3. HYPOTHESIS

The state of Uttar Pradesh has the highest under 5 mortality in the country and reports maximum cases of diarrhea in children under 5 years of age. Although the use of different diagnostic methods in identification of diarrhea cases is well established, a detailed study on the same has not yet been conducted in Kanpur district.

Our hypothesis is that though a conventional culture method remains the gold standard in identification of Diarrheagenic *E. coli*, modern techniques like Multiplex PCR offers relatively quicker, feasible and reliable method of identification. The present study will compare the feasibility and reliability of different diagnostic methods in the identification of Diarrheagenic *E. coli* to evaluate the same.