



**PROF. DR. NARESH KUMAR**  
**DOW UNIVERSITY OF HEALTH SCIENCES**  
**KARACHI, PAKISTAN**

| [Web of Science](#) | [Scopus](#) | [ORCID](#) | [Google Scholar](#) | [Research Gate](#) | [Webpage](#) |

## Work Address

Department of Science of Dental Materials  
Dr. Ishrat Ul Ebad Khan Institute of Oral Health Sciences  
Dow University of Health Sciences  
OJHA campus, SUPARCO Road, Karachi, Pakistan

## Education

2008-2011	<b>PhD in Dental Biomaterials</b> University of Birmingham, United Kingdom  <u><b>Thesis Title:</b> <a href="#">Exploring the variability in mechanical property testing of dental resin composites</a></u>
1996-2001	<b>Bachelor of Dental Surgery (BDS)</b> University of Sindh, Jamshoro, Pakistan
1993-1995	<b>Higher Secondary School Certificate</b> Board of Intermediate & Secondary Education, Sukkur, Pakistan
1991-1993	<b>Secondary School Certificate</b> Board of Intermediate & Secondary Education, Sukkur, Pakistan

### Professor & Chairperson in Department of Science of Dental Materials

#### **Major Responsibilities:**

- To instruct undergraduate and postgraduate students
- Being a member of the senate, academic council and board of studies, participate in the decision making regarding curriculum, research , examination etc
- To conduct exam of both undergraduate and postgraduate students
- Maintaining personal liaison with the students
- To develop programs for the professional development of junior faculty
- To supervise students in research activities
- To present the university in seminars and conferences
- To ensure that all teaching and non-teaching staff attend their duties properly
- To chair the departmental meetings
- To identify training needs of employees of my department

## Work History

**2018 till to-date**

**Professor in Department of Science of Dental Materials  
Dr. Ishrat Ul Ebad Khan Institute of Oral Health Sciences  
Dow University of Health Sciences, Karachi, Pakistan**

2018	Professor in Department of Science of Dental Materials Dow International Dental College, Dow University of Health Sciences, Karachi, Pakistan
2018	Associate Professor in Department of Science of Dental Materials, Dow International Dental College, Dow University of Health Sciences, Karachi, Pakistan
2016-2018	Associate Professor in Department of Science of Dental Materials, Faculty of Dentistry, LUMHS, Jamshoro, Pakistan
2015-2016	Associate Professor in Dental Materials Division, College of Dentistry, King Faisal University , Kingdom of Saudi Arabia
2014-2015	Associate Professor in Department of Science of Dental Materials, Faculty of Dentistry, LUMHS, Jamshoro, Pakistan
2011-2014	Assistant Professor in Department of Science of Dental Materials, Faculty of Dentistry, LUMHS, Jamshoro, Pakistan
2002-2011	Lecturer in Department of Science of Dental Materials, Faculty of Dentistry, LUMHS, Jamshoro, Pakistan

## Experience as Chairperson/Head/Incharge of the Department

<b>From 27/01/2021 till to date</b>	<b>Chairperson of the Department of Science of Dental Materials, Dow University of Health Sciences, Karachi</b>
<b>From 02/05/2019 till to date</b>	<b>Head of the Department of Science of Dental Materials, Dr. Ishrat Ul Ebad Khan Institute of Oral Health Sciences, Dow University of Health Sciences, Karachi</b>
From 24/03/2014 to 25/01/2018	Chairman of the Department of Science of Dental Materials, Liaquat University of Medical & Health Sciences, Jamshoro
From 04/08/2011 to 23/03/2014	Incharge of the Department of Science of Dental Materials, Liaquat University of Medical & Health Sciences, Jamshoro

### **Current Roles in Various Committees/Boards/Journals**

Associate Editor, Journal of the Dow University of Health Sciences, Karachi

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Member Board of Advanced Studies and Research, Dow University of Health Sciences, Karachi, Pakistan

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Member Scientific Board, Dow University of Health Sciences, Karachi

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Member BDS Curriculum Review Committee, Dow University of Health Sciences, Karachi

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Member Curriculum Review Committee for M.Phil and PhD in Dental Sciences, Dow University of Health Sciences, Karachi

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Member of Board of Studies, School of Dental Care Professionals, Dow University of Health Sciences, Karachi

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Chairperson Board of Studies, Department of Science of Dental Materials, Dow University of Health Sciences, Karachi

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Member Board of Faculty of Dentistry, Dow University of Health Sciences, Karachi

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### **Previous Roles in Various Committees/Boards/Programs/Courses**

Co-opted Member Standing Recognition Committee (Dental), Pakistan Medical & Dental Council, Islamabad

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PhD Coordinator Dental Sciences, Liaquat University of Medical & Health Sciences, Jamshoro

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Member PhD Core Committee, Liaquat University of Medical & Health Sciences, Jamshoro

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Facilitator Research Certificate Course, Liaquat University of Medical & Health Sciences, Jamshoro

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Member Board of Advance Studies and Research, Dental Faculty, Isra University, Hyderabad

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Member Board of Advance Studies and Research, Liaquat University of Medical & Health Sciences, Jamshoro

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### Journal articles

1. Pal A, Altaf N, Mahmood A, Akbar S, Maher N, **Kumar N**, Zafar MS, Murcia L, Oñate-Sánchez RE. Exploring the Variability in Antibacterial Testing of Resin Dental Composites among Investigators: A Narrative Review. *Microbiology Research* 2023; 14(4):1736-1750.
2. Dahri WM, **Kumar N**, Altaf N, Mughal W, Zafar MS. Mechanical and Biomimetic Characteristics of Bulk-Fill Resin Dental Composites Following Exposure in a Simulated Acidic Oral Environment. *Biomimetics* 2023; 8(1):19.
3. **Kumar N**, Maher N, Amin F, Ghabbani H, Zafar MS, Rodríguez-Lozano FJ, Oñate-Sánchez RE. Biomimetic Approaches in Clinical Endodontics. *Biomimetics* 2022; 7(4):229.
4. Amin F, Fareed MA, Zafar MS, Khurshid Z, Palma PJ, **Kumar N**. Degradation and Stabilization of Resin-Dentine Interfaces in Polymeric Dental Adhesives: An Updated Review. *Coatings* 2022; 12(8):1094.
5. **Kumar N**. Amin F, Hashem D, Khan S, Zaidi H, Rahman S, Farhan T, Mahmood SJ, Asghar MA, Zafar MS. Evaluating the pH of Various Commercially Available Beverages in Pakistan: Impact of Highly Acidic Beverages on the Surface Hardness and Weight Loss of Human Teeth. *Biomimetics* 2022; 7(3), 102.
6. Memon AB, Rahman AA, Channar KA, Zafar MS, **Kumar N**. Evaluating the Oral-Health-Related Quality of Life of Oral Submucous Fibrosis Patients before and after Treatment Using the OHIP-14 Tool. *International Journal of Environmental Research and Public Health* 2022; 19(3): 1821.
7. Memon AB, Rahman AA, Channar KA, Zafar MS, **Kumar N**. Assessing the Quality of Life of Oral Submucous Fibrosis Patients: A Cross-Sectional Study Using the WHOQOL-BREF Tool. *International Journal of Environmental Research and Public Health* 2021; 18(18): 9498.
8. Amin F, Rahman S, Khurshid Z, Zafar MS, Sefat F, **Kumar N**. Effect of Nanostructures on the Properties of Glass Ionomer Dental Restoratives/Cements: A Comprehensive Narrative Review. *Materials* 2021; 14(21):6260.
9. Memon SM, **Kumar N**, Rahman AA, Syed BM. Evaluation of C-reactive protein and hematological parameters in smokeless tobacco users: A comparative cross-sectional study. *Pakistan Journal of Medical Sciences* 2021; 37(4):983-987.
10. Memon AB, Rahman AA, Channar KA, **Kumar N**. A Clinico-Demographic Evaluation of Patients with Oral Submucous Fibrosis: a Cross Sectional Study. *Journal of Pharmaceutical Research International* 2021; 33(13):22-29.
11. **Kumar N**, Ghani F, Fareed MA, Riaz S, Khurshid Z, Zafar MS. Bi-axial flexural strength of resin based dental composites–Influence and reliability of the testing method configuration. *Materials Technology* 2021; 16:1-7.

12. **Kumar N**, Fareed MA, Zafar MS, Ghani F, Khurshid Z. Influence of various specimen storage strategies on dental resin-based composite properties. *Materials Technology* 2021; 2; 36(1):54-62.
13. Zafar MS, Amin F, Fareed MA, Ghabbani H, Riaz S, Khurshid Z, **Kumar N**. Biomimetic Aspects of Restorative Dentistry Biomaterials. *Biomimetics* 2020; 5(3):34.
14. Kumar B, Abbas M, Naz A, **Kumar N**, Ali S, Lone MA. Evaluating Distance between Vibrating Line and Fovea Palatinae in Class I, Class II and Class III Soft Palate Types. *Journal of Pharmaceutical Research International* 2020; 32 (43):78-86.
15. Ali S, Sangi L, **Kumar N**, Kumar B, Khurshid Z , Zafar MS. Evaluating antibacterial and surface mechanical properties of chitosan modified dental resin composites. *Technology and Health Care* 2020; 28(2):165-173.
16. Kumar B, **Kumar N**, Ali S, Ahmed S. Exploring partial edentulism patterns in mandibular arch among patients of Karachi. *The Professional Medical Journal* 2019; 26: 764-768.
17. **Kumar N**, Zafar MS, Dahri WM, Khan MA, Khurshid Z. Effects of deformation rate variations on bi-axial flexural properties of dental resin composites. *Journal of Taibah University Medical Sciences* 2018; 13: 319-326.
18. Ali S, Sangi L, **Kumar N**. Exploring antibacterial activity and hydrolytic stability of resin dental composite restorative materials containing chitosan. *Technology and Health Care* 2017; 25: 11-18.
19. Mirani SA, Sangi L, **Kumar N**, Ali D. Investigating the antibacterial effect of Chitosan in dental resin composites: a pilot study. *Pakistan Oral & Dental Journal* 2015; 35: 303-306.
20. Mirani SA, Kalhoro FA, **Kumar N**, Memon AB, Bhangar F. Dietary habits and prevalence of dental erosion among dental students of LUMHS Jamshoro. *Journal of the Pakistan Dental Association* 2014; 23: 61-65.
21. **Kumar N**, Sangi L. Water sorption, solubility and resultant change in strength among three resin-based dental composites. *Journal of Investigative and Clinical Dentistry* 2014; 5: 144-150.
22. **Kumar N**, Shortall A. Performance of the experimental resins and dental nanocomposite at varying deformation rates. *Journal of Investigative and Clinical Dentistry* 2014; 5: 237-242.
23. **Kumar N**, Bhangar F, Memon W, Memon M. Effect of filler particle size and nanoparticle addition on deformation rate dependence of experimental resin-based composites. *Pakistan Oral & Dental Journal* 2014; 34: 378-381.
24. Channar KA, Ghani S, **Kumar N**, Memon AB, Mirani SA. Pattern of crown fractures in 9-18 years old students in Khairpur Mirs, Sindh. *Journal of the Pakistan Dental Association* 2013; 22: 108-112.
25. Ghani S, **Kumar N**, Jabbar A, Ishaque M. Evaluation of oral hygiene instructions given to orthodontic patients by general dental practioners of Sindh. *Pakistan Oral & Dental Journal* 2013; 33: 303-306.

26. Dall AQ, Channar KA, **Kumar N**, Memon AB. Crown fractures: Frequency & associated causative factors among school children in district Khairpur, Sindh. *Pakistan Oral & Dental Journal* 2013; 33: 370-373.
27. Channar KA, Nisa ZU, **Kumar N**, Hassan QU, Memon AB. Dexamethasone in control of postoperative sequelae after extraction of mandibular impacted third molars. *Medical Channel* 2013; 19:63-66.
28. Rajput F, Memon RA, Kalhoro FA, **Kumar N**. Validity of dental operating microscope on identification of MB2 canal in maxillary molars. *Journal of the Pakistan Dental Association* 2013; 22: 23-26.
29. Bhangar F, **Kumar N**, Channar KA, Ali SA, Inayat N. In vitro comparison of the apical microleakage of mineral trioxide aggregate (MTA) with amalgam as a retrograde filling material. *Medical Forum Journal* 2013; 2 (6): 51-55.
30. **Kumar N**. Inconsistency in the strength testing of dental resin-based composites among researchers. *Pakistan Journal of Medical Sciences* 2013; 29: 205-210.
31. Iqbal K, Asmat M, **Kumar N**, Mohsin F, Ali F, Hanif S. An evaluation of disposal of mercury waste in dental teaching hospitals of Karachi. *Journal of the Pakistan Dental Association* 2012; 21: 106-109.
32. Fasial, Ahmed AR, **Kumar N**, Ali SA, Inayat N, Muneer MU. Correlation between apical periodontitis and endodontic treatment in a Sialkot population. *Pakistan Journal of Medical & Health Sciences* 2012; 6: 332-336.
33. Faisal, Shah S, **Kumar N**, Ali SA, Inayat N. Root canal treatment; Frequency in department of endodontic in dental colleges of Karachi. *The Professional Medical Journal* 2012; 19: 739-741.
34. **Kumar N**, Khoso NA, Sangi L, Kalhoro FA, Bhangar F. Dental resin-based composites: A transition from macrofilled to nanofilled. *Journal of the Pakistan Dental Association* 2012; 21: 39-44.
35. Sangi L, Kalhoro FA, **Kumar N**, Shaikh MA. Frequency of interappointment pain observed with sodium hypochlorite and hydrogen peroxide based root canal irrigants. *Journal of the Pakistan Dental Association* 2011; 20: 211-215.
36. **Kumar N**, Shortall A. Standardisation of mixing method for experimental resin-based composite. *Journal of the Pakistan Dental Association* 2011; 20: 131-134.

### **Conference papers**

1. **Kumar N**. Effect of Deformation Rate on the Strength of Dental Composites. *International Dental Journal. Abstract (FC286), FDI, 2014.*
2. Addison O, **Kumar N**, Palin WM. Use or Abuse of Weibull Statistics in Dental Materials Science. *Journal of the Dental Research* 90 (Spec Iss B): 0164, British Society for Oral and Dental Research, 2011.
3. **Kumar N**, Addison O, Marquis P, Shortall AC, Palin WM. Specimen alignment affects bi-axial flexure strength of resin-based composites. *Journal of the Dental Research* 89 (Spec Iss B): 2305, 2010.

## Book Chapter

1. **Kumar N**, Ali S, Kumar B, Muhammad Sohail Zafar, Zohaib Khurshid, 5 - Hydroxyapatite and nanocomposite implant coatings, Editor(s): Muhammad Sohail Zafar, Zohaib Khurshid, Abdul Samad Khan, Shariq Najeeb, Farshid Sefat, In Woodhead Publishing Series in Biomaterials, Dental Implants, Woodhead Publishing, 2020, Pages 69-92, ISBN 9780128195864, <https://doi.org/10.1016/B978-0-12-819586-4.00005-6>.

## Editorials/Letters to Editor/Conference Proceedings/Short Communications

1. **Kumar N**, Rahman S, Khoso MH, Zafar MS. Bi-axial flexure testing method for dental composites requires standardization. Journal of Taibah University Medical Sciences 2023; 18: 1384-1385.
2. **Kumar N**, Zafar MS. Weibull statistics for strength evaluation of viscoelastic resin-based dental composites. Journal of Taibah University Medical Sciences 2023; 18: 1099-1100.
3. **Kumar N**, Ali S. Investigators should not limit their research to only commercially-available bulk-fill resin dental composites. Journal of Oral Research 2018; 7: 166-167.
4. **Kumar N**. National road map to promote dental education via ten commandment recommendations for Pakistan—our perspective. Pakistan Armed Forces Medical Journal 2016; 66: 775.
5. Katpar S, **Kumar N**, Ahmad A, Siddiqui FG. Conference Proceedings: National Conference On Dental Education Held On 14-15th November 2014, Organized By Liaquat University Of Medical & Health Sciences, Jamshoro. Pakistan Armed Forces Medical Journal 2016; 66: 937-940.
6. Farhan T, **Kumar N**, Amin F, Mahmood SJ. Exploration of the Customized Fixtures for the Evaluation of Three-point Bending Strength of Dental Resin Composites. Journal of Dental Materials and Techniques 2020; 10.22038/JDMT.2020.44057.1320.

## Research Grants

1. For the project entitled “Antimicrobial activity and physical properties of Chitosan-based dental composites (Completed)  
(Year: 2012; Role: Principal Investigator; Funding Body: HEC, Islamabad; Grant: PKR 0.4998 M)
2. For the project entitled “Development of Novel Silk Based Glass Ionomer Restoratives for the Stress Bearing Posterior Teeth”  
(Year: 2022; Role: Principal Investigator; Funding Body: HEC, Islamabad; Grant: PKR 6.1320 M)



## **Research Supervision**

### **Supervision of PhD Theses**

- **A Study to Investigate Antibacterial Activity and Physical Properties of Newly Developed Chitosan Based Dental Composites**
  - A PhD degree awarded to Dr. Shahid Ali Mirani (2016)
- **Oral Health and Hemato-Biochemical Changes amongst Smokeless Tobacco Users in Coastal Area of Sindh**
  - A PhD degree awarded to Dr. Sikander Munir Memon (2021)
- **A Study to Evaluate the Effect of Hyaluronidase and Dexamethasone on Quality of Life and Oral Health Impact Profile in patients with Oral Submucous Fibrosis**
  - A PhD degree awarded to Dr. Abdul Bari Memon (2022)
- Effects of Maternal Periodontal Disease on Pregnancy Outcomes: Clinical and Microbiological Parameters
- Mechanical and Physical Characterization of Bulk Fill Composites Following Short, Medium and Long-Term Immersion in Locally Available Beverages: An In Vitro Study

### **Supervision of Master Theses**

- **Antibacterial Activity and Surface Hardness of Cetylpyridinium Chloride Modified Resin-Based Dental Composites**
  - An MDS degree awarded to Dr. Sara Khan (2023)
- **Mechanical and Physical Characterization of Novel Cetylpyridinium Chloride Incorporated Resin Based Dental Composites**
  - An MDS degree awarded to Dr. Tooba Farhan (2023)
- Evolutionary Transition of Anatomical, Elemental and Physical Traits of Vertebrate Teeth and their Alignment with Resin-Based Dental Composite
- Effects of Calcium Oxide Nanoparticles on the Antimicrobial and Physical Properties of Commercially Available Alginate Impression Materials
- Influence of Silk Fibres on the Setting Time, Hydrolytic Stability, Strength and Hardness of Glass Ionomer Tooth Filling Materials
- Effect of Coconut Coir Extracted Cellulose Nanocrystals on the In Vitro Performance of Glass Ionomer Restorative Materials
- Effect of Chitosan Nanoparticles on Surface Hardness, Hydrolytic Stability and antibacterial Characteristics of Resin Dental Composites
- Effect of Acidic Beverages on the Flexural Strength, Flexural Modulus, and Surface Hardness of Chitosan Modified Resin Dental Composites
- Influence of Biosynthesized Cerium Oxide Nanoparticles on Antibacterial Activity, Hydrolytic Stability, Flexural Strength and Flexural Modulus of Glass Ionomer Tooth Filling Material

## Research Interests

- Dental Biomaterials
- Dental Public Health
- Medical Education

## Achievements/Honors

- Awarded a fully funded scholarship for PhD studies in the United Kingdom by the Liaquat University of Medical & Health Sciences, Jamshoro, Pakistan in 2007
- Awarded one basic salary by the Liaquat University of Medical & Health Sciences, Jamshoro, Pakistan for the designing of PhD rules and Regulations
- Adjunct Professor, Liaquat University of Medical & Health Sciences, Jamshoro, Pakistan since 2019
- HEC Approved PhD Supervisor since 2011

## Courses/Workshops/Trainings Attended

- Four Months Computer Course from the National Institute of Electronics, Islamabad, Pakistan
- Six Months Certificate Course in Health Professional Education from the Dow University of Health Sciences, Karachi, Pakistan
- Learning to Teach Online Course from the University of New South Wales, Sydney
- Get Interactive : Practical Teaching with Technology course from the University of London
- Training program on “Developing & Assessing Research Proposal” at the Center for Executive Education, Institute of Business Administration, Karachi, Pakistan
- Workshop on “Safety, Health and Environment” at the Mehran University of Engineering & Technology, Jamshoro, Pakistan
- Workshop on “Constructing Single Best Answer MCQs in Dental Sciences” at the Dow University of Health Sciences, Karachi, Pakistan
- Workshop on Reviewer’s Capacity Building organized by the Higher Education Commission and British Council, Pakistan

### **Membership of Professional Bodies**

- Member of the Pakistan Dental Association (PDA)
- Member of the International Association for Dental Research (IADR)

**References, any documentary proof and further details can be provided on request**