
Pharm.D	13	12.26%
<b>Professional Level According to the Saudi Commission for Health Specialties</b>		
Pharmacist	83	78.30%
Senior pharmacist	23	21.70%
<b>Have you got any board-certified qualification?</b>		
No	78	73.58%
Yes	28	26.42%
<b>Do you receive a clinical training?</b>		
No	90	84.91%
Yes	16	15.09%
<b>What type of community pharmacy do you work in?</b>		
Chain pharmacy	106	100%
<b>What is your employment contract status?</b>		
Full-time	103	97.17%
Part-time	2	1.89%
Temporary/casual	1	0.94%
<b>Do you work in shifts?</b>		
No	5	4.72%
Yes	101	95.28%



Table Continued

<b>Years of experience</b>		
Less than 2 years	2	1.89%
2-5 years	26	24.53%
6-10 years	51	48.11%
More than 10 years	27	25.47%
<b>Rate of job satisfaction</b>		
Very unsatisfied	1	0.94%
Unsatisfied	2	1.89%
Fair	19	17.92%
Satisfied	49	46.23%
Very Satisfied	35	33.02%
<b>Total</b>	<b>106</b>	<b>100%</b>

**In southern region:**

<b>Age</b>	<b>Number</b>	<b>Percent</b>
23-34 years	184	91.09%
35-44 years	18	8.91%
<b>Nationality</b>		
Non-Saudi	184	91.09%
Saudi	18	8.91%
<b>Marital status</b>		
Divorced	2	0.99%
Married	142	70.30%
Single	58	28.71%
<b>Work location</b>		
In a city	147	72.77%
In a village	55	27.23%
<b>Regions of work</b>		
Al Bahah	10	4.95%
Asir	127	62.87%
Jizan	65	32.18%
<b>What is your highest qualification?</b>		
Bachelor	183	90.59%
Diploma	1	0.50%
Master	2	0.99%
Pharm.D	16	7.92%
<b>Professional Level According to the Saudi Commission for Health Specialties</b>		
Pharmacist	174	86.14%
Senior pharmacist	28	13.86%
<b>Have you got any board-certified qualification?</b>		
No	147	72.77%
Yes	55	27.23%
<b>Do you receive a clinical training?</b>		
No	160	79.21%
Yes	42	20.79%

**Table Continued**

<b>What type of community pharmacy do you work in?</b>		
Chain pharmacy	200	99.01%
Independent pharmacy	2	0.99%
<b>What is your employment contract status?</b>		
Full-time	197	97.52%
Part-time	2	0.99%
Temporary/casual	3	1.49%
<b>Do you work in shifts?</b>		
No	26	12.87%
Yes	176	87.13%
<b>Years of experience</b>		
Less than 2 years	17	8.42%
2-5 years	76	37.62%
6-10 years	87	43.07%
More than 10	22	10.89%
<b>Rate of job satisfaction</b>		
Very unsatisfied	2	0.99%
Unsatisfied	9	4.46%
Fair	34	16.83%
Satisfied	90	44.55%
Very satisfied	67	33.17%
<b>Gender</b>		
Female	7	3.47%
Male	195	96.53%
<b>Total</b>	<b>202</b>	<b>100%</b>

**Table 2.** The attitude and practice of community pharmacists towards Providing Counseling about Cosmetic and Personal Care Products in KSA

**In eastern:**

<b>How do you communicate with customer/ patient?</b>		
( Direct Face to face)	105	99.06%
( Indirect Telephone - Email - medical brochures )	1	0.94%
<b>How many customers/ patient do you serve daily?</b>		
Less than 50	6	5.66%
50-100	45	42.45%
More than 100	55	51.89%
<b>From the previous question, how many of them ask for cosmetic and personal care products?</b>		
Less than10	17	16.04%
10 to 15	28	26.42%
16 to 20	20	18.87%
More than 20	41	38.68%
<b>Total</b>	<b>106</b>	<b>100%</b>

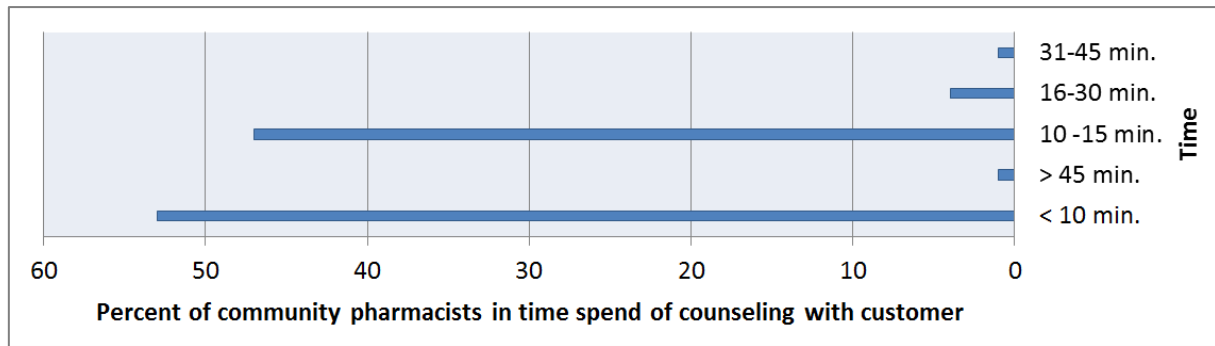


Figure 1. How long do you spend in counselling for each customers / patients? In eastern

**In southern region:**

How do you communicate with customer/ patient?		
( Direct Face to face)	198	98.02%
( Indirect Telephone - Email - medical brochures )	2	0.99%
( No communication)	2	0.99%
How many customers/ patient do you serve daily?		
Less than 50	23	11.39%
50 - 100	62	30.69%
More than 100	117	57.92%
From the previous question, how many of them ask for cosmetic and personal care products?		
Less than 10	16	7.92%
10 to 15	51	25.25%
16 to 20	45	22.28%
More than 20	90	44.55%
<b>Total</b>	<b>202</b>	<b>100%</b>

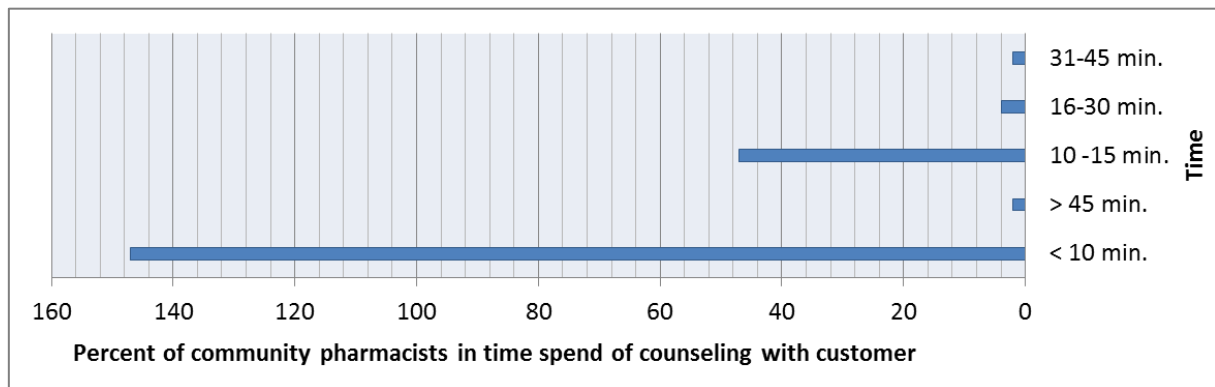


Figure 2. How long do you spend in counseling for each customers / patients? In southern

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