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Pharmaceutical Drug Promotion Practices in Pakistan: Issues in Ethical and Non-Ethical Pharmaceutical Practices

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Abstract: This research study evaluates the variables, which are responsible for the unethical pharmaceutical marketing practices, undertaken research study; also compare and identify the responsible entities for these unethical pharmaceutical marketing practices in Pakistan. This study also examines, who has initiated these unethical pharmaceutical marketing practices in Pakistan and also identify, who is more responsible for the continuation of these practices in Pakistan. In this study researcher focuses six variables that can be a major cause of unethical pharmaceutical marketing practices in Pakistan i.e. Pharmaceutical marketing and Sales personnel, doctors' community, retail and whole sales pharmacies, government and private hospitals personnel, government officials and patients or their attendants'. All these six variables have been taken and gathered the data through survey questionnaire, compiled and analyzed through Statistical techniques like descriptive and inferential Statistics i.e. z-test & ANOVA and concluded the main cause of unethical pharmaceutical marketing practices in Pakistan. This research concluded that unethical pharmaceutical marketing practices initiated and started by the pharmaceutical companies but doctors community is more responsible for the continuation of these unethical practices and subsequently, these unethical marketing practices become an integral part of the industry. It is further concluded that by enforcing the prevailing laws and making new laws through legislation can stop these unethical practices. They are also agreed non-qualified doctor's practice should be eradicated. Pharmaceutical companies should strictly abide the rules and regulations, which are already mentioned and given in the pharmaceutical marketing code of ethics, at the same time Pakistan Medical Association and Pakistan Medical and Dental Association should restrict to the doctors community to practice in the limit of ethical and moral grounds. Governmental agencies are also expected to enforce the prevailing laws with their true spirit on pharmaceutical companies and healthcare institutions.

Key words: Ethical Pharmaceutical Practices · Non-Ethical Pharmaceutical Practices · Pharmaceutical Drug Promotion Practices · Pharmaceutical Marketing Practices

INTRODUCTION

The focus of the subject study is to identify the intensity and trends of unethical drug promotion practices in Pakistan. Ascertaining the contribution of the doctors, health related institutions and the pharmaceutical industry in promoting such practices. Unethical marketing practices have now an integral part of drug promotion. Unethical marketing practices have become an essential part of the pharmaceutical industry in Pakistan and roots are so strong that it may not be possible to reverse the same [1]. However the previous study has a limitation. It was a case study on pharmaceutically industry in Hyderabad. In view of the findings of this study there was a need to carry out the same on larger basis. Thus this research has been undertaken with this objective in mind. The phenomenon of the unethical drug practices is common worldwide but its severity is deep rooted in developing countries. However, the author was not able to find any empirical study on unethical drug promotion practices except the one that was carried out by Parmar and Jalees[1] in Pakistan. Parmar and Jalees [1] in their study observed that pharmaceutical industry spends a substantial portion of its budget on market research but do not carry out the research on unethical drug promotion practices. One of the reasons is that the industry itself is indulged in this practice therefore; it does not find any need to carry out the research on this issue.

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Lack of research on the subject does not mean that unethical drug promotion practices do not exist. The pre-survey and focus groups discussions indicate that unethical pharmaceutical marketing practices have become an acceptable norm of the pharmaceutical diligence and it is also well supported by more or less all the pharmaceutical groups with the cooperation of government hospitals, private hospitals, doctors and health allied organizations including pharmacies on patients' interests.

The Pharmaceutical companies fund nearly all symposiums and educational actions of doctors; therefore, the industry uses the forum to pursue its goals, which at times may not be the same as the purpose and objective of the conferences. Pakistan Medical Journalists Association (PMJA) has published a few articles on this issue. But this has not affected the prevailing unethical drug promotion practices [2].

Due to side effects of synthetic products, herbal products are gaining popularity in the world market. In spite of well-practiced knowledge of herbal medicine and occurrence of a large number of medicinal plants and very less side effects the companies are not involved in, therefore, the share of India in the global market is not up to the mark [3]. Same in Pakistan the herbal products have not been developed despite the fact that these medicines have lesser side effects. This is also another example of non-ethical promotion of Pharmaceutical Products.

Overview of Pakistani Pharmaceutical Industry: There are about 650 leading Nationals and Multinational pharmaceutical companies operating in Pakistan. Of this total 23 are multinationals and rests of companies are local companies. The companies here could be categorized in three groups:

- Manufacturing plant
- Importers (bring finished medicines from abroad)
- Franchisers

Total current market volume (March 2010) is of Rs.137.7 billion [4].

The gap between multinationals and nationals narrows further during 2009-10 with multinationals losing another 1.7% share to nationals. At present multinationals hold 46.9% share of the market while the nationals have captured 53.1% of the pharmaceutical business. From around 80% share in the pharmaceutical retail market, the MNCs have lost around 29% during the last twenty years as the nationals continue to improve their performance in the market place. Almost an identical trend is observed in units as well, nationals having 54.05% as compared to multinationals 45.95% [4].

Of the total markets size of 137.7 billion, the top 20 corporations contribute around 60% of total business, 34% of market concentrated among the top 5 corporations. The rest 40% of the market is distributed amongst 630 corporations in Pakistan. For the purpose of calculation in terms of value, the top 15 corporations make up 54%, top 35 corporations make up 75.09% and top 75 corporations make up 90.91%, while the remaining corporations are competing for approximately 9% market share [4]. Pakistani pharmaceutical industry also growing at rapid pace over last many years and this growth major chunk came from generic drugs manufacturer or generic drugs in Pakistan.

Above graph shows that market share of generic drugs in Pakistan in continuously increases over the years reach to 53.1% market share and likely to cross 55% market by the end of this year.

While looking at the research drugs, market share in Pakistan continuously decreasing compare to the local/generic drugs making companies in Pakistan more than 53% market share in year 2010 [4].

There were 300,000 hospitals in operation worldwide at the middle of 2012, there are some third world countries, which do not have operating hospitals and if they do, they are in poor working condition [5]. Pakistan is one of those countries where hospitals and medicines condition is very poor, because of the intense corruption phenomenon in government hospitals, which also leads unethical pharmaceutical practices at the patient's cost.

Statement of the Problem: Is unethical drug promotion practice is common in Pakistan? Who initiated unethical drug promotion practice in Pakistan? Who is responsible for the continuation of the same?.

Research Hypotheses: Based on the theoretical framework, focus group and problem statement the four research Hypotheses have been developed and will be discussed in the section of data analysis:

Previous Research: The pre-survey and focus groups discussions indicate that unethical pharmaceutical marketing practices have become an acceptable norm of the pharmaceutical diligence and it is also well supported by more or less all the pharmaceutical groups with the cooperation of government hospitals, private hospitals, doctors and health allied organizations including pharmacies on patients' interests.

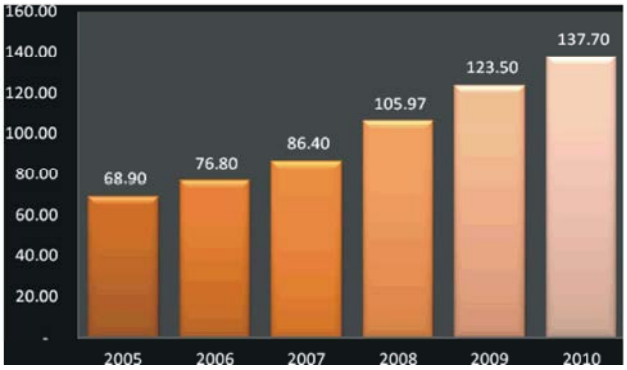

Fig. 1: Pakistan Pharmaceutical Market (PKR in Billion)
Source: IMS – PKPI Q2 2010 (MAT)

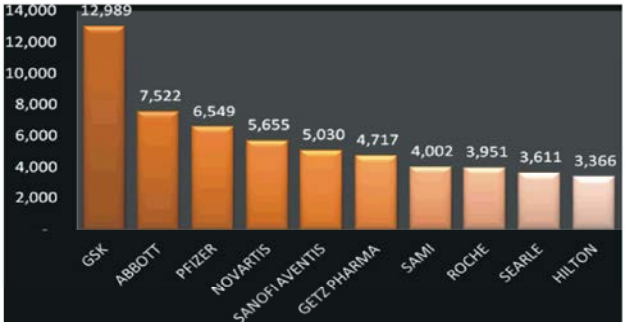

Fig. 2: Top 10 Pharmaceutical Companies (PKR in Millions)
Source: IMS – PKPI Q2 2010 (MAT)

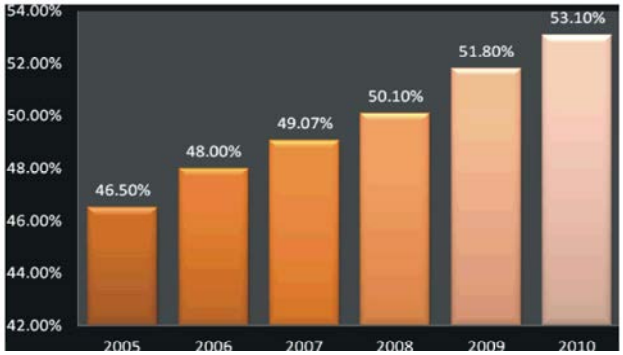

Fig. 3: Generic (Copy) Drugs (% Share of Total Market)
Source: IMS – PKPI Q2 2010 (MAT)

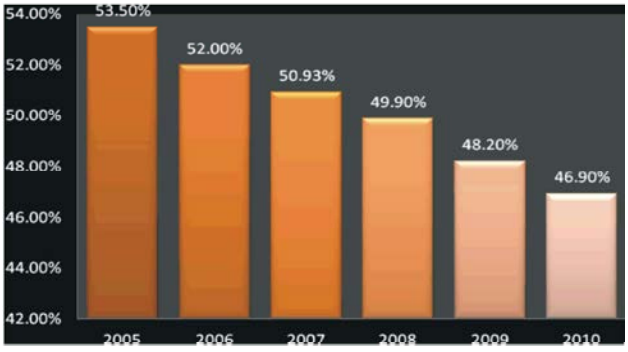

Fig. 4: Research (Branded) Drugs (% Share of Total Market)
Source: IMS – PKPI Q2 2010 (MAT)

The report contents that "Pharmaceutical companies are advancing their medicines through patients set, student and internet chat places to avoid the interdict on promoting excluding doctors" [6].

A case was inspected against GlaxoSmithKline (GSK) from Italian and German official for supposed corruption of distributing illegal gifts to doctors and other officials and approximate _228m from 1999 to 2002. After that, GSK has formed marketing ethical codes for his employees, which are compulsory to all new employees to clear an evaluation test. In 2001, a report was public and pointed out 87 employees was terminated or voluntarily departed after violation of these codes [7, 15, 16].

Zaidi *et al.* [2] in the same report pointed out about an incidence of the 17th International Gastroenterology conference held at Rawalpindi. In this conference about a dozen of local doctors' presentations were on a particular drug that belonged to the pharmaceutical company that was sponsoring the event. The foreign delegates became so frustrated with the proceeding that they left the conference by stating that their purpose of the visit was to gain insight and share their views on the issue "gastroenterology". However, the conference appears to be one directional with objective of promoting the drugs of the sponsoring company.

The Russian pharmaceutical complex is strongly concentrated-10 major domestic companies produce 30% drugs of all national medicines in value terms. The Russian pharmaceutical industry also spends for innovations to 20% of revenue. It allows of all national medicines have new innovative marketing and manufacturing procedures, so, pays in value terms [8].

Another, ethical pharmaceutical promotion is the Eco friendly pharmaceutical packaging materials are the safe materials for environment, which enclose pharmaceutical product in any of the dosage forms. This review highlight the eco friendly materials, their classification, uses, advantages and finally summarizes the scope and future need in respect of pharmaceutical packaging in order to boost up the ethical marketing practices [9].

The counterfeit drug's phenomenon is also very common in Pakistan. Counterfeit drugs are the typical examples of unethical pharmaceutical practices, in which some national pharmaceutical companies are involved in Pakistan. Important legislation and laws should be made and enforce in order to stop these practices. This phenomenon is also very common in Ukraine and exposed by Alekseev [10], in his research, the conclusion was made that the basis of the effective fight against low-quality medicines in several factors among which the multi-level security monitoring of the pharmaceutical products, the considerable powers of the governmental regulatory bodies in this area and also the constant interaction of specially authorized regulatory and law enforcement bodies [10].

Studies were carried out to uncover the impact of relation between physician and medical representatives of pharmaceutical industry. Doctors meeting with pharmaceutical representatives linked with requirements by doctors to put in medicines to the hospital formulary and there was a change in prescribing practice of the doctor [11].

Another example is that of Johnson and Johnson unlawfully and successfully promoted Propulid off-label for kids regardless of inner objection complaining safety issues. The side effects of this drug include serious cardiac arrhythmias including ventricular tachycardia; ventricular fibrillations have been reported in patients taking Propulid (Generic name: Cisapride). This product is no longer available in the United States [12, 13].

According to the WHO Ethical Criteria for Medicinal Promotion, the nastiest immoderation of deceptive and unprincipled promotion of drug keep on in developing countries, where parameters for pharmaceutical industry are very weak [14].

MATERIALS AND METHODS

The targeted population has been given as under and on the basis of targeted population researcher has selected sample size which has also been elaborated as under, moreover, following research methodology will be adopted in order to conduct this research study.

The targeted population of undertaken study is the following:

- Sales & Marketing Personnel of top 10 (According to IMS) Pharmaceutical Companies, which are operating in Pakistan including Multinational & National Companies.
- The undertaken study is a case study of Karachi city; therefore, the data has been collected from peripheral and urban areas of Karachi City. General practitioner in rural (peripheral) and urban areas, Medical Officers & Resident Medical Officers of Government & Private hospitals or the Consultants of all specialties for this study. According to IMS Karachi city is contributing more than 35% of total pharmaceutical market of Pakistan.

- Karachi city will be taken for the data collection of the Retail Pharmacies' of the study. According to IMS, Karachi city is contributing more than 40% of total pharmacies of the country.
- Karachi city will be taken for the data collection of the wholesale Pharmacies' of the study. According to IMS, Karachi city is contributing more than 50% of total wholesale pharmacies of the country.
- Karachi city will be taken for the data collection of the public and private hospitals for this study. According to IMS, Karachi city is contributing more than 28% of total public and private hospitals of the country.
- Karachi city will be taken for the data collection of the indoor and outdoor patients & their attendants during the data collection time period, which cater more than 20% of total market.
- Karachi city will be taken for the data collection of government offices & Officials, which are directly or indirectly involved in order to implement and ensure the law enforcement, which are related to the subject matter of the undertaken study.

Probability sampling technique will be used because the research study based on quantitative analysis. For the sampling purpose the Cluster sampling technique will be used, another reason to use this sampling technique is, the overall population is very much scattered and spread in a larger geographical area of the city, moreover, the overall population is heterogeneous. Therefore, for sampling purpose different clusters will be collected from different areas of Karachi city. The total sample of 300 has been extracted.

Both descriptive and inferential statistical techniques will be used through SPSS and Megastat. The data will be presented in tables and charts. The statistical hypothesis will be tested with the help of z-test (Involving two groups) and F-test (Involving more than two groups) of significance. The graphical analysis will also be presented wherever it is needed.

Data Analysis: The survey findings were analyzed linearly, cross-sectionally in order to have a better comprehension and understanding between the relationship of dependent and independent variables, moderating and intervening variables. The empirical results or the survey findings and interpretations of the study are discussed as below.

Hypotheses Testing: Four different hypotheses were developed and tested using Z-test, simple ANOVA and F-test. The result and interpretation of the four developed hypotheses are presented below:

Hypothesis No. 1:

$H1_o$: The level of unethical drug promotion practices in pharmaceutical industry is high (at least 4) on the scale of (5 to 1).
$H1_A$: The level of unethical drug promotion practices in pharmaceutical industry is less than 4 on the scale of (5 to 1).

The statistical representation of the above hypothesis is presented below:

$H1_0$: $\mu \geq 4$
$H1_A$: $\mu < 4$

The above hypothesis was tested through Z-test and the summarized result is presented below:

So, it is concluded that the null hypothesis is accepted because 4.29 lies in non critical region and it is further concluded that the level of unethical pharmaceutical marketing practices is high (At least 4) on the scale of (5 to 1).

Hypothesis No. 2: Focus group discussions indicate that the level of unethical drug promotion practices is high in rural areas. Therefore the hypothesis developed in this context is presented below:

$H2_0$: The levels of unethical drug promotion practices are equally higher in rural areas as compared to the urban areas.
$H2_A$: The levels of unethical drug promotion practices are not equally higher in rural areas as compared to the urban areas.

The statistical representation of the above hypothesis is presented below:

$H2_0$: $\mu_1 \geq \mu_2$
$H2_A$: $\mu_1 < \mu_2$

Above test was carried out through by Z-two samples variables analysis and the summarized result is presented below:

Table 1: Level of Unethical Drug Promotion Practices

Mean	4.220
Standard Deviation	0.887
Hypothesized mean	4.00
Confidence level	0.95
Critical value one tail	1.645
Critical value two tail	1.96
Z-Calculated value	4.29
N	300
Confidence interval 95.% lower	4.120
Confidence interval 95.% upper	4.320
p-value (two-tailed)	1.76E-05
Std. error	0.051
Half-width	0.100

Table 2: Level of Unethical Drug Promotion Practices In Rural Area

	Rural	Urban
Mean	4.03	3.50
Standard Deviation	1.01	1.21
Observations	300	300
Hypothesized Mean Difference	0	
Z	5.81	
p-value (one-tailed, lower)	1.0000	
z Critical one-tail	1.645	
P(Z<=z) two-tail	0	
z Critical two-tail	1.95	
Difference (Rural - Urban)	0.527	
Standard error of difference	0.091	

Table 3: Unethical Marketing Practices in Karachi

Unethical Practices (5 to 1)		
Common in Karachi	Higher in Rural areas	Equally higher in Urban areas
4.22	4.03	3.5

The hypothesis relating to higher level of unethical drug promotion practices in rural areas was substantiated. At 95% confidence level the Z-critical value taken from table is -1.645 and Z-calculated value is 5.81 that fall in the non-critical region. Therefore, it is further concluded that the levels of unethical drug promotion practices are higher in rural areas as compared to the urban areas.

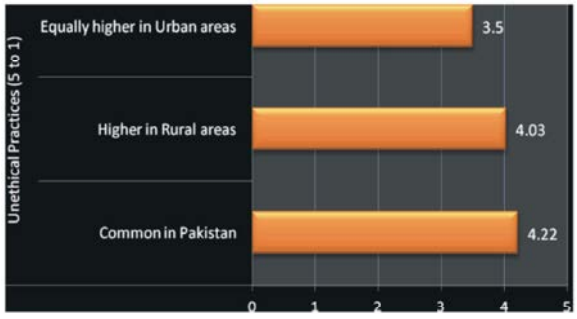

Fig. 5: Unethical Marketing Practices in Karachi

Following is the graphical representation of unethical pharmaceutical marketing practices in overall Karachi and Urban & Rural areas, which clearly demonstrate that according to the respondents, unethical marketing practices are more common in rural areas as compared to the urban areas.

Hypothesis No. 3: An important aspect is who was responsible for initiating the unethical drug promotion practices in Pakistan. In view of this disparity the developed hypothesis is presented below:

$H3_0$: There is no significant difference on the opinions of doctor, pharmaceutics companies, hospitals, pharmacies, Govt. Officials and Patients on who initiated unethical drug promotion practices in Pakistan.

$H3_A$: There is significant difference on the opinions of doctor, pharmaceutics companies, hospitals, pharmacies, Govt. Officials and Patients on who initiated unethical drug promotion practices in Pakistan.

The statistical representation of the above hypothesis is presented below:

$H3_0$: $\mu1 = \mu2 = \mu3 = \mu4 = \mu5 = \mu6$
$H3_A$: $\mu1 \neq \mu2 \neq \mu3 \neq \mu4 \neq \mu5 \neq \mu6$

The above hypothesis was tested through simple ANOVA and the summarized results are presented below:

The hypothesis relating to no significant difference of opinions on who initiated unethical drug promotion practices in Pakistan was rejected. At 95% confidence level and (5, 476) df the calculated F value of 106.24 is greater than F- critical values of 2.62.

The above analysis also indicates that the pharmaceutical industry were found to be the entity that has initiated unethical drug promotion practices in Karachi with a mean of 3.59, followed by doctors with a mean of 2.39.

Hypothesis No. 4: In the previous hypothesis, it was found out that the pharmaceutical industry initiated unethical drug promotion practices, in Pakistan. However, an important issue is that who is more responsible for the continuation of this practice. Based on the previous hypothesis the following hypothesis was developed.

Table 4: Opinion on Who Initiated the Unethical Drug Promotion Practices

Groups	Count	Sum	Average	Variance
Pharmaceutical company	300.00	439.00	3.59	2.62
Doctors	300.00	294.00	2.39	3.16
Hospitals	300.00	148.00	1.19	0.49
Pharmacy	300.00	140.00	1.11	0.19
Govt. Officials	300.00	140.00	2.11	1.29
Patients	300.00	140.00	2.29	2.31

Source of Variation	SS	Df	MS	F	*P*-value	F crit
Bt. Groups	521.56	5.00	178.95	106.24	0.00	2.62
Within Groups	747.93	476.00	1.67			
Total	1,269.48	479.00				

Table 5: Level of Unethical Practices

Unethical Practices (5 to 1)		
Groups	Average	Variance
Pharmaceutical companies	3.59	2.62
Doctors	2.39	3.16
Hospitals	1.19	0.49
Pharmacies	1.11	0.19
Govt. Officials	2.11	1.29
Patients	2.29	2.31

Table 6: Opinion about Continuation the Unethical Drug Promotion Practices

	Pharmaceutical Company	Doctors
Mean	2.94	3.81
Known Variance	3.52	2.61
Observations	300.00	300.00
Hypothesized Mean Difference	0	
Z	(4.39)	
P(Z<=z) one-tail	0.00	
Z Critical one-tail	1.645	
P(Z<=z) two-tail	0.00	
Z Critical two-tail	1.96	

Table 7: Responsible for continuation of unethical practices

	Pharmaceutical companies	Doctors
Mean	2.94	3.81
Known Variance	3.52	2.61

$H4_0$: The contribution of the pharmaceutical industry in continuation of unethical drug promotion practices is equal or higher than the doctors.

$H4_A$: The contribution of the pharmaceutical industry in continuation of unethical drug promotion practices is not equal or higher than the doctors.

The statistical representation of the above hypothesis is presented below:

$H4_0$: $\mu_1 \geq \mu_2$
$H4_A$: $\mu_1 < \mu_2$

Above test was carried out through by Z-two samples variables analysis and the summarized result is presented below:

The hypothesis relating to a higher contribution of pharmaceutical industry in unethical drug promotion practices was rejected. At 95% confidence level, the Z critical value is -1.645 and Z-calculated value is -4.39 that falls in the critical region. So, it is further concluded that the doctor community is more responsible for the continuation of unethical pharmaceutical practices.

Therefore, it is further concluded that the doctors' community is more responsible for the continuation of unethical marketing practices in the industry.

Qualitative Analysis: The qualitative analyses of determinants such as (a) tools of unethical drug promotion practices (b) drug promotion to the non-qualified doctors (c) Legislation for unethical drug promotion (d) eradication of unethical drug promotion is given as below:

Tools of Unethical Drug Practices: As was discussed in the literature survey that the commonly used tools for unethical drug practice was, monetary rewards, local visits and foreign visits etc. The summarized results are presented below:

The above table and graphs shows that foreign visits with a mean of 4.59 are more in demand and local visits being the second. The reasons for high preferences for local visits and foreign visits are that pharmaceutical industry could justify these expenses by linking it with the conference.

Drug Promotion to Non-Qualified Doctors: Opinions on drug promotion to non-qualified doctors were obtained. Ethically, the firms should not promote their drugs through them. The respondents' opinions are presented below:

Table 8: Tools of unethical drug practices

Monetary Rewards	Local visits	Foreign Visits	Personalized gifts	Chamber decoration	Home decoration
4.24	4.33	4.59	3.88	2.77	1.31

Table 9: Opinion about the promotion of drugs to Non-qualified doctors

Pharma Personnel	Doctors	Hospital	Pharmacies	Govt. Officials	Patients
3.29	4.45	3.53	3.11	3.23	3.44

Table 10: Opinion about Legislation for unethical drug promotion

Pharma Personnel	Doctors	Hospital	Pharmacies	Govt. Officials	Patients
3.96	3.91	4.12	4.35	3.34	3.72

Table 11: Opinion about eradication of unethical drug promotion

PharmaPersonnel	Doctors	Hospital	Pharmacies	Govt. Officials	Patients
1.98	2.12	1.77	1.91	2.91	2.22

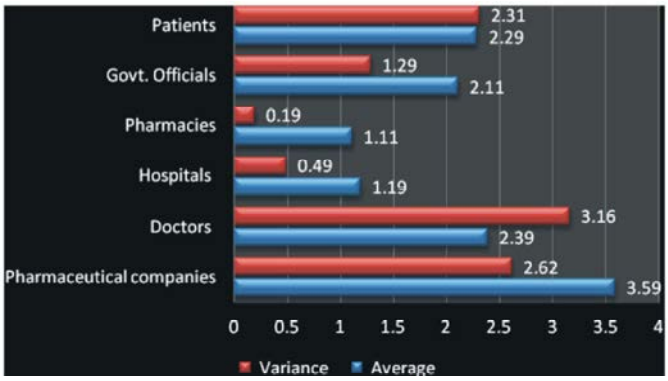

Fig. 6: Level Of Unethical Practices

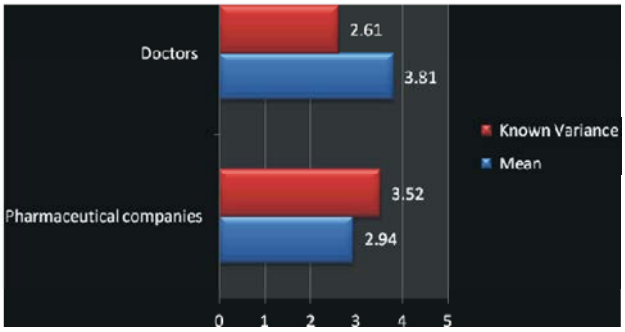

Fig. 7: Continuation of Unethical Practices

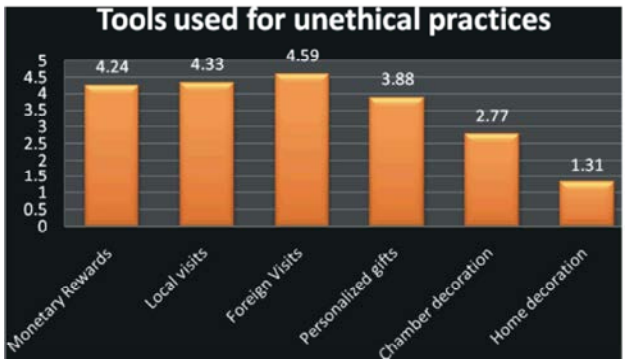

Fig. 8: Tools for unethical drug practices

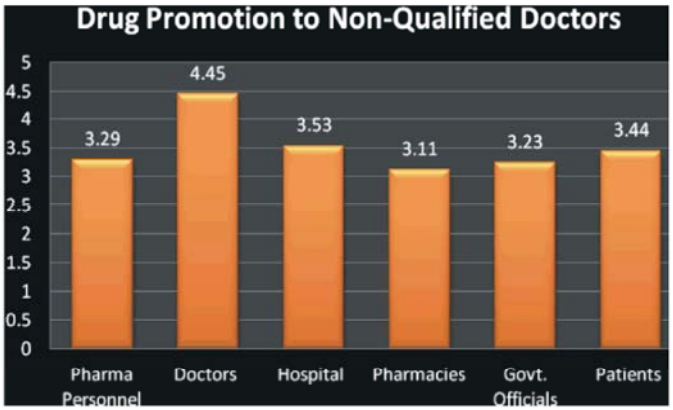

Fig. 9: Drug promotion to Non-Qualified doctors

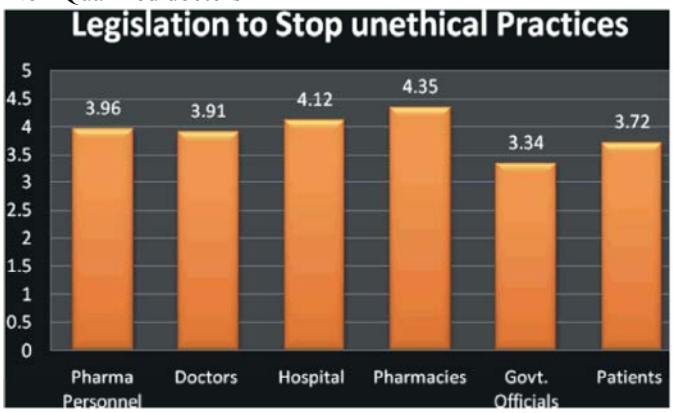

Fig. 10: Opinion about Legislation to stop unethical practices

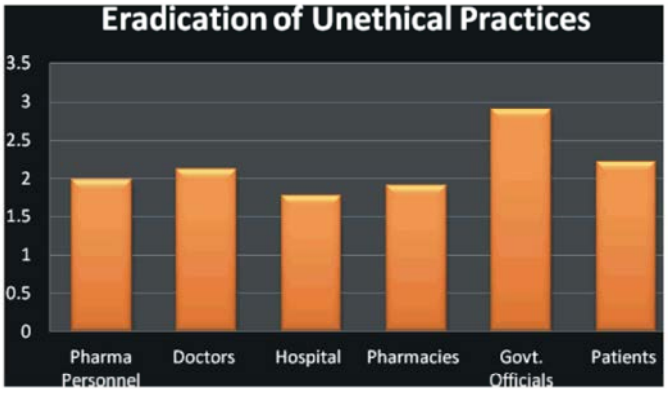

Fig. 11: Opinion about eradication of unethical practices

Majority of respondents' were strongly against drug promotion to the non-qualified doctors. However, despite their opinions it is a fact that the drugs are being promoted through non-qualified doctors.

Legislation for Unethical Drug Promotion: Respondents' opinions were obtained on the prospects of strong legislation against unethical drug promotion practices. The respondents' opinions are presented below:

Inference could be drawn from the above that the majority of respondent are strongly in the favor of making some strong legislation against the unethical drug promotional practices in Pakistan. Although some legislation is already available but this research showed there is no implementation of that legislation, therefore, majority of respondent demanded that there must be strong legislation to stop this unethical drug promotion in Pakistan.

Eradication of Unethical Drug Promotion: Opinions on eradication of drug promotion in Pakistan were obtained from the respondents'. The respondents' opinions are presented below:

Above graph shows that the majority of the respondents' strongly disagree about the opinion that the unethical drug promotion practices cannot be stopped now. Majority of respondents' agreed upon that these unethical practices could still be stopped.

CONCLUSION

The researcher has concluded the overall results and found that both doctors and pharmaceutical companies are equally responsible for unethical drug promotion practices in Pakistan. But most important and interesting findings are, basically pharmaceutical companies are responsible for initiating these unethical drug practices in Pakistan but now in continuation of these practices the doctor's community is actually responsible for these unethical drug promotion practices in Pakistan. The entire above conclusion is evident from the four hypotheses that were tested through Simple ANOVA, F-tests and Z-tests.

The results of tested hypothesis are presented below:

- The hypothesis relating to high level of unethical drug promotion practices (At least 4 on the scale of 5-1) was substantiated. At 95% confidence level, Z critical value is -1.645 and Z-calculated value is 4.29 that fall in the non-critical region.

So, it is concluded that the null hypothesis is accepted because 4.29 lies in non critical region and it is further concluded that the level of unethical pharmaceutical marketing practices is high (At least 4) on the scale of (5 to 1).

- The hypothesis relating to higher level of unethical drug promotion practices in rural areas was substantiated. At 95% confidence level the Z-critical value taken from table is -1.645 and Z-calculated value is 5.81 that fall in the non-critical region. Therefore, it is further concluded that the levels of unethical drug promotion practices are higher in rural areas as compared to the urban areas.
- The hypothesis relating to no significant difference of opinions on who initiated unethical drug promotion practices in Pakistan was rejected. At 95% confidence level and (5, 476) df the calculated F value of 106.24 is greater than F- critical values of 2.62.The above analysis also indicates that the pharmaceutical industry were found to be the entity that has initiated unethical drug promotion practices in Pakistan with a mean of 3.59, followed by doctors with a mean of 2.39.
- The hypothesis relating to a higher contribution of pharmaceutical industry in unethical drug promotion practices was rejected. At 95% confidence level, the Z critical value is -1.645 and Z-calculated value is -4.39 that falls in the critical region. Therefore, it is further concluded that the pharmaceutical companies do not have more contribution than the doctors in order to continue the unethical pharmaceutical marketing practices. In other words doctors' community is more responsible for the continuation unethical marketing practices in the industry.

The qualitative analyses of determinants such as (a) tools of unethical drug promotion practices (b) drug promotion to the non-qualified doctors (c) Legislation for unethical drug promotion (d) eradication of unethical drug promotion is given as below:

- The Qualitative analysis shows that foreign visits with a mean of 4.59 are more in demand and local visits being the second. The reasons for high preferences for local visits and foreign visits are that pharmaceutical industry could justify these expenses by linking it with the conference.
- The Qualitative analysis shows that the majority of respondents' were strongly against drug promotion to the non-qualified doctors. However, despite their opinions it is a fact that the drugs are being promoted through non-qualified doctors.
- Inference could be drawn from the Qualitative analysis that the majority of respondents are strongly in the favor of making some strong legislation against the unethical drug promotional practices in Pakistan. Although some legislation is already available but this research showed there is no implementation of that legislation.
- The Qualitative analysis shows that the majority of the respondents' strongly disagree about the opinion that the unethical drug promotion practices cannot be stopped now. Majority of respondents' agreed upon that these unethical practices could still be stopped.

Recommendations:

- The focus groups discussions and survey findings suggest that strong legislation must be developed, implemented and enforced by the government. However, the regulations and legislation actually works when they are supported by the norms and values of the society.
- It is also strongly recommended that there should be strong legislation by the healthcare authorities and government agencies to stop or at least minimize these unethical pharmaceutical marketing practices both by the doctor community and the pharmaceutical industry.
- There must be strong enforcement of existing rules and regulations by the relevant government departments and autonomous bodies whom responsible to implement and ensure these rules and regulations both on pharmaceutical industry and the doctors' community.
- It is also recommended to the doctors' community that this is also their prime and ethical responsibility to avoid getting unethical benefits from pharmaceutical companies while they are prescribing their products.
- The pharmaceutical industry should also restrict itself up to ethical marketing offers and discourage healthcare professionals if they would ask any thing, which is unethical according to the ethical pharmaceutical practices guidelines.

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