

Gender and racial bias in drug promotional material distributed by pharmaceutical companies

Sir,

Pharmaceutical industries promote their drugs with the intention to influence the prescription decision of health care provider / physicians and adopt various methods like distribution drug promotional materials to the health care provider, publishing drug advertisements in medical journals, personal visits to the health care provider/physicians by designated representatives and sponsoring conferences/CMEs (continuous medical education). Sometime this may influence the health care provider/physician and may lead to the wrong or inappropriate choice of medications, which is an issue of immense ethical concern and also can compromise with the treatment protocol. Quality of these promotional materials are always under scanner and many studies done for drug advertisements published in Indian and western journals show that many of the advertisements provides insufficient, incorrect and biased information.^[1-3] One major issue that emerged was biased nature of pictures and images in drug promotional materials distributed to physicians in hospitals and clinics. In a study done by Hawkins *et al.*, it was observed that most of the doctors shown in advertisements were men and most of the consumers were women. Men were more often shown as worker and when women were showing working, it was usually feminine jobs like waitress and secretaries.^[4] Ideally drug advertisements should have pictures according to racial and ethnic composition of people of that country, should have equal numbers of male and females, and females should be portrayed

in similar ways as male.^[5] There is scarcity of similar documentation to establish if such biases on drug promotional material distributed by pharmaceutical companies do occur in India. Present study is designed with the an overall aim of appraising the drug promotional materials distributed by pharmaceutical companies, to document presence of racial and gender bias, if any.

This study was done at Department of Pharmacology, Government Medical College, Surat. After getting permission from institutional ethics committee, drug promotional materials which were distributed to physicians by pharmaceutical companies through medical representative were collected from the outpatient departments of New Civil Hospital, Surat. These drug promotional materials were collected daily from general department as well as specialist Out Patient Departments (OPDs) of New Civil Hospital, Surat, over one month (November 2010). Each promotional material was evaluated by the team of all four authors with consensus. Information was collected in a predesigned proforma. All the pictures were categorized into doctors and patients, and this broad category further divided into apparently Non-Indian (Caucasians and Africans and others), and apparently Indian, as well as male and females. Values are shown as frequency and percentages. Statistical difference between categorical variable was determined by Fishers exact test.

A total 825 drug promotional materials were procured. Out of these, promotional materials dissipating human pictures were seen in 167 (20.2%) material. Overall 264 human figures were seen in these 167 drug promotional materials, amongst which 38 (14.3%) were of health care physicians, and remaining 226 (85.4%) were of patients. Out of 38 pictures of physician; 28 (73.6%) were males, and rest 10 (26.3%) were females ($P < 0.001$). It was also observed that amongst 38 figures of physician portrayed in the drug promotional materials, 36 (94.3%) were apparently Non-Indians (35 Caucasians and 1 African) and only 2 (5.2%) were apparently Indians ($P < 0.001$). [Table 1] Out of 226 pictures of patients,

Table 1: Racial and gender bias seen in the drug promotional materials during the study

	Variables	Frequency	Percentage	95% CI*	P value
Picturing Physicians (n = 38)	Male	28	73.6	57.9 to 85.0	<0.001
	Female	10	26.3	14.9 to 42.0	
	Non-Indian	36	94.7	82.7 to 98.5	<0.001
	Indian	2	5.2	1.4 to 17.2	
Picturing patients (n = 226)	Male	116	51.3	44.8 to 57.7	0.64
	Female	110	48.6	42.2 to 55.1	
	Non-Indian	162	71.6	65.4 to 77.1	<0.001
	Indian	64	28.3	22.8 to 34.5	

Fisher's exact test (Two tailed), *CI = Confidence Interval

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116 (51.3%) were males and 110 (48.6%) were females ($P = 0.63$). Those who appeared non-Indians were more as compared to Indians (71.6% Vs 28.3%) ($P < 0.001$). [Table 1] Amongst those who seemed to be non-Indians, all except 3 African and 2 Mongolians, were Caucasians. Out of 126 pictures of patients from psychotropic drugs 62 (49.2%) were males and 64 (50.7%) were females ($P = 0.89$).

The 167 drug promotional materials studied were distributed by 30 pharmaceutical companies (21 Indian and 9 Multinational). Out of these 30 pharmaceutical companies, 5 were listed in top 10 pharmaceutical companies according to 2009 data.^[6] This study reveals that drug promotional materials distributed by pharmaceutical companies in India, are biased, both racially and sexually. In another similar study done for drug advertisements published in western medical journals, it was observed that white population (Caucasians) is portrayed more as compared to other races, for both, doctors as well as patients.^[7]

It is to be understood that drug promotional literatures are formed in such a way that physicians can be influenced to prescribe that drug, hence pharmaceutical companies use attractive persons as patients or physicians, hence these pictures are far away from the real social structure. One major limitation in the present study was that, drug promotional materials collected only from various OPDs of a tertiary level government hospital were analyzed, and those distributed in the private hospitals were not evaluated.

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