

Behavior Change Communication in Holistic Care of Mother-Infant Dyad

Xavier AM¹, Varma BR¹, Radhamany K², Janakiram C¹, King N³, Alexander S⁴, Rai K⁵

¹Amrita School of Dentistry, Amrita Vishwa Vidyapeetham University, India, ²Amrita School of Medicine, Amrita Vishwa Vidyapeetham University, India,

³UWA Dental School, University of Western Australia, Perth, Australia, ⁴Charles Sturt University, Orange/Central West, Orange NSW, Australia; The University of Sydney, Sydney, Australia, ⁵A.B. Shetty Memorial Institute of Dental Sciences, Nitte University, India



AMRITA
VISHWA VIDYAPEETHAM

INTRODUCTION

- A mother's overall health during and after pregnancy has a considerable effect on her infant's wellbeing.
- Hormonal changes during pregnancy increase the risk of periodontal disease¹, while increased anxiety², work-related stress^{3,4}, and excessive screen time⁵ are linked to adverse birth outcomes and behavioral problems in children⁶.
- Poor oral health and oral health knowledge, systemic and psychological health of pregnant women can lead to preterm birth and low birth weight, highlighting the importance of comprehensive prenatal care⁷⁻¹⁰.
- Additionally, studies show maternal saliva carrying high levels of *Streptococcus mutans* gets transmitted to their infants and thereby causing Early Childhood caries¹¹.
- Fischer Owens Model explains a wide range of determinants of children's oral health and oral health-related behaviours, that includes health status of parents, family education, health behaviours, practices etc. under the family-level influences element¹².
- Behavior Change Communication (BCC), an interactive process of any intervention with individuals or group of community to develop communication strategies can promote positive behaviors and provide a supportive environment for individuals to adopt healthy habits, ultimately solving pressing health problems^{13,14}.

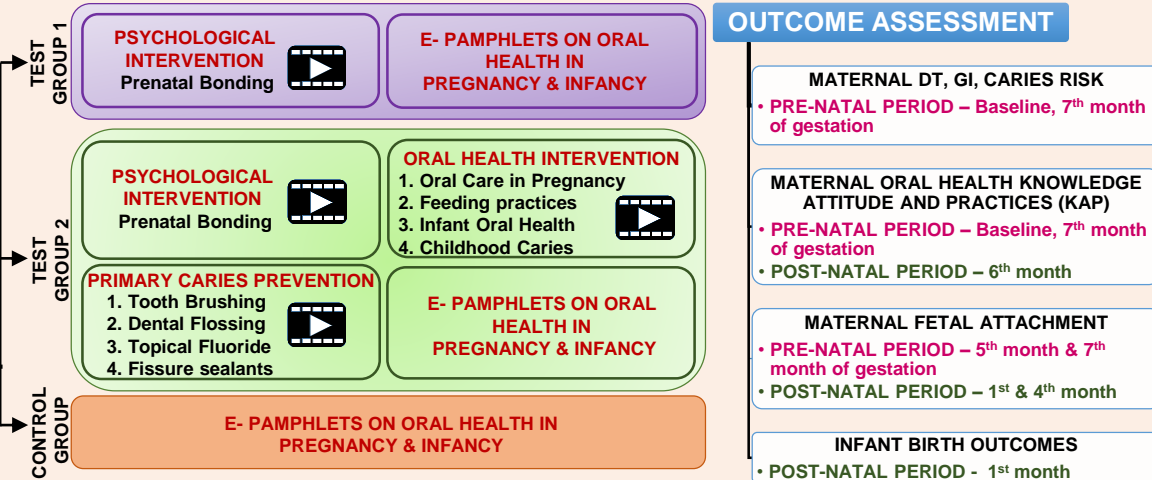
METHODOLOGY

- Sample size:** 450 Pregnant Women
- Recruitment & Baseline data collection:** 12th – 20th week of gestation
- RANDOMISED CONTROLLED TRIAL (1:1:1)**

Randomisation, Allocation and Intervention:

20th – 22nd week of gestation

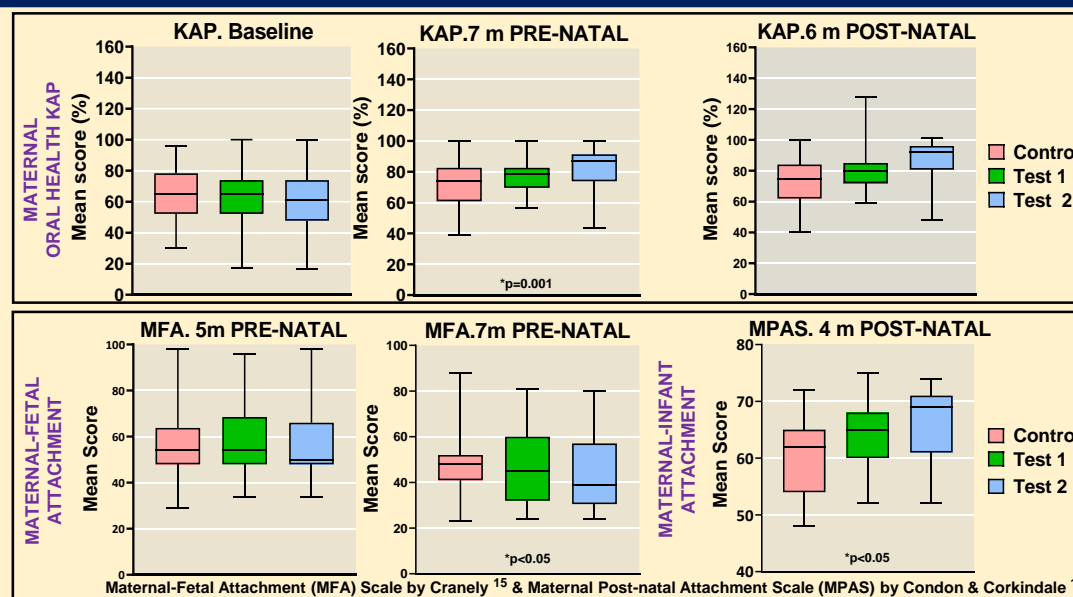
n = 150 in each group



FUNDED BY: Grant-in-aid Scheme of the Department of Health Research for 'Inter- Sectoral Convergence & Coordination for Guidance on Promotion and Health Research, Indian Council of Medical Research, New Delhi. Grant ID - R.11015/15/2023-GIA/HR

RESULTS

- Maternal educational level and socio-economic strata had a direct association to the Maternal Oral Health KAP, with 88% recognizing the importance of regular oral health examinations ($p < 0.05$).
- Reduced Decayed Teeth (DT) and Gingival Index (GI) was observed intragroup from baseline (1.48 ± 1.03 & 3.2 ± 0.7) to the post-intervention 7th month analysis (1.12 ± 1.04 & 0.9 ± 0.5) respectively, with lowest in the Test group 2.
- 94.5% of pregnancies were full term and uneventful among all the three groups, with birth weight ranging from 2.3 – 3.3 Kg
- The mean 5-min APGAR score of newborn infants among all the three groups was 9/10 ($p = 0.12$).
- Individuals with moderate caries risk dropped to lower risk by the 7th month of gestation among all groups; highest with Test Group 2.
- A significant intergroup difference ($p < .05$) in dental service utilization was observed; least in the control group (12%).



CONCLUSION

- Tailor-made Maternal BCC interventions promote overall health wellness, boosting the pregnant women's psycho-social and oral well-being.
- This BCC intervention is found to foster holistic wellness, strengthening mother-infant bonds, ultimately encouraging mothers to prioritize their infants' health needs, presumably contributing to the reduced incidence of ECC in the future.

REFERENCES

Scan image to view references

