

Dental Research in India

India holds fourteenth rank among the top 20 productive countries of the world in dental sciences, with its global publications share of 1.66% based on the cumulative world publications output data for 1999–2008.¹ Another study which used PubMed database reported that 1944 articles were published by Indian authors in dental research in the last 30 years.² Dental research in India is promoted by “Indian society for dental research” which conducts annual international conferences on cutting edge research in dentistry. Society publishes a bimonthly journal “Indian Journal of dental research” which is indexed and publishes original research articles in dental and oral health research. Despite all these, dental research remains nascent in the country due to several constraints.

The dental research in India, when compared to the other countries is restricted to laboratory and do not have much translational value to the public and patients. Though there are many dental colleges in India, only a small number of dental professionals opt for full-time research career. In postgraduate program, dissertation is a requirement for appearing in university examinations. The main purpose of the dissertation is to expose the postgraduate students to the research environment. The BDS course is spread over four years after the exclusion of the one-year internship. The basics of research can be introduced in the undergraduate curriculum itself, which will be useful when expanded as dissertation in post-graduation program. Introduction of PhD program is mandatory in the current situation, as it helps the dental professionals to pursue full-time research career.³

The need of the hour is to provide thorough training in research methodology and also to provide adequate infrastructure for research. Translational research will improve the quality of treatment, improve the professional contentment of the faculty and the betterment of clinical dentistry.

A recent survey reported certain barriers for research in an Indian scenario, which includes administrative overburden, lack of funds, and lack of documentation of the dental data.⁴ The faculty is also expected to work for inspections, National Assessment and Accreditation Council accreditation, University Grants Commission recognition, and the usual administrative work for the college round the clock, hence, the research work suffers.

A significant factor which can encourage or hamper their research work is finance. The situation is complicated by no funding from the institutes and lack of experience and training for writing grants. Faculty should be encouraged to apply for extramural research grants. More grant writing workshops needs to be conducted at frequent intervals. The faculty members should also be encouraged by providing intramural funds and necessary infrastructure for research. The researcher needs sabbatical leave for carrying out research works. Sabbaticals are mandatory for the personal and professional growth of the individual, but till date no such rules exist in any of the dental institutions in India, neither private nor government. The Dental Council of India has not provided any guidelines regarding sabbaticals. If the researcher has to go for research work, they have to use their available leaves or with the loss of pay. This is a significant barrier for dental research in India.

The dental researchers need to be trained in research methodology in terms of study design, methodology and statistical methods so that quality of work will be improved. India is emerging as an important hub for global Clinical trial. They need to be trained in regulatory guidelines for clinical trials, ethical issues and the role and responsibility of investigators and sponsors. Lack of record keeping and documentation is also a major hurdle in Indian scenario.

Inadequate research by dentists could also be attributed to the fact that presently there are no research jobs in Indian dental institutions. The human resource department should have trained dental research assistants and data analysts in the research team. This could be achieved by framing guidelines for research from the Dental Council of India and to train Indian dentists to keep documents, records and emphasize it by making it mandatory by law.⁴

Dental Council of India (DCI) has observed that there is lack of research in dental science. In government dental colleges, only few dental colleges such as Maulana Azad Institute of Dental sciences, All India Institute

of Medical Sciences (AIIMS) in the national Capital, PGI in Chandigarh and King George Dental College in Lucknow, Uttar Pradesh, have a wing actively engaged in research work. Now it has been made it mandatory that for every dental college across the country should have a research wing. This rule will apply to all dental colleges, i.e., already existing and those who are making fresh applications for establishing a dental college.

In conclusion, the future generation of dental faculty has to explore solutions for these inadequacies and barriers and also change the culture of dental college training into research supportive environment

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Even One Drink a Day Increases Risks

Alcohol use and burden for 195 countries and territories, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016.

BACKGROUND: Alcohol use is a leading risk factor for death and disability, but its overall association with health remains complex given the possible protective effects of moderate alcohol consumption on some conditions. With our comprehensive approach to health accounting within the Global Burden of Diseases, Injuries, and Risk Factors Study 2016, we generated improved estimates of alcohol use and alcohol-attributable deaths and disability-adjusted life-years (DALYs) for 195 locations from 1990 to 2016, for both sexes and for 5-year age groups between the ages of 15 years and 95 years and older.

METHODS: Using 694 data sources of individual and population-level alcohol consumption, along with 592 prospective and retrospective studies on the risk of alcohol use, we produced estimates of the prevalence of current drinking, abstinence, the distribution of alcohol consumption among current drinkers in standard drinks daily (defined as 10 g of pure ethyl alcohol), and alcohol-attributable deaths and DALYs. We made several methodological improvements compared with previous estimates: first, we adjusted alcohol sales estimates to take into account tourist and unrecorded consumption; second, we did a new meta-analysis of relative risks for 23 health outcomes associated with alcohol use; and third, we developed a new method to quantify the level of alcohol consumption that minimises the overall risk to individual health.

FINDINGS: Globally, alcohol use was the seventh leading risk factor for both deaths and DALYs in 2016, accounting for 2.2% (95% uncertainty interval [UI] 1.5-3.0) of age-standardised female deaths and 6.8% (5.8-8.0) of age-standardised male deaths. Among the population aged 15-49 years, alcohol use was the leading risk factor globally in 2016, with 3.8% (95% UI 3.2-4.3) of female deaths and 12.2% (10.8-13.6) of male deaths attributable to alcohol use. For the population aged 15-49 years, female attributable DALYs were 2.3% (95% UI 2.0-2.6) and male attributable DALYs were 8.9% (7.8-9.9). The three leading causes of attributable deaths in this age group were tuberculosis (1.4% [95% UI 1.0-1.7] of total deaths), road injuries (1.2% [0.7-1.9]), and self-harm (1.1% [0.6-1.5]). For populations aged 50 years and older, cancers accounted for a large proportion of total alcohol-attributable deaths in 2016, constituting 27.1% (95% UI 21.2-33.3) of total alcohol-attributable female deaths and 18.9% (15.3-22.6) of male deaths. The level of alcohol consumption that minimised harm across health outcomes was zero (95% UI 0.0-0.8) standard drinks per week.

INTERPRETATION: Alcohol use is a leading risk factor for global disease burden and causes substantial health loss. We found that the risk of all-cause mortality, and of cancers specifically, rises with increasing levels of consumption, and the level of consumption that minimises health loss is zero. These results suggest that alcohol control policies might need to be revised worldwide, refocusing on efforts to lower overall population-level consumption.

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