

**INTERNATIONAL CONFERENCE PROCEEDINGS ON  
MULTIDISCIPLINARY RESEARCH ON INTEGRATING KNOWLEDGE  
FOR SUSTAINABLE FUTURE IN GLOBAL OUTLOOK**

**2<sup>nd</sup> October 2024**

Organised By



**DMI – ST. JOHN THE BAPTIST UNIVERSITY,  
MALAWI, CENTRAL AFRICA**

&



**MULTI SPECTRUM RURAL SKILL DEVELOPMENT  
AND EDUCATIONAL TRUST  
KANYAKUMARI, TAMILNADU, INDIA**



**EDITORS**

**Dr. J.R. Auslien Nanci**

**Ms. R. Sheela**

**Ms. L. N. Arthi**

**Mr. S. M. Prasad**

**Dr. Radhika R**

**Mr. Nazeer Shaik**

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[www.multispectrum.org](http://www.multispectrum.org)

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Phone: +91 6384730258

E-Mail: [editor@multispectrum.org](mailto:editor@multispectrum.org)

[www.multispectrum.org](http://www.multispectrum.org)

**ESTIMATING THE GROWTH RATE OF INFECTION OF COVID-19 IN EARLY  
PHASE OF PANDEMIC**

**Dipanwitabhattacharjee**

Department of computer application, BSC Data science, 3<sup>rd</sup> year, Asansol  
Engineering college, Asansol 713305, india

**Dr Arnab Bandyapadhyay**

Associate professor in mathematics Department of basic science and  
humanities ,Dr B .C.Roy Engineering college,Durgapur,713206

**Abstract**

Being able to determine the disease's transmission rate—that is, the pace at which the number of infected individuals in each area is increasing—at the outset of a pandemic is crucial. The ability to accurately estimate how quickly the illness may spread in the short term is crucial for combating the pandemic crisis. This study occasionally counts the total number of affected individuals to assess the spreading rate. Adaptive clustering is particularly useful for creating spatially distributed clusters of infected individuals within a community, and consecutive sampling is employed to gauge the increase in the number of infected individuals. Two times already, we have developed a "chain ratio to regression type estimator of population total."

**Keywords-**covid-19, effects, infected, analyse, population.

**Introduction**

The world has learned from the recent COVID-19 tragedy that delaying action and procrastinating during the early stages of an epidemic can be fatal. COVID-19 is an exceedingly contagious disease produced by the SARS-CoV-2 virus and commonly manifests as fever, dry coughing, and trouble breathing. It is essential to be able to gauge the possible harm at the very beginning of the disease. A tragedy might arise from inaccurate or inadequate assessment!

The first instance of COVID-19 in India was discovered on January 30 and was connected to Wuhan, China (since the patient had previously visited the city). India had a sharp increase in instances on March 4th, and the numbers have continued to rise ever since. India is now the third most afflicted country in the world with over 908,000 cases and over 23,000 deaths as of July 14.

(<https://www.worldometers.info/coronavirus/>).

The Indian government has implemented a number of efforts to restrict the virus since it began to spread there. On March 25, a countrywide lockdown was declared for April 14–May 3. It was eventually extended to May 3. The entire nation was split into four zones: containment (where a high number of cases were seen in a relatively small area), red (districts with a high risk of transmission and higher doubling rates), green (districts where no cases had been confirmed in the previous 21 days) and orange (districts that did not fall into the above three zones). Following the lockdown's additional extension till May 17, a variety of