

**Advantages of Mixed-methods research in Dentistry**

<sup>1</sup>Monica Dev D S, Ph.D. candidate – ICMR NCS (Dentistry), The Tamil Nadu Dr MGR Medical University, Chennai, IND

<sup>2</sup>Srinivas Govindarajulu, Professor, Department of Epidemiology, The Tamil Nadu Dr MGR Medical University, Chennai, IND

<sup>3</sup>Aswath Narayanan MB, Registrar, The Tamil Nadu Dr MGR Medical University, Chennai, IND

<sup>4</sup>Kalpana Ramachandran, Research Officer, Department of Epidemiology, The Tamil Nadu Dr MGR Medical University, Chennai, IND

<sup>5</sup>Jasmine S. Sundar, Assistant Professor, Department of Epidemiology, The Tamil Nadu Dr MGR Medical University, Chennai, IND

<sup>6</sup>Valarmathi S, Research Officer-Statistics, Department of Epidemiology, The Tamil Nadu Dr MGR Medical University, Chennai, IND

**Corresponding Author:** Monica Dev D S, Ph.D. Candidate – ICMR NCS (Dentistry), The Tamil Nadu Dr MGR Medical University, Chennai, IND

**Citation of this Article:** Monica Dev D S, Srinivas Govindarajulu, Aswath Narayanan MB, Kalpana Ramachandran, Jasmine S. Sundar, Valarmathi S, “Advantages of Mixed-methods research in Dentistry”, IJDSIR- July - 2023, Volume – 6, Issue - 4, P. No. 194 – 196.

**Copyright:** © 2023, Monica Dev D S, et al. This is an open access journal and article distributed under the terms of the creative common’s attribution non-commercial License. Which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given, and the new creations are licensed under the identical terms.

**Type of Publication:** Short Communication

**Conflicts of Interest:** Nil

**Introduction**

Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration” (1).Predominantly qualitative research methods are known to be used in social research studies and quantitative research methods in health research. But the implementation of qualitative studies in health

research are also increasing in the field of medical science like Public Health, General Practice and Primary Care (2). In particular, the field of dentistry have been traditionally dominated by Quantitative research method and qualitative research methods can result in special and detailed, personal accounts that can help us improve our knowledge and understanding of a wide range of topics which concern or have an impact on dentistry (3). Oral health issues result from a wide range of direct and indirect causes, including biological, behavioural, social, and environmental factors. The use of mixed methods

research enables researchers to examine these health problems from various levels and perspectives, expanding the scope of investigation (4). Few advantages of implementing mixed methods research in dentistry are as follows:

- To address the complexity of the issues under study in a comprehensive approach (5). For example, the quantitative data on the prevalence of dental attrition combined with qualitative data on the patient experience like clenching of teeth, dental hygiene practices etc.
- To elevate the validity and reliability of the study when using multiple sources methods for data collection (6).
- To augment the result findings of intervention studies (7). For example, oral health interventions can be evaluated from clinical assessments and patient report outcomes along with the information on patient involvement, satisfaction and gaps that lead to the success or failure of the intervention.
- To appraise the oral health disparities (8). Example – qualitative data on socioeconomic status, cultural beliefs can add to the meaningful conclusion when combined with quantitative data.

Hence, by combining both qualitative and quantitative research methods as in mixed methods research in oral health research can contribute to a broad interpretation of oral health concerns, treatment effects, patient perception, and impacting factors on dental care services. By employing this approach, researchers can gather both quantitative data and in-depth contextual information, resulting in findings that are more comprehensive and insightful.

## References

1. Johnson RB, Onwuegbuzie AJ, Turner LA. Toward a Definition of Mixed Methods Research. *Journal of Mixed Methods Research*. 2007 Apr;1(2):112–33.
2. Harding, G., & Gantley, M.M. (1998). Qualitative methods: beyond the cookbook. *Family practice*, 15 1, 76-9 .
3. Stewart K, Gill P, Chadwick B, Treasure E. Qualitative research in dentistry. *Br Dent J*. 2008 Mar;204(5):235–9.
4. Nicolau B, Castonguay G, Levine A, Hong QN, Summer Institute 2015 Participants, Pluye P, et al. Applied Mixed Methods in Oral Health Research: Importance and Example of a Training Program. *JDR Clinical & Translational Research*. 2017 Jul;2(3):206–10.
5. O’Cathain, A., Murphy, E. & Nicholl, J. Why, and how, mixed methods research is undertaken in health services research in England: a mixed methods study. *BMC Health Serv Res* 7, 85 (2007). <https://doi.org/10.1186/1472-6963-7-85>
6. Zohrabi, Mohammad. (2013). Mixed Method Research: Instruments, Validity, Reliability and Reporting Findings. *Theory and Practice in Language Studies*. 3. 10.4304/tpls.3.2.254-262.
7. Fàbregues S, Sáinz M, Romano MJ, Escalante-Barrios EL, Younas A, López-Pérez BS. Use of mixed methods research in intervention studies to increase young people's interest in STEM: A systematic methodological review. *Front Psychol*. 2023 Jan 5; 13:956300. doi: 10.3389/fpsyg.2022.956300. PMID: 36687955; PMCID: PMC9849589.
8. Addressing Health Disparities by Combining Quantitative and Qualitative Research Methods Prepared for RCMAR/CHIME Methodological

Seminar at UCLA, December 17,2018 By Luisa R.

Blanco, Ph.D. MBA

[https://ctsi.ucla.edu/education/files/view/rcmar-seminars/2018\\_Dec\\_Blanco.pdf](https://ctsi.ucla.edu/education/files/view/rcmar-seminars/2018_Dec_Blanco.pdf)