**Introduction:**

Dengue is a mosquito-borne common viral infectious disease worldwide and it is considered as an endemic disease in many countries (Hossain et al., 2021). This disease is occurred by 4 serotypes of dengue viruses (DENV) which transmits by main vectors Aedes aegypti and Aedes albopictus through bites (Sharmin et al., 2015).. Positive sense single-strand RNA containing Dengue virus belongs to the Flaviviridae family under the Flavivirus genus with ~11 kb genome size that contains 3 and 7 non-structural proteins (Murugesan et al., 2020). Dengue patients showed a large spectrum of signs and symptoms from mild febrile illness to severe dengue, while DHF or developing dengue hemorrhagic fever, DSS, or dengue shock syndrome are counted as the most serious condition (Wilder-Smith et al., 2019). A few very common clinical features of Dengue patients are fever (100%), headache (87%), body ache (86%), backache (58%), retro-orbital pain (41%), bleeding and rash (21%) (Whitehead et al., 2007) (Anderson et al., 2007) (Carod-Artal et al., 2013). Weakness, vomiting, abdominal pain, breathlessness, vertigo, sweating, and syncope were also observed as nonspecific symptoms. In addition diarrhea, sore throat, and neurological symptoms are also observed (Gubler et al., 1998).

Dengue fever was first identified in a Chinese medical encyclopedia known as ''water poison'' from the Jin Dynasty (265–420 AD) and linked with flying insects (McBride & Bielefeldt-Ohmann, 2000). In 1779 the disease is identified as dengue fever and Dengue epidemics were observed same time in the 1780s in Asia, Africa, and North America (Ferreira, 2012). Nowadays this disease is recorded minimum of 100 countries in Asia, the Pacific, the Americas, Africa, and the Caribbean. Bangladesh is a developing agricultural country that will become a middle-income country in 2026. Dealing with coronavirus was one of the most challenging issues for Bangladesh (Ahmed et al., 2021; Islam et al.;2021, n.d.; Islam et al., 2022; Jakariya et al., 2021). The corona vaccine is ensuring the people of the country as well as the overall development of the country even though its cost was a little higher in South Asia. This country also faced sporadically Dengue disease from 1964 until a large epidemic in 2000 established the virus (Noor, 2020). In 2000 Dengue epidemic was recorded for a virus strain from Thailand. Compared with previous four years from 2018 to 2021, this year case number is increasing drastically including death cases (Hsan et al., 2019). The prevalence of DENV depends on various factors and this disease are interconnected with deforestation, human behaviors, demography, movement, climate change, and globalization (Rahman et al., 2019). According to WHO, the highest confirmed DENV cases were confirmed in Bangladesh (101,000), Malaysia (131,000) Philippines (420,000), Vietnam (320,000) in Asia (WHO, 2022) (http://apps.who.int/iris/bitstream/handle/10665/352792/Dengue-20220113.pdf?sequence=1&isAllowed=y). Several countries such as Bangladesh, Brazil, Cook Islands, Ecuador, India, Indonesia, Maldives, Mauritania, Mayotte (Fr), Nepal, Singapore, Sri Lanka, Sudan, Thailand, Timor-Leste, and Yemen affected be dengue in 2020. Again this was attacked in 2021 by Brazil, India, Vietnam, the Philippines, Cook Islands, Colombia, Fiji, Kenya, Paraguay, Peru and, Reunion islands. In 2022 *confirmed cases and deaths found* [Cambodia](https://www.who.int/westernpacific/emergencies/surveillance/dengue) (3 322/9), [China](https://www.who.int/westernpacific/emergencies/surveillance/dengue) (5/0), [India](https://nvbdcp.gov.in/index4.php?lang=1&level=0&linkid=431&lid=3715) (10 172/3), and [Indonesia](https://rdk.fidkom.uinjkt.ac.id/index.php/2022/08/12/kasus-dbd-meningkat-pemerintah-dorong-pengoptimalan-faskes-di-daerah-terdampak/) (68 903/ 640) deaths have been reported. [Malaysia](https://www.moh.gov.my/index.php/database_stores/store_view/17) (33 911 /22), [Maldives](http://health.gov.mv/) (344/0), [Nepal](http://www.edcd.gov.np/resources/newsletter) (695/0), [Oman](https://www.omanobserver.om/article/1117420/oman/health/over-70-dengue-cases-reported-in-oman) (76/0) , [Pakistan](https://urdu.geo.tv/latest/296443-) (875/0), [Philippines](https://www.who.int/westernpacific/emergencies/surveillance/dengue) (82 597 / 319) [Singapore](https://www.nea.gov.sg/dengue-zika/dengue/dengue-cases) (24 939/0), [SriLanka](http://www.epid.gov.lk/web/index.php?option=com_casesanddeaths&Itemid=448&lang=en) (40 791/0) , [Vietnam](https://www.who.int/westernpacific/emergencies/surveillance/dengue) (145 536 /53), [Afghanistan](http://www.emro.who.int/afg/information-resources/infectious-disease-outbreak-situation-reports.html) (77/0) (<https://www.ecdc.europa.eu/en/dengue-monthly>) (http://apps.who.int/iris/bitstream/handle/10665/352792/Dengue-20220113.pdf?sequence=1&isAllowed=y).

[Bangladesh](https://www.facebook.com/photo/?fbid=408013848096284&set=a.4056145467819786) is going to face another worse situation for the dengue virus as 15,878 confirmed cases and 63 deaths have been reported on 24 October 2022. The first official dengue fever this year was reported in January, and it was the lowest up to March since then the number of confirmed dengue patients increased highest in the last month (September). The first death due to dengue was confirmed in June and it was highest in September. In this particular year, more cases were reported in the post-monsoon period. This year, hardly any case was found to occur from January to June, and no deaths during this period. But, a significant number of cases were reported in July and reached a peak in September, and gradually increased at the end of the year. There has been a recent upsurge in dengue transmission in Rohinga refugee camps in Cox's Bazar district that significantly exceeds expected seasonal trends. According to [WHO](https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON401), as of 24 July 2022, a total of 7 687 cases and six deaths have been reported, with 93% (7178) of the cumulative number of cases being reported since the start of the surge at the end of May 2022 (According to WHO).

Control of frequent DENV outbreaks in Bangladesh and other tropical areas is difficult as temperatures help mosquito reproduction. To manage the ongoing dengue condition, it is essential to find out the related factors linked with the rapid spreading of DENV. It has been observed from previous studies that various diseases such as cystic fibrosis, acute bronchitis, emphysema, chronic bronchitis, chronic obstructive pulmonary disease (COPD), shortness of breath, and lung cancer are related to climatic factors (8, 9). Some other studies have also shown that weather factors have a significant effect on the growth and activity of viral diseases (Bi et al., 2007; Park et al., 2020; Tan et al., 2005; van Doremalen et al., 2013). For instance, one experimental finding claimed, animal tests using the influenza virus showed that the spreading of the virus was more proficient at five degrees celsius than at twenty degrees Celsius (Lowen et al., 2007). When the virus is exposed to increased relative humidity and temperatures, as well as simulated solar light, the virus becomes even less stable (half-life, 3 min) (*DHS S&T Launches Indoor Predictive Modeling Tool for Coronavirus Stability*, 2020).

In this study, we investigated the correlation of weather factors with Dengue cases in Bangladesh analyzing last year's data. The novel findings of this study will add value to supplement the evidence on Dengue climatic consequences. Finally, it would give a window into the perspectives from the point of view of a densely populated city of a developing nation, which can enable public health officials to design their public health response to an outbreak like these in the future.

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