

# Perceptions of Postgraduate Residents towards Promotion by Pharmaceutical Companies at a Teaching Hospital

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## ABSTRACT

**Objective:** To assess perceptions of postgraduate residents towards their interaction with representatives of pharmaceutical companies.

**Study Design:** Cross-sectional study

**Place and Duration of Study:** This study was conducted at the Medical and Surgical General and Allied Wards of Liaquat University Hospital Hyderabad/ Jamshoro from May 2022 to June 2022.

**Materials and Methods:** Postgraduate Medical and Surgical Residents of Liaquat university hospital were included. Participants were enrolled by using a convenient sampling technique. The socio-demographic profile of residents and their attitudes towards interaction with postgraduate residents was recorded using a self-structured questionnaire.

**Results:** Most of the residents 98 (83%) found gifts like drug samples useful. 88 (74.57%) subjects viewed that they feel no harm when it comes to accepting academics-related gifts. However, 83 (70%) of the postgraduate residents thought that it is wrong to accept any gift from a drug company. About 59 (50%) of the study participants believed that post-graduate residents should not have communication with the medical company's representatives at their training place.

**Conclusion:** The resident's interaction with medical representatives is substantial. The majority of the participants found perks and gifts useful and they believed that their prescribing practices are not affected by interaction with medical representatives.

**Key Words:** pharmaceutical industry, promotion, gifts, marketing, postgraduate residents

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## INTRODUCTION

Pharmaceutical industry interactions are not uncommon in residency programs of medical schools<sup>1</sup>. Many residents have accepted gifts and food in the past. Postgraduate Residency programs in many specialties allow gifts, as well as sponsorship of lectures, journal clubs and different events<sup>2</sup>. It is shown that postgraduate residents are not always cognizant of the influence of the fake and biased information provided by drug manufacturers.

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Previously published studies have suggested varying effects on the prescribing attitudes and behavior towards pharmaceutical manufacturers among residents and medical students<sup>3</sup>. The prescribing patterns of physicians have been studied as a direct determining factor on the rational drugs use worldwide. With the World Health Organization (WHO) figuring that more than 50 % of medicines are being prescribed or sold inappropriately. Promoting prescription medicines forms the main source of revenue for the drug manufacturing company. Pharmaceutical companies very commonly employ a huge range of marketing techniques to increase their medicine sales<sup>4</sup>. Even small gifts from pharmaceutical companies have the potential to influence physicians' decisions regarding which drugs to prescribe. The bioethical principle of non-maleficence is violated if a patient receives an expensive and less effective drug as a result of this relationship. Interactions with the medical representatives influence the management and treatment<sup>5</sup>. The relationship-based promotion of drugs is more focused on by pharmaceutical companies in order to create and maintain long-term partnerships with their clients<sup>6</sup>. Drug manufacturing is a costly process and following successful approval of any new

medicine product, drug companies must recover these costs, not just to be profitable but also to enable further research and drug development activities<sup>7</sup>. The area of contemporary medicine is currently becoming corporative and Pharmaceutical companies use huge amounts of their promotional budget on residents and physicians<sup>8</sup>. Critics are of the opinion that giving free hand to companies to extend various gifts to postgraduate residents can influence their prescribing behavior and attitude<sup>9</sup>. The study was planned with the objective to assess the perceptions of postgraduate residents towards their interaction with representatives of pharmaceutical companies.

## MATERIALS AND METHODS

The cross-sectional study was conducted at the Medical and surgical general and allied wards of Liaquat University Hospital Hyderabad/ Jamshoro from May 2022 to June 2022. Postgraduate (PG) Medical and Surgical Residents working in the surveyed wards in their 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> or last year of training were included. Whereas, all the PG residents who were engaged in the research's design or execution in any capacity, as well as those on whom the questionnaire was pretested, and also all the doctors or surgeons not working as residents were excluded from the study. A sample size of 118 was determined using an online sample size calculator Open-Epi by setting the confidence level at 95% and the margin of error at 5%. All the PG residents were selected through a non-probability convenient sampling technique. Informed consent was taken from all the selected participants. According to the Oxford dictionary, definition of attitude was used: as an established approach to thinking or experiencing reflected in a person's actions'. In sociology, attitude is defined as a disposition (towards a person, circumstance, institution, or social process) that reflects an underlying value or belief. The data was collected through a standard questionnaire adapted from previous research by Joseph Barfett et al. to examine the 'attitude' of resident trainee students towards the pharmaceutical sector in our environment. The questions were asked of the participants related to assessing their attitudes and practices towards promotion by pharmaceutical companies.

## RESULTS

A total of 118 participants from medicine and surgical allied wards were included. The study population consists of residents from the first year to the fifth year. Table 1 is showing the socio-demographic characteristic of the participants. For every question, we computed the percentage of resident's answers. The respondents' answers were computed as a percentage of those who agree, disagree and don't know the statement. Table 2 shows the attitude of postgraduate

residents towards their interactions with sales representatives of pharmaceutical companies.

**Table No.1: Demographic Profile of study participants (n=118)**

Study Variables	n (%)
<b>Gender</b>	
• Males	51 (43.2)
• Females	67 (56.8)
<b>Registered in</b>	
• Surgery and allied	53 (45.0)
• Medicine and allied	65 (55.0)
<b>Year of Residency</b>	
• R1	45 (38.1)
• R2	34 (28.8)
• R3	20 (17.0)
• R4	12 (10.1)
• R5	07 (6.0)

**Table No.2: Perceptions of Study Participants Regarding Sales Representatives of Pharmaceutical Companies (n = 118)**

Questions	Disagree	Neutral	Agree
Gifts from drug companies in any form are unacceptable	11(9.3)	24(20.3)	83(70.4)
Accepting merchandise for the benefit of patients, such as medicine samples, is appropriate	16(13.5)	04(3.5)	98(83.0)
Are you willing to accept tiny incentives from the companies such as a free meal, penlight, stethoscope, textbook, wristwatch, or a mobile phone?	14(11.8)	16(13.5)	88(74.6)
Pharmaceutical companies employ promotional techniques in their communication with postgraduate residents	20(17.0)	35(29.7)	63(53.3)
There is no influence of interactions with pharmaceutical representatives on one's prescribing behavior	21(17.8)	26(22.0)	71(60.2)

The trustworthiness of efficacy-related information on newer drugs provided by pharmaceutical companies is questionable.	09(7.6)	42(35.5)	67(56.7)
Is it ethical to receive sponsorship from pharmaceutical corporations for events or educational seminars in a teaching hospital?	11(9.3)	10(8.5)	97(82.2)
Is it acceptable for pharmaceutical companies to foot the bill for printing specialist file folders and prescription pads with their logos on them in teaching hospitals?	35(29.7)	54(45.7)	29(24.6)
Is it necessary to create guidelines for medical drug interactions to be used in hospitals and instructed in both undergraduate and graduate curricula?	59(50.0)	24(20.3)	35(29.7)

## DISCUSSION

The impact of drug promotion by pharmaceutical companies on prescribing medicines cannot be overlooked<sup>10</sup>. The results of this study overall showed that the Resident's interaction with medical representatives was substantial. When comparing the demographic characteristics of our study, our population consists of 51 males (43.22%) and 67 females (56.78%), and in one study conducted in turkey it was shown that they had 55.2 % females and 44.8 % males. The same study also shows the residency level of post graduate trainees year wise as 1st year 50 (24.5%), 2nd year 56 (27.45%), 3rd year 48 (23.52%), 4th year 28 (13.72%) and 5th year as 22 (10.78%)<sup>11</sup>. The residency year level of our study shows R1 as 45 (38.13%), R2 as 34 (28.81%), R3 as 20 (16.94%), R4 as 12 (10.16%) and R5 as 7 (5.93%). In response to one question when the residents were inquired about the ethical aspects of receiving gifts from representatives of drug industry, 83 of the postgraduates (70%) agreed

that it is unethical to accept promotional gifts and only 11 residents (9.33%) felt otherwise. In other question when residents were asked about if they feel harm in accepting small value gifts like pens, textbook and stethoscope, 88 residents (74.57%) opined about no harm in receiving minor gifts and only 14 residents (11.86%) disagreed. In one study performed in Canada, similar results were shown and 75 % students responded that they would accept small gifts like lunched and penlights and 66% students responded that they would accept textbooks and pharmaceutical sponsored educational activities<sup>12</sup>. When the residents were asked about the authenticity of the efficacy of newer drug information provided by drug companies, 67 residents (56.77%) agreed that the representatives do provide trustworthy information and only 9 (7.62%) disagree. In our study when we asked the residents that the company representatives should never be allowed for delivering marketing related presentations in their institute, 35 residents (29.66%) agreed and 59 (50%) of the trainees disagreed. In one study 53% of the residents believed that drug representatives should be restricted from promotional activities within the premises of campuses<sup>13</sup>. These findings are very similar to our results. When we ask the residents that they should not communicate with drug representatives at their training place, 59 (50%) of the residents agreed that they should not meet them at training site and 34 (28.81%) residents disagreed and said they should meet. In one question when the residents were asked about that do they feel it is ethical to accept drug samples for patient benefit, 98 residents (83%) felt that it is ethical to accept samples and only 16 (13.55%) felt it is unethical. When the post graduate residents were asked about the influence of their interactions with pharmaceutical representatives on their prescribing behavior, 71 residents (60%) were of the opinion that there is no impact and only 21 residents (17.79%) disagreed and 26 residents (22%) responded that they don't know. In one study it was shown that 61 % of the physicians denied that pharmaceutical representatives have any influence on their prescribing patterns<sup>14</sup>. Responding to the query regarding acceptability for pharmaceutical companies' sponsorship for educational events e.g. seminars during their residential training, 97 residents (82.2%) felt that it is acceptable for them if the manufacturers sponsor education related events and only 11 residents (9.33%) negated. When the residents were asked that the pharmaceutical representatives do apply marketing techniques in their interactions with residents, 63 residents (53.38%) agreed and 20 residents (16.94%) disagreed with the statement. The present degree of physician-drug industry interactions seems to affect prescribing behavior and it should be further highlighted at policy level and education<sup>15</sup>.

## CONCLUSION

We found that postgraduate residents are generally not opposed to dealing with or receiving promotional gifts from the industry. Residents' interaction with medical representatives was substantial. Many residents felt comfortable having gifts of less monetary value, but were ready to receive gifts of higher monetary value if they fulfill any educational purpose. Majority participants were of opinion that their prescribing practices were not influenced by interaction with medical representatives. However, many residents may not be cognizant of the goals of pharmaceutical promotional strategies and the possibility for potential conflict of interests.

### Author's Contribution:

Concept & Design of Study: Zoheb Rafique Memon  
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**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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