Faculty of Medicine
University of Dhaka

MUSCULOSKELETAL PROBLEMS AMONG THE PATIENTS WITH CHIKUNGUNYA

MD ABU HANIF

Bachelor of Science in Physiotherapy (B.Sc. PT)

Registration no: 6841

Session: 2013-2014

SCMST, Mirpur, Dhaka

SAIC College Of Medical Science and Technology
Department of physiotherapy
SAIC Tower, M-1/6, Mirpur-13, Dhaka-1216
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SAIC INSTITUTE OF MEDICAL TECHNOLOGY
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We the undersigned certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for the acceptance of this dissertation entitled

MUSCULOSKELETAL PROBLEMS AMONG THE PATIENTS WITH CHIKUNGUNYA

Submitted by Md Abu Hanif, for partial fulfillment of the requirements for the degree of Bachelor of Science in Physiotherapy (B.Sc. PT)

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DECLARATION

I declare that the work presented here is my own. All source used have been cited appropriately. Any mistakes or inaccuracies are my own. I also declare that for any publication, presentation or dissemination of the study. I would be bound to take written consent from my supervisor.

Signature: Date: / /

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Acknowledgment

All the praises and gratefulness go to the almighty Allah for giving me the passion to complete this study. I am grateful to the ethical committee of research project and faculty members of physiotherapy department, SAIC collage of medical science and technology (SCMST) who allowed me to carry out this study .I express my greatest gratitude to thr respectable course coordinator and assistant professor, Bahauddin Bayzid to give me important suggestions to complete this study

I am grateful to my supervisor S.M. Mustofa kamal, lecturer, department of physiotherapy, SAIC Collage of medical Science and Technology (SCMST) for always guiding me in this study.

I would like to thank Dr. Rokeya Sultana, MBBS, MPH (DU) Principal SAIC Institute of Medical Technology for his leadership and guidance in my professional career.

I would like to thanks Dr. Mohammad Kamruzzaman, BSPT (DU), PGDHE (DU), MHE (DU)for the endless support and guidance he provided has many dissertation chair. He is an expert researcher who generously shared his time and talents with us.

Kutb Uddin (Tutul), lecturer Department of physiotherapy, SAIC Collage of medical Science and Technology (SCMST) and Rejwan Gani lecturer, Department of physiotherapy, SAIC Collage of medical Science and Technology (SCMST).

I would like to express graduate to all my class teachers for helping in this study directly or indirectly. I am thank full to all the staff of the SCMST Libery for their cordial help to find out important books and providing support to use the computer.

I am also thankful to my family for help during this study and thankful my friend jalal uddin , Md Ariful islam, Sohel Arman, Imtiaz uddin , sahida sultana shumi, farzana rahman, khaleda akter, and all of my colleagues who helped me many ways to complete this study.

Finely, I would like to thank all the participants who participate in this study willingly

DECLARATION

We declare that the work presented here is our own. All source used have been cited appropriately. Any mistakes or inaccuracies are our own. We also declare that for any publication, presentation or dissemination of information of the study. We would be bound to take written consent from my supervisor.

No.	Candidates signature	Date
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ACNOWLEDGEMENTS

First and foremost, I would like thanks to the Almighty Allah, the most merciful and beneficent who enable me to complete and present this dissertation in the midst of many adversities. I express my profound gratitude to the respected Chairman and all the members of the dissertation committee for their kind approval of the topic of my dissertation.

I would like to gratefully acknowledge the support and academic guidance my dissertation committee provided me during my doctoral studies and particularly during the dissertation phase of my education.

First of all, I would like to honestly express my gratefulness towards my Kind and great advisor Dr. Mohammad Kamrujjaman PT, BSPT (DU), PGDHE (DU), MHE (IHE, DU), MS-SLP (DU), Lecturer Department of Physiotherapy, and SIMT for his always-significant guidance, countless supportive advices and recommendation since my first day in dissertation.

Secondly, I would like to thank Dr. Rokeya Sultana**,** MBBS, MPH (DU) Principal of SAIC Institute of Medical Technology for his leadership and guidance in my professional career.

Thirdly, I would like to thank Dr. Md. Bahauddin Bayzid PT, B.Sc. PT (DU), M.Sc. PT (DU), Assistant professor and Course Coordinator of department of B.Sc. in physiotherapy in SAIC Institute of Medical Technology (SIMT) for his active instructions and helpful recommendations not only on my thesis, but also on other subjects. He is an expert researcher who generously shared her time and talents with me.

Fourthly, I would like to thank Dr. Md. Mostafa Kamal Sohel, B.Sc. PT, MPH (BUHS) Lecturer Department of Physiotherapy,SIMT for his supportive advices and recommendation of my dissertation.

Fifthly, I would like to thank Dr. Md. Ruhul Amin PT, Assistant professor, BSPT, MPT (Advanced PT in Neurology), MPH (Epi & HM), PhD (Fellow), Department of Physiotherapy**,** Gono Bishwabidyalay for advices and recommendation since my first day in dissertation.

Sixthly, I would like to thank Dr. Pradip Kumar Saha PT, BPT, D.ortho (Cyriax Inst.) Belgium, MPH (Epi & HM) for his leadership and guidance in my professional career. He has been a wonderful mentor and has helped to guide me as I incorporated research and academic pursuit physiotherapy career.

Seventhly, Thank to external Dr. Md. Nazrul Islam PT, BSPT (DU), MPT (Ortho) Course Coordinator of Department of Physiotherapy National Institute of Traumatology and Rehabilitation (NITOR) for being in my life and inspiring me to be my best.;

I would like to express my great gratefulness to All the Physiotherapists and the staff members of the Physiotherapy department whose are participated in the study in various ways, the managements of the participated hospitals, the participants and contributions cannot go unmentioned.

I would like to thank my family for their endless support and loves especially my parents. Thanks to my classmate for all of their support and loving friendship during my doctoral education.

Lastly, I would like thanks to my family and friends for their help during this study. I would also like to thanks our respondent's without whom the experience from which thesis was ultimately derived, would not have been gained.

Abstract

Background: Chikungunya is a viral infection, spread human via mosquito that develop arthralgia symptoms such joint stiffness, myalgia, arthralgia, swelling and also inflammatory & neurological complication .Since the first reports of Chikungunya fever in Africa 1950s more than 1500.The disease is mostly confined to people living in topical Africa and Asia and is characterized by a sudden and serve fever, skin rash, joint & muscle pain. **Methods**: A cross sectional study. A total number of 70 respondents were face to face interviewed for identifying the musculoskeletal problems. **Objective:** The objective of this study to determine the musculoskeletal problems among the patients with Chikungunya.**Result:** A pre – tested, modified, semi- structure questionnaire was used to collected the data found that between; most of 30-39 years old respondents are suffer in chikungunya , among the sufferer in less than 10 days continue. Most 0f the sufferer are taken treatment in medication. Housewife are most of suffer in chikungunya. After suffer the patient are pain relieve by resting in position and worsening by movement.**Conclusion:**Chikungunya epidemics with the high attack rate of CHIKV, affect a large number of people in a short period of time and this is also consistently seen in Bangladesh outbreak 2017. Pain the most frequent clinical manifestation of Chikungunya is difficult to control, compromising the quality of life, intense psychosocial and economic repercussions, causing a serious public health problem that requires a targeted approach. The approach to the management of patients with Chikungunya requires the involvement of multidisciplinary teams. General physicians, Infectious disease specialists, Rheumatologist and other specialist, nurses, pain specialists, physiotherapists, social workers, and healthcare managers are required to institute these guidelines.

Keywords: Chikungunya, Epidemiology, Viral fever, Arthralgia

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ABBREVIATION

SPSS **:** Statistical Package for the Social Science.

OR **:**Odds Ratio.

WHO **:**World Health Organization.

PRS **:** Pain Rating Scale.

ADL **:** Activities of Daily Living.

CHIKV **:** Chikungunya Virus.

RRV **:** Ross River Virus.

ONNV **:** Onyong nyong Virus.

RNA **:**Ribonucleic Acid.

ORFS **:** Open Reading Frames.

SD **:** Standard Deviation.

SIMT **:** SAIC Institute of Medical Technology.

NITOR : National Institute of Traumatology and Orthopedic Rehabilitation

BSc PT **:** Bachelor of Science in Physiotherapy

DU **:** Dhaka University

CHAPTER-I **INTRODUCTION**

1.1 Background

Chikungunya is infection due to a RNA virus.It is spread from primates to human via Aidesaegypti mosquito. In 1952 and 1953 the virus of Chikungunya at first outbreak in East Africa. Then CHIKV fever are transmitted from country and affected large population (Rampa et al. 2007).

From Chikungunya virus the posture is affected and develops arthralgia symptoms .There are many symptoms of chikungunya such as-fever, joint stiffness, myalgia, arthralgia, swelling, headache, reduce range of motion, sudden chills, numbness. Chikungunya myelo-radiculopathy is relatively unknown and less complication of the virus and that investigated (mohona et al. 2012).

There are many complication of Chikungunya, among them the neurological complication of the infection are more than and is reported very recently. More complication are find out such as the complication of dermatology, organ failure, alatragenic complication. There is a major factor that is the complication has been observed mainly in the people who is old age, pregnancy and neonates (Smita et al. 2008).

Since the first reports of Chikungunya fever in Africain the early 1950s, more than 1500 scientific publication on different aspects of the disease and its causative agent has been produced. Analysis of these publication shows that, following a number of studies in the 1960s

and 1970s, and in the absence of autochthonous causes in developed country. Nolicensed vaccine against Chikungunya is commonly available, but several strategies are under study. In section below review several drugs which have shown antiviral activity CHIKV or active against the inflammatory symptoms associated with CHIKV infection (Thiberville at el. 2013).

Chikungunya fever is a re-emerging viral illness that is spread from human-to-human by the bite of virus-carrying mosquitoes. The disease is mostly confined to people living in tropical Africa and Asia and is characterized by a student and severe, fever skin rash and joint muscle pain. Chikungunya virus, also known as Buggy creek virus, is transmitted by Aides aegypti mosquito bites (Bhowmik et al.2010).

The joint pain in the different phase of Chikungunya disease causes important physical incapacity that significantly impacts the quality of life of affected patients the suffering related to the infection is not limited to pain ; a significant portion of patients experience mental health and sleeping disorders and mood swings (Amin et al.2007).

All the cases were medicate symptomatically no appointed treatment was certain by after 4-5 days' time 14 incident slowly ruined, became completely aware and had neurological deficit. They were paint with mild to moderate rate of joint ache. In a lesion within French military policeman after the Chikungunya prevalence in rally Island, only 3.2% of incident did not response trouble (Queyriaux et al; 2008).

In an expected study bead to parallel dengue and chikungunya fever by a new start in Gabon, heat or arthralgia had a set of 73% with a PPV OF 79% AND 44% gradually. (Knight et al; 2012).A change of different clinical symptoms bear been reported during the acute turn of chikungunya fever, certain as conjunctivitis, neuro-retinitis, myocarditis, pericarditis, pneumonia,dry cough, lymphadenopathy, nephritis, hepatic, then pericarditis.(Borgherini et al ; 2007).

In May 2004,an outbreak of chikungunya temperature influenced the poll of the Kenyan coast. Lama Island as the wide peak was extend in July. (Renault et al; 2012).High fever, headache, myalgia, arthralgia, polyarthralgia and hasty are the radical clinical symbolic CHIKV fever. Various studies have indicated that arthralgia persist is for longer time of bar badcause's hard ache in older population, so in diabetic patients. (Singh and Unna, 2011).

The mechanisms by which arthritogenic alphaviruses such as CHIKV cause disease are poorly understood, but the inflammatory response to infection contributes to viral ilumination from the blood and clinical recovery at both the acute stage and the chronic from of the disease. (Dupuis-maguirage et al. 2012).

In summary, no antiviral drug is currently available for the treatment of standard presentations of chikungunya fever, chloroquine, which has been used in the past, should not be utilized at the acute phase of the disease. Based on data collecting during a prospective clinical trial in Reunion Island (kumarasamy-et-al-2006).

In the majority of the cases the onset of fever was abrupt and associated with chills and joint pain. Fever was moderate (100-103F) for first 7 days, there after; become mild (99-100F) for next 3-4 days. All the cases had associated headache, body ache, lethargy, insomnia, and anorexia with fever. (Paquet-et-al-2006).

The most stir king complaint with fever was joint pain, which was sudden in onset, moderate to severe in severity and had affected more than one joint at a time. The joint involved in order of severity and preference were knee, ankle, and wrist, small joints of hand and feet and elbow.

Because of severe pains the most of the cases were confined to bed on first or second day of fever and 10 cases developed characteristic stooped flexed posture. Seventeen cases had joint swelling around knee and ankle. Diminished deep tendon reflexes without any focal neurological deficit were found in 7 cases. Involuntary movements in upper limbs were seen in 4 cases.

After the incapacitating arthralgia of the acute phase 70% complained of persisting joint symptoms which consisted mostly of arthralgia, stiffness in the joints and joint swelling 35% still had residual joint pain or stiffness at least 6 months after the onset of the infection.

The most affected joints in the chronic phase were the interphalangeal joints, the wrist joint and the ankle joints. Four patients also complained of persist anent shoulder pain. Pain in the soul or in the heel or the foot was experience in some patients. Joint stiffness affected mainly interphalangeal, knee and ankle joints other residual joint mainly testation were mild joint deformities and pigmentation over small joint mainly. The joint symptoms usually start with arthralgia. Involvement is symmetric and often ankle, wrists and small joints of the hand are the

worst affected larger joint like knee and shoulder and spine were also involved. Pain tends to be worse in the morning, relieved by mild exercise and exacerbated by aggressive movements. The pain may relieved for 2-3 days and then reappear in a saddle back pattern

1.2 Justification of Study

In Bangladesh Chikungunya viral disease is emerging as global threat because of the highly debilitating nature of the associated disease of its spread. Most of the patients need physiotherapy treatment after chikungunya injury. There are many complication of Chikungunya, among them the neurological complication of the infection are more than and is reported very recently. More complication are find out such as the complication of dermatology, organ failure, alatragenic complication. By proper physiotherapy we can make our inactive manpower into more active manpower that helps in total development of health sector in our country. Therefore, it is necessary to identify the musculoskeletal problems among the patients with chikungunya.

1.3 Research Question:

What are the musculoskeletal problems among the patients with Chikungunya?

1.4 Study objectives:

1.4.1 General objective

To determine the musculoskeletal problems among the patients with Chikungunya in the Dhaka city.

1.4.2 Specific objectives

To determine socio demographic factors

To identify the musculoskeletal complication related factors in different body regions

To association between Socio demographic factors related factors

1.5 Operational Definition

Chikungunya:

Chikungunya is a viral illness transmitted by mosquitoes that causes the sudden onset of fever and severe joint pain. Other signs and symptoms may include fatigue, muscle pain, headache and rash

Musculoskeletal pain:

Musculoskeletal pain is an injury or disorder of the muscles, nerves, tendons, joints cartilage and spinal disc.

PRS (Pain rating Scale):

PRS is a segmented numeric version of the visual analog scale (VAS) in which a respondent selects whole number (0-10 integers) that best reflects the intensity of his/her pain.

Pain: Pain is the protective mechanism of the body when any tissue is being damaged.

Stiffness: The resistance of a structure to the deforming force.

Medical Care:

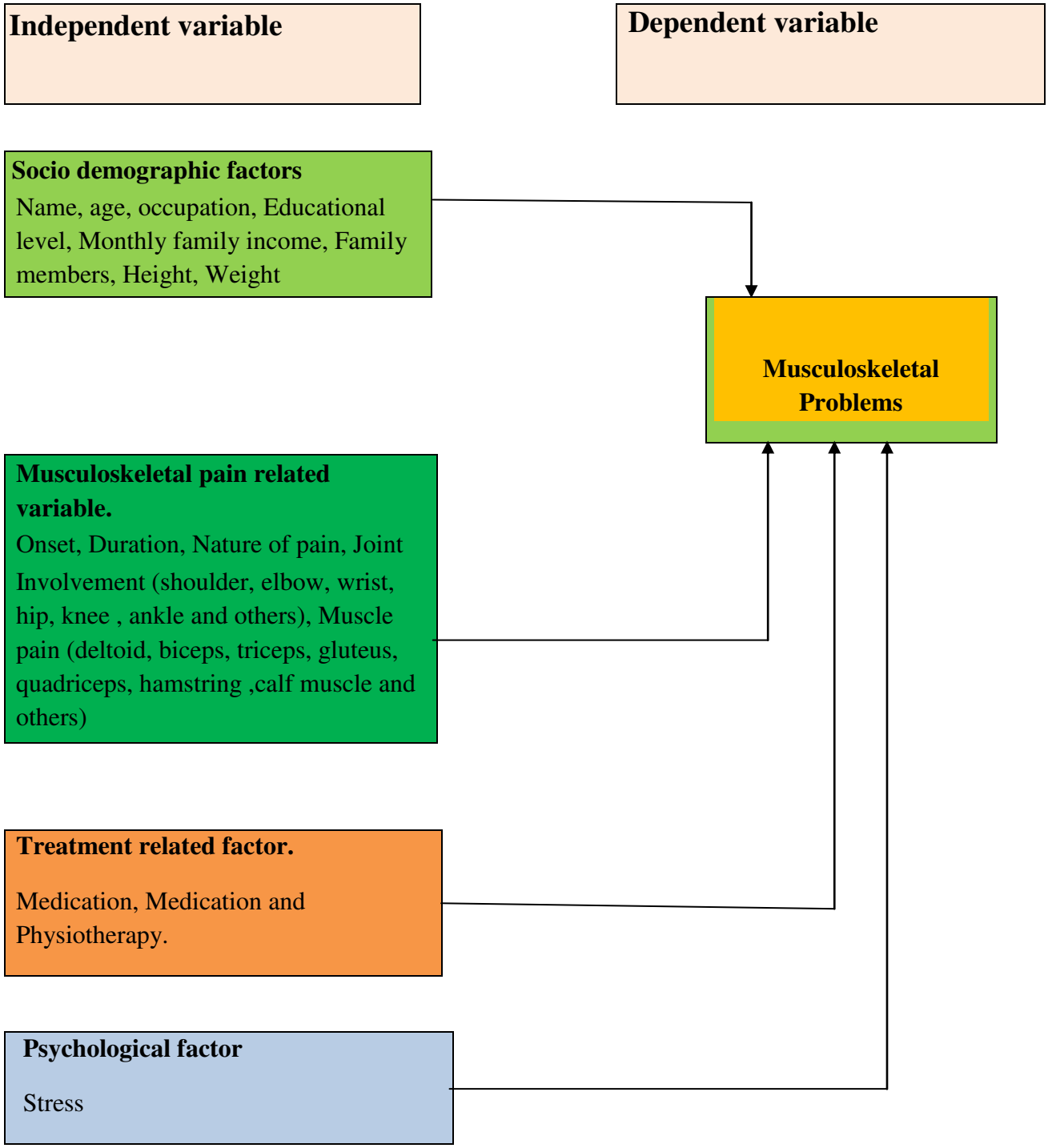
Includes addressing minor ailments or injures and seeking emergency care as necessary.

Impairment: Impairment is state of being diminished, weakened or damaged mentally or physically.

Arthralgia: Arthralgia means joint pain, it is a symptom of injure, infection or in particular illness.

Myalgia: Myalgia is a term that literally means muscle pain.

1.6 Conceptual framework



CHAPTER-II LITERATURE REVIEW

The clinical complication of post- musculoskeletal Chikungunya infection was carried out in 2007 from the study from data collection we find out that the range of participants 77 people and age 6 to 69 years. (Dr. Smita, et al. 2008).Apart fromsymptom we can observed a squeals of neurological abnormalities. With abnormal CT scan of head and CSF study (Rampal, et al. 2007)

There were 77 participants in the study: 41 males (53%) and 36 females (47%). The age distribution was as follows: 0-10 years (3%), 21 -30 years (17%), 31-40 years (14%), 41-50 years (25%) , 51- 60 years (29%), and 61-70 years (9%), 26% of participants in this sample had a co-morbidity or underlying chronic disease such as diabetes mellitus, hypertension or Rheumatoidarthritis. Duration of the acute phase of the illness was as follows: 35 days (42%), 6-7 days (27%), 10-15 days (22%), and more than 15 days (9%).Medications used during the acute phase were as follows: NSAIDs (88%), paracetamol (88%), antibiotics (12%), chloroquine (1%) and others (21%). In the majority of cases, medications were taken in combination. 21% of the participants who had been prescribed “others” drugs were not aware of the nature of the medications prescribed to them. After the acute phase of Chikungunya infection, participants complained of joint, psychological, dermatological, iatrogenic and neurological complications showed a higher frequency in females than in males (Smita et al. 2008).

Chikungunya fever is an acute illness caused by Chikungunya virus belonging to the Alpha virus genus of the Togaviridae family. It is not uncommon in Bangladesh in 2007, 2008, 2009, 2014, 2016 and 2017; several sporadic cases have been reported from different parts of the country.

Chikungunya fever is an acute illness caused by Chikungunya virus belonging to the Alpha virus genus of the Togaviridae family. The virus is transmitted by mosquitoes, mostly aedes aegypti and Aedes albopictus. Chikungunya fever is primarily tropical disease accurting in Africa. Asia and Indian Ocean slands. From the arrival of the Chikungunya virus in the Americas in 2013 until March 20116, approximately two million cases of the disease have been reported in Brazil, the virus was first identified in 2014 and thousands of people have been affected (Mahmud ET. Al. 2017)

Of the 300 patients with CHIKV taint ocular during this epidemic, 49 (16.3%) patients open neurological complications. There were 42 males and 7 females and the age was over 20 years in all barring one. The neurological sign executed cover: Encephalitis (27, 55.1%), myelopathy (7, 14.3%), neuropathy (7, 14.3%) myeloneuropathy (7, 14.3%) and myopathyOf the 27 patients with encephalitis, 16(59%) oresented with abnormal behavior or 6(22%) everywith killed elevation of consciousness. (Manimunda et al; 2010).The effect were honest. Of the 49 patients, in that were three dying, two byencephalitis and one with myeloneuropathy or 37(75.5%) patients find good effect Of the 34 patients certain cortico-steroids, 25(73.5%) ruined again as of

the patients adoption empty supportive dealing, 12(80%) patients killed. Current CHIKV corruption was associated with various neurological difficulty, gesture neurotropic disposition of the virus. The fate of the neurological nodes is imposing to be excellent. (Thiberville et al; 2013)

By 2004-2005 chikungunya excitation was sent to human via Ac- aegypti (Arankalle et al; 2007) in Kenya, Comoros, Seychelles and divers place of Madagascar (de Lamballeric et al; 2008) then by the start, a genetic alternative happened to location 226 of the gene because the tunic rot glycoprotein E, with the rejection of violin remainder after an alanine E: A226 V (Schuffenecker et al; 2006).

Apart from typical clinical history of chikungunya infection, neurological complications with associated clinical feature abnormalities suppoactive laboratory evidences,positive chikungunya igm card test, exclusion of other causes and known predilection of arbovirus for central nervous system infection allows us to conclude the diagnosis of study cases as chikungunya encephalitis, (sergon-et-al-2008).

Transmission by this mosquito was extremely efficient since a cross- sectional seroprevalance study, performed 9 weeks after the epidemic peak on a representative sample of the lames island population, revealed that 75% of the population presented with anti chikungunya antibodies similarly. (Sergon-et-al-2008). A cross-sectional seroprevalence study performed on a

representative sample of GrandeComoroIsland in March 2005 reported a seroprevalence of 63%, with a considerable social impact. (Renault-etal-2012).

A retrospective seroepidemiological study showed that approximately 40% of the population had been infected, demonstrating the massive impact of the epidemics caused by this dispersing virus. (Gerardin-et-al-2008). This is an agreement with prospective surveillance data which reported 266.000 symptamatic infections on attack rate; 34% and 22 severe presentations requiring assistance for at least one vital function. (Renault-et-al-2012) of whom 65 died (29%); 25 severe presentations in patients under 15 years of age were detected, of whom 2 died (8%). Forty four causes of mother to infant transmission were reported. (Economopoolou-et-al-2009).

It must be noted that the orginal, non-mutated Ac.acgyptiadapted strain was extremely efficiently transmitted in the regions where this mosquito was prevalent, with seroprevalences reaching more than 60% in GrandeComoro and LamaIslands.

CHAPTER-IIIMethodology

3.1 Study Design:

Cross sectional study

3.2 Study Population:

Patient who are affected from Chikungunya.

3.3 Study Area:

Mirpur, Shyamoli, Dhanmondi,Dhaka.

3.4 Study period

The duration of study had be six months. The study had be conducted from 1st November, 2017 to 30th April, 2018

3.5 Sample Technique:

Purposive sampling will be taken.

3.6 Data collection tools

A pretested**,** modified and semi-structured questionnaire had be used to collect the data

3.7 Data Collection Instruments

Data was collected by structured questionnaire, pen, paper, file, clipboard and checklist.

.

3.8 Sample size:

$$n = \frac{z^2 pq}{d^2}$$

$$n = \frac{(1.96)^2 \text{x } 0.66 \text{ x } 0.34}{(0.05)^2}$$

$$= 344$$

Here,

P = Estimated 0.66

When,

P1 = 87% (Thiberville S.D et al. 2013).

P2 = 78% (Amin R.et al 2017).

P3 = 38% (Mahmud S.et al 2017).

q = 1-P

=0.34

d = confidence interval 0.05

So, required sample size is 344.

Sample size was small (70) due to time and financial limitation

3.9 Data collection technique

From the participant by face to face questionnaire interview

3.10 Data management and analysis

After collection of data of the respondents were organized. Data was entered into the computer into a data base in the software package. Statistical package for the social science (SPSS) Version 16.0 (Polar engineering and consulting, Chicago) using descriptive statistics such as frequency, distribution, range, mean, and percentage. All scores and percentages was computed and presented in tabular form, charts, and graphs as appropriate. Further it was analyzed with the help of chi-square test and P-value. Finally the data was interpreted on the basis of study findings.

3.11 Data Presentation

Data would be presented in table and graph (bar and pie chart) so that difference between male and female and others can be visualized at a glance.

3.12 Ethical Considerations

The protocol initially would be approved by the ethical review committee of SAIC Institute of Medical Technology (SIMT). International ethical guidelines for biomedical research involving human subjects will be followed throughout the study. Written informed consent will be taken at the time of enrolling the participants. However, verbal consent will be also taken when required. In consent form, the title, aim of the study, data Collection procedures, required time for date collection, confidentiality and anticipated use of the result of the study will be written in plain and simple Bengali language and it will brief to each participant before date collection. All participants will inform that they are free to leave or to refuse to take part in this study at any time. The personal information of the participants will be kept totally confidential. The information given by the participants had be analyzed using code number so that nobody can identify them.

3.13 Inclusion and Exclusion Criteria

3.13.1 Inclusion Criteria

Subjects who was participate willingly.
Participants who was above 10 years old.
Who would have permitted me to take data?

3.13.2 Exclusion Criteria

Participant who wasbellows 10 years old.
Who was not interest to give data?
Who was have affected in multiple disease?
Who was non communicable

.

CHAPTER-IVRESULT

This descriptive type of cross sectional study was conducted in Dhaka city in order to determine the level of satisfaction regarding physiotherapy treatment among the patient attend in different physiotherapy center.A pre-tested modified interviewer administrated semi questionnaire was used to collect the information.A total of 70 patients were interviewed to collect the information. Section A contained the questions about socio-demographic characteristics; section B contained information related question variables. All the data were entered and analyzed by using statistical packages for social science (SPSS) software version 16.0 (Chicago).

Table-01: Distribution of the respondents by age (n=70)

Age	Number (n)	Percentage (%)
<10	2	2.9
10-19	12	17.1
20-29	19	27.1
30-39	18	25.7
40-49	11	15.7
49>	8	11.4
Total	70	100

Table 1 found that age below 10, 10 to 19, 20 to 29, 30 to 39, and 40 to 49 and above 49 of the respondents 2.9%, 17.1%, 27.1%, 25.7%, 15.7% and 11.4% respectively.

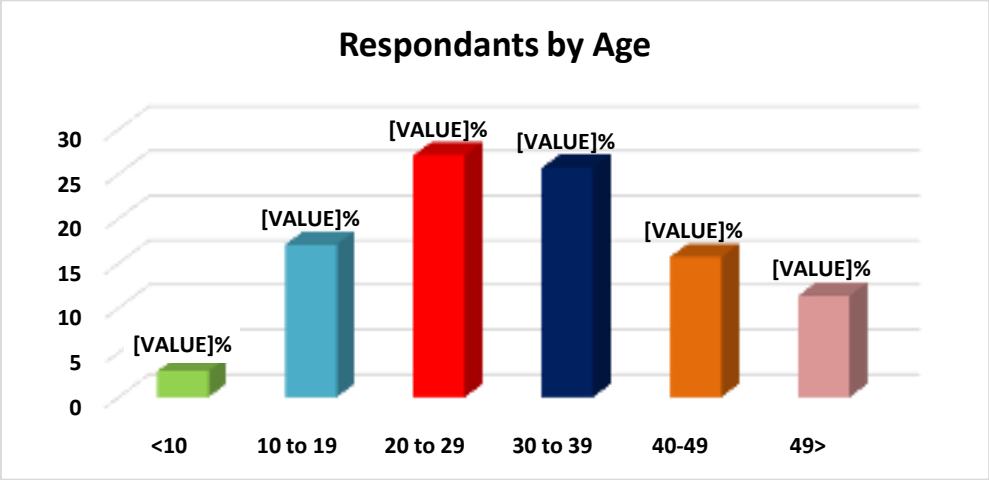


Figure-01: Distribution of the respondents by age

Table-02: Distribution of the respondents by Sex (n=70)

Sex	Number (n)	Percentage (%)
Male	35	50.0
Female	35	50.0
Total	70	100

Table 2 found that sex male 50% and Female 50% respectively.

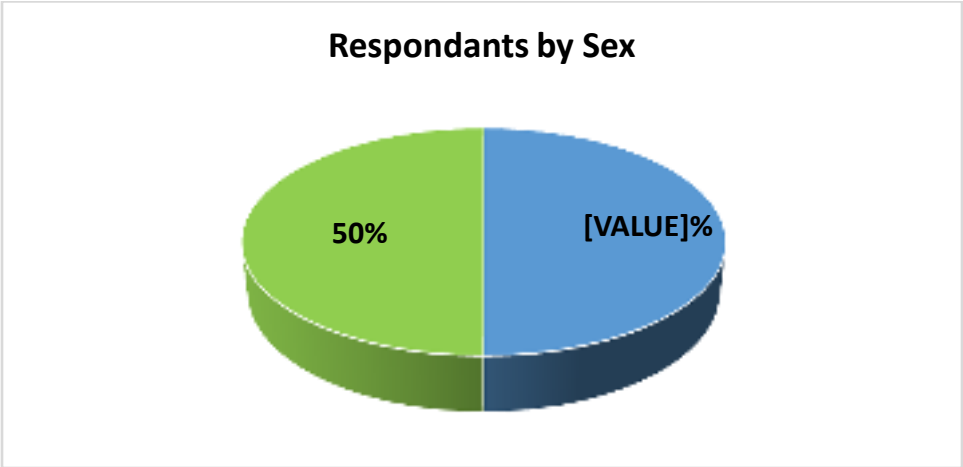


Figure-02: Distribution of the respondents by sex

Table-03: Distribution of the respondents by Religion (n=70)

Religion	Number (n)	Percentage (%)
Islam	65	92.9
Hindu	4	5.7
Buddhism	1	1.4
Total	70	100

Table 3 found that religion Islam 92.9%, Hindu 5.7% and Buddhism 1.4% respectively.

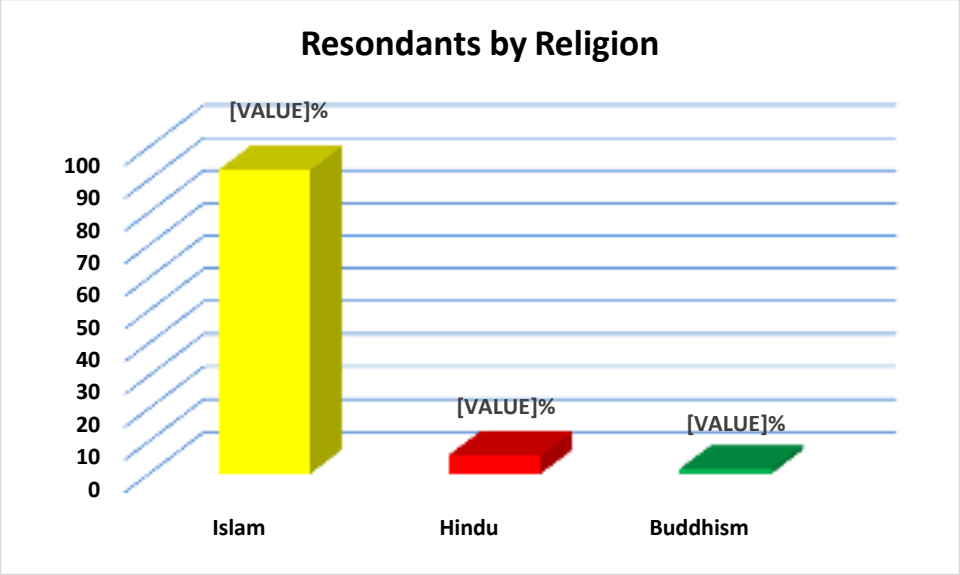


Figure-03: Distribution of the respondents by religion

Table-04: Distribution of the respondents by Education (n=70)

Education	Number (n)	Percentage (%)
Illiterate	3	4.3
Primary	9	12.9
SSC	16	22.9
Below SSC	11	15.7
HSC	12	17.1
Graduate	5	7.1
Post Graduate	14	20
Total	70	100

Table 4 found that Illiterate 4.3%, Primary 12.9%, SSC 22.9%, Below SSC 15.7%, HSC 17.7%, Graduate 7.15 and Post Graduate 20% respectively.

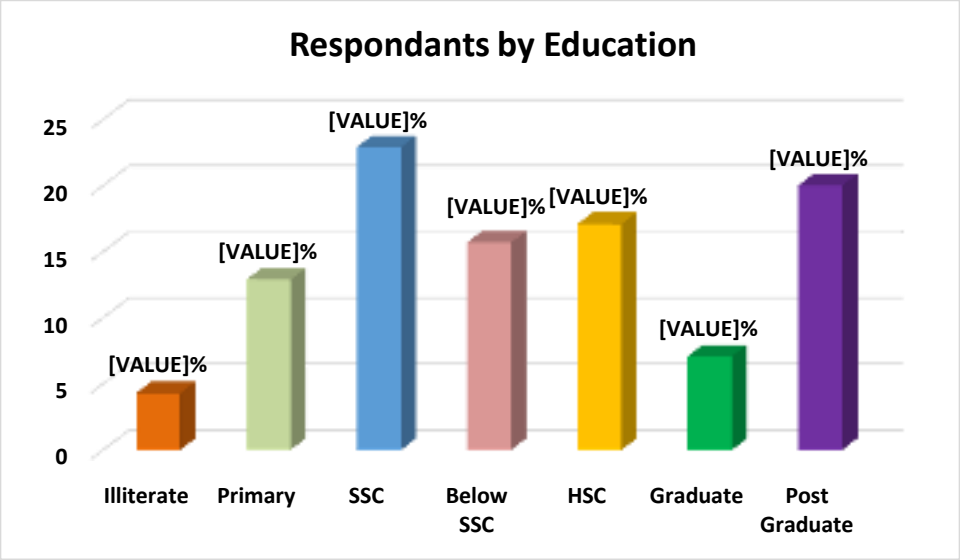


Figure-04: Distribution of the respondents by Education

Table-05: Distribution of the respondents by occupation (n=70)

Occupation	Number (n)	Percentage (%)
Govt. service	4	5.7
Private service	13	18.6
Businessman	9	12.9
Housewife	22	31.4
Others	22	31.4
Total	70	100

Table 5 found that Govt. Service 5.7%, Private Service 18.6%, Businessman 12.9 %, Housewife 31% and others 31.4% respectively.

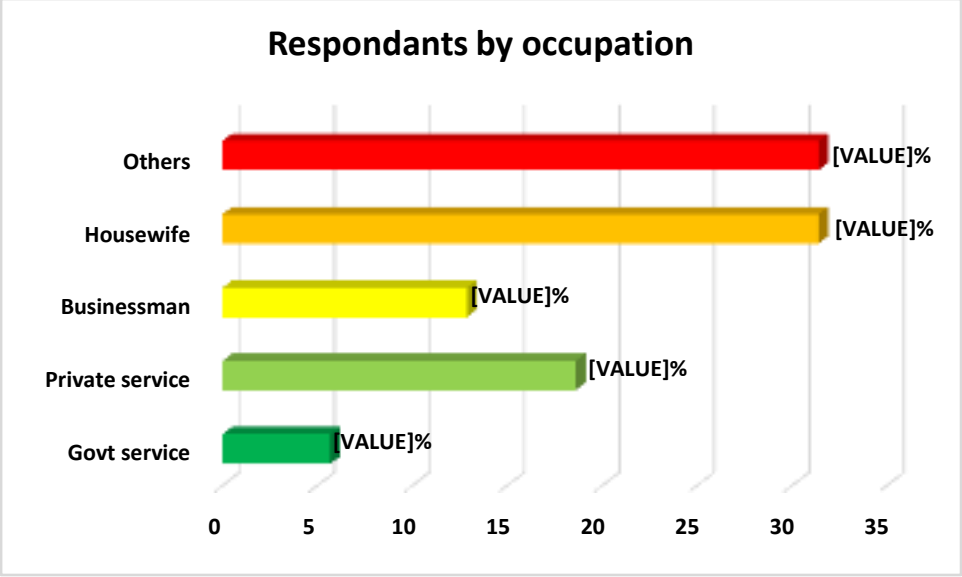


Figure-05: Distribution of the respondents by occupation

Table-06: Distribution of the respondents by Income (n=70)

Income	Number (n)	Percentage (%)
Below 10000	10	14.3
10000 to 19000	13	18.6
19000 to 29000	20	28.6
29000 to 39000	14	20
39000 to 49000	5	7.1
Above 49000	8	11.4
Total	70	100

Table 6 found that income Below 10000 (14.3%), 10000 to 19000 (18.6%), 19000 to 29000 (28.6%), 29000 to 39000 (20%), 39000 to 49000 (7.1%) and Above 49000 (11.4%) respectively.

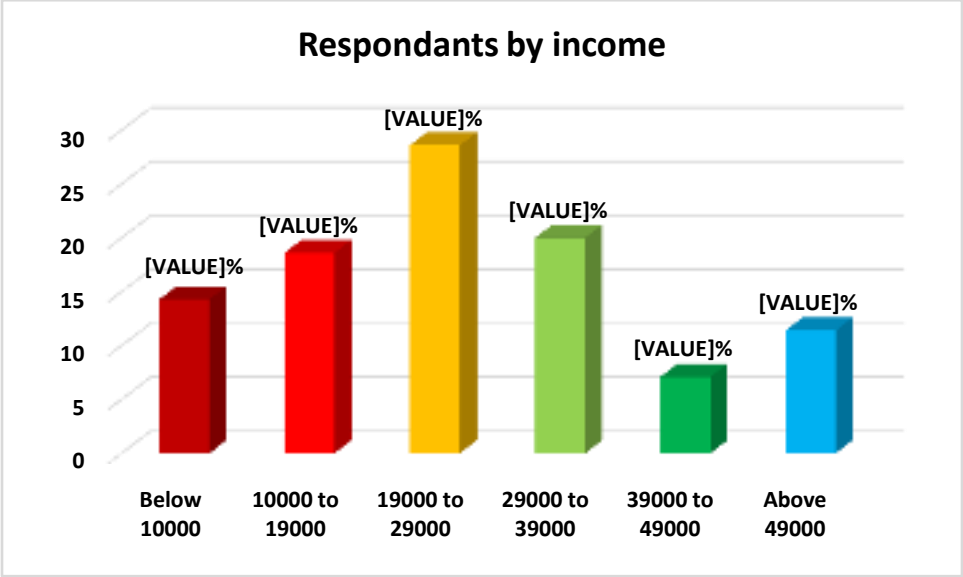


Figure-06: Distribution of the respondents by income

Table-07: Distribution of the respondents by marital status (n=70)

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Marital status	Number (n)	Percentage (%)
Married	41	58.6
Unmarried	28	40.6
Separated	1	1.4
Total	70	100

Table 7 found that Married 58.6%, Unmarried 40.6% and Separated 1.4 % respectively

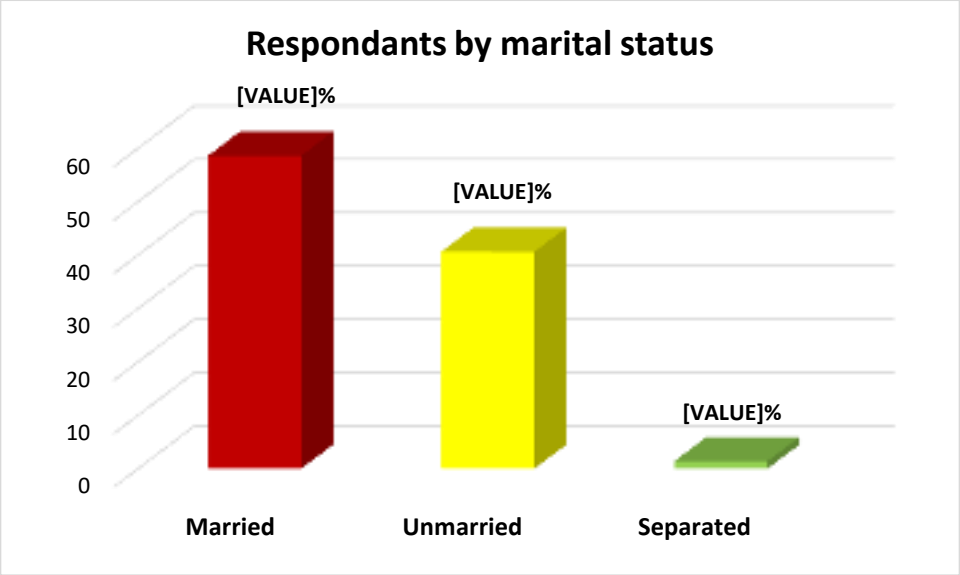


Figure-07: Distribution of the respondents by marital status

Table-08: Distribution of the respondents by height (n=70)

Height	Number (n)	Percentage (%)
Below 100	2	2.9
126 to 150	2	2.9
151 to 175	64	91.4
Above 176	2	2.9
Total	70	100

Table 8 found that height below 100 (2.9%), 126 to 150 (2.9%), 151 to 175 (91.4%) and above 176 (2.9%) respectively.

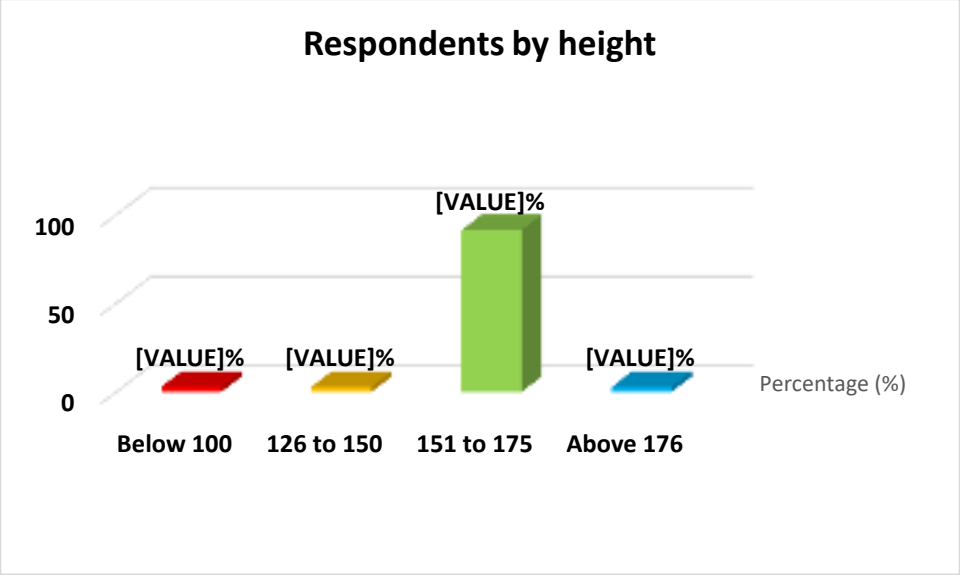


Figure-08: Distribution of the respondents by height (n=70)

Table-09: Distribution of the respondents by weight (n=70)

Weight	Number (n)	Percentage (%)
Below 30	2	2.9
30 to 45	13	18.6
46 to 60	24	34.3
61 to 75	28	40.0
76 to 90	3	4.3
Total	70	100

Table 9 found that weight Below 30 (2.9%), 30 to 45 (18.6%), 46 to 60 (34.3%), 61 to 75 (40%) and 76 to 90 (4.3%) respectively

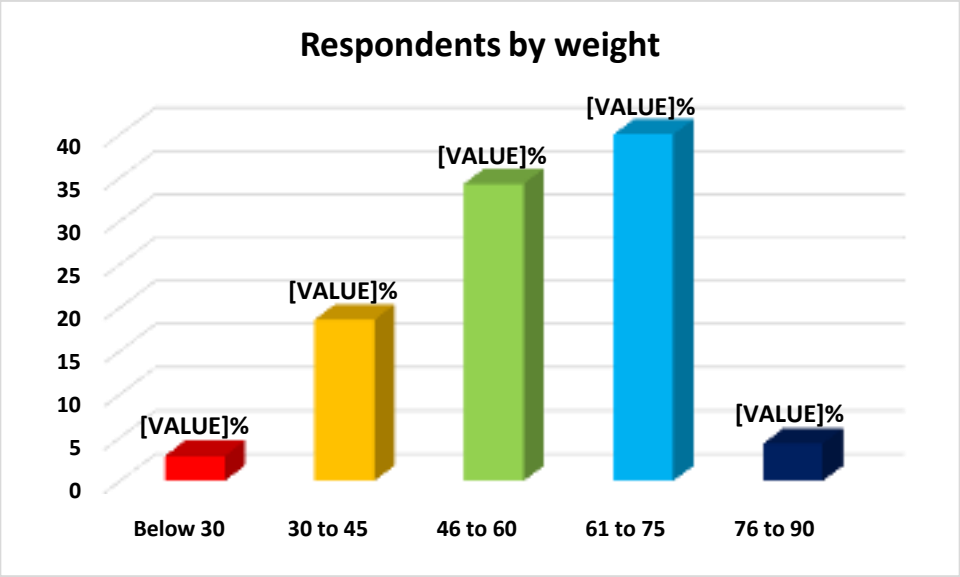


Figure-09: Distribution of the respondents by Weight

Table-10: Distribution of the respondents by days of suffering ago (n=70)

Days of suffer	Number (n)	Percentage (%)
Below 200	11	15.7
200 to 300	55	78.6
Above 300	4	5.7
Total	70	100

Table 10 found that days of suffering ago below 200 (15.7%), 200 to 300 (78.6%) and above 300 (5.7%) respectively.

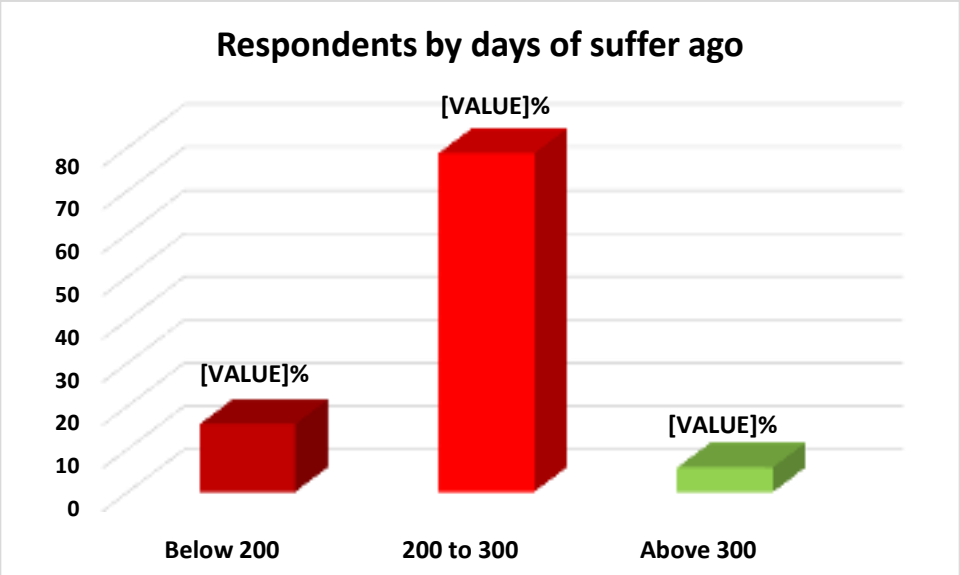


Figure-10: Distribution of the respondents by days of suffer ago

Table-11: Distribution of the respondents by taken of treatment place (n=70)

Taken of treatment	Number (n)	Percentage (%)
By home	70	100

Table 11 found thattaken of treatment place by home 100% respectively.

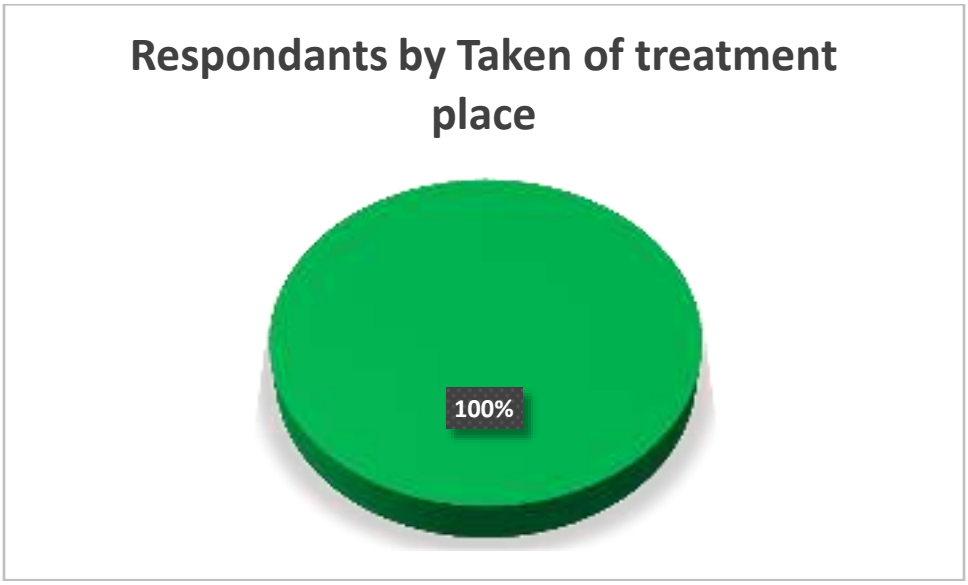


Figure-11: Distribution of the respondents by taken of treatment place

Table-12: Distribution of the respondents by duration of suffering days (n=70)

Duration of suffering days	Number (n)	Percentage (%)
Below 10	43	61.4
10 to 19	11	15.7
20 to 29	6	8.6
Above 29	10	14.3
Total	70	100

Table 12 found that duration of suffering days below 10 (61.4%), 10 to 19 (15.7%), 20 to 29 (8.6%) and above 29 (14.3%) respectively.

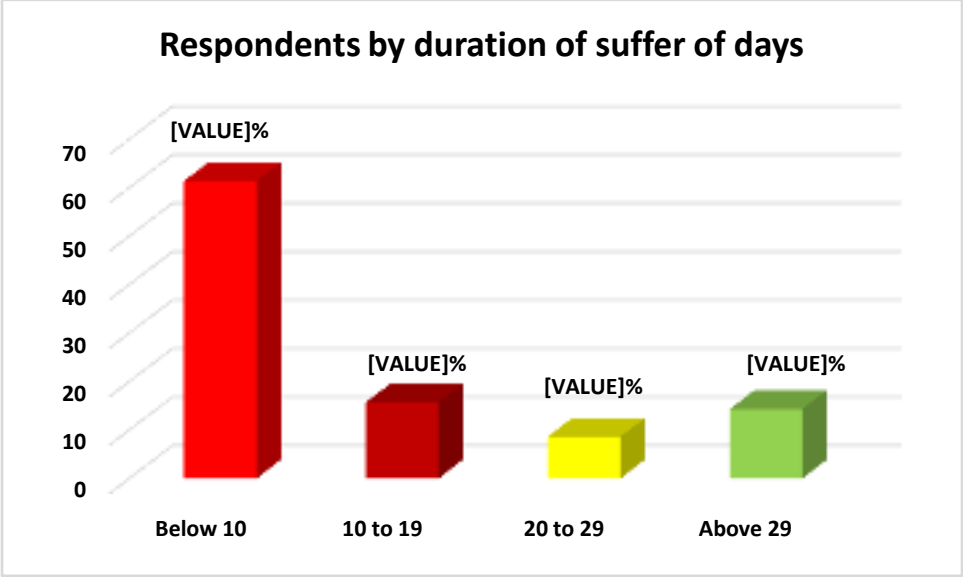


Figure-12: Distribution of the respondents by duration of suffer days

Table-13: Distribution of the respondents by musculoskeletal problem during chikungunya (n=70)

Musculoskeletal problem during Chikungunya	Number (n)	Percentage (%)
Yes	69	98.6
No	1	1.4
Total	70	100

Table 13 found that musculoskeletal problem during Chikungunya Yes 98.6% and No 1.4% respectively.

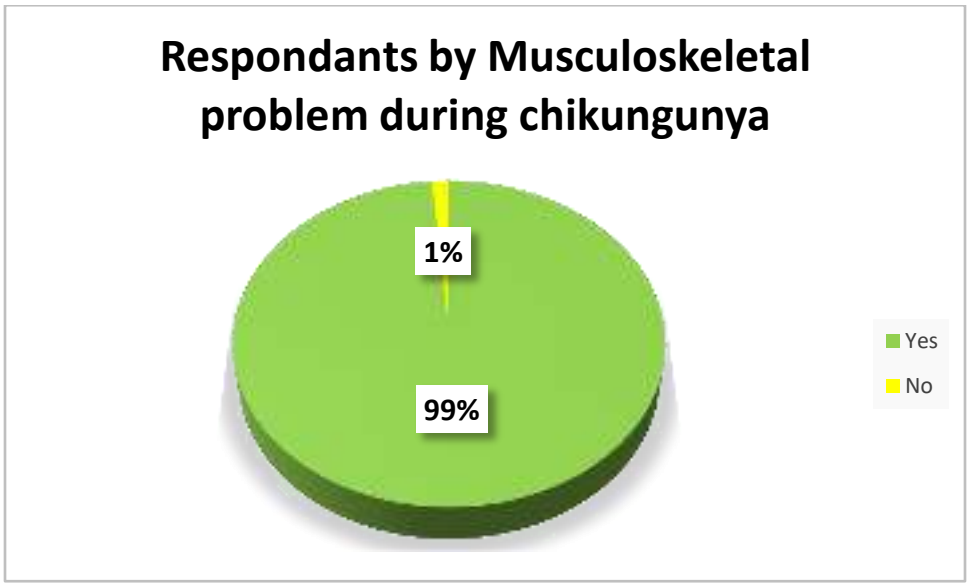


Figure-13: Distribution of the respondents by musculoskeletal problem during chikungunya

Table-14: Distribution of the respondents by Suffering the problems (n=70)

Suffering the problems	Number (n)	Percentage (%)
Arthralgia	45	51.7
Limitation of activity	8	9.2
Myalgia	15	17.2
Backache	19	21.8
Total	87	100

Table 14 found that suffering the problems Arthralgia 51.7%, Limitation of activity 9.2%, Myalgia 17.2% and Backache 21.8% respectively.

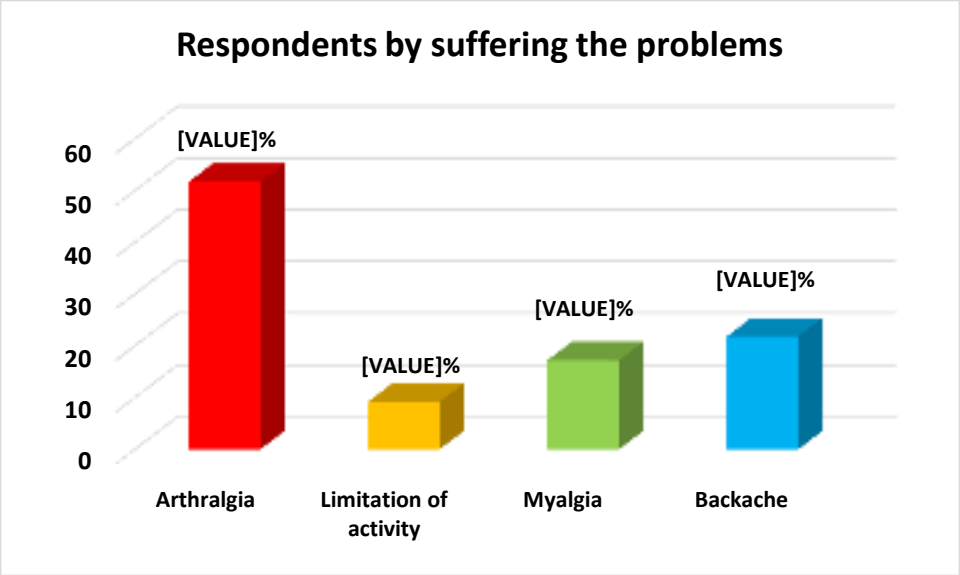


Figure-14: Distribution of the respondents by suffering the problems

Table-15: Distribution of the respondents by joint mostly involve (n=70)

Joint mostly involve	Number (n)	Percentage (%)
Shoulder	9	7
Elbow	13	10.2
Wrist	18	14.1
Hip	5	3.9
Knee	36	28.1
Ankle	33	25.8
Others	14	10.9
Total	128	100

Table 15 found that joint mostly involve shoulder 7% , Elbow 10.2 % , Wrist 14.1%, Hip 3.9 %, Knee 28.1, Ankle 25.8% and Others 10.9% respectively.

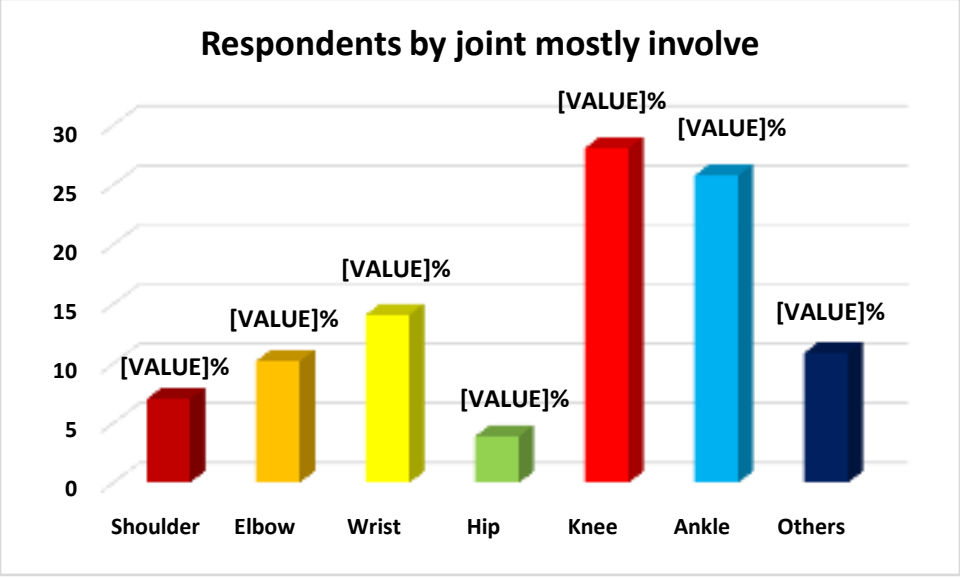


Figure-15: Distribution of the respondents by joint mostly involve

Table-16: Distribution of the respondents by muscle mostly involve (n=70)

Muscle mostly involve	Number (n)	Percentage (%)
Deltoid	2	14.3
Biceps	2	14.3
Triceps	2	14.3
Gluteal	2	14.3
Hamstrings	3	21.4
Quadriceps	2	14.3
Others	1	7.1
Total	14	100

Table 16 found thatmuscle mostly involve Deltoid 14.3%, Biceps 14.3 %, Triceps 14.3%, Gluteal 14.3%, Hamstrings 21.4%, Quadriceps 14.3 % and Others 7.1 respectively.

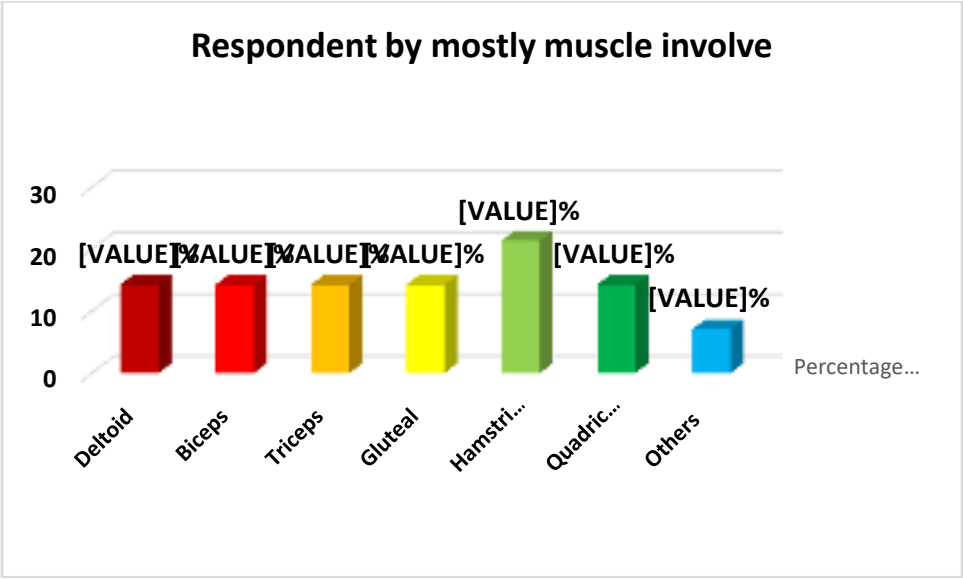


Figure-16: Distribution of the respondents by muscle mostly involve

Table-17: Distribution of the respondents by severity of pain (n=70)

Severity of pain	Number (n)	Percentage (%)
Mild pain	20	28.6
Moderate pain	41	58.6
Severe pain	9	12.9
Total	70	100

Table 17 found thatSeverity of pain Mild pain 28.6%, Moderate pain 58.6%, Severe pain 12.9% respectively.

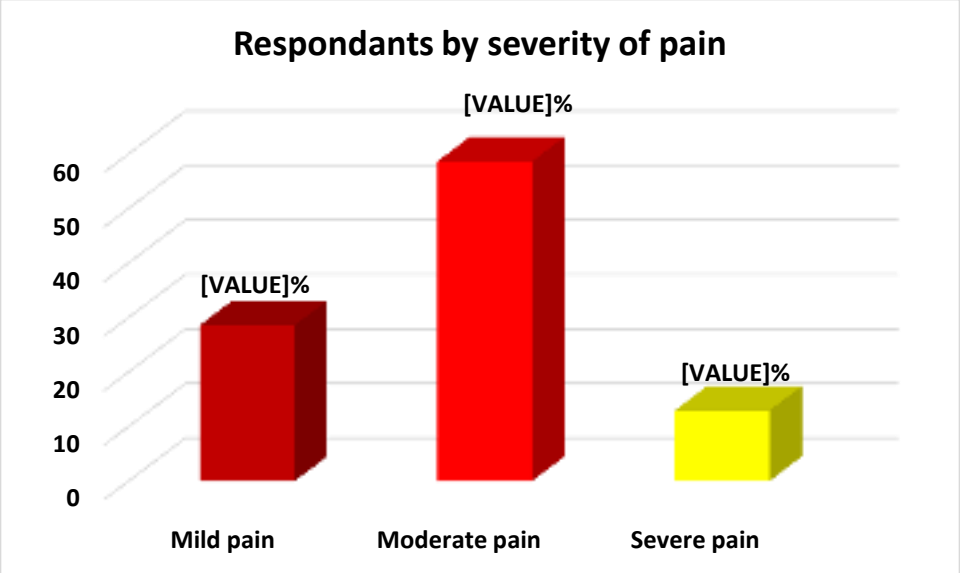


Figure-17: Distribution of the respondents by severity of pain

Table-18: Distribution of the respondents by nature of pain (n=70)

Nature of pain	Number (n)	Percentage (%)
Continuous	41	58.6
Episodic	1	1.4
Intermittent	28	40
Total	70	100

Table 18 found that continuous pain 58.6%, episodic pain 1.4%, and intermittent pain 40% respectively.

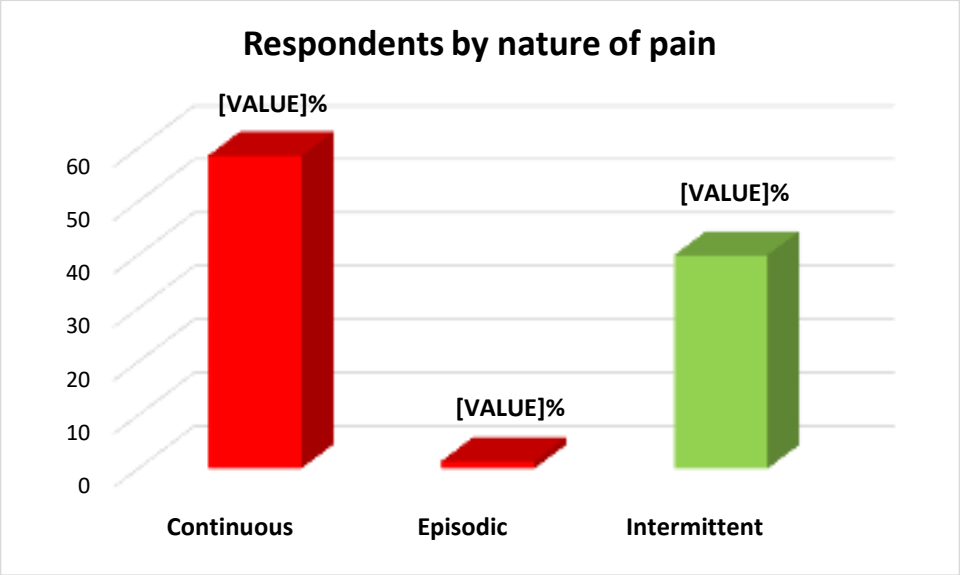


Figure-18: Distribution of the respondents by nature of pain

Table-19: Distribution of the respondents by pain increasing time (n=70)

Pain increasing time	Number (n)	Percentage (%)
Morning	39	44.3
Afternoon	9	10.2
Night	32	36.4
Midnight	8	9.1
Total	88	100

Table 19 found that Pain increasing time morning 44.35%, afternoon 10.2%, night 36.4%, midnight 9.1% respectively.

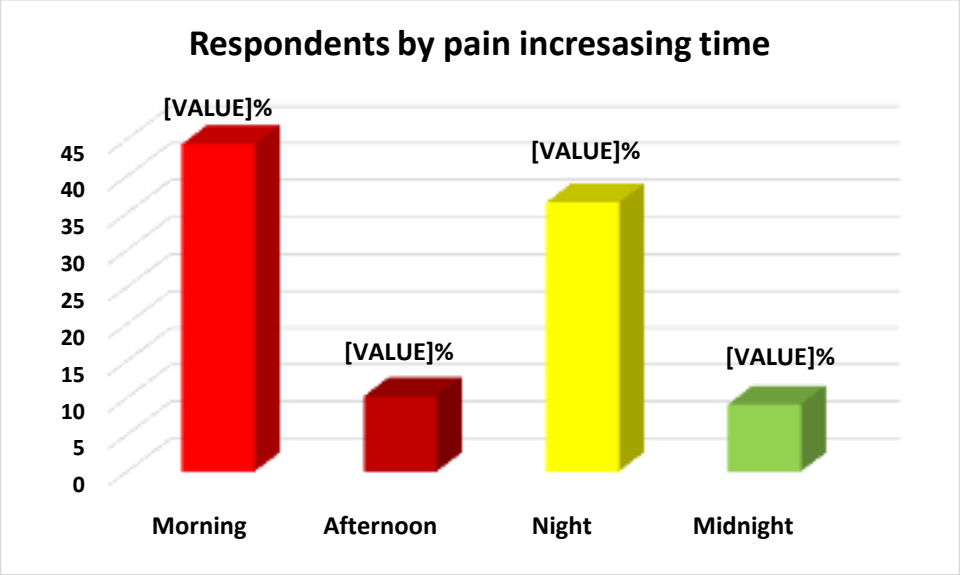


Figure-19: Distribution of the respondents by pain increasing time

Table-20: Distribution of the respondents by pain relieving by (n=70)

Pain relieving	Number (n)	Percentage (%)
Mild exercise	7	10
Rest	63	90
Total	70	100

Table 20 found that pain relieving by mild exercise 10% and rest 90% respectively.

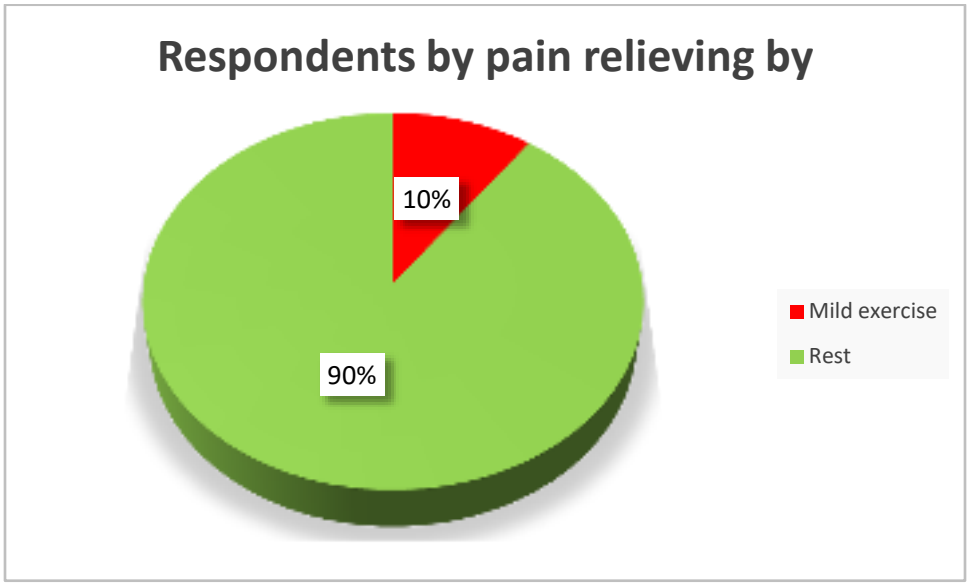


Figure-20: Distribution of the respondents by pain relieving by

Table-21: Distribution of the respondents by pain worsening activities (n=70)

Pain worsening activities	Number (n)	Percentage (%)
During walking	14	20
During movement	41	58.6
During working	15	21.4
Total	70	100

Table 21 found that Pain worsening activities during walking 20%, during movement 58.6% and during working 21.4% respectively.

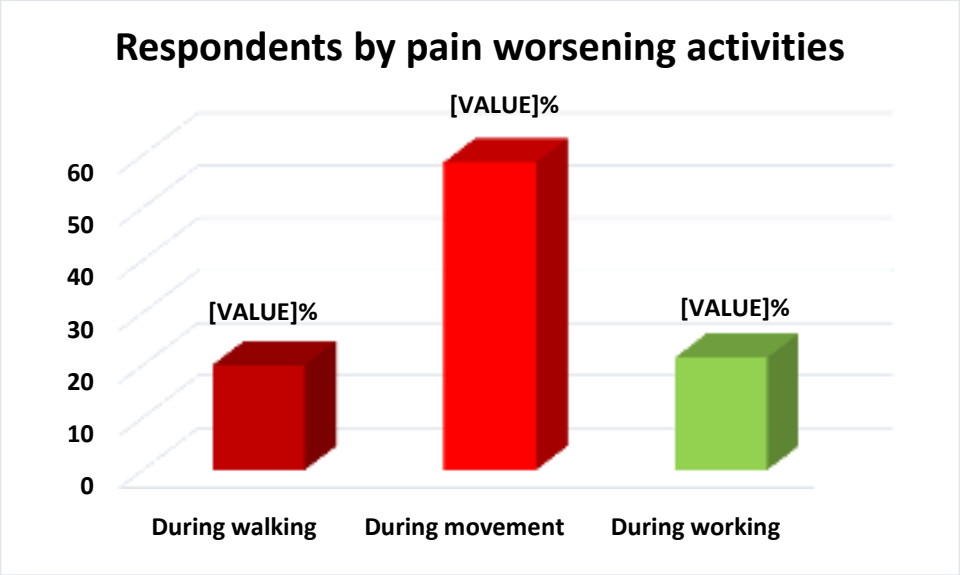


Figure-21: Distribution of the respondents by pain worsening activities

Table-22: Distribution of the respondents by perform of ADL (n=70)

ADL	Number (n)	Percentage (%)
Yes	23	32.9
No	47	67.1
Total	70	100

Table 22 found that ADL performed yes 32.9% and no 67.1% respectively.

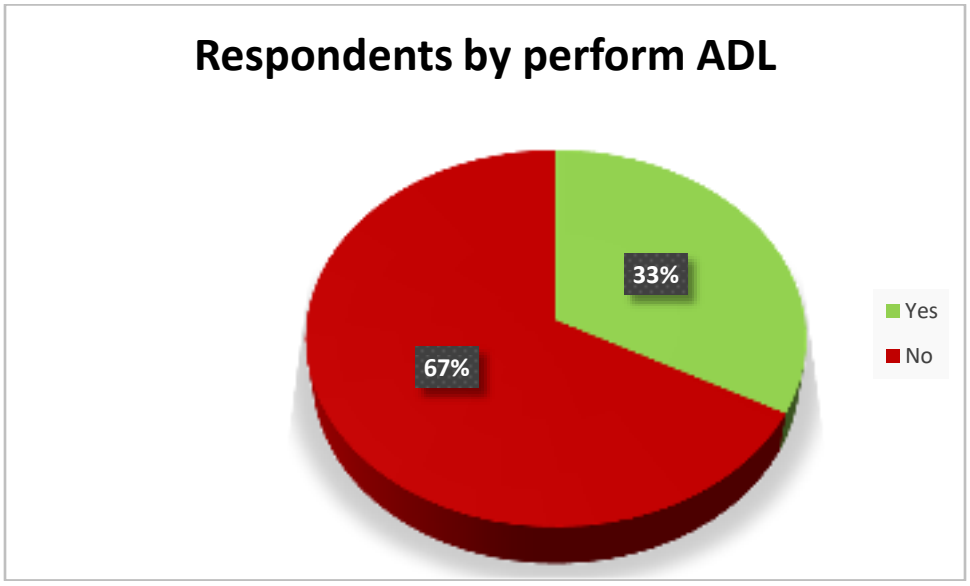


Figure-22: Distribution of the respondents by perform of ADL

Table-23: Distribution of the respondents by treatment during chikungunya (n=70)

Treatment during chikungunya	Number (n)	Percentage (%)
Yes	68	97.1
No	2	2.9
Total	70	100

Table 23 found that treatment during chikungunya yes 97.1% and no 2.95% respectively.

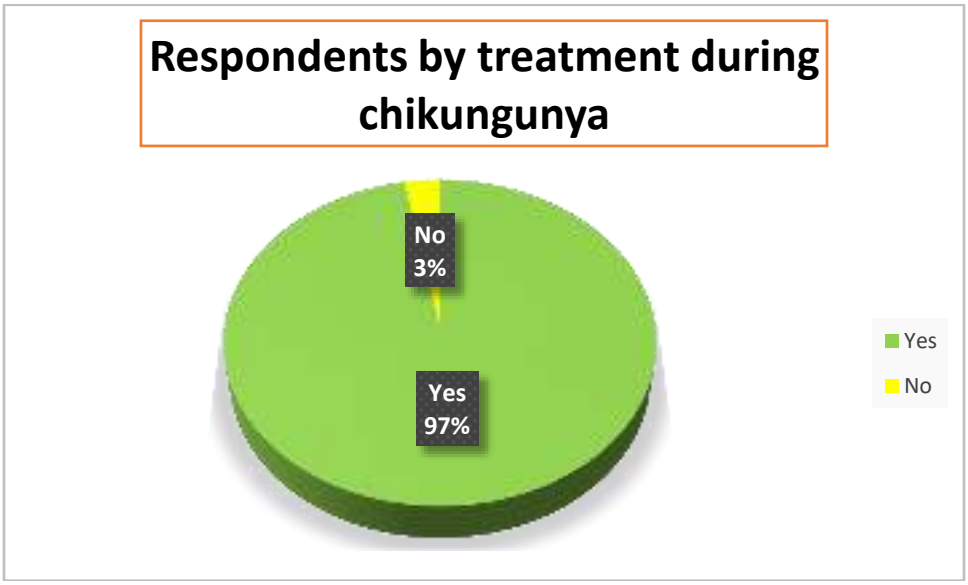


Figure-23: Distribution of the respondents by treatment during chikungunya

Table-24: Distribution of the respondents by which type of treatment taken (n=70)

Type of treatment taken	Number (n)	Percentage (%)
Medication	69	98.6
Physiotherapy & Medication	1	1.4
Total	70	100

Table 24 found that type of treatment taken medication 98.6% and physiotherapy & medication 1.4% respectively.

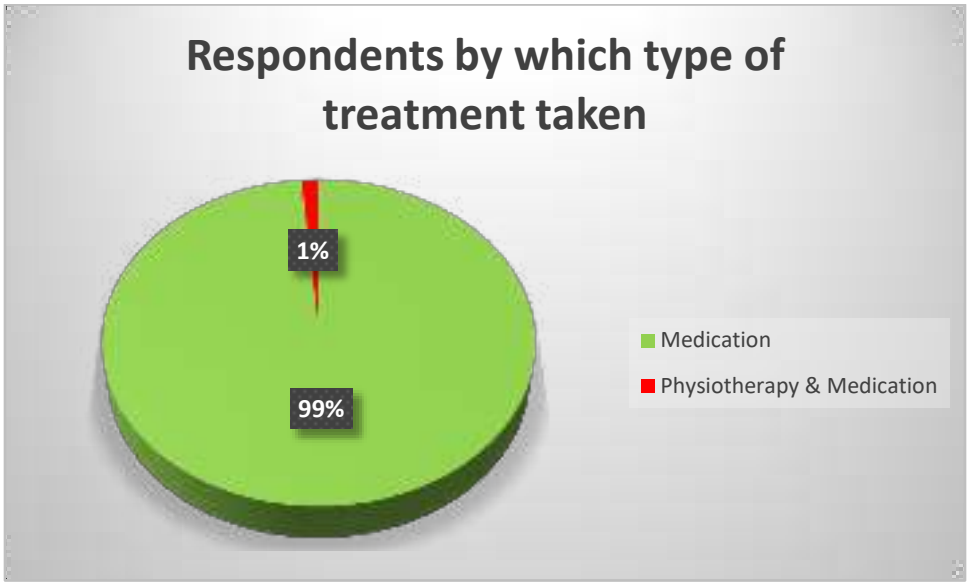


Figure-24: Distribution of the respondents by which type of treatment taken

Table-25: Distribution of the respondents by stress (n=70)

Stressful	Number (n)	Percentage (%)
Yes	34	48.6
No	36	51.4
Total	70	100

Table 25 found that stressful yes 48.6% and no 51.4% respectively.

Figure-25: Distribution of the respondents by stress

Table-26: Distribution of the respondents by age

Variable	Did you have any musculoskeletal problem during chikungunya		Total	Chi-square test
Age	Yes	No		
<10	2 (100%)	0 (0.0%)	2 (100%)	X^2 = 2.723
10-19	12 (100%)	0 (0.0%)	12 (100%)	df= 5
20-29	18 (94.7%)	1 (5.3%)	19 (100%)	
30-39	18 (100%)	0 (0.0%)	18 (100%)	
40-49	11 (100%)	0 (0.0%)	11 (100%)	P= 0.743
>49	8 (100%)	0 (0.0%)	8 (100%)	

Table-26 revealed a significant association between age and presence of musculoskeletal problem. (P value = 0.743).

Table-27: Distribution of the respondents by sex

Variable	Did you have any musculoskeletal problem during chikungunya		Total	Chi-square test
Sex	Yes	No		
Male	35 (100%)	0 (0.0%)	35 (100%)	$X^2 = 1.014$
Female	34 (97.1%)	1 (2.9%)	35 (100%)	df= 1 P= 0.314

Table-27 revealed a significant association between sex and presence of musculoskeletal problem. (P value = 0.314).

Table-28: Distribution of the respondents by religion

Variable	Did you have any musculoskeletal problem during chikungunya		Total	Chi-square test
Religion	Yes	No		
Islam	64 (98.5%)	1 (1.5%)	(100%)	$X^2 = .743$
Hindu	4 (100%)	0 (0.0%)	(100%)	df= 5
Buddhism	1 (100%)	0 (0.0%)	(100%)	P= 2.723

Table-28 revealed a significant association between religion and presence of musculoskeletal problem. (P value = 2.723).

Table-29: Distribution of the respondents by Occupation

Variable	Did you have any musculoskeletal problem during chikungunya		Total	Chi-square test
Occupation	Yes	No		
Govt. Service	4 (100%)	0 (0.0%)	(100%)	X^2 = .697
Private Service	13 (100%)	0 (0.0%)	(100%)	df= 4
Businessman	9 (100%)	0 (0.0%)	(100%)	
Housewife	21 (95.5%)	1 (4.5%)	(100%)	P= 2.213
Others	22 (100%)	0 (0.0%)	(100%)	

Table-29 revealed a significant association between occupation and presence of musculoskeletal problem. (P value = 2.213).

Table-30: Distribution of the respondents by income.

Variable	Did you have any musculoskeletal problem during chikungunya		Total	Chi-square test
Income	**Yes**	**No**		
Below 10000	10 (100%)	0 (0.0%)	(100%)	X^2 = .541 Df= 5 P= 4.058
10000 to 19000	13 (100%)	0 (0.0%)	(100%)	
19000 to 29000	20 (100%)	0 (0.0%)	(100%)	
29000 to 39000	13 (92.9%)	1 (7.1%)	(100%)	
39000 to 49000	5 (100%)	0 (0.0%)	(100%)	
Above 49000	8 (100%)	(0.0%)	(100%)	

Table-30 revealed a significant association between income and presence of musculoskeletal problem. (P value = 4.058).

Table-31: Distribution of the respondents by days of suffer

Variable	Did you have any musculoskeletal problem during chikungunya		Total	Chi-square test
Days of suffer	Yes	No		
Below 10	42 (97.7%)	1 (2.3%)	(100%)	X^2 = .888
10 to 19	11 (100%)	0 (0.0%)	(100%)	Df= 3
20 to 29	6 (100%)	0 (0.0%)	(100%)	
Above 29	10 (100%)	0 (0.0%)	(100%)	P= .637

Table-31 revealed a significant association between days of suffer and presence of musculoskeletal problem. (P value = 0.637).

CHAPTER-VDISCUSSION

Chikungunya virus is the etiological agent of mosquito borne disease. It was first isolated in 1952 .The percentage at infected patients requiring medical attention is higher than in most other common arbovirus infections. In safe stage some patients complained relapse persistent arthralgia on musculoskeletal pain. Joint pain is mostly poly-articular, bilateral, and symmetrical and occurs mainly in peripheral joint. In our study we were see that most at the patients were complain about pain of severity. The most of the patients said arthralgia, limitation of activity, myalgia, and backache is the common. The first attempts to develop an inactivated vaccine were reported at the end of 1960 and involved detergent treatment at virus. But no vaccine against Chikungunya is currently available. It is a viral disease so not given to antibiotic drugs. Some medication and physiotherapy is vital role playing in Chikungunya patients. In first stage, paracetamal drugs may suggest and then thermo therapy with gentle exercise. The joint pain in the different phases of Chikungunya disease causes physical in capacity than significant impact the quality of life of affected people may increase neurological complicate of the infection. In later stage we found psychological

Table 1 found that age below 10, 10 to 19, 20 to 29, 30 to 39, and 40 to 49 and above 49 of the respondents 2.9%, 17.1%, 27.1%, 25.7%, 15.7% and 11.4% respectively. Table 2 found that sex male 50% and Female 50% respectively. Table 3 found that religion Islam 92.9%, Hindu 5.7% and Buddhism 1.4% respectively.

Table 4 found that Illiterate 4.3%, Primary 12.9%, SSC 22.9%, Below SSC 15.7%, HSC 17.7%, Graduate 7.15 and Post Graduate 20% respectively.Table 5 found that Govt. Service 5.7%, Private Service 18.6%, Businessman 12.9 %, Housewife 31% and others 31.4% respectively.Table 6 found that income Below 10000 (14.3%), 10000 to 19000 (18.6%), 19000 to 29000 (28.6%), 29000 to 39000 (20%), 39000 to 49000 (7.1%) and Above 49000 (11.4%) respectively.Table 7 found that Married 58.6%, Unmarried 40.6% and Separated 1.4 % respectively

Table 8 found that height below 100 (2.9%), 126 to 150 (2.9%), 151 to 175 (91.4%) and above 176 (2.9%) respectively.Table 9 found that weight Below 30 (2.9%), 30 to 45 (18.6%), 46 to 60 (34.3%), 61 to 75 (40%) and 76 to 90 (4.3%) respectively. Table 10 found that days of suffering ago below 200 (15.7%), 200 to 300 (78.6%) and above 300 (5.7%) respectively.Table 11 found that taken of treatment place by home 100% respectively.Table 12 found that duration of suffering days below 10 (61.4%), 10 to 19 (15.7%), 20 to 29 (8.6%) and above 29 (14.3%) respectively.

Table 13 found that musculoskeletal problem during Chikungunya Yes 98.6% and No 1.4% respectively. Table 14 found that suffering the problems Arthralgia 51.7%, Limitation of activity 9.2%, Myalgia 17.2% and Backache 21.8% respectively. Table 15 found that joint mostly involve shoulder 7% , Elbow 10.2 % , Wrist 14.1%, Hip 3.9 %, Knee 28.1, Ankle 25.8% and Others 10.9% respectively.

Table 16 found that muscle mostly involve Deltoid 14.3%, Biceps 14.3 %, Triceps 14.3%, Gluteal 14.3%, Hamstrings 21.4%, Quadriceps 14.3 % and Others 7.1 respectively. Table 17 found that Severity of pain Mild pain 28.6%, Moderate pain 58.6%, Severe pain 12.9% respectively.Table 18 found that continuous pain 58.6%, episodic pain 1.4%, and intermittent pain 40% respectively.Table 19 found that Pain increasing time morning 44.35%, afternoon 10.2%, night 36.4%, midnight 9.1% respectively.

Table 20 found that pain relieving by mild exercise 10% and rest 90% respectively. Table 21 found that Pain worsening activities during walking 20%, during movement 58.6% and during working 21.4% respectively.Table 22 found that ADL performed yes 32.9% and no 67.1% respectively. Table 23 found that treatment during chikungunya yes 97.1% and no 2.95% respectively.

Table 24 found that type of treatment taken medication 98.6% and physiotherapy & medication 1.4% respectively.25 found that stressful yes 48.6% and no 51.4% respectively

CHAPTER-VICONCLUSION AND LIMITATION

6.1 Conclusion

Chikungunya epidemics with the high attack rate of CHIKV, affect a large number of people in a short period of time and this is also consistently seen in Bangladesh outbreak 2017. Pain the most frequent clinical manifestation of Chikungunya is difficult to control, compromising the quality of life, intense psychosocial and economic repercussions, causing a serious public health problem that requires a targeted approach. The approach to the management of patients with Chikungunya requires the involvement of multidisciplinary teams. General physicians, Infectious disease specialists, Rheumatologist and other specialist, nurses, pain specialists, physiotherapists, social workers, and healthcare managers are required to institute these guidelines.

6.2 Limitation:

There were some situational limitation and barriers while considering the study.

Those are as follows:

Expected sample size was 344 for this study but due to resource constrain, financial problem and time limitation just 70 sample were taken which is very small to generalize the result for the wider population to find out satisfaction on physiotherapy.

There was lack of randomization

Resources were limited which have a great deal of impact on the study and affect result of the study to generalize for wider population.

We are 4th year B.Sc in physiotherapy student so we had limited experience with techniques and strategies in terms of the practical aspect of research

CHAPTER-VII RECOMMENDATIONS

7.1Recommendation

Based on the study findings, the following recommendations to certain authorities and personnel are proposed:

Government and also non-government need to plan awareness program for physiotherapy so that patient don't suffer of disease.

Continued and regular study in this area should play an essential part in improving quality of life of the patient. Recommendations for other researcher as follows:

Increasing the number of the participants and conduct the research in different places.

Including both subjective and objective to find out the objective.

Take sample from include other hospital

References

Rahman AM and Tarikul Q.T. (2017).Chikungunya. *J Medicine* 18, 92-108pp

Bhowmik D; Chironjib and Kumar K.P. (2010).Chikungunya Epidemicin India –A Major Public-Health Disaster. Pharmaceutical Biological chemical science .1, 64p

Goorah S.S.D; Ghamy A.B; Caussy B.S;Cheeneebash J and Ramchurn S.K. (2009). Clinical complication of Chikungunya fever in Mauritius .Internet Journal of Medical Update 4 (2), 3-8.

Mahmud S; Ahmed S.S, and Hussain M. (2017). Chikungunya Fever: A global burden including Bangladesh. International Journal of scientific Research, 6, pp2272-8179.

Rampal; Shard. M. and meence. (2007). Neurological complication in Chikungunya Fever. JAPI, 55pp 761 – 801.

Thiberville S.D; Moyer N, Maguiraga L.D., Nougairede A., Gould E.A., Roques p. and Laubatterie X.D.(2013).Epidemiology, clinical syndrome, pataogenesis and therapy. Antiviral Research.99, pp345- 370.

Medeiros.F.C.de, Costa.L.O.P, Oliveria.N.de, Costa.L.da.C.M. (2016), Satisfaction of patients receiving physiotherapy care for musculoskeletal conditions: A cross sectional study, *SciELO Analysis*; 23 (1), 448-475 pp.

Olatunji T.O, Ogunlana M.O, Bello M.A, Omobaanu S.O. (2008). Assessment of Patients Satisfaction with Physiotherapy Care, *Journal of the Nigeria Society of Physiotherapy*; 16(1).

Casserley-Feeney S.N., Phelan M, Duffy F, Roush S, Cairns C.M, and Hurley D.A. (2008). Patient Satisfaction with private Physiotherapy for musculoskeletal Pain. *BMC Musculoskeletal Disorder* v.9; PMC2359748.

Sharma S.K and Kamra P.K (2013).Patient Satisfaction with Nursing Care in Public and Private Hospitals,Rishikesh, Uttarakhand,*Nursing and Midwifery Research Journal*, 9(3).

APPENDIX-A

Informed consent form

Annexure- A

Research Title: Musculoskeletal problems among the patients with Chikungunya.

Participant ID No…… Date ……/……../…….

Assalamualaikum, we are Samon Das, Mahmudha Khanam, Md. AshiqurRahman and Sadia Arefin Jhumur students of BSc in physiotherapy. We came from SAIC Institute of Medical Technology, which is affiliated by Dhaka University, located at Mirpur, Dhaka. I am now conducting a study on **"Musculoskeletal problems among the Patients with Chikungunya."** We would be very much pleased if you participate in this study. We would like to ask you some question about your Chikungunya. This interview usually takes between 15-20 minutes to complete. Whatever information you provide will be keeping strictly confidential and will not be shown to others. Participation in this study is voluntary, and you can choose not to answer any individual question or all of the questions. However, we hope that you will participate in this study since your views are important.

At this time do you want to ask me anything about this study?

May we begin the interview now?

Signature of interviewer…….

Date ……../……/…….

I understand that all information will be kept strictly confidential, that I can contact study personnel of I have any questions. I further understand that I can withdraw from the study at any time and I will not get any financial benefit for attending this study.

I am willing to participate in the study.

Participant signature ……..
……..

Date ……../……/……. Supervisor's signature

Contact No……

Participant ID No……..

Questionnaire

Musculoskeletal problems among the patients with Chikungunya.

Name of interviewer ……

Date of interview ……../……../…….. Time of interview ……

Respondent's Identification

Name of respondent …….

Address ……

Contact No. ……..

Part- 1(Socio demographic questions)

Serial No.	Question	Response
1	Age of the participant	☐ Years
2	Sex of the participant	1= Male 2= Female
3	Religion of the participant	1 = Islam 2 = Hindu 3 = Christian 4 = Buddhism 5 = Others
4	Educational background of the participant	1 = Illiterate 2 = Primary 3 = Below SSC 4 = SSC

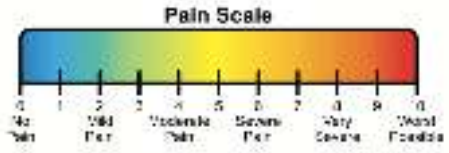
		5 = HSC 6 = Graduate 7 = Post graduate
5	What is your occupation	1 = Govt. service 2= Private service 3 = Businessman 4= Unemployed 5= Housewife 6 = Others
6	Family monthly income	☐ BDT
7	Marital status	1= Married 2= Unmarried 3=Separated / Divorced
8	Height	☐ Meter
9	Weight	☐ Kg

Part- 2(Information related question)

	Question	Response
11	How long before you were suffered from chikungunya?	☐ Days ago
12	From which place had you have taken of treatment	1) By admitted hospital 2) By home
13	How long time did you have difficulty to work?	☐ Days

Part- 3(Musculoskeletal problem related questions)

	Question	Response
14	Did you have any musculoskeletal problem during Chikungunya	1= Yes 2= No
15	Currently have you been suffering the problems	1.Arthalgia 2.Limitation of activity 3.Myalgia 4.Backache
16	Which joints are mostly involve?	1.Shoulder 2.Elbow 3.Wrist 4.Hip 5.Knee 6.Ankle 7.Others

17	Which muscle are mostly involve?	1.Deltoid 2.Biceps 3.Triceps 4.Gluteus 5.Hamstings 6.Quadriceps 7.Others
18	Severity of pain (PRS)?	 1=0= No pain 2=(1-3)= Mild pain 3=(4-5)= Moderate 4=(6-9)= Severe 5=10= Worse pain
19	Nature of Pain	1.Continuous 2.Episodic 3.Intermittent
20	Pain increasing time	1.Morning 2.Noon 3.Afternoon 4.Night 5.Midnight
21	Pain relieving by	1.Stretching exercise 2.Mild exercise 3.Rest 4.No
22	What is your pain worsening activities?	1.During Walking 2.During Movement 3.During Working
23	Currently do you perform your Activities of Daily Living	1.Yes 2.No

Part-4 (Treatment related questions)

	Question	Response
24	Did you take any treatment during chikungunya?	1= Yes 2= No
25	If yes which types of treatment have you taken?	1= Medication 2= Physiotherapy & Medication

Part- 5(Psychological related questions)

	Question	**Response**
27	**Did you have any kind of stress?**	1= Yes 2= No

Thank you for answering these questions.

…….

Signature of interviewer

APPENDIX-B

BANGLADESH MAP

APPENDIX-C


I Dhaka
Army Golf Club
KURIL
Zia Colony Road
Tongi Diversion Rd
ZIA COLONY
Dhaka Cantonment
Combined
Pragati Ave
Jamuna Future Park
Dacca
NIRJHAR
BLOCK A
Tongi Diversion Rd
Pragati Ave
Park Rd
VATARA
SOLMAID
BARIDHARA
K BLOCK
Gulshan North Ave
BARIDHARA
VATARA
Dhaka - Mymensingh Hwy
Rd No 27
Rd No 23
Madani Ave
Western Rd
GULSHAN
Rd No 35
Graveyard Rd
PALLI
Rd No 11
KHILBARI TEK
FRUL

APPENDIX-D

Time line of study

Activities	Months	Nob - Feb 2017-2018				Mar – Apr 2018				May – June 2018				July - Aug 2018				Sep – Oct 2018			
	Weeks	1st-2nd	3rd-4th	5th-6th	7th–8th	1st–2nd	3rd-4th	5th-6th	7th–8th	1st–2nd	3rd–4th	5th–6th	7th–8th	1st–2nd	3rd–4th	5th–6th	7th–8th	1st-2nd	3rd-4th	5th-6th	7th-8th
Proposal writing																					
Literature review																					
Proposal defense																					
Pretest of questionnaire																					
Data collection																					
Data entry																					
Data analysis																					
Report writing																					
Draft submission /Thesis defense																					
Final report submission																					