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**PHARMACY STUDENTS' OPINION TOWARDS THE ATTRIBUTES OF THE
PHARMACEUTICAL MARKETING AND MANAGEMENT COURSE IN PHARM-D
CURRICULUM**

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ABSTRACT

The current study was conducted with the aim to identify how students feel about particular attributes of the pharmaceutical marketing and management course in the Pharm-D curriculum. This transversal study was conducted from Aug'14 to Dec'14 by adopting a pre validated questionnaire distributed to senior pharmacy (final year) students in different private and public sector universities of Karachi. The questionnaire consisted of items that focused on observable attributes of pharmaceutical marketing and management course in Pharm-D curriculum, and abstract attributes of course, as perceived by students. The filled questionnaires were analyzed by using Statistical Package for Social Sciences (SPSS 20.0, Chicago, IL). Descriptive statistics were used to demonstrate students' demographic information and their response to the questionnaire items. One way ANOVA was used to evaluate the influence of gender and institute on the questionnaire items. Out of 600 survey questionnaires, 504 were returned back and only 416 were in useable form. Hence the response rate was 69.33%. Around 50% agreed that pharmaceutical marketing and management course was more interesting as compared to other pharmacy courses. Around 67% considered the course to be useful in the future. Respondents 41.87% and 40% considered that marketing course was more challenging and they learned more in the course respectively. It is concluded that undergraduate pharmacy students showed positive

attitude towards the pharmaceutical marketing and management courses and considered it an effective means of enhancing student learning of business management topics. There is a need of specific pedagogical approaches that are more dynamic, experiential and concrete.

Keywords: Marketing and Management, Pharmacy Students, Attributes, Pakistan

INTRODUCTION

Since the health care transformation continues to be a strikingly debatable issue globally, the probable impact on the health care profession including pharmacy profession and its prospective outlook needs to be continuously evaluated. Pharmacists' roles have also expanded not only in public health through health education and disease prevention program but also in systems management with the development of pharmacy informatics and medication use systems. The imminent pharmacists must be proficient in three key areas of practice: pharmaceutical care, system management, and public health [1, 2]. Various countries are still striving to provide up to date academic and clinical training competence to their students [3]. Pharmacy curricula outcomes outline topics such as leadership, management, general management principles, personnel management and entrepreneurial skills [4]. These topics are mainly covered through the marketing and management courses taught during the Pharm-D program. Imminent pharmacists learn various business management skills, and/or marketing aspects

of pharmacy enabling the pharmacists an edge over others when seeking employment [5]. It is a well established fact that vocation in marketing encompasses a wide range of industries and businesses [6].

Pakistani pharmacists are facing an "identity crisis" as about 90% of pharmacist moving abroad after the completion of the Pharm-D program. Majority of pharmacist prefer to work in the pharmaceutical industry and less than 25% of pharmacists in Pakistan choose to work in hospital or community pharmacy [3, 7]. Previous researches were carried out to evaluate the pharmacy student's level of comprehension and attitude about their prospective career in pharmacy [8-10]. It is necessary to assess the interest of the students in pharmaceutical marketing and management courses in pharmacy program for better understanding of their educational and professional capabilities. Imminent pharmacist need to be educated about the benefits of the program or courses. It may also help in revising the curriculum, leading to erudite pharmacist who can serve the executive positions in pharmaceutical and

healthcare organizations efficiently and effectively. According to marketing concept, the consumers' expectations are expected to be met, the student is regarded as the consumer and ongoing studies of student satisfaction [11, 12]. are some of the quality assurance guidelines used to oversee this concern in higher education [6, 13]. Therefore, the current study was conducted with the aim to identify how students feel about particular attributes of the marketing and management course in the pharmacy curriculum with the following research objectives:

1. What is the interest of pharmacy students in the marketing and management courses offered in the program?
2. What is their evaluation of the marketing and management courses offered in the program?
3. How do they compare marketing and management courses to other pharmacy courses?
4. What is their view of marketing as a career?

MATERIALS AND METHODS

Study design and setting

This transversal study was conducted from Aug'14 to Dec'14 by adopting a pre validated questionnaire distributed to senior pharmacy (final year) students in different private and

public sector universities of Karachi. The sample size was calculated by Open Epi[®] online software and non probability sampling technique was adopted. Overall, four hundred and sixteen students participated in the study. Students were encouraged to fill up the given questionnaire on spot. After completion the questionnaires were subsequently collected for further analysis.

Ethical Approval

Prior verbal ethical approval was taken from each institution's head of the department to instigate the study in their institute. Each institution's head of the department and the students' participating in the study were informed about the rationale of the study. Participants were assured about the confidentiality of their personal information and responses.

Data Collection

A pre validated questionnaire used in other study was adapted and modified [5]. The questionnaire consisted of items that focused on observable attributes of the marketing course in pharmacy curriculum, and abstract attributes of course, as perceived by students. In addition, an overall student attitude toward marketing as a career was evaluated. A pre validated questionnaire consisted of 30 items was revalidated by factor loading and those

items which have the factor loading greater than 1 were excluded.

Statistical analysis

The filled questionnaires were analyzed by using Statistical Package for Social Sciences (SPSS 20.0, Chicago, IL). Descriptive statistics were used to demonstrate students' demographic information and their response to the questionnaire items. One way ANOVA was used to evaluate the influence of gender and institute on the questionnaire items.

RESULTS AND DISCUSSION

Out of 600 survey questionnaires, 504 were returned back and only 416 were in useable form. Hence the response rate was 69.33%. Table 1 showed the demographic of the study population. The study population comprised of 61.53% females. Near about 50.48% of the participants belonged to the public sector and 49.51% belonged to private sector universities. Marketing has always been viewed from different prospective and has been evolving with the passage of time. The basic concept ranges from customer-need identification and satisfaction, the movement of goods and services to the dimensions of contributions to well-being of the society and the final consumer. Marketing education enables the students to acquire knowledge, skills, attitudes and competencies that will help the students to progress through their

courses and use the personalized study plan activities to achieve success in the classroom, workplace and become adult consumers. It prepares students for long life career opportunity after the school education in specialized positions in the organizations [6].

On inquiring about the confidence in marketing ability the respondents (57.4%) agreed that they understand the principles of marketing. Near about 58.65% responded that they will use marketing knowledge in the future. One study evaluated the managerial skills of the students after completion of the course revealed the significance of management training and the desirability of these skills among employers [14-16].

More than 50% agreed that they better understand the concepts through business examples. Only 33.38% felt that they have the ability to analyze case studies. Various studies were carried out to evaluate the student's preferences for specific pedagogical approaches supports that business students may favor pedagogies that are more dynamic, experiential, concrete, and can present real-world applications [17].

On evaluating the students' interest in the marketing course, 48.72% and 45.24% showed their interest in reading text books and doing assigned homework respectively. Nearabout 50% searched on internet and

participated in class discussion. Only 40% respondents showed that marketing course could be evaluated through final projects and writing report. The specific objectives of marketing education are intended to meet the social, vocational and personal needs and wants of students and adult consumers. Marketing education helps students to develop job attitude by understanding their personal responsibilities to the society and also engage in activities that will safeguard and promote their health and others. It also develops intellectual, spiritual, moral, aesthetic, technical or vocational aspect of life. It is opined that a fundamental understanding of the marketing concept and basic marketing skills are essential not only to students entering the field of marketing but to everyone entering the workforce [6].

Around 50% agreed that pharmaceutical marketing and management course was more interesting as compared to other pharmacy courses. Respondents 41.87% and 40% considered that pharmaceutical marketing and management course was more challenging and they learned more in the course respectively. 36.87% agreed that they had to prepare more for this marketing course. One of the study highlighted the optimistic effects that business management lecture material had on students' self-perceived awareness and

understanding, and more notably the appreciably low levels of business management comprehension and understanding students had if the topics were not discussed in the classroom [18]. Job markets for fresh pharmacy graduates are becoming more competitive, they can only lead by managing both the clinical and administrative facets of a pharmacy. Many students have articulated desire for better understanding of managerial topics while few of the alumnae regretted for being less attentive in the class [19].

Only 29.87% felt that they have more control over the pace of learning in this course and 27.64% would take more pharmaceutical marketing and management courses after completion of pharmacy degree. This was in contrast with the findings of other studies in which the most prevalent graduate degree associated with the Pharm-D as part of a dual-degree program is the MBA [20]. The MBA is highly recognized as having a broad range of applications, with Pharm-D / MBA graduates entering pharmacy practice areas such as the pharmaceutical industry, community pharmacies, hospitals, managed care, and academia. Around 70% wants to have some marketing exposure during the course. Many students agreed strongly that the course facilitated the student in their

career and for providing a better career base. 45% agreed that the course helps them in choosing a career path. 41.23% will find a job in marketing after graduating to pursue a career in marketing. 66.57% considered the course to be useful in the future. The pharmaceutical marketing and management course focuses enormously on the pharmaceutical industry. This specialized education pledges the students the comprehensive knowledge and skills needed to understand the organizational, political economic and financial structure of the pharmaceutical industry [21, 22]. Warner in 2009 stated that marketing education is becoming more essential as organizations attempt to expand products and services that appeal to their consumers and aspire to distinguish their offering in the increasingly-crowded global market. The results of this study also shows that marketing education courses enable student select occupation and job advancement [23].

CONCLUSION

It is concluded that our undergraduate pharmacy students showed positive attitude towards the pharmaceutical marketing and management courses and considered them to be an effective means of enhancing student learning of business management topics. There is a need of specific pedagogical

approaches that are more dynamic, experiential and concrete. Practical exposure to the pharmaceutical marketing and management would support and provide an active learning component and directs the students to think critically to use their business decision-making power as a pharmacist. Pharmacy graduates having little exposure to or experience with business management may not be a strong candidate in an increasingly competitive pharmacist job market.

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Table 1: Characteristics of study population

Characteristics	Numbers (Percentages)
Gender	
Male	160(38.46)
Female	256(61.53)
Institute	
Public Sector	210(50.48)
Private	206(49.51)

Table 2: Mean score, standard deviation and factor loading of items of questionnaire

Items	Mean Score	Standard Deviation	Factor Loading
Confidence in Marketing ability			
Ability to write about marketing concepts	3.19	0.950	0.935
Ability to explain about marketing through discussion	3.43	1.004	0.897
Analyzing case studies	3.20	0.944	0.776
Understanding concepts through the business examples	3.51	0.999	0.748
Evaluation of Marketing Course			
Reading the text material	3.36	0.943	0.672
Doing assigned homework	3.28	0.945	0.663
Research on Internet	3.43	0.934	0.628
Participating in class discussion	3.48	0.954	0.574
Writing reports	3.27	1.005	0.559
Working on final project	3.21	1.069	0.516
Comparison of Marketing Course to Other Pharmacy Courses			
Marketing course was more challenging	3.20	1.097	0.488
Marketing course was more interesting	3.36	1.123	0.446
I learned more in this marketing course	3.19	0.993	0.441
I had more control over the pace of learning in this course	3.10	0.910	0.398
I had to prepare more for this marketing course	3.16	1.038	0.378
I would take more marketing courses after completion of pharmacy degree	2.89	1.157	0.373
Viewpoint Towards a Career in Marketing			
Helps in choosing a career path	3.26	1.080	0.349
Find a job after graduating	3.30	2.282	0.342
Advances chosen career field	3.32	1.789	0.306
Useful in the future	3.66	1.031	0.279
Some marketing exposure is required	3.72	1.074	0.266
I will pursue a career in marketing	2.97	1.116	0.216

Table 3: Influence of gender and institute of students on their response

Items	Gender		Institute	
	F	Sig.	F	Sig.
Confidence in Marketing and management ability				
Ability to write about marketing concepts	3.044	0.082	1.419	0.237
Ability to explain about marketing through discussion	0.591	0.442	1.638	0.180
Analyzing case studies	3.497	0.062	2.477	0.061
Understanding concepts through the business examples	0.022	0.882	11.180	0.000
Evaluation of Marketing and management Course				
Reading the text material	4.369	0.037	3.593	0.014
Doing assigned homework	1.357	0.245	2.378	0.069
Research on Internet	4.352	0.038	8.015	0.000
Participating in class discussion	0.454	0.501	5.920	0.001
Writing reports	0.667	0.414	18.358	0.000
Working on final project	0.416	0.519	17.337	0.000
Comparison of Marketing and management Course to Other Pharmacy Courses				
Marketing course was more challenging	0.182	0.670	3.336	0.019
Marketing course was more interesting	0.028	0.867	14.358	0.000
I learned more in this marketing course	0.950	0.330	4.252	0.006
I had more control over the pace of learning in this course	6.110	0.014	1.735	0.159
I had to prepare more for this marketing course	2.541	0.112	5.588	0.001
I would take more marketing courses after completion of pharmacy degree	9.849	0.002	3.200	0.023
Viewpoint Towards a Career in Marketing				
Helps in choosing a career path	2.921	0.088	7.223	0.000
Find a job after graduating	0.001	0.980	3.504	0.016
Advances chosen career field	0.347	0.556	3.287	0.021
Useful in the future	1.787	0.182	9.684	0.000
Some marketing exposure is required	0.569	0.451	11.689	0.000
I will pursue a career in marketing	5.797	0.016	1.773	0.152

In the Table 3 value of sig. < 0.05 considered as significant