



### Professional qualification

Out of total participants, 89 (57.1%) of them were postgraduates, 35 (22.44%) were intern medical officers, and 32 (20.51%) were faculty members. The results are shown in Fig. 1.

### Evaluation of knowledge

Regarding knowledge, the mean score was  $6.24 \pm 0.17$ . 52 (33.33%) of the participants were found to have good knowledge (scores 8–10), 73 (46.79%) had average knowledge, and 31 (19.87%) with scores 0–4 had poor knowledge, respectively.

### Evaluation of attitude

53 (34%) participants felt that mandatory generic drug prescriptions are a burden on practitioners. 72 (46%) participants opined that mandatory generic prescriptions will not work in a country like India. 137 (88%) suggested that government must ensure the quality of generic drugs. When asked about education on generics, 140 (90%) mentioned that health-care providers and pharmacies must be educated about generic drugs. Regarding the importance of generic prescription, 129 (83%) participants felt that generics must be taught in early part of medical training. Majority of the 62 (40%) participants disagreed upon the fact that switching to generics may change the outcome of therapy. Majority of the 132 (85%) participants suggested that a national level online reference should be made available for generic drugs. The results are shown in Fig. 2.

### Evaluation of practice

Out of 156 participants, 90 (58%) were found to prescribe generic drugs. 42 (27%) prescribe generic drugs from local manufacturers. 115 (74%) discuss with patients before prescribing generic drugs. 122 (78%) consider socioeconomic status of patients for prescribing generic drugs. 88 (56%) did not write initial of brand below prescription. 95 (61%) allow patients to substitute generic for a brand or brand for generic drugs. 53 (34%) did not feel that personal experience with medicines will affect prescription of generic drugs. The results are shown in Fig. 3.

## DISCUSSION

A total of 156 participants were included in the study. Mean age was  $29.05 \pm 17.81$  years. 78% were aware that the composition of generic drugs is similar to brand drugs. Only 33% were aware that generic drugs are marketed after expiry of patent period of brand drugs. 87% agreed that generic drugs reduce the overall cost of health care. 78% were aware that the Government of India has made it mandatory for the use of generic drugs. 60% knew that generic drugs were available in pharmacies. In the study done by Badwaik *et al.*, 92.5% doctors had knowledge that composition, dose, and indications of generic medicines were the same as the branded counterparts. 95% of the participants believed that generic medicines reduced the overall health-care expenditure. In this study, 89% felt that health-care providers and pharmacies must be educated about generic drugs. 88% felt that government must ensure quality control of generic drugs. 16% opined that incentives must be paid to doctors for prescribing generic drugs. In the study done by Badwaik *et al.*, 90.4% were of the opinion that training programs should be conducted to increase the awareness regarding the use of generic drugs [13]. 97.5% of the doctors agreed that the importance of generics should be taught in early part of internship. 92.5% of the participants were of the view that quality testing of generic medicines should be made more vigorous [14]. In the study done by Guptha *et al.*, 89% agreed that there should be training program to increase the awareness regarding generic drugs among doctors and patients [15].

In this study, 58% of participants prescribed generic drugs. 77% of them prescribed based on socioeconomic status of patient. In the study done by Zaverbhai *et al.*, 68.9% prescribed generic medicines. 78.5% opined that they take into consideration economic status of patient while prescribing. In the study done by Badwaik *et al.*, 53% participants prescribed generic drugs. 64% opined that they take into consideration economic status of patient while prescribing generic drugs. In the study

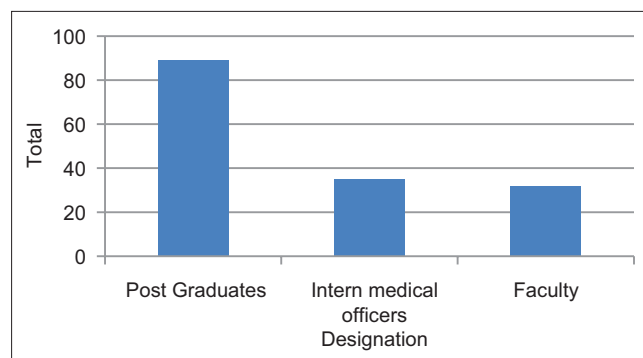


Fig. 1: Professional qualification of the participants

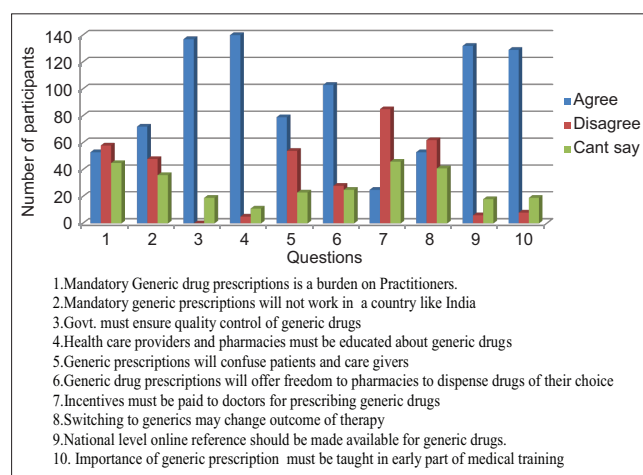


Fig. 2: Evaluation of attitude

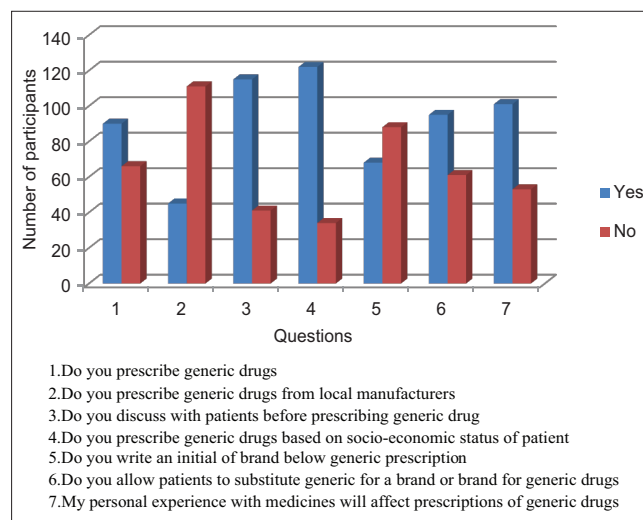


Fig. 3: Evaluation of practice

done by Bhattacharjee *et al.*, 93% participants prescribed generic drugs. 98% take into consideration economic status of patient while prescribing generic drugs. In the study done by Guptha *et al.*, 63% participants prescribed generic drugs. 3% take into consideration economic status of patient while prescribing generic drugs.

## CONCLUSION

This study shows that participants were well aware about generic drugs. As opined by the clinicians, a national level online reference

must be made available. Although they prescribe good number of generic medicines, concerns about efficacy, safety, and availability were present. Educational and regulatory interventions to address these concerns are required.

#### Limitation

Duration of study and sample size.

#### ACKNOWLEDGMENT

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#### CONFLICTS OF INTEREST

None.

#### REFERENCES

- World Health Organization. Generic Drugs. Department of Trade, Foreign Policy, Diplomacy and Health of World Health Organization. Geneva: WHO Press; 2004. Available from: <http://www.who.int/trade/glossary/story034/en>. [Last accessed on 2018 Aug].
- Bugeja V. Medicines: Mere generic facts. *J Malta Coll Pharm Pract* 2007;13:424.
- Swain TR, Giri PP. Generic medicines: Old wine in new bottle? *J Young Pharm* 2015;7:1434.
- Hassali MA, Alrasheedy AA, McLachlan A, Nguyen TA, Al-Tamimi SK, Ibrahim MI, et al. The experiences of implementing generic medicine policy in eight countries: A review and recommendations for a successful promotion of generic medicine use. *Saudi Pharm J* 2014;22:491-503.
- Jamshed SQ, Hassali MA, Ibrahim MI, Babar ZU. Knowledge attitude and perception of dispensing doctors regarding generic medicines in Karachi, Pakistan: A qualitative study. *J Pak Med Assoc* 2011;61:80-3.
- Bakthavathsalam G. Generic medicines: Cost effective alternative to branded drug. *Health Adm* 2006;19:16-9.
- Department of Pharmaceuticals, Ministry of Chemicals and fertilizers, Government of India. Jan Aushadhi. Generic Medicine Campaign Improving Access to Medicines. Available from: <http://www.janaushadhi.gov.in>. [Last accessed on 2018 Jul].
- King DR, Kanavos P. Encouraging the use of generic medicines: Implications for transition economies. *Croat Med J* 2002;43:462-9.
- Steinman MA, Chren MM, Landefeld CS. What's in a name? Use of brand versus generic drug names in United States outpatient practice. *J Gen Intern Med* 2007;22:645-8.
- Shrank WH, Cox ER, Fischer MA, Mehta J, Choudhry NK. Patients' perceptions of generic medications. *Health Aff (Millwood)* 2009;28:546-56.
- Sontakke SD, Bajait CS, Pimpalkhute SA, Jaiswal KM, Jaiswal SR. Comparative study of evaluation of self medication practices in first and third year medical students. *Int J Biol Med Res* 2011;2:561-4.
- Zaverbhai KD, Dilipkumar KJ, Kalpan DC, Kiran DM. Knowledge, attitude and practice of resident doctors for use of generic medicines at a tertiary care hospital. *J Young Pharm* 2017;9:263-6.
- Badwaik RT, Chopade SS, Mahajan HM, Honrao R. Prescribers views on generic medicines: A study on knowledge, attitude and practice. *J Cont Med A Dent* 2015;3:27-32.
- Bhattacharjee P, Das L, Ghosh R, Das UK, Chakraborty M. Knowledge, attitude and practice of generic medicines among doctors in a tertiary care teaching hospital of Tripura. *Int J Basic Clin Pharmacol* 2017;6:1-6.
- Gupta KS, Nayak PR, Vidyarthi SK. A study on the knowledge, attitude and practice of generic medicines among doctors in a tertiary care teaching hospital in South India. *Natl J Physiol Pharm Pharmacol* 2015;5:39-44.