



RESEARCH ARTICLE

Widespread cognizance survey of epidemic Monkey-Pox Infection

Dr. Prolay Paul¹, Dr. Shubham Dutta², Dr. Susanta Nath Sarma³, Dr. Sobhan Gupta⁴, Dr. Davis John⁵

¹Clinical Pharmacologist,
Narayana Superspeciality
Hospital, Howrah, West
Bengal

²Clinical Pharmacologist,
Narayana Superspeciality
Hospital, Howrah, West
Bengal

³Clinical Pharmacologist,
Narayana Superspeciality
Hospital, Howrah, West
Bengal

⁴Clinical Pharmacologist,
Narayana Superspeciality
Hospital, Howrah, West
Bengal

⁵Clinical Pharmacologist, Max
BLK Superspeciality Hospital,
New Delhi



Abstract:

Monkey-Pox is a viral zoonotic disease (a virus transmitted to humans by animals) with symptoms similar to those experienced by smallpox patients in the past, but it is clinically less severe. Monkey-Pox has emerged as the most important orthopoxvirus for public health since the eradication of smallpox in 1980 and the subsequent cessation of smallpox vaccination. Monkey-Pox is primarily found in central and western Africa, often near tropical rain forests, and is becoming more common in urban areas. The awareness survey was carried out between 1st July to 15th August. A self-created questionnaire was administered and distributed via social media. Our study was both cost-effective and time-efficient. The questions concerned were about basic preventive measures for monkey pox. Microsoft-Excel software was used to record and analyze the response. A scientific evaluation of the viability and suitability of vaccination for the prevention and control of Monkey-Pox is now being conducted in various places. Some nations have policies in place or are creating them to provide vaccines to people who may be at risk, including laboratory staff, members of quick reaction teams, and health care professionals and other citizens. This survey depicts the awareness of Monkey-Pox and has illustrated every point with pie chart with appropriate results.

Keywords:

Monkey-pox, Antiviral Treatment, West African & Congo Basin Virus,

Introduction:

Monkey-Pox is a viral zoonotic disease (a virus transmitted to humans by animals) with symptoms similar to those experienced by smallpox patients in the past, but it is clinically less severe. Monkey-Pox has emerged as the most important orthopoxvirus for public health since the eradication of smallpox in 1980 and the subsequent cessation of smallpox vaccination. Monkey-Pox is primarily found in central and western Africa, often near tropical rain forests, and is becoming more common in urban areas. A variety of rodents and non-human primates serve as hosts. Monkey-Pox virus is an enveloped double-stranded DNA virus that belongs to the Poxviridae family's Orthopoxvirus genus.¹ The Monkey-Pox virus has two distinct genetic clades the central African (Congo Basin) clade and the West African clade. Historically, the Congo Basin clade caused more severe disease and was thought to be more transmissible. So far, Cameroon has been the only country where both virus clades have been found to have a geographical divide. For human Monkey-Pox, there are currently no licensed treatments; however, two orally bio available drugs, brincidofovir and tecovirimat, have been approved for the treatment of smallpox in the United States in preparation for a potential bioterrorism event. 17–19 Neither drug has undergone human efficacy testing. In animal models, however,

both drugs demonstrated efficacy against other orthopoxviruses (including Monkey-Pox). There have been reports of tecovirimat being used compassionately for complicated vaccinia^{20,21} and cowpox²², with no safety concerns. In the Central African Republic, where Monkey-Pox outbreaks are common, a Tecovirimat expanded access programme is being planned. The virus was first discovered in monkeys in a Danish laboratory in 1958, hence the name Monkey-Pox. In 1970, a 9-month-old baby boy in Zaire (now the Democratic Republic of the Congo, DRC) was diagnosed with the first case in humans.² Monkey-Pox has since become endemic in the DRC and has spread to other African countries, primarily in Central and West Africa. Outside of Africa, the first cases of Monkey-Pox were reported in 2003, and the most recent cases were in 2019, at the time of this systematic review. The epidemiology of Monkey-Pox outbreaks was described in a previous systematic review that evaluated the literature through summer 2018. Given the recent increase in reports from Nigeria and elsewhere, we launched a new systematic investigation. A review of the literature with a focus on the changes in the epidemiology of human Monkey-Pox from the first cases in the 1970s to the present.

Methodology:

The study was an observational prospective study. The awareness survey was carried out between 1st July to 15th August. A self-created questionnaire was administered and distributed via social media. Our study was both cost-effective and time-efficient. The participants flowered epitome interest to complete our questionnaire. Participants in our study used smart technologies such as smart-phones, computers with an e-connection. Therefore, total responses were recorded and analyzed through Google forms. Hence, the investigation lasted several days. The Google based questionnaire was created in accordance with CDC guidelines, Ministry of Health and Family Welfare guidelines. The questions concerned were about basic preventive measures for monkey pox. Microsoft-Excel software was used to record and analyze the response.

Result

Among 100 participants, Most of them were working professionals.

Fifty percent of the participants were following the safety measures and precautions suggested by CDC.

Patient Age Distribution

To embark upon, statistical analysis shows the no of participants belongs to above age 20 -60. Moreover, a maximum involvement towards awareness belongs to age of 25-35 which are listed bellow accordingly in table 1.

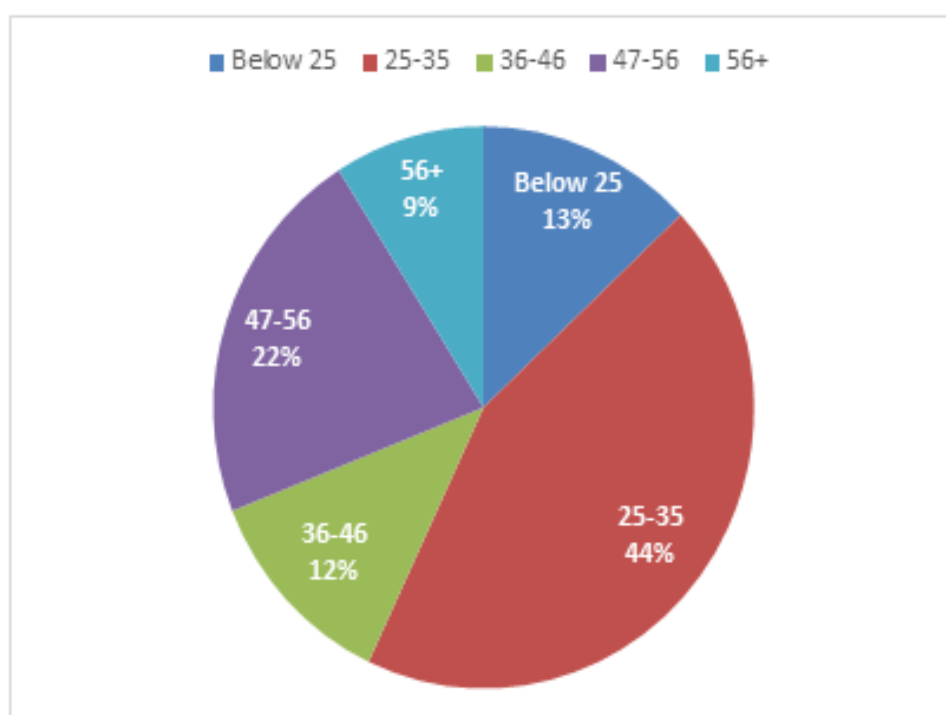


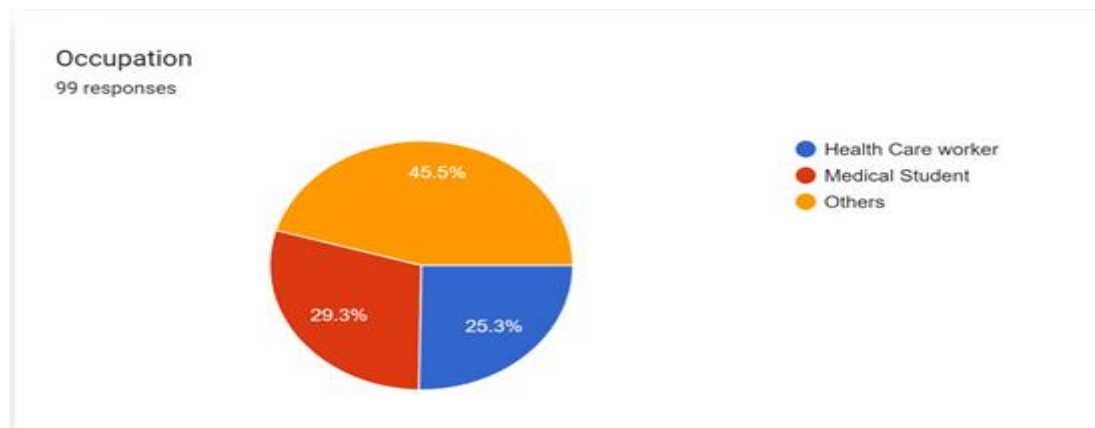
Table 1: Demographic details by age

Age group	Number of participants	Percentage
Below 25	13	13%
25-35	44	44%
36-46	12	12%
47-56	22	22%
56 and above	9	9%

In addition with, a prospective study shows that around 25% participants were from health care workers, medical students were 29% participants and other participants were 45%. Hence, occupations were listed in table 2.

Table 2: Occupation

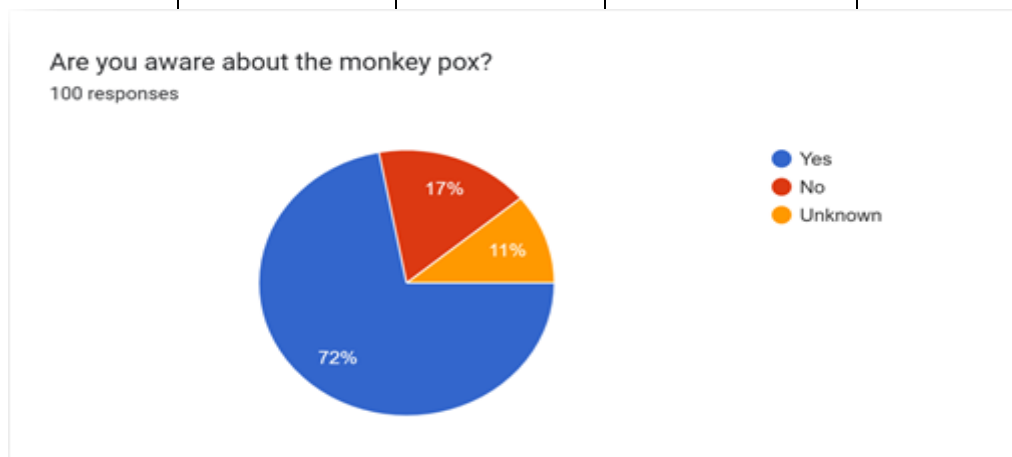
Options	Total count	Percentage
HEALTHCARE WORKER	25	25%
MEDICAL STUDENT	29	29%
OTHERS	45	45%



On the contrary, out of 100 participants 72% has opted yes, 17% has opted no and remaining of them were seen 11% as unknown which were listed in table 3.

Table 3: Awareness about the Monkey-Pox?

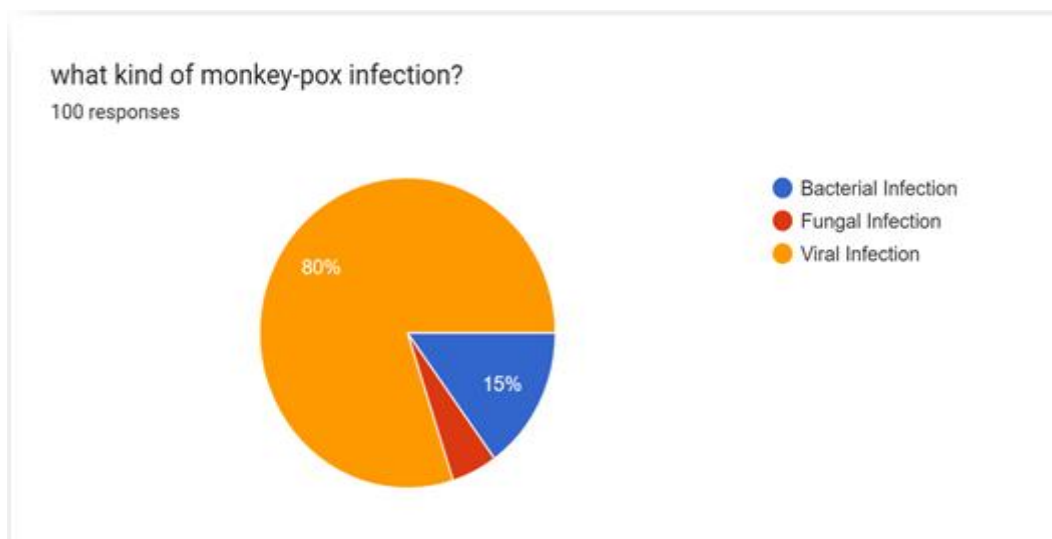
Option	Total Count	Percentage
YES	72	72%
NO	17	17%
UNKNOWN	11	11%



Around 15% participants have chosen bacterial infection, 5% has chosen fungal infection whereas, 80% participants has chosen viral infection which were listed in table4 .

Table 4: Kind of Monkey-Pox infection?

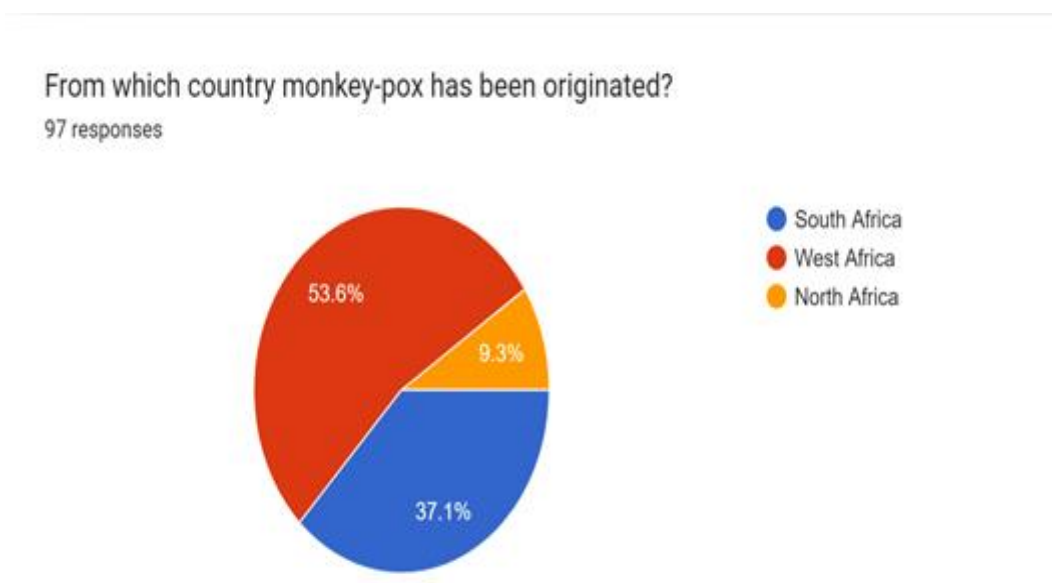
Infection	Total Count	Percentage
Bacterial	15	15%
Fungal	80	5%
Viral	5	80%



Our studies shows that around 53.6% participants has selected West Africa, 37.1% has selected South Africa and remaining 9.3% has selected North Africa which were listed in table 5

Table 5: Monkey-Pox originated?

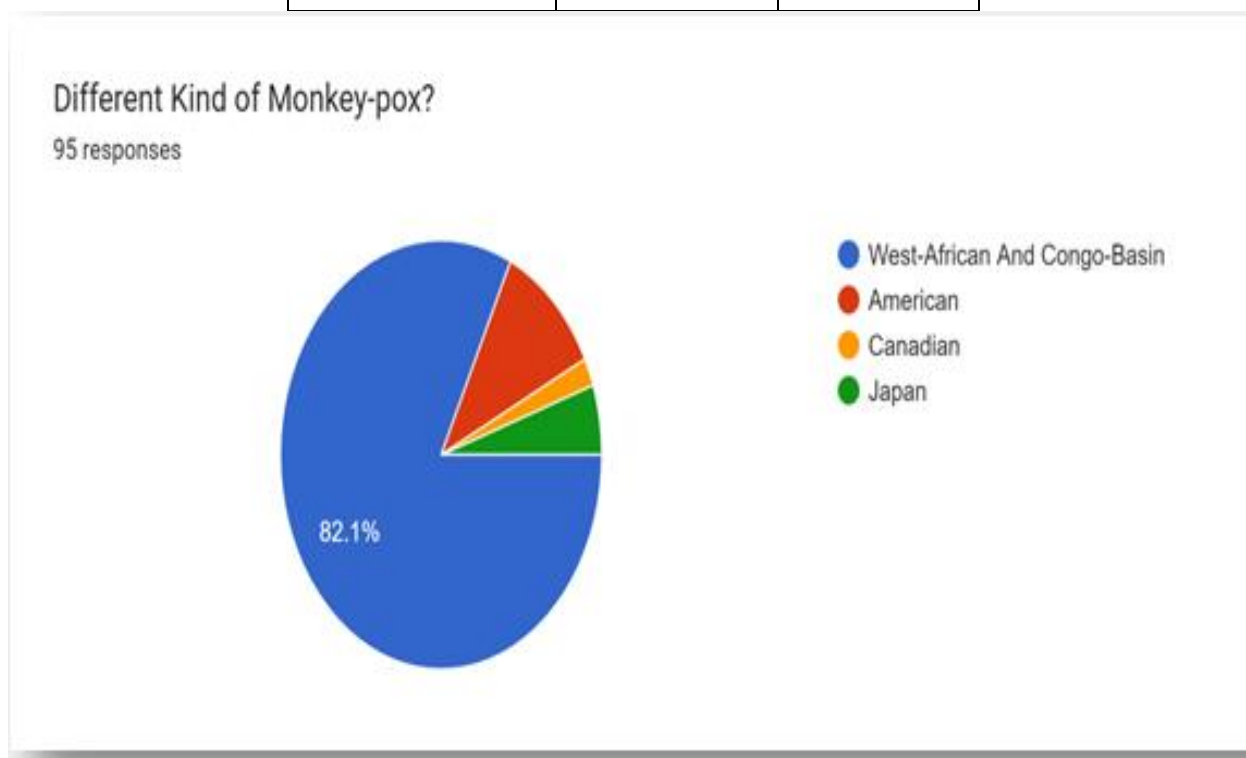
Origin	Total Count	Percentage
SOUTH AFRICA	36	37.1%
WEST AFRICA	52	53.6%
NORTH AFRICA	9	9.3%



According to our study, statistical analysis shows that 82.1% participants has opted West Africa & Congo-Basin which were listed in table 6.

Table 6: Different kind of Monkey-Pox?

Different Monkey-Pox	Total Count	Percentage
West Africa & Congo-Basin	78	82.1%
American	10	5%
Canadian	2	3%
Japan	5	10%



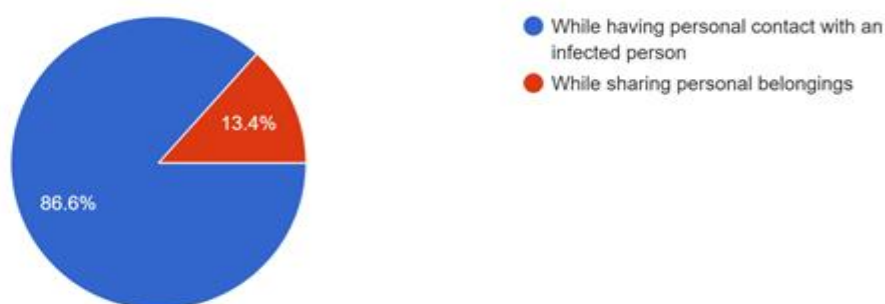
Around 89.6% participants have chosen personal contact, 13.4% has selected sharing which were listed in table 7.

Table 7: when should someone get tested for Monkey-Pox?

Test	Total Count	Percentage
Personal contact with an infected person	84	86.6%
Sharing personal belongings	13	13.4%

When Should Someone get tested for monkey-pox?

97 responses



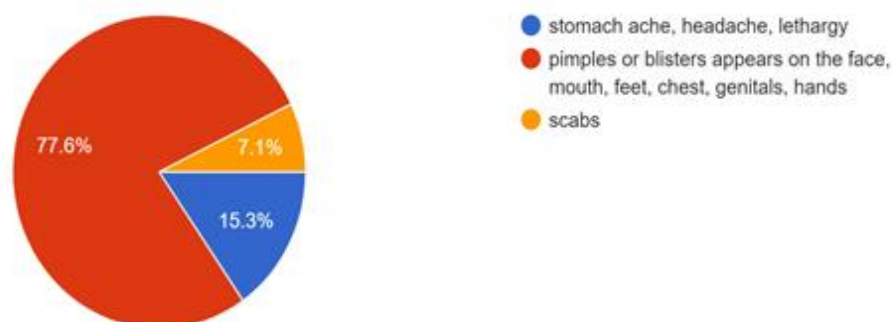
With the ongoing survey, analytical data view of symptoms in monkey-pox are stomach ache 15.3%, appears on chest 77.6% and scabs were 7.1% which were listed below in table 8.

Table 8: Symptoms of Monkey-Pox?

Symptoms	Total Count	Percentage
Stomach ache	15	15.3%
Appears on chest, genitals, hands	76	77.6%
Scabs	7	7.1%

Symptoms of monkey-pox?

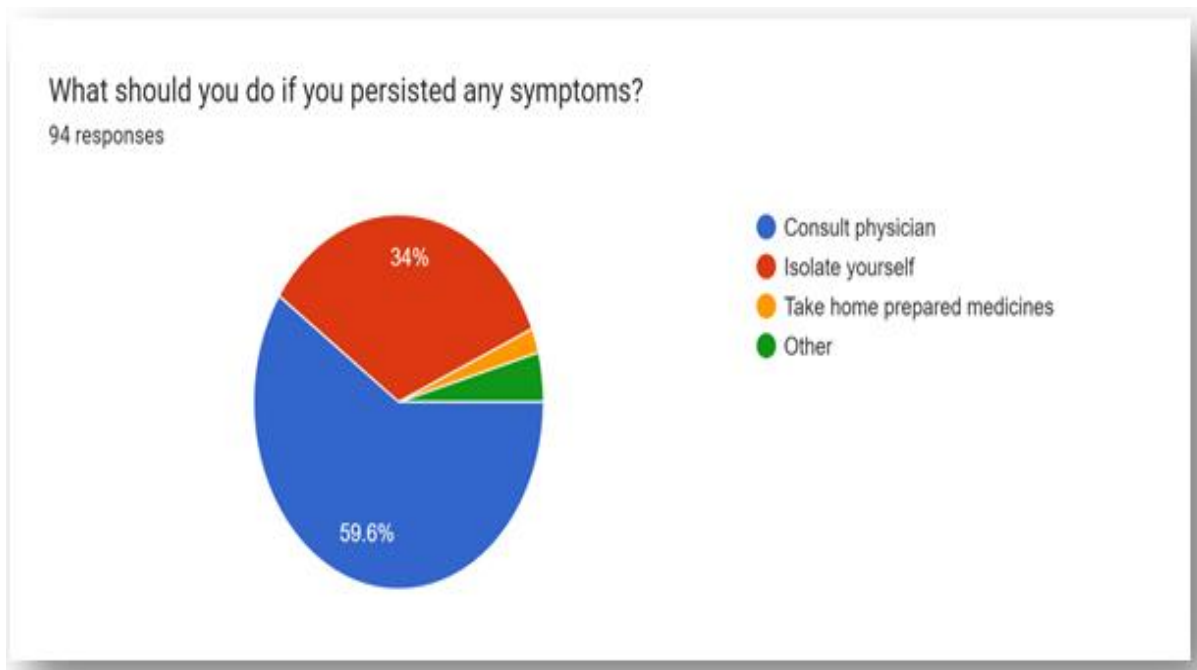
98 responses



The below table 9 has shown the listed of persisted symptoms; consult physician were 59.6%, isolated were 34%, taking home medicines were 3.2% and others were 3.2%

Table 9: Persisted symptoms?

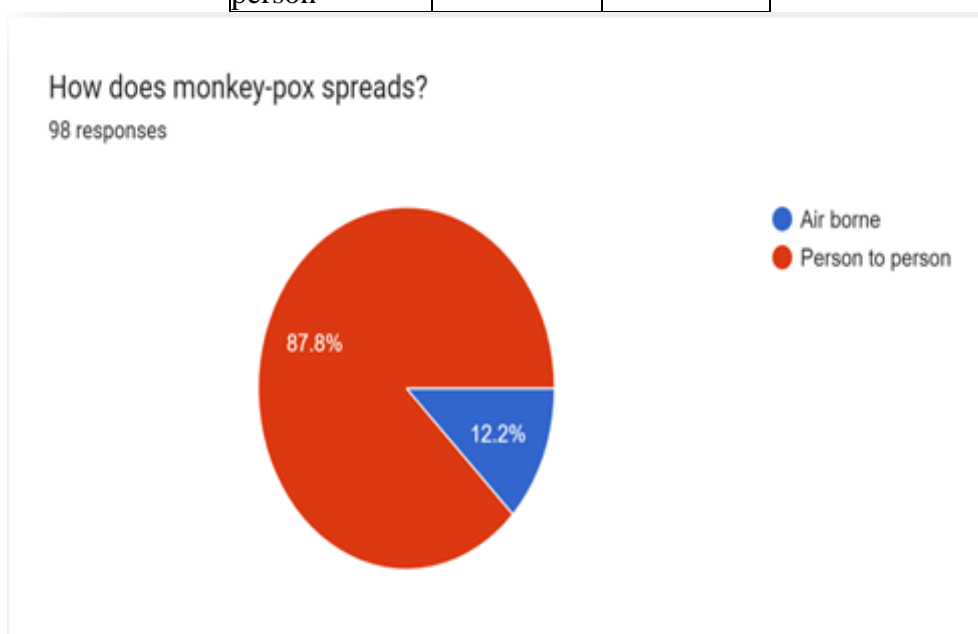
Persisted symptoms	Total Count	Percentage
Consult physician	86	59.6%
Isolate Yourself	32	34%
Take home medications	2	3.2%
Others	4	3.2%



In table 10 it is clearly seen that spreading by air borne were 12.2%, person to person were 87.8% which depicts that the disease is contagious.

Table 10: How Monkey-Pox spreads?

Option	Total Count	Percentage
Air borne	12	12.2%
Person to person	86	87.8%



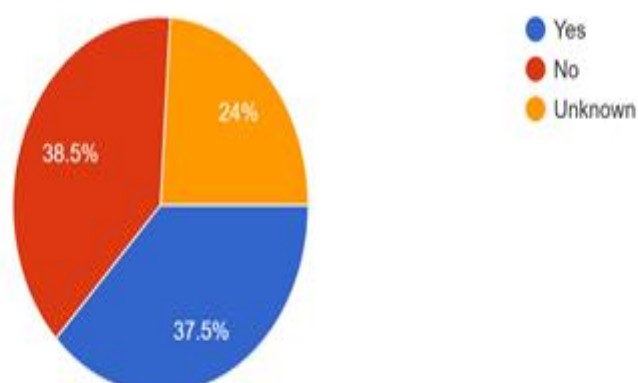
The below table 11 clearly illustrates that people who has opted yes were 37.5%, no were 35.5% and unknown were 24%.

Table 11: Is Monkey-Pox sexually-transmitted infection ?

Option	Total Count	Percentage
Yes	36	37.5%
No	37	38.5%
Unknown	23	24%

Is monkey-pox a sexually transmitted infection?

96 responses



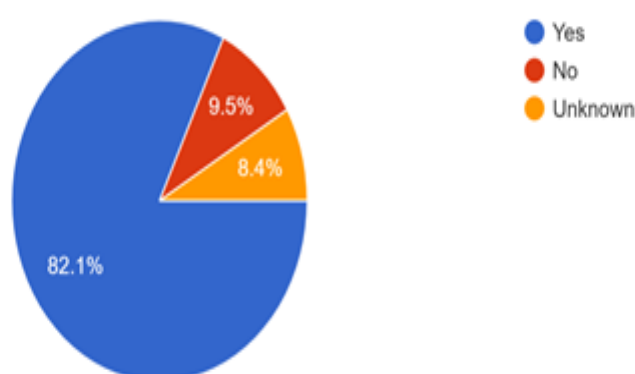
The below table 12 clearly demonstrates that people who has selected yes were 82.1%, no were 9.5% and unknown were 8.4%.

Table 12: How much concerned by avoiding crowded events or places ?

Option	Total Count	Percentage
Yes	78	82.1% %
No	9	9.5%
Unknown	8	8.4%

Should people be concerned by avoiding crowded events or markets?

95 responses



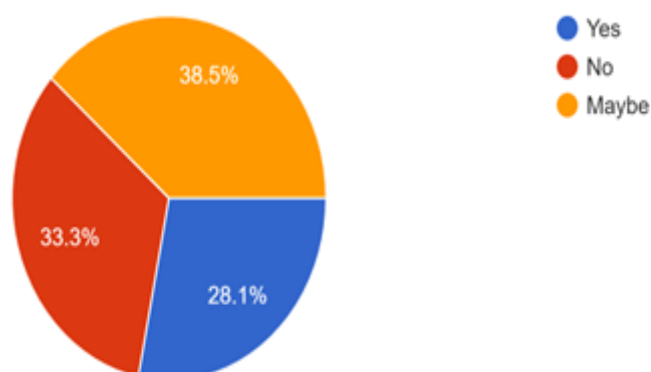
The below table 13 clearly illustrates that people who has opted yes were 28.1%, no were 33.3% and maybe were 38.5%.

Table 13: Is there vaccine to prevent Monkey-Pox?

Option	Total Count	Percentage
Yes	27	28.1%
No	32	33.5%
Maybe	37	38.5%

Is there a vaccine to prevent monkey-pox?

96 responses



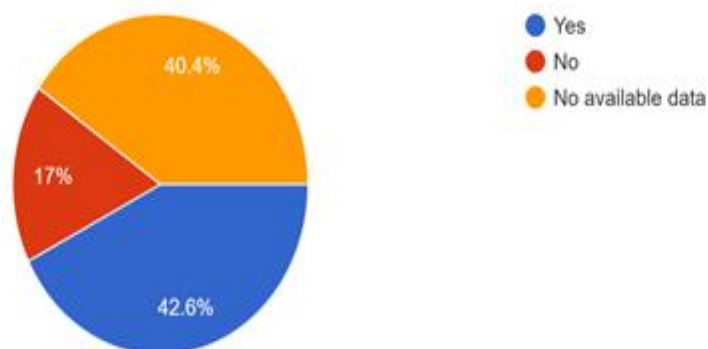
The below table 13 clearly illustrates that people who has opted yes were 42.6%, no were 17% and no available data were 40.4%.

Table 13: Are HIV people more likely towards Monkey-Pox?

Option	Total Count	Percentage
Yes	40	42.6%
No	16	17%
No available data	30	40.4%

Are people with HIV more likely to get monkey-pox?

94 responses



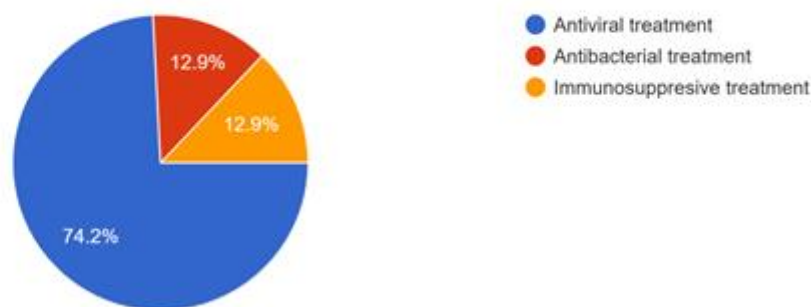
The below table 11 clearly illustrates that people who has opted antiviral were 74.2%, antibacterial were 12.9% and immune-suppressive treatment were 12.9%.

Table 14: Which treatment is effective towards Monkey-Pox ?

Treatment	Total Count	Percentage
Antiviral	69	74.2%
Antibacterial	12	12.9%
Immune-suppressive	12	12.9%

Which treatment is effective towards monkey-pox?

93 responses



Discussions:

A total no of 100 participants were participated in our study, Statistical analysis of our study show that approx 66.44 % participants were aware about the viral infection which demonstrates that people are maintaining safety measures among themselves and also creating in society by spreading awareness through social platforms. Moreover, over the time, primary animal-to-human transmission has been the cause of the majority of human infections.³ It is important to avoid unprotected contact with wild animals, infected persons, especially those animals that are sick or dead, as well as their flesh, blood, and other by-products. All items containing animal meat or parts must also be fully cooked before consumption. Some nations have laws in place that limit the importation of non-human primates and rodents. Animals kept in captivity that might have monkey-pox should be quarantined right away and kept separate from other animals. Animals that may have interacted with an infected animal need to be confined, handled with regular safety measures, and monitored for signs of monkey-pox for 30 days.⁴

To contain an outbreak, surveillance and quick case identification are essential. The main risk factor for monkey-pox virus infection during human monkey-pox epidemics is intimate contact with sick people (especially those who have STD). The risk of infection is higher for household members and health care staff. Health professionals should follow the recommended infection control procedures while caring for patients with a monkey-pox virus infection that has been suspected or confirmed or when handling specimens from such patients. If at all feasible, choose caregivers who have received a smallpox vaccination in the past and should get treated accordingly with lab reports.⁵

Conclusion:

The above article concludes that primary preventative method for Monkey-Pox involves increasing public knowledge of risk factors and teaching individuals about the steps they may take to lessen virus exposure. A scientific evaluation of the viability and suitability of vaccination for the prevention and control of Monkey-Pox is now being conducted in various places. Some nations have policies in place or are creating them to provide vaccines to people who may be at risk, including laboratory staff, members of quick reaction teams, and health care professionals and other citizens. This survey depicts the awareness of Monkey-Pox and has illustrated every point with pie chart with appropriate results.

Conflict Of Interest: None declared.

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