

Pharmaceuticals companies' promotional brochures: do they display reliable and useful medications' information?

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ABSTRACT

Background: The main objective of this study which was the first of its kind in Sudan was the evaluation of the medication informational contents (section headings) of pharmaceutical companies' promotional brochures, their possible benefits, reliability and usefulness in the proper and rational use of drugs.

Methods: Three hundred and fifty-one (n=351) brochures were collected from randomly selected doctors' clinics in Khartoum, Sudan. Ninety-two of those brochures were excluded for being either duplicates, reminder brochures, promoting medical devices or cosmetics. The remaining (259), were then screened to match their macro-informational contents (section headings) against same advised in world health organization ethical criteria for medicinal drug promotion.

Results: Almost all the screened brochures displayed unbalanced and poorly evidence supported (48.2%) medication information messages, which minimized the risks of the promoted drugs (45.4%), while displaying section headings encouraging more use of the promoted products, in higher frequencies (93.66%). There was significant difference between the frequencies of display of medication information section headings of eight out of nine tested section headings, of a multinational and branded generic brochures (p. value ranged between 0.01 and 0.000).

Conclusions: Screened brochures were found to display poorly reliable and unbalanced medication information. Healthcare providers shall, accordingly, seek independent medication information sources, and not solely depend on commercial sources of medication information. Official regulators shall strictly define and mandate medication information contents in printed pharmaceutical promotional materials. Healthcare providers should, also, master the skills of appraising such promotional printed materials if rational medication use is to be achieved.

Keywords: Pharmaceutical, Companies, Promotional, Brochures, Medication, Information

INTRODUCTION

Healthcare providers in both developed and developing countries need adequate, comprehensive, easily accessible, accurate and balanced medication information to help them choose the appropriately reliably useful and safe medications that support rational prescribing decisions. They get access to such essentially needed medication information about old and new medications, from a diversity of sources.¹⁻³ Especially in developing countries, the pharmaceutical industry through its various promotional tools, materials and activities represent an

important source of medication information for healthcare providers.^{4,5} Though was known to have a negative effect on healthcare prescribing practices.⁶ However, doctors and other healthcare providers, greatly rely in their prescribing practices on medication information provided by the pharmaceutical industry.⁷⁻⁹

The pharmaceutical sales representative when calling (visiting) on doctors, always carry with them those glossy, colorful, and sight appealing brochures which display the main themes or messages of the promoted products. They usually leave them behind for healthcare providers further

and ongoing reference. Brochures represent a crutch on which the representative leans while leading a discussion with health care providers. Doctors find the information in the brochures easily accessible, precise and does not need great concentration, and respective of their time. Brochures are known to be very effective promotional tools as they addresses both the conscious and subconscious minds of the prospects.¹⁰

If the healthcare providers were only relying in their prescribing practices, on commercial medication information, with its much criticized poor, deficient and imbalanced nature, then the highly needed rational prescribing that affects the treatment outcomes, might be grossly hampered to the detriment of patients' safety, economy and overall health aims.

It was, accordingly, decided to undertake this study under with the main objective of evaluating the medication informational contents (section headings) of pharmaceutical companies' promotional brochures, their possible benefits, reliability and usefulness, for healthcare providers, in the proper and rational use of drugs study. The studied promotional brochures' medication information, section headings, were matched against same advised in the World Health Organization (WHO) ethical criteria for medicinal drug promotion, which stood as an internationally accepted unbiased standard.¹¹

METHODS

This study which was the first of its kind in Sudan was a part of an inclusive attempt for the determination of the impact of pharmaceutical promotion on proper medical practice in Sudan. It was started on May, 2005 and completed on May 2007 and approved, July 2007, by the Graduate Studies Committee, Faculty of the Pharmacy University of Gezira/ Wad Medani-Sudan.

Three hundred and fifty brochures of both multinational and branded generic pharmaceutical companies, representing 255 (n=255) different pharmaceutical prescription products, were collected from doctors clinics in Khartoum, Sudan. Duplicate brochures, promoting the same products for same companies, reminder brochures, and those brochures promoting cosmetics, and medical devices brochures, were excluded. They were found to be ninety-two (n=92). The remaining 259 (n=259), were then screened to verify whether their medication informational contents, as represented by section headings, were satisfying the medication information particulars recommended in the WHO ethical criteria for medicinal drug promotion.

The section headings looked for were: the product's brand name and generic name, indications, dosage and administration, dosage forms, contra-indications, precautions, side effects, drug interactions, and the supporting scientific evidence (references) for their various

claims. All the selected brochures were introductory and were in excellent condition.

Only 125 cited references were selected randomly, and screened to verify that they were retrievable, and then match them against the promotional claims to which they correspond. The screening was limited to the internet.

RESULTS

The two hundred and fifty-nine (n=259) different pharmaceutical companies' brochures randomly selected were found to relate to multinational companies (91) and (168) to branded generic companies (Group A and Group B, respectively). The results of the screening for section headings are shown in Table 1, hereunder, Figure 1 and Table 2, hereunder, show the frequencies

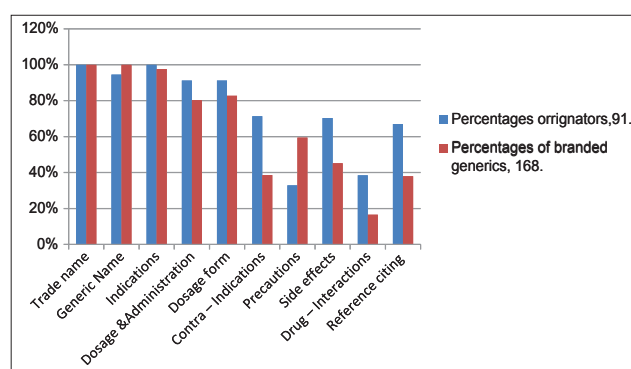


Figure 1: Comparison between availability of medication information section headings in promotional brochures of multinational pharmaceutical companies (Group A) and branded generic companies (Group B).

Table 1: Brochures medication information section headings matching against same advised by the WHO ethical criteria for medicinal drug promotion.

Section headings	Frequency of availability in the brochure's text	Percentage of age
Brand name	259	100
Generic name	259	100
Indications	255	98.4
Dosage form	222	85.7
Dosage and administration	218	84.1
Side effects	140	54
Contraindications	130	50.1
Precautions	130	50.1
Drug-interactions	63	24.3
Retrievable references	125	48

WHO: World Health Organization

Table 2: Availability of medication information section heading in the (n=259) screened pharmaceutical promotional brochures.

Section heading	Multinational companies brochures		Branded generics brochures		p value
	Available	Not available	Available	Not available	
Generic name	86	5	168	0	0.002*
Indications	91	0	164	4	0.14*
Dosage administration	83	8	132	36	0.01*
Dosage form	83	8	136	32	0.03*
Contra-indications	65	26	65	103	0.00*
Precautions	30	61	100	68	0.000*
Side effects	64	27	76	92	0.000*
Drug-interaction	35	56	28	140	0.000*
Reference citation	61	30	64	104	0.000*

*Significant association

and corresponding percentages for the availability of medication information section heading in the (n=259) screened brochures.

Bivariate Analyses

Table 2 shows the results of the bivariate analyses using the Chi-square test, for the correlation between the frequencies of availability of medications' informational in nine section headings, in multinational and branded generics companies brochures (Group A and Group B respectively), where significant differences between eight out of nine of same section headings (p value ranged between 0.01 and 0.000) were found.

Figure 1 shows a comparison between availability of medication information section headings in promotional brochures of multinational pharmaceutical companies (Group A) and branded generic companies (Group B).

DISCUSSION

The printed pharmaceutical promotional materials of different kinds and forms are used by pharmaceutical companies to convey the promotional information message, to healthcare providers, with the main objective of influencing their prescribing and dispensing decisions in favor of their promoted drugs choices. The promotional brochures which are usually made from glossy materials, in attractive colors, design and layout, are usually quite well satisfactory to their intended promotional purposes. They usually are almost always used by pharmaceutical industry's medical representatives for these purposes, and are usually left behind.¹²

Although the promotional brochures may often contain misleading and unbalanced information, medical practitioners, in developing countries, mostly utilize such drug promotional materials from pharmaceutical companies, as major sources of medication information, due to the

scarcity and poor accessibility of other non-commercial, independent information sources.⁴ As pointed to by many researchers, these printed materials, were mostly intended to promote rather than to educate.¹²⁻¹⁵

Two hundred and fifty-nine (n=259) pharmaceutical promotional brochures were screened to match their medication informational contents, as represented by their section headings, to those same (section headings) advised by WHO, 1988 ethical criteria for medicinal drug promotion.¹²

As shown in Table 1, the (n=259) screened promotional brochures' macro-medication information contents (section headings), displayed unbalanced and weakly evidence-supported medication information. Those sections headings of the promoted products inviting and encouraging for unrestricted use of the promoted medications, such as the brand name, generic name, indications, dosage form, dose and administration were given more attention and more frequent display, average 1213 (93.66%). In contrast, those section headings relating to medications' safety issues and restrictions on products' use, such contra-indications, precautions, side effects and drug- interactions, were less displayed 588 (45.4%).

It, accordingly, was evident that the screened pharmaceutical promotion brochures displayed unbalanced and possibly misleading information, which cannot be relied on solely by the practicing healthcare providers, if rational and safe prescribing, recommending and dispensing of medications were to be actualized. These results are matching to the findings of other researchers.¹⁶⁻²⁴ Some other authors, arrived at even a darker picture; where they put it: "adverse reactions, warnings about interactions and contra-indications, were absent from all promotional printed materials studied."²⁰

Other researchers advised that, "Physicians should be cautious about drawing conclusions based on data presented on brochures provided by pharmaceutical companies."¹⁷

The screening for the scientific evidence supporting the promoting company's claims (references) in the screened brochures showed that the references cited in all the screened brochures (Groups A and B) were only 125 (48.2%). However, they were more in Group A (67%) than in Group B (38%). These results were matching to results of other researchers.²¹

Moreover, the results bivariate analyses for the comparison between the brochures of the multinational and the branded generic pharmaceutical companies, regarding the frequencies of displays of the informational section headings, Table 2, revealed significant *differences (*p values, ranged between 0.01 and 0.000). Other researchers had, quite often, reported similar differences between the promotional printed materials of the multinationals and branded generics, albeit those differences might not be significant.^{20,25,26}

This may further confirm our proposal that the quality of scientific medication information provided in pharmaceutical company's brochures screened, of both the multinational and the branded generic pharmaceutical companies, did not provide adequate balanced and reliable medication information, which might even be misleading.^{18,27,28} They, as well, were not exactly matching to WHO ethical criteria for medicinal drug promotion.²⁹

Accordingly, they might not be of much help to the healthcare providers, to firmly rely on, if rational use of such medications is to be practiced.²²

As, the promoting companies themselves were feeling the inadequacy of the medication information they provide in their brochures, many pharmaceutical promotional brochures contain a footnote showing the contact address of the promoting companies encouraging interested healthcare providers to contact them if they might ever need more information about the promoted products. Pakistani researchers studying these encouraging invitations, reported very weak responses, from those companies, to such written requests from doctors.³⁰

CONCLUSIONS

The results of the study revealed, very clearly, that the overall nature of the informational contents of the screened pharmaceutical promotional brochures, as judged from the frequencies of the informational section headings displayed, was unbalanced, biased, not educative and poorly referenced. Moreover, they did not follow, or comply with, the WHO ethical criteria for medicinal drug promotion directives in this concern. The informational contents' particulars of the printed pharmaceutical promotional materials, about their validity, accuracy, sufficiency, balanced nature and truthfulness, shall be carefully studied. Health care providers shall be trained on how to critically appraise the quality of the medication information displayed in the promotional

brochures. And those in developing countries in particular, should not solely depend on commercial medication information, but should seek independent sources of medication information. They should, also, master the skills of appraising such printed promotional materials. The official regulators of such materials shall define and strictly mandate their medication information particulars.

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