Introduction

Animal experiments have conventionally formed an essential component of postgraduate medical education (PGME; 1) and undergraduate medical education (UGME; 2–4) in the discipline of Pharmacology in India. Graduate students in India specialise in pharmacology after the completion of Bachelor of Medicine, Bachelor of Surgery, Bachelor of Pharmacy, Bachelor in Veterinary Science or Master of Science courses. In almost all of these pharmacology-related postgraduate courses (except for the PhD), animal experiments form a vital part of summative assessment. However, the poor clinical and toxicological utility of animal experiments (5, 6), and the finding that many are statistically under-powered (7), contribute to the question of their validity. In addition, the escalating economic burden of animal experiments, problems in obtaining animals, strict regulations limiting their use, ethical objections from animal rights organisations, and misgivings voiced by undergraduate students (2–4, 8–11) and medical interns (12), have created stumbling blocks to the use of animals in medical education. Moreover, the availability of many newer alternatives, such as computer simulations, high-quality videos, ethically-sourced animal cadavers for education/biomedical research (13, 14), innovative opportunities in the pharmaceutical industry and clinical research organisations (15), and other evolving streams, such as pharmacoepidemiology, pharmacovigilance and pharmacoeconomics (1), have raised questions about the use of animals in medical education.

The perceptions of students and faculty members with regard to the use of animals in UGME have been explored in depth (9–12, 16, 17), but, to our knowledge, no studies have compared the perceptions of faculty members on the use of animal experiments and alternatives in UGME and in PGME. We also determined the association between these perceptions and the socio-demographic characteristics of the participants. Pharmacology faculty members in 15 medical colleges located in southern India answered a 27-statement, 5-domain questionnaire with a total score of 108. The means of the total, domain and statement scores were analysed by the Wilcoxon signed-rank test. The mean total score obtained for faculty members (n = 52) was significantly higher (p < 0.001) for PGME (61.2/108) than that for UGME (51.9/108). Significant differences were observed in the mean total and in the domain scores for PGME when compared to UGME in all of the socio-demographic groups, except for male faculty members and those without an MD or doctoral degree. The mean individual statement scores also indicated that there is more support for animal use in PGME. Overall, it was apparent that pharmacology faculty members in southern Indian medical colleges support animal use in PGME more than in UGME. Increased awareness is required among faculty members concerning alternatives to animal experiments in medical education, especially in PGME.