

HEALTH RELATED QUALITY OF LIFE AMONG THE RANA PLAZA TRAGEDY SURVIVORS IN THE COMMUNITY

Md. Sahnawaz Sajib

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

DU Roll No: 172

Registration No: 5260

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Bangladesh Health Professions Institute (BHPI)

Department of Physiotherapy

CRP, Savar, Dhaka -1343

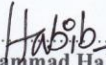
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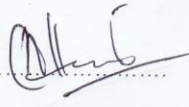
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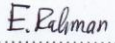
We the under signed certify that we have carefully read and recommended to the Faculty of Medicine, University of Dhaka, for the acceptance of this dissertation entitled.


HEALTH RELATED QUALITY OF LIFE AMONG THE RANA PLAZA TRAGEDY SURVIVORS IN THE COMMUNITY


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


.....
Mohammad Habibur Rahman
Assistant Professor
Department of Physiotherapy
BHPI, CRP, Savar, Dhaka
Supervisor.


.....
Mohammad Anwar Hossain
Associate Professor Physiotherapy, BHPI
Head of the Department of Physiotherapy
CRP, Savar, Dhaka.


.....
Ehsanur Rahman
Assistant Professor
Department of Physiotherapy
BHPI, CRP, Savar, Dhaka.


.....
Md. Shofiqul Islam
Assistant Professor
Department of Physiotherapy
BHPI, CRP, Savar, Dhaka.


.....
Md. Obaidul Haque
Associate Professor and Head
Department of Physiotherapy
BHPI, CRP, Savar, Dhaka.

Declaration

I declare that the work presented here is my own. All sources used here have been cited appropriately. Any mistakes or inaccuracies are my own. I also declare that for any publication, presentation or dissemination of information of the study, I would be bound to take written consent from the Department of Physiotherapy of Bangladesh Health Professions Institute (BHPI).

Signature: Md. Sahnawaz Sajib.

Date: 04/10/17.

Md. Sahnawaz Sajib

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Acronyms

BHPI	Bangladesh Health Professions Institute
CRP	Centre for the Rehabilitation of the Paralysed
AFB	Arm Forces Bangladesh
BGMEA	Bangladesh Garment Manufacturers and Exporters Association
BMRC	Bangladesh Medical Research Council
CDD	Centre for Disability in Development
CMH	Combined Military Hospital
CPD	Centre for Policy Dialogue
EMCH	Enam Medical College and Hospital
HRQOL	Health Related Quality of Life
IRB	Institutional Review Board
ILO	International Labor Organization
QOL	Quality of Life
NGOs	Non-Government Organizations
RAJUK	Rajdhani Unnayan Kartripakkha
RMG	Readymade Garments
SPSS	Statistical Package for Social Science
WHO	World Health Organization
PF	Physical Functioning
RP	Role Physical Health
RE	Role Emotional
VT	Vitality
MH	Mental Health
SF	Social Functioning.
BP	Bodily Pain
GH	General Health

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Abstract

Purpose: The purpose of the study was to identify the Health related Quality of life among the Rana Plaza tragedy survivors in the community.

Objective: The objectives of the study were to observe the physical functioning, role of physical health, role of emotion, vitality, mental health, social functioning, bodily pain and general health of the participants.

Methodology: The study was conducted through Cross-sectional study design among 50 participants of Rana Plaza survivors who were selected by convenient sampling technique from savar, Dhamrai upozilla and manikgonj district by a structured questionnaire with face to face interview. SF-36 questionnaire was used to conduct the research and data was analysed by SPSS version 20 and Microsoft Excel Work 2013.

Results: In this research minimum age of the participants was 20 years and maximum age was 52 years. Among that the mean age of the participant's was 32.74 years and SD was 6.963. Among 50 participants, most of them (68%) were completed primary education level. Among the participants most of them were married (98%) and 42% was employed. Health Related Quality of life of survivors was detected by a questionnaire SF36 and there was 8 dimensions, from these dimensions the mean score of physical functioning was 54.50%, Role limitation due to physical health was 45.75%, Role limitation due to emotional problem was 75.40%, Energy or fatigue was 55.73%, Emotional well-being was 56.98%, Social functioning was 53.60%, Pain was 45.15%, and lastly general health was 40.20%. According to SF-36 score range there physical health was poor and mental health was fair.

Conclusion: Among the participants who were working on the community they are now still suffering post-traumatic stress. Though the governmental and non-governmental organization helped them lot but that was not sufficient for them. some of them requaire further treatmeant but they do not continue thier treatment due to thier poor economical status and this situation indirectly creat a bad effect into their life.

Keywords: Rana Plaza survivors, Health Related Quality of life of survivors, SF-36,

1.1 Background

Bangladesh is one of the most disaster-prone nations in the world. The geographical location, land characteristics, multiplicity of rivers and the monsoon climate render Bangladesh highly vulnerable to natural hazards (UNOPS, 2008). Natural disaster is the significant cause for mortality, morbidity and disability and most of the disability occurs due to high numbers of traumatic injuries that severely impact health of the injured population and the overall health system of the affected country (Phalkey et al., 2011). The World Health Organization defines it as “A sudden ecologic phenomenon of sufficient magnitude to require external assistance”. There are two basic groups of disasters: one is the natural disasters are earthquakes, volcanoes, hurricanes, flood, and fires. And another one is manmade disasters is war, pollution, nuclear, explosions, fires hazardous materials exposures, explosion, and transportation.

In recent Bangladeshi people have faced some manmade disaster and RANA PLAZA tragedy was one of them. On 24th April 2013, Bangladesh skilled a sad prevalence and it became the maximum bad occurrence than preceding which is known as “Rana Plaza Tragedy”. Rana Plaza situated at Savar sub district in Dhaka suddenly collapsed around 9 o'clock in the morning. Its miles one of the Worst tragedies of building collapse in the history of the field which took greater than 1000 lives. Approximately 1129 people died due to crumble of the building and extra than 2000 human beings are dwelling without or with disabilities in Bangladesh (World Health Organization, 2014).

Rana Plaza built as a nine-storied building in Savar that housed 4 garment factories with a selection of stores. Despite of the fact that Rana Plaza had allow building a five-storied constructing for stores and residential accommodation, the owner made it nine testimonies. The Bangladeshi information media stated that inspection groups determined cracks in the shape of Rana Plaza on Tuesday (the day before disintegrate). Stores and a financial institution department at the decrease flooring have been at once closed (Malkin, 2014). But, the proprietors of the garment factories on the top floors ordered employees to work on Wednesday (The day of collapse), without any protection to

prevent the risk. Jahangir, (2013) said in a piece of writing that once Rana plaza incident, the rescue teams through their super efforts succeeded to store 2465 lives from the rubbles. It is predicted that more or less 3122 people were trapped interior. consistent with WHO document it's far located that approximately 1127 survivors died on the spot and health facility, about 1,885 humans were discharged through may also 2, 2013 (after one week) with receiving instant treatments from specific hospitals.

Bangladesh is a developing country. The majority of our people are engage themselves in the agricultural sector but due to globalization most of them are involve themselves in others small scaled industries like handicrafts which help to earn huge foreign currency. The hit export orientated readymade clothes (RMG) enterprise of Bangladesh have located terrific boom due to the fact that it has been starting since Nineteen Seventies. (Bhuiyan, 2012).

According to the WTO, Bangladesh is the fourth greatest exporter of clothing in the world, its percentage being share 4.8% of the total (data from 2011). In the economic year 2011-2012, the garment sector accounted for 78.6% of Bangladeshi total exports (BGMEA, 2013), bringing 19 billion dollars into the country and contributing to more than 13.5% of the total gross domestic product. Bangladesh is an impressive populated country and it is a great achievement to include this large population into this market. The economy of our country was crushed after the independence war (ended in 1971). The first investments in the garment sector arrived in the early 80s from Korea and since then the industry have been exponentially growing year after year. To hold the size of this growth, consider that in 1984–1985 the total number of garment factories in Bangladesh was of 384, while in 2011–2012 this number spiked to 5400 factories, employing a total of 4 million workers. Most of exports are directed towards western countries, mostly towards Europe (60%) and US (24%). Emerging markets such as Russia, China and Brazil still don't account for much of the total export (10%) but their share it's rapidly growing (20% increase from the 2011-12 period to the 2012-13 one) (Mariani & valenti, 2014).

The annual growth rate of RMG export industries in Indonesia (31.2%), Mauritius (23.8%) & Dominican Republic (21.1%) compare extremely high with that of Bangladesh (81.3%) over the 1980-1987 periods of time (Arafat, 2014).

A particularity of the Bangladeshi garment area is that it specializes on Ready-made garment (RMG). A sort of precise that intrinsically leads to low margins of profits and whose manufacturing does not require highly educated people (Hossain et al., 2010).

This opportunity is inspiring them to earn minimum foreign money to satisfy their daily wishes. So many of the people came from rural areas and they join this job for betterment of their livelihood. Truly, it makes them hired as a male or woman and their livelihood is quite better than rural lifestyles. But many of them are live under the poverty and their living place was not so good. And they are working in excessive dangerous area for their livelihood and sometimes they have faced some life threatening situation like fire, collapse, poisoning and accidents. This incidents occurred because of over population, proprietor careless mind set, absence of regularity authority and 'danger' taking tendencies of the unsafe workers as this job is primarily the only profits of the families. In Bangladesh, humans are familiar with constructing disintegrate incidents, the building collapsing records are not always unknown with those who are conducting production zone. Clothes manufacturing unit related uncertain instants are going to be horrible day by day. The Tajrnoon factory fire, Bipail building collapse, Tejgaon building collapse, Sankharibazar building collapse is are some of the well-known tragedies now (Alvi, 2013).

Building collapses are a major motive of mortality and morbidity around the area. Within the remaining decade, some of building has collapsed causing a full-size wide variety of deaths and illness. In current years, high and middle earnings nations like America, South Korea, Turkey, Austria, and China have experienced screw ups due to collapsed building (British Broadcasting Corporation news, 2014).

After any disaster natural or manmade its directly create an effect one quality of life. In Bangladesh, there has no statistic about quality of life after supports, especially after medical based support. There has no any statistic about injured person's quality of life after any incidence like building collapse.

The World Health Organization define quality of life (QoL) as ‘An individual perception of his/her position in life in the context of the culture and value systems in which he or she lives , and in relation to his/ her goals, expectations , standards, concern’. According to this definition, Quality of life is a complex concept. Entailing the people’s physical health and level of independence, as well as psychological wellbeing, social perception and the relationship with specific and relevant aspects of the environment (Hill et al., 2010).

When any disasters occur, disaster management institutions and health care institutions have to provide major services. Quality and efficiency of these emergency services depend on the degree of the comprehensiveness of the disaster management plan available resources. So hospital function is very extensively related to the management of earthquake management and its recovery. Unlike to other disasters, earthquakes can damage the hospital severely. Hospital can be damaged structurally and non-structurally (Urmi et al., 2014).

Living with an injury or disability affect the ones quality of life and after any damage or building collapse who are survive after this accident it makes an enormous effect on their physical, mental, social, psychological life (Hyeon, 2007).

Therefore, the researcher is involve to find out the health related quality of life of the existing survivors who've face that terrible tragedy (Rana Plaza), is probably affected undoubtedly or harmfully on their physical, mental, psychosocial satisfactory of life.

1.2 Rationale

Bangladesh is one of the most disaster-prone nation in all over the world, here all the time people pass their time in risk of earthquake and others natural disaster. Now-a-days some manmade disaster also include with this natural disaster and it's create a bad impact in our total economic growth as well decreases the people's quality of life. Rana Plaza is one of the historical man-made disaster in our country. The percentage of building collapsed in our country is very low but survivors suffering rate is very high as for example Rana Plaza tragedy survivors. Here approximately 1129 people died due to collapsed of the building and more than 2000 people are living with or without disabilities in Bangladesh (WHO, 2013). After the occurrence many people are injured where the number of fracture, amputation, musculoskeletal disorder and spinal cord injury patients were large. Those people who are alive after this accident they got the treatment from different hospital and organization in addition to some of them completed their rehabilitation program as well as after that they back to their community. In their community they have face some problem as like post-traumatic stress disorders, some of them get job less which affect their physical, mental , social, economic and psychological life and its gradually decrease their quality of life. Still now there is no statistics about Rana Plaza survivor's quality of life. In this research, researcher will try show the present status of health related quality of life among this Rana Plaza survivors in their community.

So that the national or international and govt. or non-govt. organization who are working with this type of survivors and disaster management program they can take proper steps to minimize the effect of disaster and take necessary steps to improve the health related quality of life.

1.3 Research Question

What is the health related quality of life among the Rana Plaza Tragedy Survivors in community?

1.4 Aim of the study

- To find out the Health Related Quality of Life among the Rana Plaza tragedy survivors in the community.

1.5 Objectives

1.5.1 General objective

- To find out the health related quality of life among the survivors of building collapse (Rana Plaza) incident.

1.5.2 Specific objectives

- To observe the physical functioning of the participants.
- To observe the role of physical health of the participants.
- To observe the role of emotion of the participants.
- To observe the vitality of the participants.
- To observe the mental health of the participants.
- To observe the social functioning of the participants.
- To observe the bodily pain of the participants.
- To observe the general health of the participants.
- To find out the association between demographic factors age, sex, types of injury, educational status and eight domains of sf-36.

Homes serve several needs of the society – basically as protection from climate and as standard residing area, to offer privacy, to save property and to conveniently live. This was supported through Olusola, (2002) who viewed constructing as a space that is essential for safety from natural surroundings and constructed for a particular use (Micheal et al., 2013).

According to Collins statement “building is described as any human-made shape used or supposed for assisting or sheltering any use or non-stop occupancy, or an act of production (I.e. the interest of building,) (Razzak et al., 2013).

There are various causes of building collapse in Nigeria found by different authors those are lack of structural design, bad or faulty design, faulty design implementation, faulty construction methodology, foundation failure, excess load on buildings due to unauthorized increase in number of storeys, use of unqualified artisans and poor workmanship. They also include the reason which is poor project supervision and monitoring, lack of enforcement of building codes with standards, the use of low quality materials, aged buildings, poor maintenance culture and poor site investigation of the soil of the building site. Other technical causes of failure identified by these authors are: the acceptance of wrong foundation, inadequate depth of placement of foundations, poor concrete mix ratio, poor concrete strength, improper walling, poor building material specifications, hasty construction and inadequate maintenance, The overturning and sliding of building by lateral loads such as heavy wind loads; deterioration of building, particularly, the corrosion of the reinforcement and fire inferno have also been identified as causes of collapse of buildings (Tanko et al., 2013).

Oloyede et al. (2010) also state that there are main two causes of building collapse, one of them are natural and another one is man-made. In natural causes consist of earthquakes and typhoons while man-made phenomena consist of disasters which may be occurred due to man’s negligence may in areas such as soil type, building design and planning for extra ordinary loads, earthquake for tall buildings, foundation works, quality of building materials , strict monitoring of craftsmen and quality of workmanship.

Now a days building collapse is main disaster and most of the people are injured and become disabling. Many problems are grow up after a building collapse such as physical, mental and psychological. In physically most of the people are faced different injuries such as fracture, spinal cord injury, head injury, nerve injury and amputation. World trade Centre disaster is one of the big manmade disaster and most of the people are suffer from different type of injury. A total 62.4% people are survivors from damaged building, 63.8% experience three or more potentially psychologically traumatized event, 43.6% are injured, 56.6% of survivors experience worsening respiratory symptoms after attack. 10.7% people experienced serious psychological distress (Brackbill et al., 2006).

Another building collapse happens in Italy at 11 November, 1999 and six story apartment building collapsed in Foggia. Many of the residents killing who are live this apartment. The building was 30 years old. Ten were found alive within 36 hour collapse and one man died after rescues and he died within 12 hour. 31 of the victims died quickly due to severity of injury, 29 victims died of mechanical asphyxia, and 11 of the victims were died caused by moderate trauma such as musculoskeletal fracture, laceration and contusion of internal organ. 14 victims there was no evidence of significant trauma. Total 62 people were died. Multiple injuries were seen in the victims and it classified by body area such as head, neck, chest, abdomen, back, extremities and external (superficial wounds, laceration, burn). 24 people had skull and facial bone fracture. 12 victims had subdural hematoma or brain contusion. In 47 cases had thorax injured. 22 had head injury and chest injury (Dai et al., 2010).

On august 2013 tow apartments building collapsed in Vadodara, the north-western state of Gujarat and 11 people had died and five people were injured. The first building was collapsed between 4.30 pm and 4.45 pm and the second one collapsed after one hour of first building collapsed. The buildings were constructed in 2012. There was a problem with structural error and after this incident; people have suffered a lot with their injured livelihood (Bhattacharya, 2013).

Shah (2013) said in The Wall of street Journal that about seventeen people died in a building collapse on July 2014 in Secunderabad (South India). A garment factory in

Bhiwandi (around 20 miles away from Mumbai) collapsed after a week and killing six people. In 2014, 74 people were died due to building collapsed in India where 18 children are included. However, in South Asian aspect, more than 1,100 people died on April 2014, at same time a building collapsed in neighbouring Bangladesh. It was one of the world's worst industrial accidents.

The Times of India, (2014) has mentioned that around fourteen people were killed when an under-construction five-story residential building caved in Cancona town near Goa. Personnel of Goa fire and emergency services and Army carried out rescue operations overnight to look for more survivors but as 17 hours passed since this accident and due to huge pile of debris, the chances of finding anybody alive were getting low with the passage of time.

Cable News Network (CNN) reporters (Quinones, 2013) in Colombia have stated that a 22-story residential building collapsed in Colombia's second-largest city, killing one person, injuring two and leaving 10 others unaccounted for, authorities said Sunday October 13, 2013. The building collapsed on Saturday night in Medellin, according to the office of Claudia Patricia Restrepo, (the temporary mayor). Indeed of the official rescue team evacuated 24 families from the building. At that time, Construction workers were inside to the collapse building among the missing one. After the incident, authorities evacuated residents of nearby buildings as a security measure. At the period of rescue and recovery, police, fire service department, psychologists and the Red Cross society were at the site and involved until full recovery.

In India, newspaper reporters have added in electronic media that at least one person was killed when a residential building collapsed in New Delhi in 2013. The fire chief had declared that the four-story building in the northern part of the city was more than 50 years old. He had aware the residence people immediately, so far the dyed list had redacted. He also added that two people were hospitalized with injuries. Authorities said digging on an adjacent plot of land for a new apartment building could have weakened the building's foundation. An inquiry has been ordered to determine the exact cause. This crumbling building is one of many that have caused calamity recently (Singh, 2013).

Singh (2013) said in another study that a building collapsed in Mumbai on September 27, 2013, in that time at least 61 people died. In April, scores of people were killed when an illegal multi-storey building collapsed in Thane, a city in the Mumbai region. In India the 'Housing rights groups' have said that many old buildings in the city are depressed and neglected, while newer ones were often built using substandard materials and have structural problems.

In Bhopal, India on April 26, 2013 a hospital female ward had collapsed and at least 14 people were injured through this consequence (Singh, 2013).

Since the 1980s the, starting as a response to adjust the economy and resolve the balance of payment deficit, the readymade garments has been growing fast in export business. Bangladesh is a developing country and over populated country. So many young girls come to urban area for their livelihood. But the work place is not safe and not comfortable for them. At present about 40 hundred thousand people work almost 4700 industries, where at least 80% women are present (Dreams et al. 2013).

Bangladesh has many export oriented RMG factories and Rana Plaza has one of the most of them which has once again attention of citizen of this country. The significant progress of the Bangladesh's RMG (Ready mate Garments) sector is over the last 3 decades. Many of the factories are continuing to work with poor physical and social compliances. We can see over the past 10 years more than 2000 workers work in the RMG (ready mate garments) sector of the country. This problem without safety turn to disaster (Independent, 2013).

In Bangladesh a six storied building in old city collapsed at 4 am (Shankhari Bazar) on June 9, 2004. Bottom three stories were crushed while upper three stories remained intact. Three stories were added (unauthorized) over an old three-storied building made of bricks and lime mortar and these result 19 deaths and 11 serious injuries. A three-decade-old 5-stories building of Phoenix Group collapsed in the city's Tejgaon industrial area at about 10.30 am on 25th Feb 2006. After this incidence, it has reported that about 22 are total died and 50 are severely injured. Al-Hussaini & Hossain (2008) have revelled on their paper that a totally unauthorized 9 story (each floor area 15000 Sft) concrete

frame building in the outskirts of Dhaka on April 11, 2005 at 1 am has collapsed. Approximately 61 deaths and 86 injured (Source: The Daily Star, 2006).

According to the information from the Enam Medical College and Hospital (EMCH), after the Rana Plaza tragedy total of 1,800 workers have taken primary treatment there, of which 1,000 workers were released within a week. Among the rest, another 700 were released within one to two months. A total of 34 injured workers who needed special treatment were shifted to Centre for Rehabilitation of the Paralyzed (CRP), Savar Combined Military Hospital (CMH) and Orthopaedic Hospital, Dhaka. A total of 339 workers were severely injured and had to undergo major operation(s) and long-term treatment. Most of these workers were admitted in different medical institutes including Orthopaedic Hospital, Savar CMH, Dhaka Medical College, EMCH, CRP, and 15 Clinic in Savar. According to the information from the monitoring team, severely injured workers have eight types of wounds which include hand injury, leg injury, traumatized, severe backbone injury, head injury, pelvic fracture, crush injury and compartmental syndrome and others. The extent of severity of the injuries can be perceived from the number of cases in which people lost hands or legs or incurred severe backbone injuries. Male workers experienced most of these wounds proportionately, while injuries of the female workers can be categorized under specific types such as in legs and hands. Over 50 per cent female workers ended up with almost disabled hands and legs. In other words, these workers seem to have lost their earning ability by working in the industrial sector (CPD, 2013).

According to monitoring team, Male are injured by different type of injury such as, Hand Injury (fracture, dislocation 16%), leg injury(fracture, dislocations 19%), traumatized(8%), severe spinal cord injury(9%), head injury (9%),pelvic fracture/injury(7%), crush injury/compartmental syndrome (13%),others (25%).female are, hand injury (fracture, dislocation, etc. 20%), leg injury(fracture, dislocation, etc,30%), traumatized(30, severe spinal injury(4%), head injury(8%), pelvic fracture/injury(9%), crush injury/ compartmental syndrome(11%) (CPD, 2013).

One research suggests victims of the Rana Plaza tragedy, 1498 of the survivors reported they had injuries with 611 reporting they were severely wounded. Six types of functional disability were assessed based on the survivor's perception. A quarter of those with injuries (373) reported difficulty in walking or climbing while 184 reported difficulty in caring for themselves, 141 had problems concentrating, 89 in seeing, 61 in hearing and 60 in communicating. Seventy-nine respondents had to undergo amputation. The physical condition of 127 of the survivors is getting worse while 29 report to be at serious risk. 1386 of the survivors reported that they are deeply traumatized with over half have difficulty sleeping and almost the same number suffering from depression(WHO Summary, 2013).

After a building collapse lots of people die and many get severe injury. In China, Wang (2010) mentioned in a study that many of the injured survivors suffered a lot in their daily life because they have very poor quality of life with psychological and environmental aspect. There is an important relation between buildings collapsed incidence and the survivors quality of life because many of them were not engaged them self's into the others work because they suffered from various post traumatic and psychological stress disorders.

Science 1980 People have more concern about their overall physical and mental health. HRQOL refers to the health status of individuals affected by diseases, injuries, medical interventions, aging, and social environment. HRQOL also represents the subjective satisfaction linked to economic, cultural background, and an individual value HRQOL describes the functional status of individuals in terms of physical, psychological, and social aspects. HRQOL covers physical health and MH and can clearly determine the health status indexes of individuals. As an important indicator of the quality of life of people in terms of physical health and mental health, HRQOL has also become an important means to evaluate and monitor the health status of people. HRQOL can reduce the boundaries between various disciplines and can be widely applied to social, psychological, and medical services. HRQOL also has a significant effect on health of the people (Liang et al., 2013).

In general, quality of life (HRQoL or QOL) is the perceived quality of an individual's daily life that is an assessment of their well-being or lack thereof. This includes all emotional, social and physical aspects of the individual's life. Health-related quality of life (HRQoL) is an assessment of how the individual's well-being may be affected over time by a disease, disability or disorder.

Quality of life is a model of integrated objective and subjective indicators. It is a broad range of life domains, and individual values. It takes account of concerns that externally derived norms should not be applied without reference to individual differences. Factors that play a role in quality of life vary according to personal preferences, but they often include financial security, job satisfaction, family life, health and safety (WHO, 2013).

The quality of life includes the following dimension: health (physical, emotional, cognitive), social (individuals perception of the interpersonal relationships and social role in their life), personal characteristics (self-esteem, coping style, sense of control (potential right, human right, environment) and socioeconomic the study of quality of life is an examination of influences upon the goodness and meaning of life as well as people happiness and well-being status (Soh et al., 2011).

Health related quality of life is a multidimensional construction, which measures a person's ability to physical function, mental and social awareness (Rezia et al., 2009).

SF-36 is one of the most commonly used scales worldwide. SF-36 includes 36 items and eight domains, namely, physical functioning (PF), role physical (RP), role emotional (RE), social functioning (SF), body pain (BP), general health (GH), vitality (VT), and mental health (MH). These scales are important for evaluating the health status of individuals. Compared with clinical diagnoses, these scales can help better characterize the physical, psychological, and functional states of individuals. (Liang et al., 2013)

SF-36 is very important to measure HRQOL because this tool has been evaluating quality of life. Many studies have shown that SF-36 is appropriate for analysing the situation of Mainland China. The reliability and validity of SF-36 have proven (Liang et al., 2013).

The shortened Form-36 health survey (SF-36) is a multipurpose health survey which contains 36 questions. The SF-36 is generic measure of health status that target's the specific age, disease or treatment group. It is designed to provide a global measurement of health related quality of life. It comprises eight scales (Caliborne et al., 2002). The eight enter related health dimensions are: physical functioning, role limitations, bodily pain, general health, vitality (energy/fatigue), social functioning, role emotional, mental health (Carrone et al., 2010).

SF-36 physical component summary: the physical component summery measure of SF-36 four dimension: physical functioning, role limitation physical, body pain and general health. These four individuals' domains reflect physical function and well-being. A low score indicate poor general health, severe body pain and frequent tenderness and limitation of self-care, physical mobility, and social interaction and role activities. A high score indicates that general health is excellent, no physical limitation, disabilities, or diminishment in role activities (Sohey et al., 2011).

3.1 Study design

This study aimed to find out the Health related Quality of life among the “Rana plaza” survivors in community. For this reason a quantitative research model in the form of a cross-sectional type survey design is used. I used this method so that the aim and objectives of the study can be fulfilled. In this study, there is no hypothesis as such, but the aim is to describe a population or subgroup within the population accordingly to the physical, social and economic quality of life. Data can also be collected on individual characteristics, beside information about outcome. In this way cross-sectional studies provide a expressive outcome at a specific point in time. The objectives of the study has demanded the association between demographic factors and quality of life, for this reason cross sectional study is the best way to find out the relation between those .

3.2 Study area

It is being worked for persons with disabilities to reintegrate them at their community life. The investigator was chose Savar, Dhamrai upazilla and Manikgonj district as a study area for collecting data. Researcher calls the participants by mobile phoning and meet with them in selected areas. Participants had different type of physical disabilities such as spinal cord injury, amputation, fracture and musculoskeletal injuries. All the people with physical disabilities were selected for this study and that fulfilled the inclusion criteria. Researcher was explained every participant about the research aim and objectives. Researcher was take sampling from those who willingly participated in this research.

3.3 Study population

“Rana Plaza” tragedy survivors in the community who lives in Savar and Dhamri Upazila and Manikgonj district.

3.4 Sampling procedure

In the study here used convenience sampling technique, considering the inclusion and exclusion criteria.

3.5 Sampling technique

After taking permission from IRB of BHPI, the investigator was collected a list of people of Rana plaza victims. Researcher also observed the persons with disabilities who had survived after the breakdown. Those participants had fulfilled inclusion criteria as they are the participants of the study.

3.6 Variables:

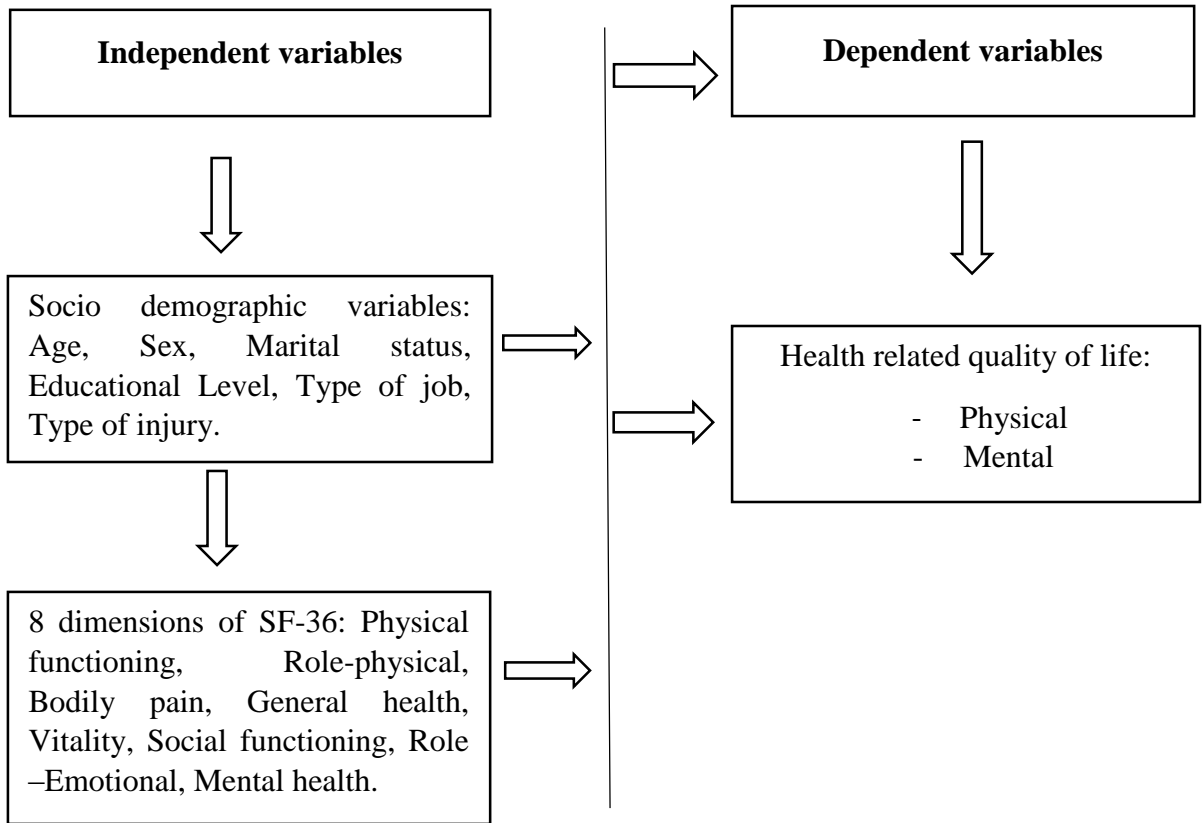


Figure: Conceptual Framework.

3.7 Inclusion Criteria

1. Rana plaza victims (male and female person with without disabilities)
2. Person with physical disabilities (permanent and temporary) is the participants of the study who are suffering from moderate to mild disabilities and age is more than 17. Bangladeshi government has a strong restriction with child labor below 16 years of age. Therefore, researcher selected the age range up to 16 years for maintaining ethical issue.

3.8 Exclusion Criteria

1. People with physical disabilities that have Mental illness (Psychosis)
2. People with speech problem prior to building collapse
3. Person who were not interested to attend the program at the time of data collection.

3.9 Sample size

Sampling procedure for cross sectional study done by following equation-

$$n = \left\{ \frac{z - \frac{\alpha}{2}}{d} \right\}^2 \times pq$$

Here,

$$z - \frac{\alpha}{2} = 1.96$$

$$d = 0.05$$

$$p = 0.50$$

$$q = (1-p) = (1-0.50)$$

$$= 0.50$$

According to this formula of sample size calculation, the actual sample size was about 384 but unwilling to participant of patients 50 samples was collected as my target data because that number is very easy for me to collect and to analyse the data.

3.10 Data collection instrument and tools

A questionnaire SF-36 and socio-economic informative questionnaire were used for data collection.

3.11 Measurement tools

A socio-demographical informative questionnaire was developed by researcher to collect data. A Standardized questionnaire/tool named the Short Form-36 (SF-36) is a 36 item questionnaire which measures Health Related Quality of Life (HQOL) across eight domains.

SF-36

The Short Form-36 (SF-36) is a 36 item questionnaire which measures Quality of Life (QOL) across eight domains, which are both physically and emotionally based and it is a structured, self-report questionnaire (Jenkinson et al., 2014). The eight domains that the SF36 measures are as follows: physical functioning; role limitations due to physical health; role limitations due to emotional problems; energy/fatigue; emotional well-being; social functioning; pain; general health. It is the most widely used measures to predict health-related quality of life and it also help in showing the difference between subjects with variety of chronic conditions and between subjects with different level of severity of the same disease. The Test-retest reliability of sf-36 Bangla version has been tasted and the value of Test- retest reliability (.94-1.0) (Walton et al., 2012).

3.12 Data collection procedure

Before data collection, researcher was first introduced himself to the participants & took verbal consent. Then provide written consent form to the participant, and after signed the consent form, data was collected through a questionnaire from the participants by face to face conversation. In that way questionnaire was present and data was completed. In the questionnaire, there was participant's demographic information including Demographic information included age, sex, educational level, marital status, previous occupation, new job along with questionnaire of SF-36

3.13 Data analysis

After complete the initial data collection, every questionnaire was check again to find out any mistake or unclear information. Then data was analysed through Statistical package of social science (SPSS) version 20 and data was levelled in Microsoft Excel worksheet and arranged in results. Then data was analysed through descriptive statistics for find out the P value and chi square for association and level of significance between the socio demographic factors and domains of sf-36 as well as calculated as a percentages and presented by table, bar graph and pie charts etc. Microsoft office Excel 2013 is used to decorating the bar graph and pie charts.

3.18 Ethical considerations

The proposal of the dissertation including methodology was presented to the Institutional Review Board (IRB) of Bangladesh Health Professions Institute (BHPI). Again before the beginning of the data collection, Ethical permission was taken from IRB to conduct the study. The whole process of this research project was done by following the Bangladesh Medical Research Council (BMRC) guidelines and World Health Organization (WHO) Research guidelines.

Verbal and written inform consent will take from every patient. And ensure every patient that they can leave any time during data collection, & it was ensured that participants were not influence by data collector. The researcher strictly maintained the confidentiality regarding participant's condition and treatments. The study was conducted in a clean and systematic way. Every subject had the opportunity to discuss their problem with the senior authority or administration of CRP and have any questioned answer to their satisfaction.

In the present study, HRQoL was assessed by using SF-36 among the 50 participants of Rana Plaza Tragedy survivors in the community.

4.1 Gender of the participants

Out of the 50 participants, the majority was female 60% (n=30) and male was 40% (n=20).

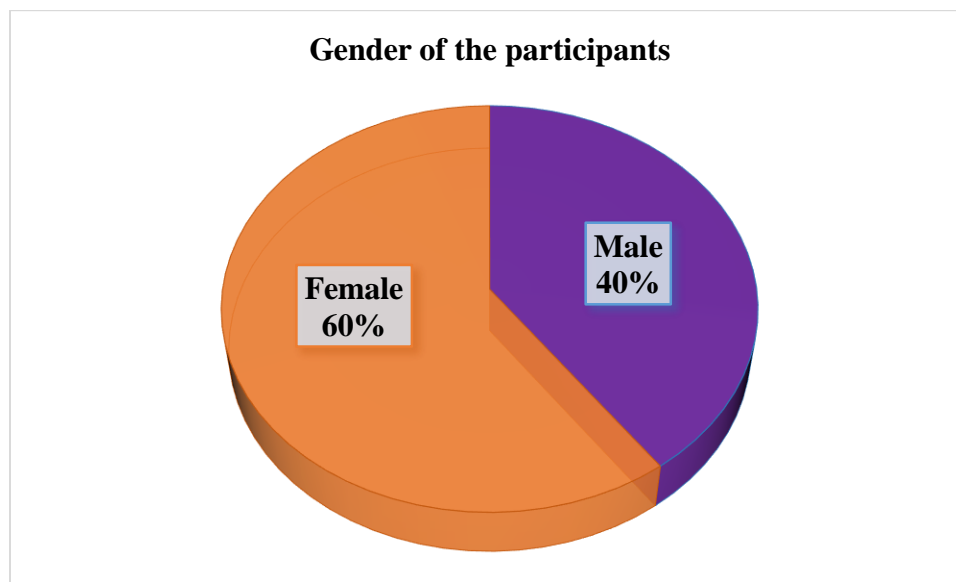


Figure 4.1: Gender of the participants.

4.2 Age of the participants

Among the 50 participants, maximum patient was between the 26-30 and 31-35 age range.

Table 4.2: Age range of the participants

Age Range	Number
20-25	8
26-30	14
31-35	13
36-40	9
41-45	4
46-50	1
51-55	1

Among the 50 participants, minimum age was 20, maximum age 52, mean 32.74 and standard deviation 6.963.

Table 4.3: Age of the participants

Age of the participants	Total number	Minimum age	Maximum age	Mean	Standard deviation
	50	20	52	32.74	6.963

4.3 Educational level of the participants

Among the 50 participants, 12% (n=6) were illiterate, 68% (n=34) were primary level, 18% (n=9) were completed their S.S.C level and 2% (n=1) were completed their H.S.C level.

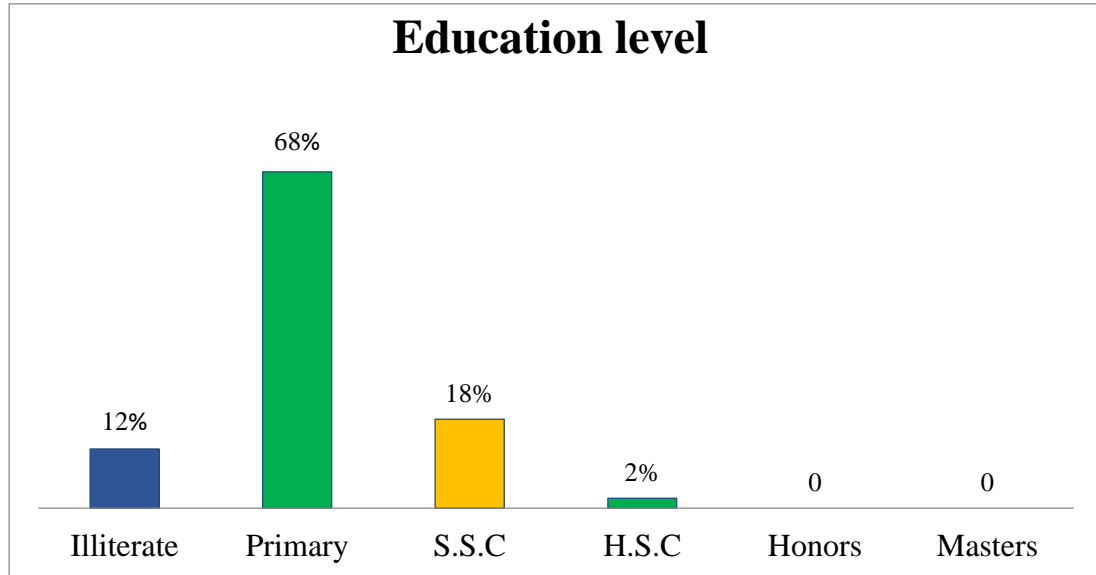


Figure 4.3: Educational level of the participants

4.4 Marital status of the participants

Among the participants almost 98% (n=49) were married and 2% (n=1) were unmarried. Among the married participants 40 participants were married before Rana Plaza Tragedy and Rest of them were married after the Rana Plaza Tragedy.

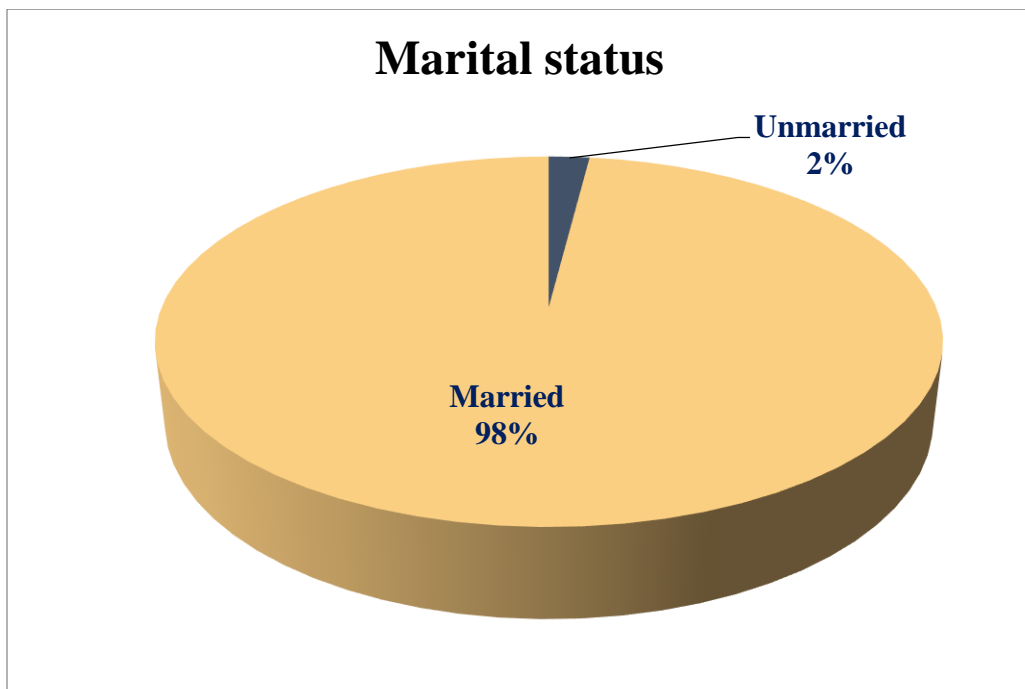


Figure 4.4: Marital status of the participants

4.5 Occupation

Among the 50 participants 42% (n=21) were involved with job and 58% were not involve with any job (Figure 4.5 a). In between 42% (n=21), 38.1% (n=8) were working in non-government organization and 68.9% (n=13) were self-employment (Figure 4.5 b).

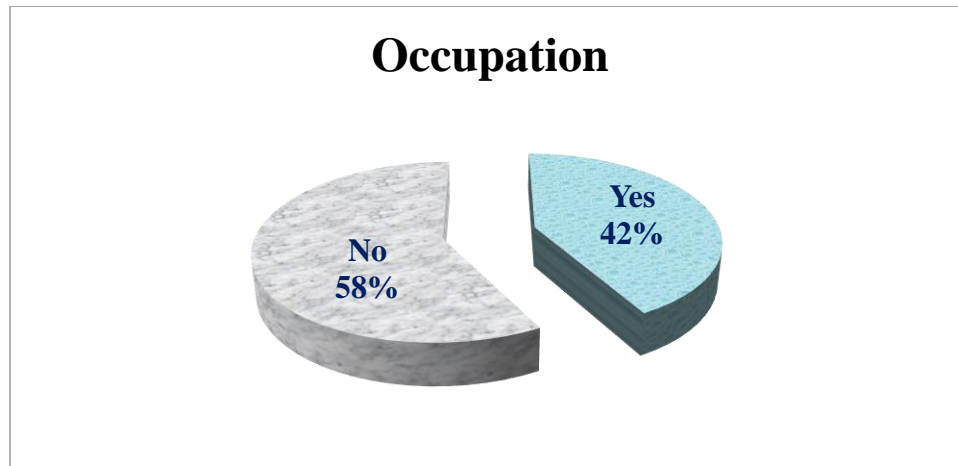


Figure 4.5(a): Occupation of the participants

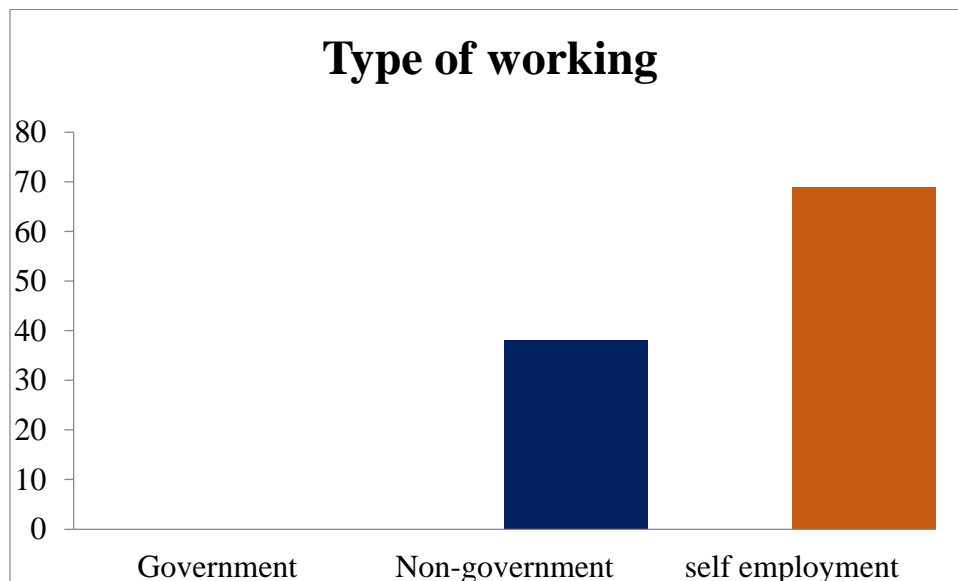


Figure 4.5(b): Type of working

4.6 Injury type

Among the 50 participants 6% (n=3) were Lower limb amputee patient, 26% (n=13) were fracture patient, 2% (n=1) were spinal cord injury patient, 64% (n=32) were musculoskeletal injury patients and 2% (n=1) were other patient.

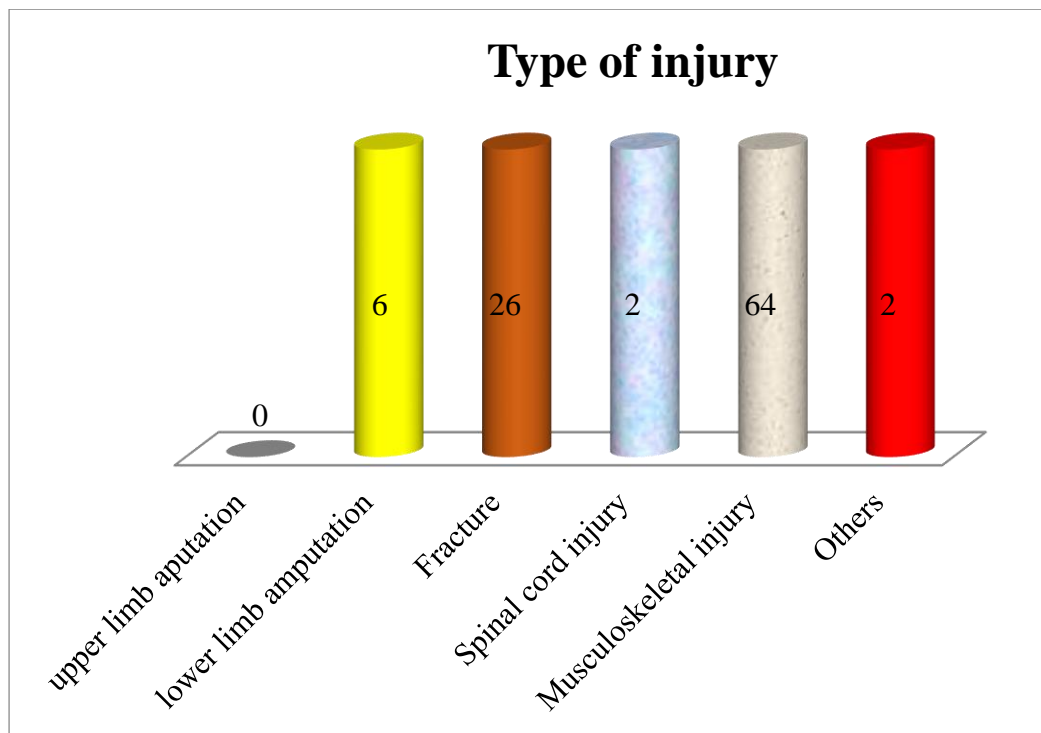


Figure 4.6: Type of injury of the participants

4.7 Physical functioning

In this study total participant was 50, among the participants 42% (n=21) had a lot of limitation in vigorous activities, 26% (n=13) had little limitation in vigorous activities and 6% (n=3) had no limitation in vigorous activities. The study also shows that 6% (n=3) had lot of, 66% (n=33) had little, 28% (n=14) had no limitation in moderate activities. 12% (n=6) had lot of, 58% (n=29) had little, 30% (n=15) had no limitation on carrying heavy objective. 36% (n=18) had lot of, 52% (n=26) had little and 12% (n=6) had no limitation on climbing several flights stairs, 18% (n=9) had lot of, 50% (n=25) had little, 32% (n=16) had no limitation on climbing one flights stairs. 34% (n=17) had lot of, 50% (n=25) had little, 16% (n=8) no limitation on forward bending, 30% (n=15) had lot of, 56% (n=28) had little and 14% (n=7) had no limitation on walking more than one kilometre. 2% (n=1) had lot of, 20% (n=10) had little and 78% (n=39) had no limitation on bathing or dressing by own.

Table 4.7: Physical functioning of the participants

Variables	Yes, limited a lot	Yes, limited a little	No, not limited at all
	Number (%)	Number (%)	Number (%)
Vigorous activities	21 (42%)	26 (52%)	3 (6%)
Moderate activities	3 (6%)	33 (66%)	14 (28%)
Carrying heavy object	6 (12%)	29 (58%)	15 (30%)
Climb several stair	18 (36%)	26 (52%)	6 (12%)
Climb one stair	9 (18%)	25 (50%)	16 (32%)
Forward bending	17 (34%)	25 (50%)	8 (16%)
Walking more than a kilometre	15 (30%)	28 (56%)	7 (14%)
Walking several hundred kilometre	8 (16%)	26 (52%)	16 (32%)
Walking one hundred kilometre	4 (8%)	23 (46%)	23 (46%)
Personal care	1 (2%)	10 (20%)	39 (78%)

4.8 Role physical

Among the 50 participants, 2% (n=1) spent all of the time, 14% (n=7) most of the time, 72% (n=36) some of the time, 12% (n=6) a little of time to do their work or other activities, 2% (n=1) all of the time, 22% (n=11) most of the time, 64% (n=32) some of the time, 12% (n=6) a little time were given to accomplished less than they would like to do. This study also showed that, 2% (n=1) all of the time, 30% (n=15) most of the time, 60% (n=30) some of time, 8% (n=4) a little of time were limited in the kind of work or other activities.

Table 4.8: Role of physical

Variables	All of the time	Most of the time	Some of the time	A little of the time	None of the time
	Number (%)	Number (%)	Number (%)	Number (%)	Number (%)
Cut down time	1 (2%)	7 (14%)	36 (72%)	6 (12%)	0
Accomplished less	1 (2%)	11 (22%)	32 (64%)	6 (12%)	0
Activity limited	1 (2%)	15 (30%)	30 (60%)	4 (8%)	0
Activity difficulty	1 (2%)	11 (22%)	36 (72%)	2 (4%)	0

4.9 Bodily Pain

Among the 50 participants, 6% (n=3) had very mild, 28% (n=14) had mild, 36% (n=18) moderate, 26% (n=13) had severe, 4% (n=2) had very severe pain felt (fig:4.9a) and pain interfere their indoor and outdoor activities 6% (n=3) had not at all, 22% (n=11) had a little bit, 48% (n=24) had moderately, 24% (n=12) had quite a bit during the past four weeks (fig:4.7b).

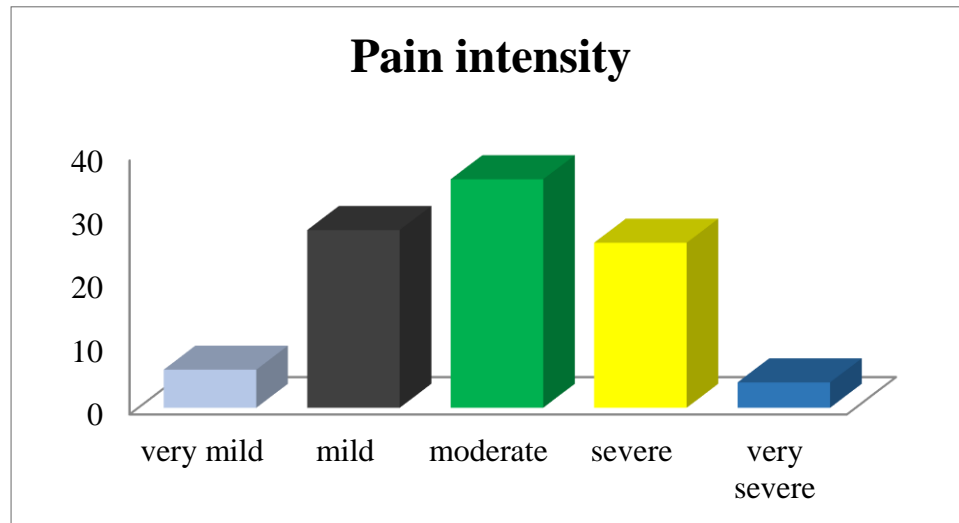


Figure 4.9a: Pain intensity during last four weeks.

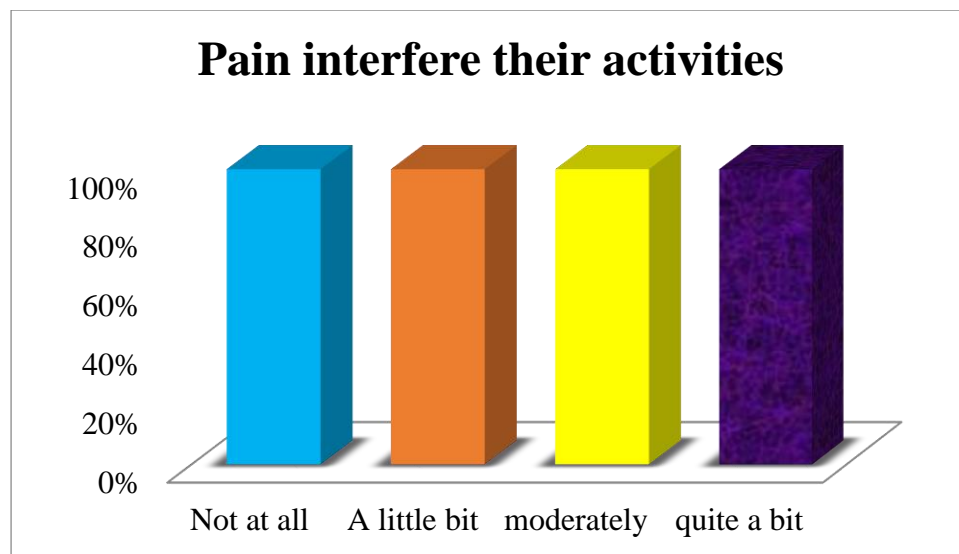


Figure 4.9b: Pain interfere their indoor and outdoor activities.

4.10 General Health

This study showed that among the 50 participants, 4% (n=2) had very good health, 50% (n=25) had good health, 46% (n=23) had fair health status.

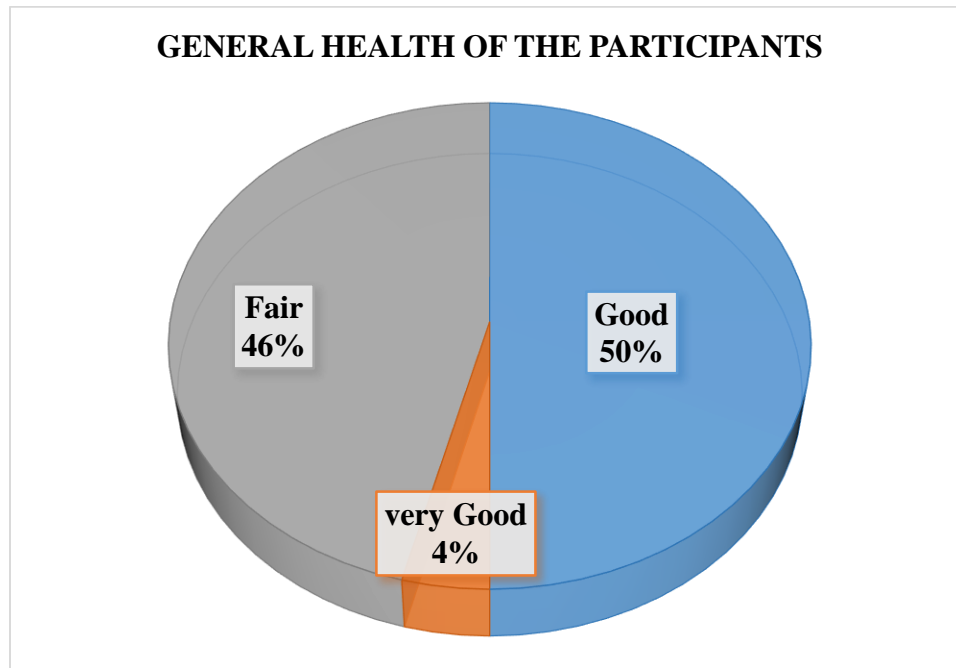


Figure 4.10: General health of the participants

4.11 Vitality

Among the 50 participants, they were pep life for most of the time 16% (n=8), some of the time 64% (n=32), a little of the time 20% (n=10) and energetic for most of the time 14% (n=7), some of the time 64% (n=32), a little of the time 22% (n=11). Worn out of the participants for most of the time 40% (n=20), some of the time 52% (n=26), a little of the time 8% (n=4). Among the participants 46% (n=23) most of the time, 46% (n=23) some of the time, 8% (n=4) a little of the time had been tired.

Table 4.11: Vitality of the participants

Variable	Most of the time	Some of the time	A little of the time
	Number (%)	Number (%)	Number (%)
Pep life	8 (16%)	32 (64%)	10 (20%)
Energy	7 (14%)	32 (64%)	11 (22%)
Worn out	20 (40%)	26 (52%)	4 (8%)
Tired	23 (46%)	23 (46%)	4 (8%)

4.12 Social functioning

Among the 50 participants 12% (n=6) have no problem in social functioning, 20% (n=10) have slightly social participants, 48% (n=24) had moderately and 20% (n=10) had quite a bit problem in social participation. In social time about 18% (n=9) had most of the problem, 60% (n=30) had some of the problem, 18% (n=9) had a little of the time, 4% (n=2) had none of the time.

Table 4.12: Social functioning of the participants

Variable		Number (%)
Social extent	Not at all	6 (12%)
	Slightly	10 (20%)
	Moderately	24 (48%)
	Quite a bit	10 (20%)
Social time	Most of the time	9 (18%)
	Some of the time	30 (60%)
	A little of the time	9 (18%)
	None of the time	2 (4%)

4.13 Role emotional

Among the participants 8% (n=4) all of the time, 22% (n=11) most of the time, 64% (n=32) some of the time, 6% (n=3) had cut down the most of on their activities. 6% (n=3) all of the time, 28% (n=14) most of the time, 60% (n=30) some of the time, 6% (n=3) had accomplish less activities. 6% (n=3) all of the time, 28% (n=14) most of the time, 56% (n=28) some of the time, 10% (n=5) had cut down the most of on their activities.

Table 4.13: Role of emotional of the participants

Variable	All of the time	Most of the time	Some of the time	A little of the time
	Number (%)	Number (%)	Number (%)	Number (%)
Cut down time	4 (8%)	11 (22%)	32 (64%)	3 (6%)
Accomplish less	3 (6%)	14 (28%)	30 (60%)	3 (6%)
Not careful	3 (6%)	14 (28%)	28 (60%)	5 (10%)

4.14 Mental health

The study shows that among the participants feel nervousness for most of the time 28% (n=14), some of the time 64% (n=32), a little of the time 8% (n=4). The participants feel down in dumps for most of the time 22% (n=11), some of the time 68% (n=34), a little of the time 10% (n=5). Peaceful for most of the time 16% (n=8), some of the time 62% (n=31), a little of the time 22% (n=11). Downhearted or depressed for most of the time 34% (n=17), some of the time 60% (n=30), a little of the time 6% (n=3). Happy for most of the time 22% (n=11), some of the time 54% (n=27), a little of the time 24% (n=12).

Table 4.14: Mental health of the participants

variable	Most of the time	Some of the time	A little of the time
	Number (%)	Number (%)	Number (%)
Nervous	14 (28%)	32 (64%)	4 (8%)
Down in	11 (22%)	34 (68%)	5 (10%)
Peaceful	8 (16%)	31 (62%)	11 (22%)
Depressed	17 (34%)	30 (60%)	3 (6%)
Happy	11 (22%)	27 (54%)	12 (24%)

SF-36 scoring among the participants

The SF 36 consists of eight scaled scores, which are the sums of the questions in their section. This data was also analysed by using SPSS version 20. From 50 participants the minimum & maximum percentage of physical functioning was 25.00 % & 100.00%, role limitation due to physical health was .00% & 75.00%, role limitation due to emotional problem was .00% & 75.00%, energy or fatigue was 40.00% & 80.00%, emotional well-being was 40.00% & 80.00%, social functioning was 12.50% & 100.00%, pain was 20.00% & 77.50%, general health was 10.00% & 65.00%. And from these section, the mean score of physical functioning was 54.5%, role limitation due to physical health was 45.75%, role limitation due to emotional problem was 75.40%, energy or fatigue was 55.73%, emotional well-being was 56.98%, social functioning was 53.60%, pain was 45.15%, and lastly general health was 40.20%. And standard deviation of PF was 20.03%, RP was 12.26%, RE was 23.89%, VT was 7.86%, MH was 7.65%, SF was 18.62%, BP was 17.03%, and GH was 13.54%. When the score is near about 100, like 70, 80, 90, it means the quality of life of Survivors is good & when the score is poor like 30, 40, it means the quality of life of Survivors is poor.

Among the participants mean of the role emotion was 75.40 according to SF-36 this range was good and the mean physical functioning was 54.50, vitality was 55.73, mental health was 56.73, social functioning was 53.60 according to SF-36 this range was moderate score and the general health of participants mean was 40.20, role physical, bodily pain was 45.15 according to SF-36 this range was poor. So among the participants their physical health quality of life was poor and mental health quality of life was fair.

Table 4.15: SF36 scoring among the participant

Scale	Minimum	Maximum	Mean	Std. Deviation
Physical function	25.00	100.00	54.5000	20.03
Role physical health	.00	75.00	45.7500	13.26
Role emotional	.00	75.00	75.4000	23.89
Vitality	40.00	80.00	55.7250	7.86
Mental health	40.00	80.00	56.9840	7.65
Social functioning	12.50	100.00	53.6000	18.62
Bodily pain	20.00	77.50	45.1500	17.03
General health	20.83	66.67	43.7500	12.23

Association between Socio-Demographic factors (sex) with eight domains of SF-36:

The Chi-Square Test was performed between the socio-demographic factors (sex) with the eight domains of sf-36.

Table 4.16: Association between Socio-Demographic factors (sex) with eight domains of SF-36

		Physical Functioning	Role Physical health	Role Emotion	Vitality	Mental Health	Social Functioning	Bodily Pain	General Health
Sex	p-value	0.852	0.291	0.590	0.650	0.777	0.484	0.699	0.516
	Chi-square	9.048	11.703	4.645	6.877	6.439	7.50	9.048	11.10

Among the 50 participants, the observed chi-square value was PF 9.048, RP 11.70, RE 4.645, VT 6.87, MH 6.43, SF 7.45, BP 9.04, GH 11.10 and 5% level of significant state that chi-square was 1.96 which is more than the observed chi-square value. That means Null-hypothesis was accepted and Alternative hypothesis was rejected. So the result was not significant that indicate that there didn't have strong association between sex and eight domains of SF-36.

Association between socio-demographic factors (Age) with eight domains of SF -36:

The Chi-Square Test was performed between the socio-demographic factors (Age) with the eight domains of sf-36.

Table 4.17: Association between Socio-Demographic factors (Age) with eight domains of SF-36

	Physical Functioning	Role Physical health	Role Emotion	Vitality	Mental Health	Social Functioning	Bodily Pain	General Health
Age	0.512	0.318	0.073	0.001	0.250	0.852	0.966	0.061
Chi-square value	27.86	18.84	14.33	24.21	21.39	14.17	20.19	27.27

Among the 50 participants, in between eight domains of sf-36 seven domains observed chi-square value was PF 27.86, RP 18.84, RE 14.33, MH 21.39, SF 14.17, BP 20.19, GH 27.27 and 5% level of significant state that chi-square was 1.96 which is more than the observed chi-square value. That means Null-hypothesis was accepted and Alternative hypothesis was rejected. So the result was not significant that indicate that there didn't have strong association between age and eight domains of SF-36. In case of vitality the observed chi-square value was 24.21 and 5% level of significant state that chi-square was 1.96 which is less than the observed chi-square value. That means Null-hypothesis was

rejected and Alternative hypothesis was accepted. So the result was significant that indicate that there was strong association between age and Vitality.

Association between the Socio-Demographic factors (type of injury) with the domains of SF-36:

Table 4.18: Association between Socio-Demographic factors (Type of injuries) with eight domains of SF-36

	Physical Functioning	Role Physical	Role Physical	Physical Vitality	Mental Health	Social Functioning	Bodily Pain	General Health
Type of injury P-value	0.888	0.776	0.318	0.884	0.961	0.980	0.990	0.973
Chi-square value	43.504	29.349	26.719	26.225	25.735	17.783	28.063	31.009

Among the 50 participants, the observed chi-square value was PF 43.50, RP 29.34, RE 26.71, VT 26.22, MH 25.73, SF 17.78, BP 28.06, GH 31.00 and 5% level of significant state that chi-square was 1.96 which is more than the observed chi-square value. That means Null-hypothesis was accepted and Alternative hypothesis was rejected. So the result was not significant that indicate that there didn't have strong association between type of injury and eight domains of SF-36.

Association between the Socio-Demographic factors (Educational status) with the domains of SF-36:

Table 4.19: Association between Socio-Demographic factors (Educational status) with eight domains of SF-36

The Chi-Square Test was performed between the socio-demographic factors (Educational status) with the eight domains of sf-36.

		Physical Functioning	Role Physical health
Educational status	P-value	.041	.000
	Chi-square value	59.248	66.842

Among the 50 participants, the observed chi-square value was PF 59.24 and RP 66.84 and 5% level of significant state that chi-square was 1.96 which is less than the observed chi-square value. That means Null-hypothesis was rejected and Alternative hypothesis was accepted. So the result was significant that indicate that there was strong association between education and Physical Functioning as well as Role of Physical health.

Socio-demographic characteristics are a strong predictor of perceived quality of life among survivors. Rana plaza disaster survivors' sex is an important factor of socio-demographic characteristics. Regarding the socio-demographic status, this study finding is similar to other study findings. Demographic data of survivors, after building collapse shows that among all of participants, most of the participants were (60%) female rather than male (40%). Hu et al. (2012) has revealed in his study that after any disaster the female exposure suffers a lot than male due to their physical structure and cultural aspect, in that study about 60% participants were female survivors.

One article showed that most of the respondents among the survivors surveyed are women. Out of the 1300 survivors surveyed, 35% were men and 65% were women. Majority of the respondents are young with 32% aged between 21-25 years and 30% between 26-30 years. Of them, 76% are married, 17% are single, 3% are widowed and 4% each are divorced and separated.

Zhang et al. (2012) has mentioned in their study that after SICHUAN earthquake in China; most of the survivors were females with fractures rather than male. In case of garments working sectors, females are highly getter than male workers. Therefore, the study participants are smaller than other study, thus why it does not match with another statistics of Bangladeshi garments sector. In case of their marital status, about 2% were unmarried, 98% were married. The number of married men and women worker with children are higher than no child workers (Monitoring the Rana Plaza Follow-ups 2013). In Bangladesh, one study in garments factory says that about 53% garments worker are married and secondly 36% are unmarried where divorce persons rate is 6% (Chowdhury & Ullah, 2010).

Among all of the participants, about 12% participants have never attended on any formal education and 68% of the participant has completed primary education, 18% of the participant has finished their S.S.C level and 2% of the participant has completed their H.S.C level. In Bangladesh, the garments workers are poor and their educational

qualifications are not significant (Bhuiyan, 2012). Chowdhury & Ullah, (2010) said that in Bangladesh, most of the garment workers' educational level is between class I-IV (38%) and between classes VI-X for about 28% in Chittagong district. Generally, the survivors' educational level is poor in fact they have shown risk taking behaviour for their livelihood but have also poor awareness about building collapse impact.

A survey was done by Action aid at 2015; here they found that 52 percent survivors got engaged in various types of wage and self-employment. 48 percent survivors claimed that they are currently unemployed. The previous (2015) survey found that 55 percent survivors were unemployed during the survey conducted, while 44 percent survivors were engaged in various types of wage and self-employment, and only 0.6 percent survivors claimed that they were not able to work.

Among the currently employed 21.4 percent are found to be working in garments factories, 23.2% are involved in petty business, while 16.8% are working as tailors. Additionally, 3.0% are running grocery shop, 4.2% are engaged in wage labor and 4.9% are engaged in agriculture. 2.9% are engaged in irregular works. Aside from these, survivors are engaged in other types of income generating activities as household help, salesperson, auto rickshaw driver, mobile phone repairing work etc. Therefore, large majority of the survivors are self-employed. Although the Rana Plaza collapse has compelled many survivors to seek employment in other sectors, still there is a flow of workers resuming garment factories for work. Those who are unemployed cited physical weakness (56.5%) and mental weakness (34.1%) as the main reasons for being unemployed.

Among the 50 participants 42% of the participants are working job among them 68.1% were involved with self-employment and 38.1% worked in a non-government organization and 58% are struggling without any job due to poor financial support and physical impairments.

Among the participants most of the survivors injury type was musculoskeletal 64%, lower limb amputee survivors was 6%, Fracture survivors was 26%, spinal cord injury survivors was 2% and 2% others survivors. In India, after earthquake, huge numbers of

buildings were collapsed. It is found that most of the survivor (23%) was diagnosed with upper extremity fracture and about 18% are diagnosed with head injury. Therefore, the situations are little bit similar. On the other hand Yang (2013) state that female were get more injured than male workers.

In this study, for the eight subscales, total scores may range from 0 to 100. Each scales ranging from 0 (presence all problems) to 100(no problems at all) with in the dimension (Roux et al., 2004). The physical component summery scores mean of physical functioning (54.50), Role of physical (45.75), Bodily pain (45.15), General health (40.20) and the mental component summery score is vitality (55.73), social functioning (53.60), Role emotional (75.40) and mental health (56.98). The lowest score indicate the poor quality of life and highest score indicate the good quality of life.

The score was lowest for the General health subscale and highest for the Role emotion subscale. The score for all subscales for participants with survivors were significantly different form age and sex of the individual. The three most affected subscales were role physical (45.75), bodily pain (45.15), general health (40.20) and the highest score for the role of emotion (75.40) subscale. (Lin et al., 2009) found their studies among the eight subscale the score is lowest for the physical subscale and highest for the physical functioning subscale.

Liang et al. (2014) found on their study after the disaster the mean and standard deviation was PF 49.10 and 25.21, RP 48.91 and 25.21, RE 51.88 and 36.74, MH 44.10 and 26.55, VT 45.06 and 26.36, SF 60.81 and 33.00, GH 32.63 and 21.56, BP 50.70 and 26.85.

In this study total participant was 50, among the participants 42% (n=21) had a lot of limitation in vigorous activities, 26% (n=13) had little limitation in vigorous activities and 6% (n=3) had no limitation in vigorous activities. The study also shows that 6% (n=3) had lot of, 66% (n=33) had little, 28% (n=14) had no limitation in moderate activities. 12% (n=6) had lot of, 58% (n=29) had little, 30% (n=15) had no limitation on carrying heavy objective. 36% (n=18) had lot of, 52% (n=26) had little and 12% (n=6) had no limitation on climbing several flights stairs, 18% (n=9) had lot of, 50% (n=25) had little, 32% (n=16) had no limitation on climbing one flights stairs. 34% (n=17) had lot of, 50% (n=25) had little, 16% (n=8) no limitation on forward bending, 30% (n=15)

had lot of, 56% (n=28) had little and 14% (n=7) had no limitation on walking more than one kilometre. 2% (n=1) had lot of, 20% (n=10) had little and 78% (n=39) had no limitation on bathing or dressing by own. Here maximum physical functioning is 100.00% and minimum physical functioning is 25.00% and mean and standard deviation is 54.5 and 20.03.

Among the 50 participants, 2% (n=1) spent all of the time, 14% (n=7) most of the time, 72% (n=36) some of the time, 12% (n=6) a little of time to do their work or other activities, 2% (n=1) all of the time, 22% (n=11) most of the time, 64% (n=32) some of the time, 12% (n=6) a little time were given to accomplished less than they would like to do. This study also showed that, 2% (n=1) all of the time, 30% (n=15) most of the time, 60% (n=30) some of time, 8% (n=4) a little of time were limited in the kind of work or other activities. Here maximum role physical health is 75.00 and mean and standard deviation is 45.75 and 12.26.

Among the 50 participants 8% (n=4) all of the time, 22% (n=11) most of the time, 64% (n=32) some of the time, 6% (n=3) had cut down the most of on their activities. 6% (n=3) all of the time, 28% (n=14) most of the time, 60% (n=30) some of the time, 6% (n=3) had accomplish less activities. 6% (n=3) all of the time, 28% (n=14) most of the time, 56% (n=28) some of the time, 10% (n=5) had cut down the most of on their activities. Here maximum role of emotion 75.00% and minimum .00% and mean and standard deviation 75.40 and 23.89.

Among the 50 participants, they were pep life for most of the time 16% (n=8), some of the time 64% (n=32), a little of the 20% (n=10) and energetic for most of the time 14% (n=7), some of the time 64% (n=32), a little of the time 22% (n=11). Worn out of the participants for most of the time 40% (n=20), some of the time 52% (n=26), a little of the time 8% (n=4). Among the participants 46% (n=23) most of the time, 46% (n=23) some of the time, 8% (n=4) a little of the time had been tired. Here maximum vitality 80.00% and minimum vitality 40.00% and mean and standard deviation 55.73 and 7.86.

The study shows that among the participants feel nervousness for most of the time 28% (n=14), some of the time 64% (n=32), a little of the time 8% (n=4). The participants feel down in dumps for most of the time 22% (n=11), some of the time 68% (n=34), a little of

the time 10% (n=5). Peaceful for most of the time 16% (n=8), some of the time 62% (n=31), a little of the time 22% (n=11). Downhearted or depressed for most of the time 34% (n=17), some of the time 60% (n=30), a little of the time 6% (n=3). Happy for most of the time 22% (n=11), some of the time 54% (n=27), a little of the time 24% (n=12). Here maximum mental health 80.00% and minimum 40.00% and mean and standard deviation 7.65.

Among the 50 participants 12% (n=6) have no problem in social functioning, 20% (n=10) have slightly social participants, 48% (n=24) had moderately and 20% (n=10) had quite a bit problem in social participation. In social time about 18% (n=9) had most of the problem, 60% (n=30) had some of the problem, 18% (n=9) had a little of the time, 4% (n=2) had none of the time. This study shows that maximum social functioning 100.00% and minimum social functioning 12.50% and mean and standard deviation 53.60 and 18.62.

Among the 50 participants, 6% (n=3) had very mild, 28% (n=14) had mild, 36% (n=18) moderate, 26% (n=13) had severe, 4% (n=2) had very severe pain felt and pain interfere their indoor and outdoor activities 6% (n=3) had not at all, 22% (n=11) had a little bit, 48% (n=24) had moderately, 24% (n=12) had quite a bit during the past four weeks. Here maximum range of bodily pain 77.50% and minimum 20.00% and mean and standard deviation 45.15 and 17.03.

This study showed that among the 50 participants, 4% (n=2) had very good health, 50% (n=25) had good health, 46% (n=23) had fair health status. Here maximum general health 65.00% and minimum 10.00% and mean and standard deviation 40.20 and 13.54. Nuhu et al. (2013) has said that one-third of the participants had poor overall QOL at palliative care survivors with cancer. After Rana Plaza disaster the exposure that means the survivors level of health satisfaction has analyzed, Along all of survivors about 33.7% of participants are neither satisfied nor dissatisfied with their health satisfaction where 27.2% are satisfied with their health status and about 23.9% of participants are dissatisfied with their health status but only a few are very satisfied with their health status. Nuhu et al. (2013) 66% has said that reported poor health satisfaction in quality of life at palliative centre. Wang et al. (2010) mentioned that the quality of life for the

person of traumatized disability has improved day by day with reducing anxiety and depression.

In Action aid 2015 they found that 78.8% survivors reported that their condition is more or less stable. 14.6% who reported that their condition is deteriorating listed headache, difficulty in movement, pain in hand and leg, back pain as some of the major problems.

Among the participants mean of the role emotion was 75.40 according to SF-36 this range was good and the mean physical functioning was 54.50, vitality was 55.73, mental health was 56.73, social functioning was 53.60 according to SF-36 this range was moderate score and the general health of participants mean was 40.20, role physical, bodily pain was 45.15 according to SF-36 this range was poor. So among the participants their physical health quality of life was poor and mental health quality of life was fair.

Yiang, 2013 found on his research the HRQOL of earthquake is relatively poor, especially in the GH, MH, SF, VT and so on. He found on his research some factors that influence the HRQOL, which were health, gender, education, monthly income and age that significantly affect the HRQOL in survivors.

This study also sets out to show the association between overall quality of life Rana plaza survivors' characteristics (age, sex, educational background, type of injuries). In association it is found that there was no significant association between survivors' sex and quality of life that means there was no variation in quality of life between male or female survivors after Rana plaza disaster because there was no significant association between the age and all domains of sf-36. Ceyhan & Aykut, (2007) and Nuhu et al. (2013) have mentioned in their study that the male survivors have poor quality of life than females. In Asian context the males are the main income personnel for family members. It may effects on their quality of life, especially in physical domain but in the Rana plaza survivors sex and quality of life have no associations. According to result, Quality of life does not depend upon sex. Bangladesh is male dominant country and male take responsibilities for family than female but finding say that quality of life could be better or poor for both male and female. Regarding survivors age, there was significant association between the vitality energy/fatigue), others has been no significant association between Rana plaza survivors age and their overall qualities of life. Tsai et al.

(2007) has mentioned that the survivor's age and quality of life have significant association where the younger aged quality of life is poorer than older survivor's. Tsai et al. (2007) has revealed that there is a close association between level of mental health and educational qualification. In this study, researcher found survivor's educational qualifications has visible relation with their quality of life. Educational qualification influences the ones physical functioning and physical health in the community. Moreover, survivor's marital statuses have no significant associations with their quality of life. Nuhu et al. (2013) has shown that the cancer survivor's quality of life does not depend upon their marital status. There has no connection between married and unmarried person with their quality of life.

Association between demographic factors and overall quality of life:

Association between sex and quality of life:

In association it is found that there was no significant association between survivor's sex and quality of life that means there was no variation in quality of life between male or female survivors after Rana plaza disaster. Ceyhan & Aykut (2007) and Nuhu et al. (2013) have mentioned in their study that the male survivors have poor quality of life than females. In Asian context the males are the main income personnel for family members. It may affects on their quality of life, especially in physical domain but in the Rana Plaza survivor's sex and quality of life have no associations. According to result Quality of life does not depend upon sex.

Association between Age and health related quality life:

Regarding survivors age, there was significant association between Rana Plaza survivor's age and the vitality of domains of sf-36. Tsai et al., (2007) has mentioned that the survivors' age and quality of life have significant association where the younger aged quality of life is good than older survivor's.

Association between Education and health related o quality of life:

Among the survivors there was significant association between education and quality of life. Regarding survivors who have educational background they have good physical functioning and health.

Association between type of injury and health related quality of life:

There was no significant association between type of injury and health related quality of life. Its means that all participants have same quality of life.

Limitation

The main limitation is the absence of a standard SF-36 score for Bangladeshi population for comparison. I was used SF-36 questionnaire which was based on think about Indian population and their culture which was differing from our culture and population.

Another major limitation was time. Due to my time limitation I did not cover all the district and in my research I was try to uphold the present situation of Rana Plaza Tragedy survivors based on some area. The time period was very limited to conduct the research project on this topic.

Now-a-days, building collapse in Bangladesh is a significant and traumatic experience. Some risk factors such as gender, type of disabilities and diagnosis after the event can affect the HRQOL and health prospect with their physical, social, psychological and environmental aspect of survivors. Among the survivors their physical health is poor and mental health is fair. People are still struggling with their life in the community. Some people are who working on the community they are now still suffering post-traumatic stress. Though the governmental and non-governmental organization helped them lot but this is not sufficient for them. some of them requaire further treatmeant but they are not continue thier treatment due to thier poor economical status and this situation indirectly create a bad impact into their life. so the goverment and non-government organization should take necessary steps for provide support to the survivors and try to improve their health status.

Recommendation

The finding could be generalized, if HRQoL could assess again further and follow-up it until five to ten years. Here only used 50 samples and cover only three area which was Savar upazilla, Dhamri upzila and manikgonj district due to time limitation so if any one will findout the HRQoL of the Rana Plaza tragedy survivors they should use more sample, try to cover the all the district and it could be find out a good result. The study could spread out some message for further preparatory action plans. It could help to take further necessary steps in recovery and rehabilitation activities for ensuring sustainability

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APPENDIX

Consent Form

Assalamualaikum\ Namashker,

I am Md Sahnawaz Sajib, 4th Professional B.Sc. in Physiotherapy student at Bangladesh Health Professions Institute (BHPI) under the Faculty of Medicine, University of Dhaka. To obtain my Bachelor degree, I have to conduct a research project and it is a part of my study. My research title is “**Health Related Quality of life among the RANA PLAZA Tragedy Survivors in the Community**”. To fulfil my research project, I need to some information from you to collect data. So, you can be a respected participant of this research and the conversation time will be 20-30 minutes.

I would like to inform you that this is a purely academic study and will not to be used for any other purposes. I assure that all data will be kept confidential. Your participation will be voluntary. You may have the rights to withdraw consent and discontinue participation at any time of the experiment.

If you have any query about the study, you may contact with researcher Md. Sahnawaz Sajib and/or supervisor, Mohammad Habibur Rahman (Assistant Professor, Dept. of Physiotherapy, BHPI, CPR, Savar, and Dhaka-1343).

Do you have any questions before start this session?

So, I can proceed with the interview.

Yes

No

Signature of the participant and Date:

Data collector signature and date:.....

Researcher signature and Date:.....

সম্মতি পত্র

আসসালামুয়ালাইকুম/নমস্কার,

আমার নাম মোঃ শাহনেওয়াজ সজীব, আমি এই গবেষণা প্রকল্পটি বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)-এ পরিচালনা করছি যা আমার ৪র্থ বর্ষ বিএসসি ইন ফিজিওথেরাপী কোর্সের অধিভুক্ত। আমার গবেষণার শিরোনাম হল “**রানা প্লাজা দুর্ঘটনায় বেঁচে যাওয়া মানুষের স্বাস্থ্য সম্পর্কিত সামাজিক জীবন যাত্রার মান**”। আমি এক্ষেত্রে আপনাকে কিছু ব্যক্তিগত, রোগের বৈশিষ্ট্য এবং সংশ্লিষ্ট নিয়ামকের উপর আনুষঙ্গিক কিছু প্রশ্ন করতে চাচ্ছি। এতে আনুমানিক ২০-৩০ মিনিট সময় লাগবে।

আমি আপনাকে অনুগত করছি যে, এটা আমার অধ্যয়নের অংশ এবং যা অন্যকোন উদ্দেশ্যে ব্যবহৃত হবে না। এই গবেষণায় আপনার অংশগ্রহণ বর্তমান ও ভবিষ্যৎ চিকিৎসায় কোন প্রকার প্রভাব ফেলবে না। আপনি যে সব তথ্য প্রদান করবেন তার গোপনীয়তা বজায় থাকবে এবং আপনার প্রতিবেদনের ঘটনা প্রবাহে এটা নিশ্চিত করা হবে যে এই তথ্যের উৎস অপ্রকাশিত থাকবে।

এই অধ্যয়নে আপনার অংশগ্রহণ স্বেচ্ছাপ্রণোদিত এবং আপনি যে কোন সময় এই অধ্যয়ন থেকে কোন নেতিবাচক ফলাফল ছাড়াই নিজেকে প্রত্যাহার করতে পারবেন।

এই অধ্যয়নে অংশগ্রহণকারী হিসেবে যদি আপনার কোন প্রশ্ন থাকে তাহলে আপনি গবেষক মোঃ শাহনেওয়াজ সজীব আথবা/এবং সুপারভাইজার,মোহাম্মদ হাবিবুর রহমান, সহকারী অধ্যাপক, ফিজিওথেরাপী বিভাগ, বিএইচপিআই, সিআরপি, সাভার, ঢাকা-তে যোগাযোগ করতে পারেন।

সম্মতিকার শুরু করার আগে কি আপনার কোন প্রশ্ন আছে ?

আমি কি আপনার আনুমতি নিয়ে উপাত্ত সংগ্রহকারীর এই সম্মতিকার শুরু করতে পারি ?

হ্যাঁ

না

অংশগ্রহণকারীর স্বাক্ষর ও তারিখ.....

উপাত্ত সংগ্রহকারীর স্বাক্ষর ও তারিখ.....

গবেষকের স্বাক্ষর ও তারিখ

Title: Health related quality of life among the “Rana Plaza” Tragedy Survivors” in the community.

Name of Interviewer:

Date of interview: Time of interview:

Respondent Identification

Name of Respondent:..... ID no:

Address:.....

Contact number where possible:

Part I: Socio Demographic Information

Please give a tick \checkmark mark on the left side of the box of correct answer. It also indicates that there will be two possible answers but you give tick mark closer answer.

SN	Question	Response
01.	Sex	<input type="checkbox"/> Male <input type="checkbox"/> Female
02.	How old are you?	Years <input style="width: 50px;" type="text"/>
03.	What is the highest level of education you have completed?	<input type="checkbox"/> Illiterate <input type="checkbox"/> primary <input type="checkbox"/> S.S.C <input type="checkbox"/> H.S.C <input type="checkbox"/> Honors <input type="checkbox"/> Masters
04.	What is your marital status?	<input type="checkbox"/> Single <input type="checkbox"/> Married <input type="checkbox"/> Separated <input type="checkbox"/> Divorced <input type="checkbox"/> Unmarried

Part II: Socio-economic Information

SN	Question	Response
05.	Do you have any job?	<input type="checkbox"/> Yes <input type="checkbox"/> No
06.	Which one of this list best describes your main work status now? [skip question number 06 if the question number 05 answer in No]	<input type="checkbox"/> Government employee <input type="checkbox"/> Non-government employee <input type="checkbox"/> Self-employed
07.	Types of injury	<input type="checkbox"/> Amputation of Upper limb <input type="checkbox"/> Amputation of Lower Limb <input type="checkbox"/> Fracture <input type="checkbox"/> Spinal Cord Injury <input type="checkbox"/> Musculoskeletal dysfunction <input type="checkbox"/> Others

SF-36 English:

1. In general, would you say your health is

Excellent



Very good



Good



Fair



Poor



2. Compared to one year ago, how would you rate your health in general now?

Much better
now than one
year ago



Somewhat
Better now than
one
year ago



About the
same as
one year ago



Somewhat
worse
now than one
year ago



Much worse
now than one
year ago



**3 The following questions are about activities you might do during a typical day.
Does your health now Limit you in these activities? If so, how much?**

	Yes, limited a lot	Yes, limited a little	No, not limited at all
Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	▼ <input type="checkbox"/>	▼ <input type="checkbox"/>	▼ <input type="checkbox"/>
Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lifting or carrying groceries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climbing several flights of stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climbing one flight of stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bending, kneeling, or stooping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking more than a kilometre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking several hundred metres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking one hundred metres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bathing or dressing yourself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
	▼	▼	▼	▼	▼
a. Cut down on the amount of time you spent on work or other activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Accomplished less than you would like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Were limited in the kind of work or other activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Had difficulty performing the work or other activities (for example, it took extra effort)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. During the past 4 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
	▼	▼	▼	▼	▼
a. Cut down on the amount of time you spent on work or other activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Accomplished less than you would like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Did work or other activities less carefully than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. During the past 4 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups?

Not at all	Slightly	Moderately	Quite a bit	Extremely
▼	▼	▼	▼	▼
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. How much bodily pain have you had during the past 4 weeks?

None	Very mild	Mild	Moderate	Severe	Very severe
▼	▼	▼	▼	▼	▼
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	Slightly	Moderately	Quite a bit	Extremely
▼	▼	▼	▼	▼
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. These questions are about how you feel and how things have been with you during the past 4 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks.

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
Did you feel full of life?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you been very nervous?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you felt so down in the dumps that nothing could Cheer you up?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you felt calm and Peaceful?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have a lot of energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you felt downhearted and depressed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you feel worn out?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking several hundred metres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you been happy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you feel tired?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time	None of the time
▼	▼	▼	▼	▼
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. How TRUE or FALSE is each of the following statements for you?

	Definitely True	Mostly true	Don't know	Mostly false	Definitely False
	▼	▼	▼	▼	▼
a. I seem to get sick a little easier than other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. I am as healthy as anybody I know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. I expect my health to get worse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d My health is excellent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Title: Health related quality of life among the “Rana Plaza Tragedy Survivors” in the community.

“রানা প্লাজা দুর্ঘটনায় বেঁচে যাওয়া মানুষের স্বাস্থ্য সম্পর্কিত সামাজিক জীবন যাত্রার মান”

তথ্য গ্রহনকারীর নাম:.....।

তথ্য নিবন্ধনের দিনঃসময়ঃ

তথ্য প্রদানকারীর পরিচিতি

তথ্য প্রদানকারীর নামঃ আইডি নং

ঠিকানা.....মোবাইল.....

পৰ্ব I: জনসংখ্যাভিত্তিক তথ্যাবলি(Demographic Information)

অনুগ্রহপূৰ্বক নিচের প্রশ্নগুলোর মধ্যে সঠিক উত্তরের বাম পাশে টিক চিহ্ন দিন। উল্লেখিত যে নিচের প্রশ্নগুলোর মধ্যে একই প্রশ্নের দুটি উত্তর হতে পারে। কিন্তু আপনি সবচেয়ে কাছের(গ্রহনযোগ্য) উত্তরটিতে টিক চিহ্ন দিন।

ক্রমিক নং	প্রশ্নসমূহ	উত্তর
০১।	লিঙ্গ	<input type="checkbox"/> পুরুষ <input type="checkbox"/> মহিলা
০২।	আপনার বয়স কত?	বয়স <input type="text"/>
০৩।	আপনি সর্বোচ্চ কোন শ্রেণী পর্যন্ত লেখাপড়া করেছেন?	<input type="checkbox"/> অশিক্ষিত <input type="checkbox"/> প্রাইমারী <input type="checkbox"/> এস.এস.সি <input type="checkbox"/> এইচ.এস.সি <input type="checkbox"/> স্নাতক পাশ <input type="checkbox"/> মাস্টার্স
০৪।	আপনার বৈবাহিক অবস্থা কি?	<input type="checkbox"/> অবিবাহিত <input type="checkbox"/> বিবাহিত <input type="checkbox"/> তালাকপ্রাপ্ত <input type="checkbox"/> বিধবা

পর্ব II: আর্থসামাজিক তথ্যাবলি (socio-economic demographic information)

ক্রমিক নং	প্রশ্নসমূহ	উত্তর
০৫।	আপনি কি কোন চাকরি করছেন?	<input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না
০৬।	পাশের তালিকার বর্তমানে কোন পদমর্যাদা আপনার জন্য উপযুক্ত? [যদি প্রশ্ন নম্বর ০৫ এর উত্তর না হয় তাহলে প্রশ্ন নম্বর ০৬ এর উত্তর করার প্রয়োজন নাই]	<input type="checkbox"/> সরকারি চাকুরিজীবী <input type="checkbox"/> বেসকারি চাকুরিজীবী <input type="checkbox"/> আত্মকর্মসংস্থান
০৭।	আঘাতের ধরণ?	<input type="checkbox"/> হাতের অঙ্গহানি <input type="checkbox"/> পায়ের অঙ্গহানি <input type="checkbox"/> ফ্র্যাকচার <input type="checkbox"/> স্পানাইল ইনজুরি <input type="checkbox"/> হাড়মাংস পেশি সংক্রান্ত <input type="checkbox"/> অন্যান্য

SF-36 প্রশ্নাবলী

সাধারণ স্বাস্থ্য:

১. সাধারণভাবে, আপনি বলতে হবে আপনার স্বাস্থ্য হল

১. চমৎকার ২. খুব ভালো ৩. ভাল ৪. মুটামুটি ৫. খারাপ

২. সাধারণভাবে গত এক বছর আগে তুলনায় আপনার স্বাস্থ্য বর্তমানে কেমন ?

গত ভালো এক গত ভালো এক প্রায় গত গত বছরেরও গত বছরেরও
বছরেরও তুলনায় বছরেরও তুলনায় বছরের তুলনায় এখন তুলনায় এখন
এখন অনেক ভালো এখন খানিকটা মতই। কিছুটা খারাপ। বেশী খারাপ
। ভালো। ।

▼

▼

▼

▼

▼

৩. নিম্নো লিখিত প্রশ্নগুলি আপনি একটি দিনে কাজকর্মগুলি করে থাকতে পারেন সেই সম্পর্কিত। আপনার স্বাস্থ্য কি এখন আপনার এই সমস্ত কর্ম সম্পাদনে অন্তরায় হয়ে দাঁড়িয়েছে? যদি হ্যাঁ হয়, তবে কতখানি যেমন, চলমান ভারী বস্তু উদ্ধরণ, শ্রমসাধ্য খেলায় অংশ হিসেবে সবল কার্যক্রম?

হ্যাঁ অনেকখানি হ্যাঁ অল্পস্বল্প না,একেবারে
 অন্তরায় হয়ে অন্তরায় হয়ে অন্তরায় হয় নি
 দাঁড়িয়েছে দাঁড়িয়েছে



a. অতিমাথায় পরিশ্রম সাধ্য
 কার্যবলি যেমন ভারী জিনিস
 তোলা , কষ্ট সাধ্য খেলাধুলা
 অংশগ্রন করা

b. অপেক্ষাকৃত কম পরিশ্রম সাধ্য
 কার্যবলি , যেমন টেবিল সরানো,
 বাগান কাজ করা , সাইকেল
 চালানো

c. চাল-ডাল ইত্যাদি শুকনো
 বাজার জিনিস তোলো বা বহন
 করা

d. কয়েক তলা সিঁড়ি বেয়ে ওটা

e. এক তলা সিঁড়ি বেয়ে ওটা

f. ঝোঁকা, হাঁটু গেড়ে বসা , নীচু
 হওয়া

g. এক কিলোমিটারের বেশী হাঁটা

h. কয়েকশো

i. একশো মিটার হাঁটা

৪. গত চার সপ্তাহে, আপনার শারীরিক অবস্থা কারণে , কতবার আপনার দৈনন্দিন কার্যক্রম নিম্নলিখিত সমস্যার গুলি মধ্যে কোনটি দেখা দিয়েছিল ?

	সব সময়	বেশীরভাগ সময়	মাঝে মধ্যে	খুবই সময়	কম কখনই নয়
	▼	▼	▼	▼	▼
আপনার কর্ম ক্ষেত্র এবং অন্যান্য কাজে থেকে কম সময় দিতে পেরেছেন	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
আপনি যতটা চেয়েছিলেন তার থাকে কম কর্ম সম্পাদন করতে পেরেছেন	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
আপনার কৃত কর্ম কাণ্ডে মধ্যে আপনার কাজের গুণী সীমাবদ্ধ ছিল	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
আপনার কাজ করতে গিয়ে অসুবিধা হয়েছে	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

৫. গত চার সপ্তাহে, আপনি আপনার মানসিক অবস্থা কাজ বা অন্যান্য নিয়মিত দৈনন্দিন কার্যক্রম যেমন সঙ্গে নিম্নলিখিত সমস্যার কোনো ছিল ?

	সব সময়	বেশীরভাগ সময়	মাঝে মধ্যে	খুবই কমসময়	কখনই নয়
	▼	▼	▼	▼	▼
আপনার কর্ম ক্ষেত্র এবং অন্যান্য কাজে থেকে কম সময় দিতে পেরেছেন	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

আপনি যতটা চেয়েছিলেন

তার থেকে কম কর্ম
সম্পাদন করতে পেরেছেন
আপনার কৃত কর্ম কাণ্ডে

মধ্যে অনেক কম খেয়াল
করতে পেরেছি

৬. গত চার সপ্তাহে আপনার পরিবার, বন্ধুবান্ধব, প্রতিবেশী সঙ্গে সামাজিক ক্রিয়াকর্ম,
আপনার শারীরিক অবস্থা বা মানসিক সমস্যাগুলি, কতখানি বাধা সৃষ্টি করেছে?

একেবারে না	সামান্য রকম	মাঝামাঝি রকম	বেশ অনেকখানি	অত্যন্তবেশী রকম
▼	▼	▼	▼	▼
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

৭. গত চার সপ্তাহে আপনি কতখানি শারীরিক যন্ত্রণা ভোগ করেছেন?

একেবারে না	সামান্য রকম	মাঝামাঝি রকম	বেশ অনেকখানি	অত্যন্ত
▼	▼	▼	▼	▼
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

৮. গত চার সপ্তাহে আপনি কতখানি শারীরিক ব্যথাবেদনা আপনার (ঘরে ও বাইরের)
কাজকর্ম কতখানি বাধা সৃষ্টি ভোগ করেছে?

একেবারে না	সামান্য রকম	মাঝামাঝি রকম	বেশ অনেকখানি	অত্যন্ত
▼	▼	▼	▼	▼
□	□	□	□	□

৯. গত চার সপ্তাহে, আপনার শারীরিক অবস্থা কিরকম কেটেছে সেই সম্পর্কিত। যে
রকম কেটেছে সেই সম্পর্কিত প্রশ্ন উত্তর দিন।

	সব সময়	বেশীরভাগ সময়	মাঝে মাঝে	খুবইকম সময়	কখনই নয়
আপনি কি খুব প্রানবন্ত বোধ করছিলেন	▼	▼	▼	▼	▼
	□	□	□	□	□
আপনি কি খুব স্নায়ুবিধ ভাবে দুর্বল হয়ে পড়ছিলেন?	▼	▼	▼	▼	▼
	□	□	□	□	□
আপনি কি মানসিক অবসাদ গ্রস্ত হয়ে পরেছিলেন	▼	▼	▼	▼	▼
	□	□	□	□	□
আপনি কি সিদ্ধ ও শান্ত ছিলেন?	▼	▼	▼	▼	▼
	□	□	□	□	□

আপনার কি প্রচুর প্রাণশক্তি ছিল?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
আপনি কি মানসিকভাবে হতাশ ও অবসাদগ্রস্ত হয়ে পড়েছিলেন?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
আপনি কি বিদ্রুত বোধ করেছিলেন?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
আপনি কি আনন্দে ছিলেন?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
আপনি কি ক্লান্ত ছিলেন?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

১০। গত চার সপ্তাহে আপনি কতখানি শারীরিক অবস্থা ও মানসিক সমস্যাগুলি আপনার
ক্রিয়াকর্মে বাধা সৃষ্টি করেছে?

সব সময়	বেশীরভাগ সময়	মাঝে মাঝে	খুবই কম সময়	কখনই নয়
▼	▼	▼	▼	▼
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

১১ . নিচের বিবৃতি প্রত্যেকটি আপনার ক্ষেত্রে কত দূর সত্য বা মিথ্যা ?

	অবশ্যই সত্য	বেশীরভাগ সত্য	জানি না	বেশীর ভাগই মিথ্যা	অবশ্যই মিথ্যা
আমি মনে হয় আমি যেন অন্যদের থেকে অস্থিত হয়ে পরছি	▼ <input type="checkbox"/>	▼ <input type="checkbox"/>	▼ <input type="checkbox"/>	▼ <input type="checkbox"/>	▼ <input type="checkbox"/>
আমি আমার জানাশুনা যে কোন লোক মতো সুস্থবান	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
আমি স্বাস্থ্য খারাপ হবার আশঙ্কা করি	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
আমার স্বাস্থ্য খুব ভালো	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Permission letter

March 30, 2017

Head of the Department
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343.

Subject: Seeking permission for data collection to conduct my research project.

Dear Sir,

With due respect and humble submission to state that I am Md. Sahnawaz Sajib, a student of 4th Professional B.Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). The ethical committee has approved my research project entitled on **“HEALTH RELATED QUALITY OF LIFE AMONG THE RANA PLAZA TRAGEDY SURVIVORS IN COMMUNITY”**. To conduct this research project, I want to collect data from the survivors living at Savar and Dhamrai upazilla and Manikgonj district. I would like to assure that anything of my study will not be harmful for the participants.

I therefore, pray and hope that you would be kind enough to grant my application and oblige thereby.

Sincerely yours,

Md. Sahnawaz Sajib.

Md. Sahnawaz Sajib
Student of 4th Professional B.Sc. in Physiotherapy
Roll-28, Session:2012-2013
Bangladesh Health Professions Institute (BHPI)
(An academic Institute of CRP)
CRP, Chapain, Savar, Dhaka-1343.

Forwarded
Habib
30.3.17

Allowed for Data Collection
9/30/3/17
Md. Obaidul Haque
Associate Professor & Head of the Department
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)
(The Academic Institute of CRP)

CRP-Chapain, Savar, Dhaka, Tel: 7745464-5, 7741404, Fax: 7745069
BHPI-Mirpur Campus, Plot-A/5, Block-A, Section-14, Mirpur, Dhaka-1206. Tel: 8020178, 8053662-3, Fax: 8053661

তারিখ : ০৬.০৪.২০১৭

প্রতি
সহকারী ব্যবস্থাপক
রিহ্যাবিলিটেশন উইং
সিআরপি, সাভার, ঢাকা।

বিষয় : রিসার্চ প্রজেক্ট (dissertation) প্রসঙ্গে।

জনাব,

বিএইচপিআই'র ৪র্থ পেশাগত বিএসসি ইন ফিজিওথেরাপি কোর্সের ছাত্র মোঃ শাহনেওয়াজ সজীবকে তার রিসার্চ সংক্রান্ত কাজের জন্য আগামী ১০.০৪.২০১৭ তারিখ থেকে ৩০.০৫.২০১৭ তারিখ পর্যন্ত সময়ে আপনার নিকট প্রেরণ করা হলো। তার রিসার্চ শিরোনাম

“ Health related quality of life among the Rana Plaza tragedy survivors in the community.”

তাই তাকে সার্বিক সহযোগীতা প্রদানের জন্য অনুরোধ করছি।

ধন্যবাদান্তে

মোঃ ওবায়দুল হক
সহযোগী অধ্যাপক ও বিভাগীয় প্রধান
ফিজিওথেরাপি বিভাগ
বিএইচপিআই।



Forwarding to CBR department for
necessary cooperation, Thanks
@mm
1542



বাংলাদেশ হেল্থ প্রফেশন ইনস্টিটিউট (বিএইচপিআই)
BANGLADESH HEALTH PROFESSIONS INSTITUTE (BHPI)
(The Academic Institute of CRP)

Ref: CRP-BHPI/IRB/04/17/110

Date: 15/04/2017

To
Md. Sahnawaz Sajib
B.Sc. in Physiotherapy
Session: 2012-2013, Student ID 112120029
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: "Health related quality of life among the RANA PLAZA Tragedy Survivors in the community".

Dear Sahnawaz Sajib,

The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application on 16/08/2016 to conduct the above mentioned research, with yourself, as the Principal investigator. The following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Thesis Proposal
2	Questionnaire (English and Bengali version)
3	Information sheet & consent form.

Since the study involves SF-36 questionnaire that takes 20 to 30 minutes and have no likelihood of any harm to the participants. The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 09:00 AM on August 17, 2016 at BHPI.

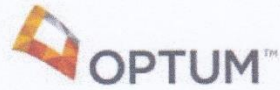
The institutional Ethics committee expects to be informed about the progress of the study, any changes occurring in the course of the study, any revision in the protocol and patient information or informed consent and ask to be provided a copy of the final report. This Ethics committee is working accordance to Nuremberg Code 1947, World Medical Association Declaration of Helsinki, 1964 - 2013 and other applicable regulation.

Best regards,

Muhammad Millat Hossain
Assistant Professor, Dept. of Rehabilitation Science
Member Secretary, Institutional Review Board (IRB)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

CRP-Chapain, Savar, Dhaka-1343. Tel: 02-7745464-5, 7741404, Fax: 02-7745069,
Email: contact@crp-bangladesh.org, www.crp-bangladesh.org

APPENDIX B



LICENSE AGREEMENT - DETAILS

Licensee: Bangladesh Health Professions Institute
Sahnawaz Sajib

License Number: QM039983

Amendment to: N/A

Study Term: 04/01/17 to 04/01/18

Approved Purpose
Health relate quality of life among the Rana Plaza
survivors in community

Licensed Surveys (Modes) and Services:

Item	Description	Mode of Admin	Quantity
PROJ01	License Fee		1
ADMINS	Administrations		100
ES0220	SF-36v2, Standard Recall	Paper	1

Approved Languages:
India (Bengali)

SS100	Scoring Software v5		1
SS108	SS v5 Key: SF-36v2		100
EM125	SF-36v2 User's Manual 3rd Ed.		1

TOTAL FEES: 0.00 USD