DISABILITY DUE TO ROAD TRAFFIC ACCIDENT IN BANGLADESH

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

DISABILITY DUE TO ROAD TRAFFIC ACCIDENT IN BANGLADESH

Submitted by **Moeidu Bhuian Priti**, for the partial fulfilment of the requirement for the degree of Bachelor of Science in Physiotherapy (B.Sc. PT).

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DECLARATION

This work has not previously been accepted in substance for any degree and isn't concurrently submitted in candidature for any degree. This dissertation is being submitted in partial fulfillment of the requirements for the degree of B.Sc. in Physiotherapy.

I confirm that if anything identified in my work that I have done plagiarism or any form of cheating that will directly awarded me fail and I am subject to disciplinary actions of authority. I confirm that the electronic copy is identical to the bound copy of the Thesis.

In case of dissemination the finding of this project for future publication, research supervisor will highly concern, it will be duly acknowledged as graduate thesis and consent will be taken from the physiotherapy department of Saic College of Medical Science and Technology.

Signature: **Date:**

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Acronyms

APA	American psychological association.
CI	Confidence interval
DALY	Disability based adjusted life year.
DSM-5	Diagnostic and statistical manual of mental disorder
ICRC	International Committee for the Red Cross
MAIS	Maximum abbreviated injury scale.
RTI	Road traffic injury.
SD	Standard Deviation
UNICEF	United Nations international children emergency fund
USAID	United States agency for international development
WHO	World Health Organization
YLD	Years lived with disability

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Abstract

Background: Disability is a state in which person daily activities are continuously restricted. Additionally, in 1993, the disability services act passed. In 2010, road traffic accidents caused 34% of all years lived with disability (YLD) related to injury, killing 1.3 million people worldwide. Approximately 40 years ago there has been a significant decline in the number of fatal traffic accident in high income countries with Australia seeing the biggest reductions.

Objective: To determine the disability after road traffic accident in Kishoreganj district.

Methodology: It was a descriptive type of cross-sectional study conducted among physically disabled individuals. This study involved participant from age 14 to 60 years who were physically disabled. 128 individuals were involved in the study who full filled the inclusion criteria. The participants were selected using convenience sampling technique, data was collected direct interview method and were analyzed with the help of SPSS software. The results were presented by tables, figures and graphs.

Results: Majority of participants were male and were from rural area. Majority of participants were illiterate and most of them had poor family income. Female had given less educational and occupational opportunity.

Conclusion: the study concluded that people with disability were at greater risk of having psychological problems. The other socio-demographic status of people plays less role in psychological status of people with disability, the main cause of psychological problem among them is disability itself. The study showed the vulnerability of people with disability, thus proper support from family, society and government are needed to decrease the risk of psychological problems.

Key words: Road traffic accident, disability.

HAPTER – I INTRODUCTION

1.1 Background

Over the past few years, there had been an alarming increase in traffic accidents in Bangladesh, particularly highway accidents. According to a study by the ACCIDENT RESEARCH CENTRE (ARC) at BUET, traffic accidents result in estimated 35,000 injuries and 12,000 fatalities per year. The yearly fatality rate from traffic accidents is reported to be 85.6 per 10,000 cars, according to World Bank data. As a result, Bangladesh's roads have grown dangerous. RTAs are a hotly debated public health issue in Bangladesh that account for approximately 21000 fatalities annually. The majority of these fatalities frequently involve pedestrians and passengers of small cars. So, RTIs lead to higher health, personal, family and social care expenses because to accidental demise and impairment. In addition, due to the rapid urbanization and RTAs are expanding day by day because to the growing quantity of automobiles.

The majority of these fatalities RTAs are now sustainable development goal (SDG) issues. In LMCs deaths are occurring globally. Over the past few years, there has been an alarming increase in traffic accidents in Bangladesh, particularly highway accidents. According to a study by the accident research center (ARC) at BUET, traffic accidents result in an estimated 35,000 injuries and 12,000 fatalities per year. The yearly fatality rate from traffic accidents was reported to be 85.6 per 10,000 cars according to World Bank data. As a result, Bangladesh roads have grown dangerous. Disability is a state in which person daily activities are continuously restricted. Additionally, in 1993, the disability services act passed. In 2010, road traffic accidents caused 34% of all years lived with disability (YLD) related to injury, killing 1.3 million people worldwide. Approximately 40 years ago there has been a significant decline in the number of fatal traffic accident in high income countries with Australia seeing the biggest reductions.

Disability is a state in which person daily activities are continuously restricted. Additionally, in 1993, the disability services act passed. In 2010, road traffic accidents caused 34% of all years lived with disability (YLD) related to injury, killing 1.3 million people worldwide. Approximately 40 years ago there has been a significant decline in the number of fatal traffic accident in high income countries with Australia seeing the biggest reductions. Researcher stated that, it translates via disability which was

recognized by psychiatric, neurological, intellectual, cognitive, physical, or sensory impairment which may be permanent or likely to be permanent, and which emerges from the interaction of social, communication, learning and daily life.

Activities and more assistance for moving forward in their lives. The most typical sort of instead of sensory and intellectual impairment. The respiratory, neurological, musculoskeletal and circulatory system all contribute to impairment. The disability based –adjusted life –year (DALY) is currently the international standard measure for integrating the fatal and non-fatal consequences of illness (Peden et al., 2002, 2004; Murray et al., 2013; Gabbe et al., 2014). DALY adaptation was recently utilized in a study that was intended to quantify the combined burden of roadway accidents , deaths , and injuries (Dhondt et al., 2013). This study, which concentrated on DALYs per kilometer traveled by mode of transportation, supported more extensive prior research that showed motorcycling had the highest disease burden per kilometer. There is a lack of research to inform future decisions in this area. The definition of a serious motor vehicle accident as a policy indicator has a number of problems, including: when a particular severity cut –off point is chosen, the burden of road injury is recorded. Modern techniques to measure the effect of diseases and injuries on population health may be useful to get insight into burden of road traffic injuries separated by severity cut off point (Polinder et al., 2012).

RTI patients that were treated at the ED represented 83% of RTI incidence, but accounted for 26% of total YLD. For the admitted patients, MAIS2, MAIS3+ accounted for 3%, 41% and 39% of total YLD respectively. In the Netherlands, RTI caused 76,400 DALYs annually (4.7 DALY per 1000 people), 64% of which were due to non-fatal injury (48,500 YLD versus 27,900YLI). Bicycle injuries that do not include a motor vehicle in the collision make up by far the majority of all YLDs when broken down by type of road user (13,000 YLD). When examining the distribution of MAIS severity levels by age, it is clear that the percentage of MAIS remains consistent across all age groups whereas the percentage of MAIS 3+ rises with age. The MAIS rating is barely different between boys and females. In the Netherlands (population: roughly 16.4 million), 127,700 patients visited a hospital annually on an average between 2007 and 2009 owing to RTI. From the RTI after were sent home, compared to 21,400 RTI patients who were hospitalized to hospitals on average. The majority of hospitalized

patients (64%) who were less than 65 years old were men. There were women than in the 65+ age group (55%).

Bicycle injuries that do not include a motor vehicle in the collision make up by far the majority of all YLDs when broken down by type of road user (13,000 YLD). When examining the distribution of MAIS severity levels by age, it is clear that the percentage of MAIS remains consistent across all age groups whereas the percentage of MAIS 3+ rises with age. The MAIS rating is barely different between boys and females. In the Netherlands (population: roughly 16.4 million), 127,700 patients visited a hospital annually on an average between 2007 and 2009 owing to RTI. From the RTI after were sent home, compared to 21,400 RTI patients who were hospitalized to hospitals on average. The majority of hospitalized patients (64%) who were less than 65 years old were men. There were women than in the 65+ age group (55%). More than half (68%) of these patients aged 65 or older rode bicycles. The only age category of admitted patients were more than (63%) of were between ages of 18 and 34.

The WHODAS 2.0 scoring method enables more precise analyses that utilize all of the answers category data for comparisons between population and subpopulation. it first codes each response to an item as “none”, “mild”, “moderate”, “severe”, or “extreme” before summing the scores by differently weighting the items and the severity levels . Transforming the summary score into a number between 0 and 100(where 0 indicates no handicap and 100 indicates total disability). Measuring health and disability: manual for who disability assessment schedule (WHODAS2.0) (Ustun et al., 2010).

The WHODAS 2.0 scoring method enables more precise analyses that utilize all of the answer category data for comparisons between populations or subpopulations. It first codes each response to an item as “none”, “mild”, “moderate”, “severe”, or “extreme” before summing the scores by differently weighting the items and the severity levels. Transforming the summary score into a number between 0 and 100(where 0 indicates no handicap and 100 indicates total disability). Measuring health and disability: manual for WHO disability assessment schedule (WHODAS2.0). Using health data from Brussels and Flemish populations, we assessed the health risk of RTAs in this study. Our effort was to examine both the injuries and the strain they place on other road user’s yields comprehensive data for the areas road traffic strategy. Our findings about injury pattern generally agree with those from other studies.

1.2 Rationale

Disability is the term which cover all the problems of disabilities like an umbrella shape, covering activity limitation, participation restriction and any kind of impairment. psychological disability is the term which is refer to the mental condition or disorder that effect the person's condition , emotions and Behavior . The worldwide condition related to psychological problem. who shows that one into four person have the problem related to the psychological problem like; mental or neurological disorders .in some points in their lives . In October 4, Geneva declared that the mental health regarding to psychological disorders around 450 million people was suffering from such condition. Disabilities due to injuries in traffic accidents cause medical, social and economic problems and impose a considerable effect on quality of life. In addition to health, a number of factors, such as economic status, relations with family and friends, job opportunities, educational opportunities and environmental factors are important in determining the level of quality of life. The purpose of this study was to investigate the impact of disabilities due to road traffic accidents. Furthermore, the essence of this study is not an exhaustive description due to road traffic accidents but to give a critical analysis on its causes, contributing and determinant factors, effects and its threat to human security. Impairment is loss or abnormality of a body structure or of a psychological or physiological function while disability is characterized by limited activity.

Around the world, traffic accidents are a severe issue. Despite spending money on reducing the frequency of traffic accidents, The Czech Republic, The European Union, and The world health organization recorded an average of 1.8 fatalities per day and 59 injuries in 2015. The immediate victim of road traffic accidents and their families are the group most impacted by the aftereffects. The direct victims of traffic accidents experience negative health effects more than others. The effects of road traffic accidents are essentially mirrored in the social sphere since they result in a significant number of fatal incapacitating injuries. Policymakers are increasingly using non – fatal road traffic injuries (RTI) as a gauge of traffic safety. There is disagreement over the severity level that should be the benchmark for measuring achievement in terms of road safety. The maximum abbreviated injury scale (MAIS), used internationally in the field of road safety. The severity cut off point selection has a significant impact on the RTI disease burden measurements.

Although many people who are injured in traffic accidents on the road recover from their wounds, some people never fully recover. According to the literature, many of them suffer from psychological issues like depression and post-traumatic stress disorder (PTSD), as well as deficiencies in self – reported health and households have been demonstrated to bear a significant financial cost due to traffic – related injuries. Losing a breadwinner, paying for lengthy medical care, or having to take care of a family member who is crippled due to a traffic accident can cause families to fall further into poverty.

1.3 Research Question

What are the type of disabilities occur after road traffic accident in Kishoregonj district?

1.4 Objectives of the study

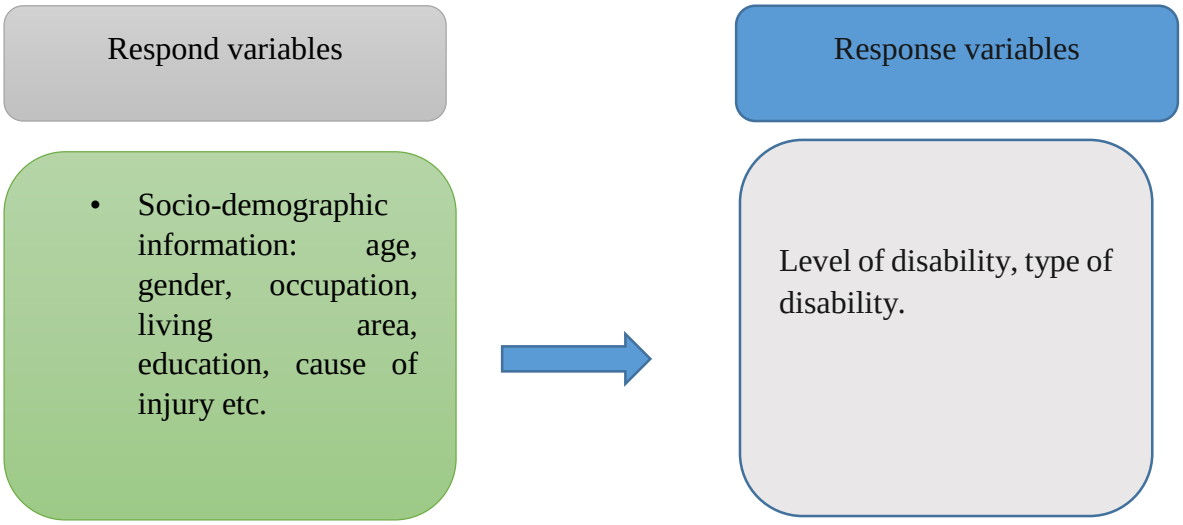
1.4.1 General objective:

To determine the disability after road traffic accident in kishoreganj district.

1.4.2 Specific objectives:

- To assess the disability level of the participants.
- To find out the association between type of disability and occupation of the participant.
- To examine the association between type of disability and disability status measured by WHODAS 2.0.
- To explore the socio demographic information of the participants.

1.5 List of variables of the study



1.6 Operational definitions of the variables

DISABILITY: A disability is any condition of the body or mind (impairment) that makes it more difficult for the person with the condition to do certain activities and interact with the world around them.

IMPAIRMENT: Any loss or abnormality of psychological, physiological or anatomical structure or function.

HANDICAP: Any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being.

ROAD TRAFFIC ACCIDENT: a traffic accident is defined as an accident involving at least one vehicle on a road open to public traffic in which at least one person is injured or killed.

TRAUMA: trauma is an emotional response to a terrible event like an accident, rape or natural disaster.

COLLISION: an instance of one moving object or person striking violently against another.

WHODAS 2.0 SCALE: the whodas2.0 shows that sensitivity to change in people who have certain health conditions (e.g. cataract, hip or knee problems, and depression, schizophrenia or alcohol problems) as it can pick up improvements in functioning following treatment.

CHAPTER – II LITERATURE REVIEW

The disability adjusted life year (Daly) was currently the international standard measure for integrating the fatal and non –fatal consequences of illness. DALY adaptation was recently utilized in a study that was intended to quantify the combined burden of roadway accidents, deaths, and injuries (The Haagsma et al., 2012). This study which concentrated on DALYs per kilometer traveled by mode of transportation, supported more extensive prior research that showed motorcycling had the highest disease burden per kilometer. (Dhondt et al., 2013).

There was a lack of research to inform future decisions in this area. The definition of a serious motor vehicle accident as a policy indicator had a number of problems, including: when a particular severity cut off point was chosen, the burden of road injury was recorded. Modern techniques to measure the effect of diseases and injuries on population health may be useful to get insight into burden of road injuries separate by severity cut –off point (Polinder et al., 2012). RTI patients that were treated at the ED represented 83% of RTI incidence, but accounted for 26% of total YLD. For the admitted patients, MAIS1, MAIS2, MAIS3+ accounted for 3%, 41% and 39% of total YLD respectively. In the Netherlands, RTI caused 76,400 DALYs annually (4.7 DALY per 1000 people).

The prevalence of disabilities was determined by global trends in health conditions, environmental factors, and other elements like traffic accidents, natural disasters, conflict, diet and substance abuse. For instance, it was predicted that 20 to 50 million people, each year as a result of road traffic accidents. Road traffic injuries are thought to account for 1.7% of all years lived with disability, though the number of people rendered incapacitated as a result of these collisions was not extensively documented. People who were unemployed, earn little money, or had only a low level of education were more likely to become disabled. People from proper households were known to have a much higher risk of impairment when compared to others (WHO 2011).

According to estimates from the WHO and World Bank (2011), more than a billion people (or 15% of the world population) were disabled. There were known restrictions on this estimate that the 15.6% and 19.4% of people live with a disability respectively. Estimates of the global burden of disease 95 million (5.1%) children, of whom 13

million (0.7%) had a childhood handicap. Significant impairment a lack of international agreement on how to define disabilities and survey issues have made comparing prevalence difficult (WHO and WORLD BANK 2011).

Analysis of data from the world health survey for 54 nations estimated that there were be 14% (Mitra and Sambamoorthi, 2014). The definition of a disability, the standards and procedures for data collecting, the reliability of the sources, and the range of disclosure rates were all variables that effect the prevalence of impairment (Al ju'beh, 2021). Bicycle injuries that do not include a motor vehicle in the collision make up by far the majority of all YLDs when broken down by type of road user (13,000YLD).

When examining the distribution of MAIS severity levels by age, it was clear that the percentage of MAIS remains consistent across all age group whereas the percentage of MAIS3+ rises with age. The MAIS rating was barely different between boys and females. In the Netherlands (population: roughly 16.4 million), 127,700 patients visited a hospital annually on an average between 2007 and 2008 owing to RTI. From the RTI after receiving care in the ED, 83% of patients were sent home, compared to 21,400 RTI patients who were hospitalized to hospitals on average. The majority of hospitalized patients (64%) who were less than 65 years old were men. There were women than in the 65+ age group (55%). More than half (68%) of these patients aged 65 or older rode bicycles. The only age category of admitted patients were more than (63%) of were between ages of 18 and 34. The RTI were brought on by an accident involving a motorized vehicle (auto, motorcycle, or moped). One fourth of the patients who were admitted had a skull – brain damage. Fractures of the upper and lower extremities (16% and 15% respectively) were common kind of injury.

The world health organization disability assessment schedule (WHODAS 2.0) demonstrates changes sensitivity in individuals with specific medical illness (such as cataracts, hip or knee issues, depression, schizophrenia, or alcoholism) as it can detect improvements in functioning after treatment. The instrument as a whole displayed a resilient factor structure that stayed stable across countries and various patient populations because all of the items were chosen in accordance with item response theory. Confirmatory factor analysis revealed a strong correlation between the domains and a general disability factor as well as the item factor structure and the domains. These findings were on favor of domains being one-dimensional .The WHODAS 2.0

scored favorably in comparison to other measures of impairment or health status .The WHODAS 5 – point scale , which allows the clinician to categorize a person's level of disability as none (0- 0.49), mild (0.5-1.49), moderate (1.5-2.49), severe (2.5-3.49), or extreme is comparable to the average scores (3.5-4). In the DSM – 5 field trials, it was discovered that the average domain and general disability ratings were trustworthy, simple to use and clinically helpful (APA, 2021).The raw domain score was divided by the average domain score. The raw domain score was divided by the total number of items in the domain to determine the average domain Score to compute the average general disability score, divide the raw overall score by the number of elements in the measure. Data that enables comparison to a sizable sample (n=1,431) from a variety of populations (general population, populations with physical difficulties, populations with mental or emotional problems, populations with alcohol and drug use problems from over 21 nations is given (WHO, 2010).A percentile of 50 denotes that a person's of disability was average when compared to the other participants in the sample.

The WHODAS 2.0 uses two techniques for scoring: score and its percentile, average rating and its percentile. Item response theory (IRT) , which considers various degrees of difficulty for each WHODAS 2.0 item, is used to calculate the initial score (1-36).The WHODAS 2.0 scoring method enables more precise analyses that utilize all of the answer category data for comparisons between populations or subpopulations. It first codes each response to an item as "none", "mild", "moderate", "severe", or "extreme" before summing the scores by differently weighting the items and the severity levels. Transforming the summary score into a number between 0 and 100(where 0 indicates no handicap and 100 indicates total disability) (Ustun et al., 2010). Measuring health and disability: manual for WHO disability assessment schedule (WHODAS2.0) World Health Organization. Using health data from Brussels and Flemish populations, we assessed the health risk of RTAs in this study. Our effort was to examine both the injuries and the strain they place on other road user's yields comprehensive data for the areas road traffic strategy. Our findings about injury pattern generally agree with those from other studies. In the area, include the general high percentage of head injuries in motor vehicle occupants, and the high percentage of lower extremities in motorcyclists and pedestrians .The relationship between passenger miles traveled and disability adds validity to these findings since DALYs provide a clear picture of which injuries have the highest burdens. The actual exposure was put

into the perspective. Our findings can therefore be used to identify the road users who are most of experiencing severe health consequences. Only a small number of studies have been able to calculate a risk; these studies frequently used other estimates, such as time traveled (Tin et al., 2010) or they calculated their risk from various injury groups. Such as major trauma or minor accidents only (Aestsens et al., 2010).The ambiguities of calculating the true risk were increased by the absence of precise exposure data such as miles involved. The impact of RTAs and the injuries or causalities they cause must be examined using more trustworthy data. A recent technique for quantifying medical data RTAs impact on health. The majority of the time, these analyses show higher incidence rates (Chini et al., 2010).

In this study we investigated an injury based method to more precisely predict the health risk of RTAs using hospital discharge data (HDD) and mortality data. The most comprehensive data sources were both population based and included both. Disability Adjusted Life Years (DALY). A valuable health measure for RTA (Pollinder et al.,2007) were used to compute exposure based rates of the road traffic health burden .Injury from traffic accidents was a significant public health issue (World health organization ,2018). According to the world health organization, 1.35 million people die each year in traffic accidents and 20 to 50 million more suffer non-fatal injuries. As they frequently had to share the road with swiftly moving motor vehicles, pedestrians, cyclists and motor cycle riders were regarded as vulnerable road users (World Health Organization ,2018).The World Health Organization (WHO) views older people, kids , disable pedestrians as being particularly vulnerable to injury on the road(World Health Organization ,2018). Road Traffic Accidents were a serious health issue.

Worldwide, road traffic accidents (RTA) claim the lives of more than 1.2 million people each year and injury millions more (Peden et al., 2004). Belgian road fatalities account for almost one third of all unnatural deaths in people under the age of 40 (Adsei, 2008) which was higher than the average for the population of the European Union (European Road Safety observatory 2011). It was far more difficult to find data on RTA injury rates, most figures came from police data. Police figures do not however , include all RTA victims .As a result , it was unlikely that an accurate assessment of the exact risk of being wounded in a motor vehicle accident can be made and police data will thus be conservative (Constant and Lagarde, 2010). According to estimates, road traffic accidents caused 110 000 fatalities, 2.5 million hospital admissions, 8–9 million minor

injuries, and economic damages amounting to 3% of India's GDP in 2005. If the current pattern continues, India will have 150 000 fatalities and 3 million hospitalizations yearly by 2010, and 200 000 fatalities and more than 3.5 million hospitalizations annually by 2015. Road traffic injuries account for up to 10%–30% of hospital registrations, and the majority of these patients have varied degrees of disability. Most victims of traffic accidents are men between the ages of 15 and 44 who come from lower socioeconomic classes (Gururaj, 2008).

Depending on the country, "any person killed immediately or dying within 30 days as a result of an injury or accident" is the definition of "road traffic fatality." RTIs are the sixth most common cause of death in India, according to the WHO, and they are more common among young and middle-aged people, who also suffer a higher proportion of hospitalizations, fatalities, impairments, and economical losses. In terms of prehospital and acute care, as well as rehabilitation, RTIs place a significant strain on the health sector. The purpose of this study is to evaluate the prevalence and effects of RTIs, identify risk factors, review existing RTI preventive strategies, including policies, processes, and interventions, and emphasize the contribution of the Indian health care system and its professionals to road safety. Due to epidemiological and demographic change, India is currently experiencing a triple epidemic of communicable and infectious diseases, non-communicable diseases, and injuries. A body lesion at the organic level caused by acute exposure to energy (mechanical, thermal, electrical, chemical, or radiant) interacting with the body at rates or amounts greater than the psychological tolerance threshold is referred to as an injury. Injury-related mortality account for 10% of all fatalities worldwide and 15% of DALYs (disability-adjusted life years). According to recent studies, injuries are a factor in 13% to 18% of all fatalities in India.

Road accidents can result in a range of injuries, from those that require merely first aid to those that result in sudden death. The police and hospitals are the most frequent sources of RTI data. Due to their medical-legal character, potential for prosecution, and need for compensation, the majority of fatalities are reported to the police. Due to a variety of factors, only a few fatalities and the bulk of injuries are reported to the authorities. A research in Bangalore compared deaths reported to police and medical staff and discovered that 5% of fatalities and more than 50% of major injuries were underreported. According to a different study from rural Haryana, the ratio of serious,

moderate, and minor injuries is 1:29:69. Every healthcare facility treats RTI patients, however due to inadequate information systems, RTI details are not readily available. Road accidents can result in a range of injuries, from those that require merely first aid to those that result in sudden death. The police and hospitals are the most frequent sources of RTI data. Due to their medical-legal character, potential for prosecution, and need for compensation, the majority of fatalities are reported to the police. Due to a variety of factors, only a few fatalities and the bulk of injuries are reported to the authorities. A research in Bangalore compared deaths reported to police and medical staff and discovered that 5% of fatalities and more than 50% of major injuries were underreported.

This study revealed that more number of people with disability were from age group 35-45. Male participants were more in this study which also implies that male population were more physically disabled than female participants. Most of the people with physical disability were from the rural area. Most of the participant were married and illiterate. Very few participants had completed graduation. Majority of female participant were housewife and male were involved in job like builder, rickshaw puller, driver, electrician. Most of the participant had low family income. Road traffic accident was the major cause of disability followed by deformity. Majority of individual were disabled from 20-30 years. Most of the participants lack access to rehabilitation service. The finding of this study can be correlated with each other. According to the society of study place the male are the bread owner of the family which increases the chance of getting work related injuries and all causing physical disability. Similarly, our study showed majority of participants were from age group 35-45, this is the major working age group. Those might had been physically disabled and in this age group, living disability for 20-30 years. Our study finding contradict from major study finding conducted in different countries. The study conducted in Portugal that majority of study population i.e. people with disability are females (Canha et al., 2016).

The study conducted in Canada also showed that majority of people with disability were female. This might be due to the cultural difference in those country. Where females also had equally given opportunity in every field. And the majority of participant were disabled from 8 years. The mean age of participant was 51 and had at least completed 10th standard (Turner & Turner, 2004).Several earlier research have evaluated the cumulative effect of traffic-related injuries and fatalities on disease burden. According

to the current study, RTIs caused 4.7 DALY per 1000 residents in the Netherlands. According to a research from a Dutch cohort of patients who had serious trauma, there were 3.9 DALY per 1000 people for RTIs (Holtslag et al., 2008). According to a French study (Lapostolle et al., 2009) that also included mortality, emergency department, and hospital register data, there were 5.4 and 1.7 DALY per 1000 for men and women, respectively. The Netherlands' higher DALY rate (3.2 against 6.0/1000 for men) is likely a result of the country's comparison to France. Similar to Belgian studies (Dhondt et al., 2013).In the context of road safety, injury severity is evaluated globally using the MAIS, however there is continuous discussion regarding the appropriate MAIS level to utilize as a cut-off point for lowering the health burden of RTI. The burden of road injury that is captured and/or missed when a specific severity cut-off point is chosen is a major problem with regard to the definition of a serious road injury. A person with an injury score of MAIS 3+ is considered to have a significant RTI. Disability is the term which cover all the problems of disabilities like an umbrella shape, covering activity limitation, participation restriction and any kind of impairment. psychological disability is the term which is refer to the mental condition or disorder that effect the person's condition , emotions and Behavior . The worldwide condition related to psychological problem. who shows that one into four person have the problem related to the psychological problem like; mental or neurological disorders .in some points in their lives . In October 4, Geneva declared that the mental health regarding to psychological disorders around 450 million people was suffering from such condition. Disabilities due to injuries in traffic accidents cause medical, social and economic problems and impose a considerable effect on quality of life. In addition to health, a number of factors, such as economic status, relations with family and friends, job opportunities, educational opportunities and environmental factors are important in determining the level of quality of life. The purpose of this study was to investigate the impact of disabilities due to road traffic accidents. Furthermore, the essence of this study is not an exhaustive description due to road traffic accidents but to give a critical analysis on its causes, contributing and determinant factors, effects and its threat to human security. Impairment is loss or abnormality of a body structure or of a psychological or physiological function while disability is characterized by limited activity .Around the world, traffic accidents are a severe issue. Despite spending money on reducing the frequency of traffic accidents, The Czech Republic, The European Union, and The world health organization recorded an average of 1.8 fatalities per day

and 59 injuries in 2015. The immediate victim of road traffic accidents and their families are the group most impacted by the aftereffects. The direct victims of traffic accidents experience negative health effects more than others. The effects of road traffic accidents are essentially mirrored in the social sphere since they result in a significant number of fatal incapacitating injuries. Policymakers are increasingly using non – fatal road traffic injuries (RTI) as a gauge of traffic safety. There is disagreement over the severity level that should be the benchmark for measuring achievement in terms of road safety. The maximum abbreviated injury scale (MAIS), used internationally in the field of road safety. The severity cut off point selection has a significant impact on the RTI disease burden measurements

CHAPTER – III METHODOLOGY

3.1 Study design

It was a descriptive type of Cross sectional study.

3.2 Study place

The study place of this research was in Kishoreganj District in Bangladesh.

3.3 Study period

The duration of the study was 12 months from 1st July 2022 to 30th June 2023.

3.4 Study population

The population of this study was disabled person who were victim of road traffic accident.

3.5 Sample size

Sample size for this study was calculated by the following equation.

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

$$n = \frac{0.438 \times (1 - .438) \times (1.96)^2}{(.05)^2}$$

=378.25

here,

n= sample size

z=1.96

p= prevalence 43.8% was taken from (giapoli et.al 1999)

q= 1-p

d=0.05

3.6 Sampling technique

The sample was collected by convenience sampling technique.

3.7 Eligibility criteria

3.7.1 Inclusion criteria

1. Disable person after road traffic accident in Kishoreganj district.

2. Both male and female.

3. Patient who were ambulant.

3.7.2 Exclusion criteria

1. Disable persons who were not interested.

2. Patients who were bedridden.

3.8 Method of data collection

To collect sample for this study face to face interview method was used.

3.9 Instrument and tools of data collection Management of data

1. Consent paper

2. Self structured Questionnaire for collecting socio demographic information.

3.9.1 Data analysis

Data had been analyzed by statistical package for social science (SPSS) version 25 and MS EXCEL.

3.10 Ethical consideration

The subjects were neither deliberately exposed nor there was any intervention involved. There were no activities that may harm or cause any problem to participants in the study. Ethical clearance was obtained from concerning authority, after getting approval from the course coordinator, supervisor. The purpose of study, data collection method was clearly explained to concern personnel. Individual consent was taken from every participant involved in study. The consent form was clearly explaining the purpose of study, there right during the data collection, about the confidentiality. The participant privacy and confidentiality was maintained. There was potential harm for participant in this study.

CHAPTER – IV RESULTS

4.1 **Analysis of socio-demographic characteristics of participants**

The study consist of total 11 variables covering almost all the information needed for the study. Description analysis such as percentage, frequency, mean, standard deviation was performed whenever needed. The results were presented with the help of tables, graphs and charts.

The below table 4.1 represents the distribution of the participants according to their age group. Around 63% of total participants where from age group less than 40 years. The age group 40-60 had second highest number of participants (32.8%). The least number of participants belonged to the age group more than 61 years (4.7%). Most of the participants were male (51.6%). The finding showed that middle aged adult were more disabled than the other age group and male were more disabled than female. It might be due to the reason that only male population were mainly involved in the risky job probably increasing risk of disability.

Table 4.1 Distribution of participation according to their age.

Age:

variables	Frequencies (n)	percentage (%)	Mean ±SD
<40	80	62.5%	34.48±17.97
40-60	42	32.8%	
>61	6	4.7%	
Total	128	100%	

Table no 4.1.1: Distribution of participants according to their gender.

Gender:

variables	Frequencies (n)	percentage (%)	Mean±SD
Male	66	51.6%	34.48±17.97
Female	62	48.4%	
Total	128	100%	

4.1.1 Education of participants

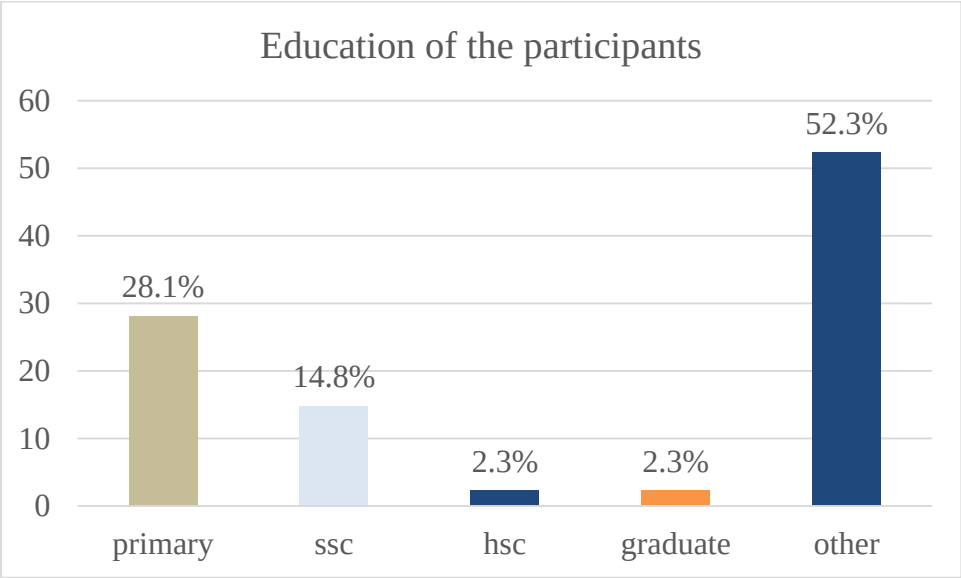


Figure: 4.1.1 Distribution of participant based on their education level.

The Figure 4.1.1 represents education level of the participant. The study showed that 52.3% were other. Almost equal number of participant's H.S.C and graduate student (2.3%). Primary level students were (28.1%). there were S.S.C students (14.8%).

4.1.2 Type of disability of the participants

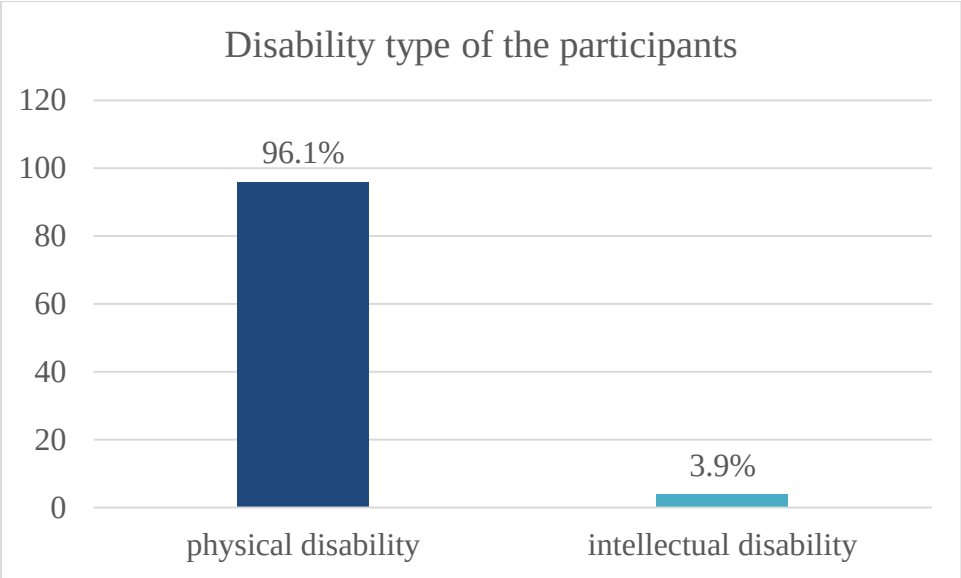


Figure no: 4.1.2 Distribution of participant based on disability type.

The figure 4.1.2 represents the disability type of the participants. The study shows that 96. 1 % people had physical disability and 3.9% people had mental disability. It shows that people who were injured from road traffic accidents mostly become physically disabled. Only a few people become mentally disabled after road traffic accident.

4.1.3 Living area of the participants

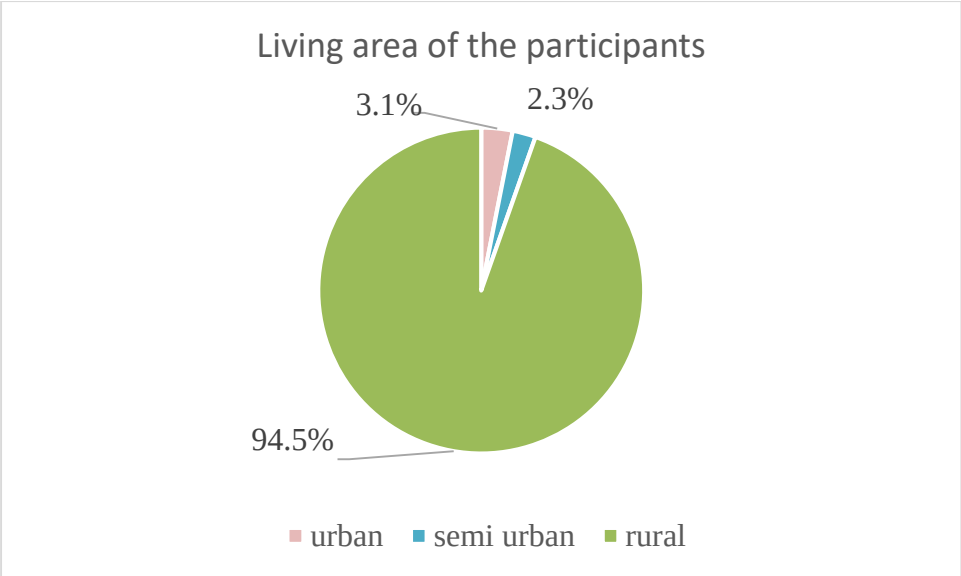


Figure no. 4.1.3: Living area of the participants.

The figure 4.1.3 represents the living area of the participants. The study shows that 94. 5 % population lives in rural area. In this study most of the participants came from rural area. Some are from other places.

4.2.0 Monthly income of the participants.

There were interpretation of monthly income of this study. The table shows that 83.6% population had <20000 BDT monthly income. Only 14.8% population had 20000-40000 BDT monthly income. Remaining 1.6% population had >41000BDT monthly income.

Table 4.2.0: Monthly income of the participants.

Monthly income (BDT)	frequencies (n)	percentage (%)	Mean ±SD
<20000	107	83.6	22109.38±5702.92
20000-40000	19	14.8	
>41000	2	1.6	

4.1.5 Rehabilitation of the participants

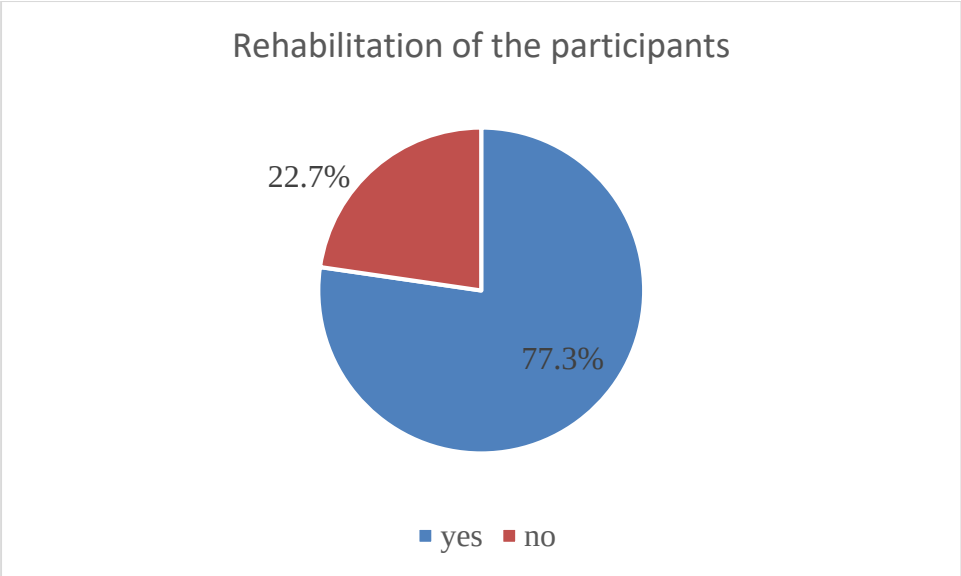


Figure no 4.1.5: Rehabilitation of the participants.

The chart shows the interpretation of taking rehabilitation service of the participants. In this study it shows that 77.3% population had taken rehabilitation service. Only 22.7% population declined.

4.2 disability level of the participants

There were WHODAS 2.0 scale to measure the disability level of the participants.it contained 12 item in the scale.

4.2.1 Standing for long periods

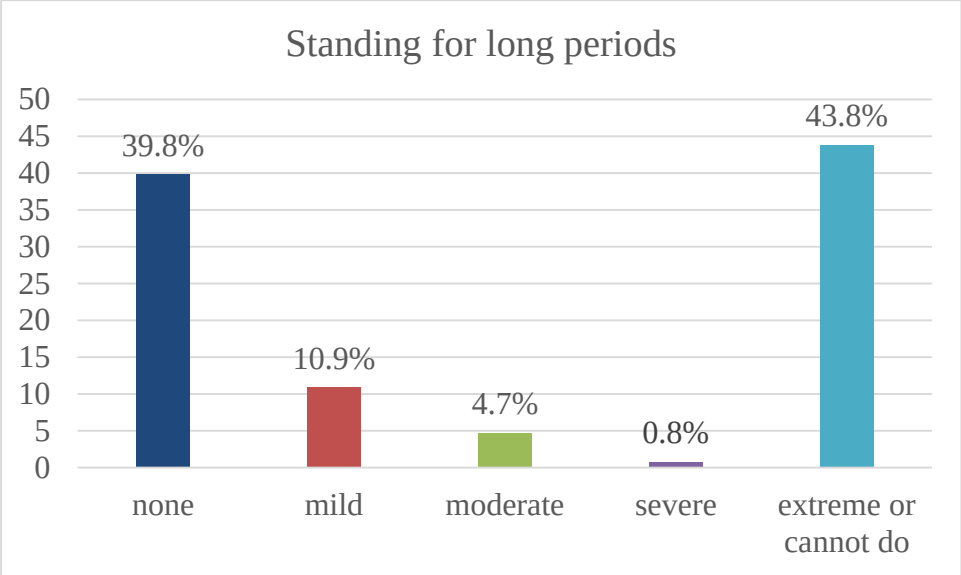


Figure no 4.2.1: Standing for long periods.

The graph shows the interpretation of participants whom can stand long period .It shows 39.8% population can stand for long periods. Others population (10.9%, 4.7%, 0.8%) can mild, moderate and severely stand for long period. 43.8 % population cannot stand for long periods.

4.2.2 Taking care of the household.

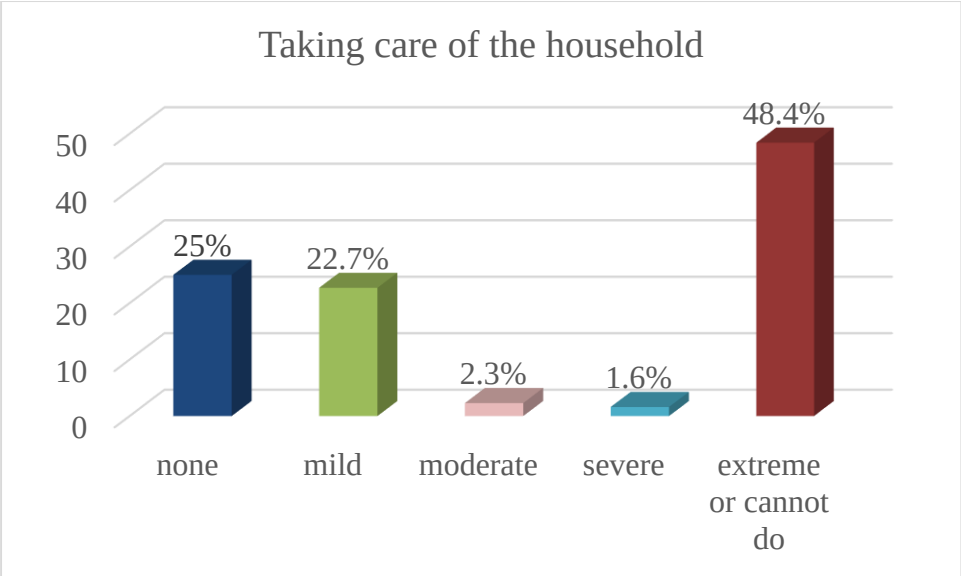


Figure no. 4.2.2: Taking care of the household.

This chart shows the interpretation of taking care of the household. Only 25% of the population could took care of the household. Some population could mildly do the work and the percentage was 22.4%. Other population could moderately and severely took care of the household. These are 2.3% &1.6%. 48.4% population could not took care of the household.

4.2.3 Learning new task

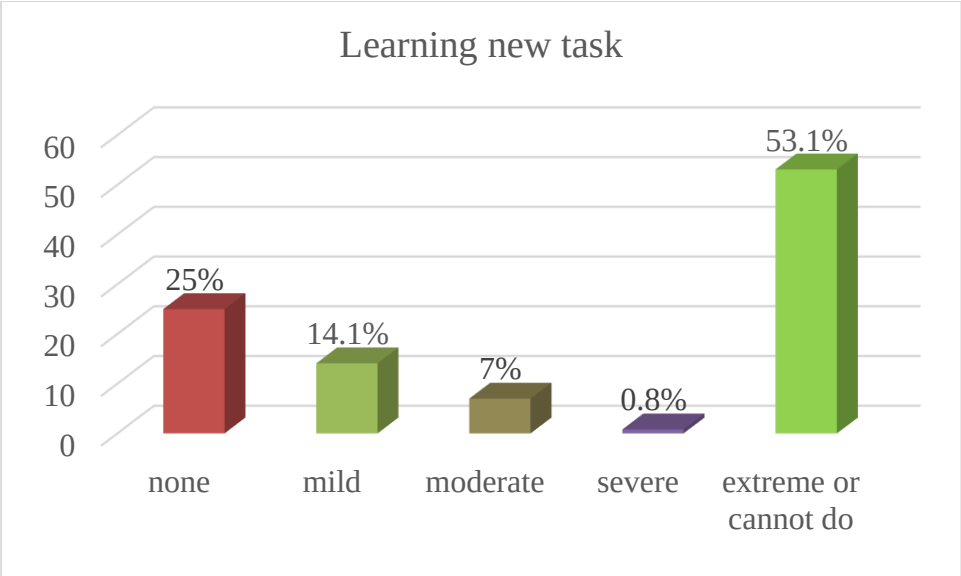


Figure no.4.2.3: Learning new task.

This chart shows the interpretation of learning new task. 25% population could learn the new task. 14.1% population could mildly learn new task. 7% and 0.8% population could moderately and severely learn new task. 53.1% could not learn new task.

4.2.4 Problem in joining community program

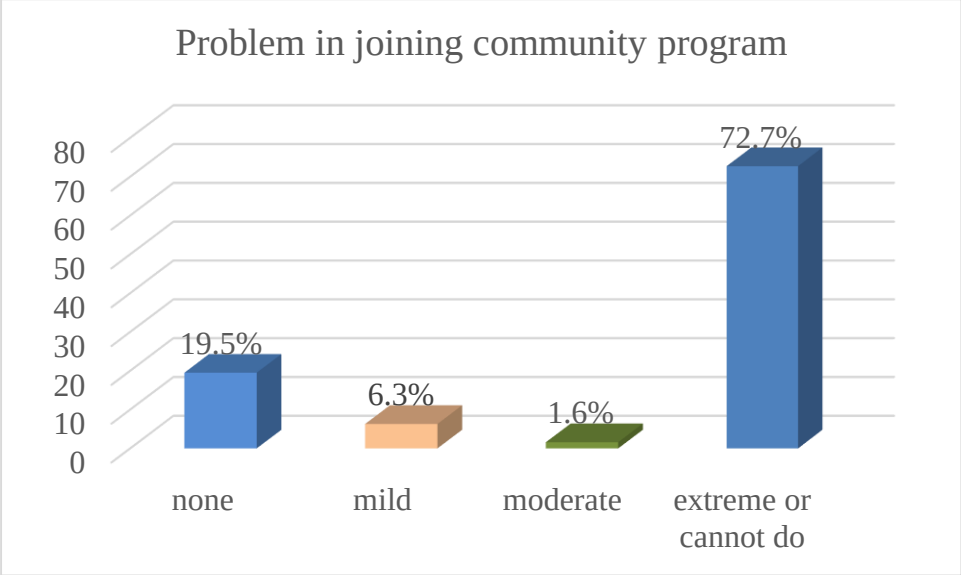


Figure no.4.2.4: Problem in joining community program.

The chart shows the interpretation of having problem in joining community program.19.5% population had no problem in joining community program. 72.7% could not join community program. 6.3% and 1.6% population could mildly and moderately join community program.

4.2.5 Emotionally affected by health problems.

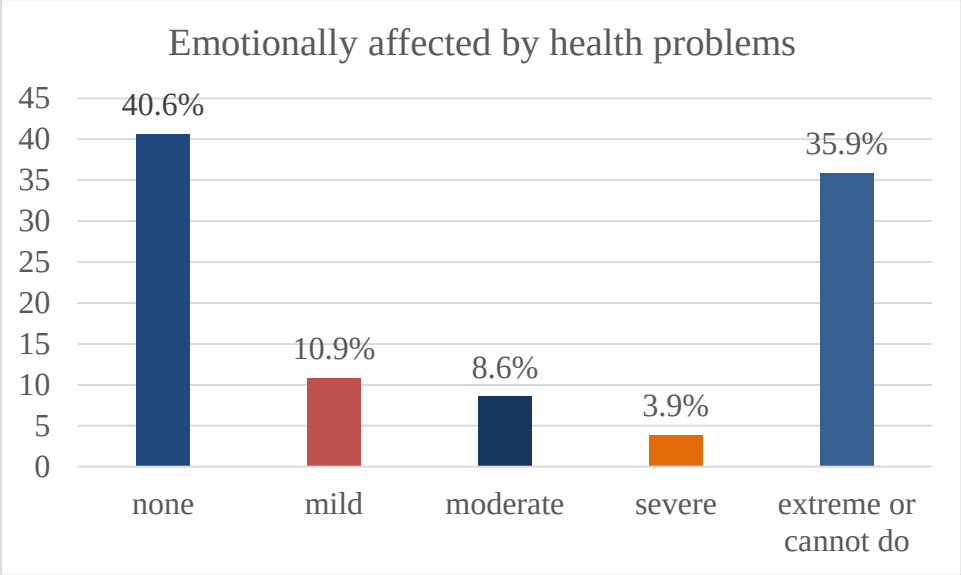


Figure no.4.2.5: Emotionally affected by health problems.

This chart shows that the interpretation of emotionally affected by health problems. 40.6% population was not emotionally affected by health problems. 10.9% and 8.6% population was mildly and moderately emotionally affected by health problems.35.9% was extremely emotionally affected by health problems.

4.2.6 Concentrating for ten minutes

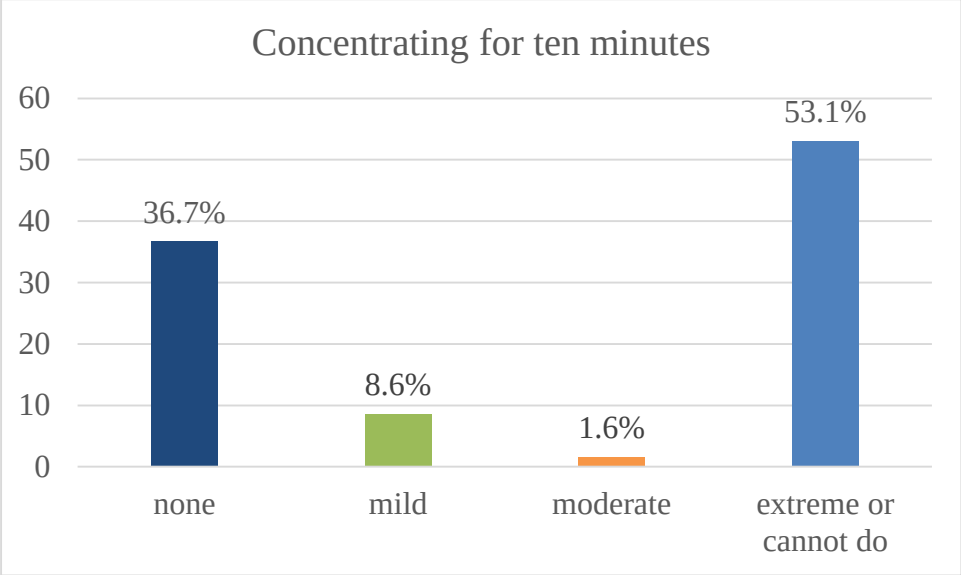


Figure no.4.2.6: Concentrating for ten minutes.

This chart shows that the interpretation of concentrating for ten minutes. 36.7% population could concentrating for ten minutes. 8.6% and 1.6% mildly and moderately concentrate for ten minutes. 53.1% population could not concentrate for minutes.

4.2.7 Walking long distance in kilometer

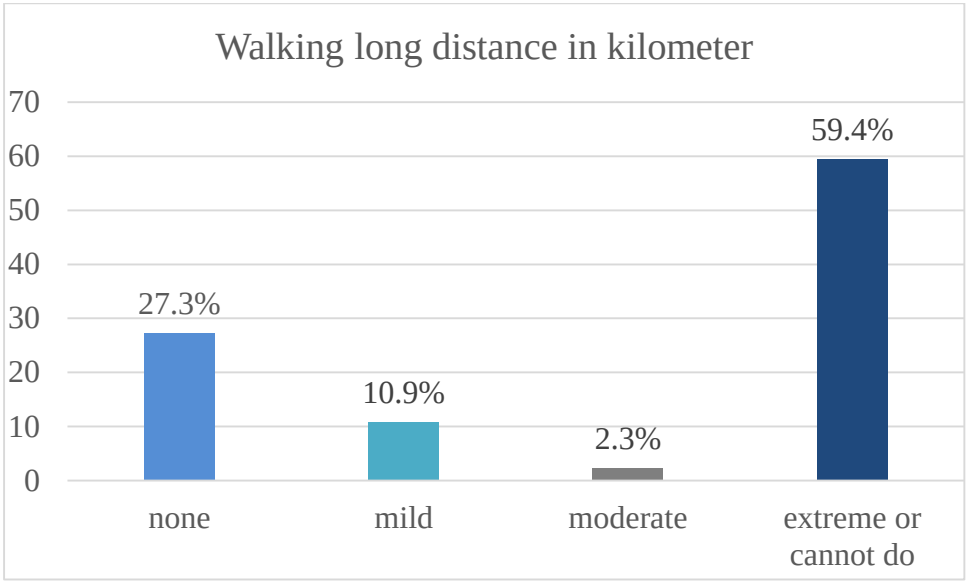


Figure no.4.2.7: Walking long distance in kilometer.

The chart shows the interpretation of walking long distance in kilometer. Only 27.3% population was able to walk long distance in kilometer. 10.9% mildly and 2.3% moderately walk long distance in kilometer. 59.4% could not walk long distance in kilometer.

4.2.8 Washing whole body

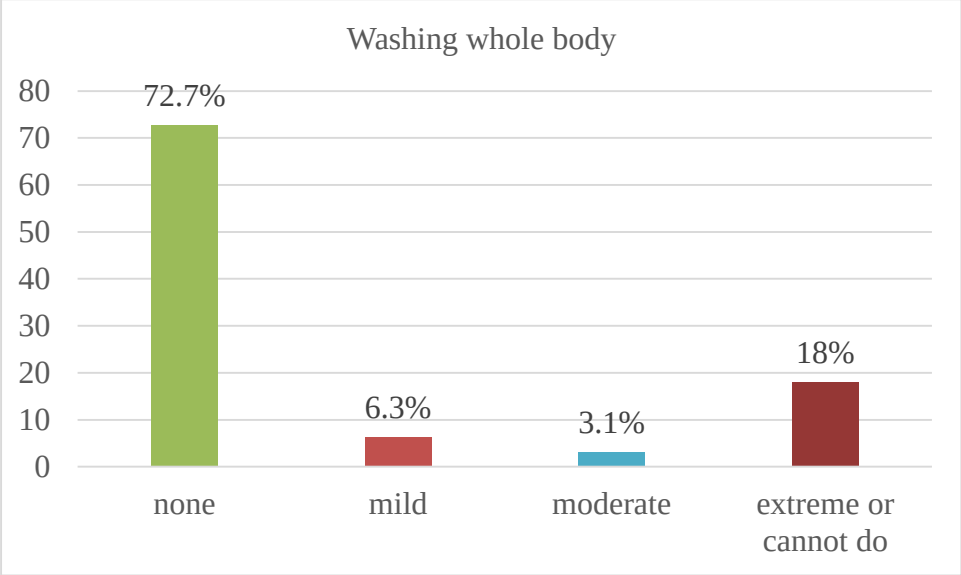


Figure no.4.2.8: Washing whole body.

This chart shows the interpretation of washing whole body. 72.7% population had been able to wash their body independently. Other 6.3% and 3.1% population could wash whole body mildly and moderately. Only 18% population could not was their body.

4.2.9 Getting dressed.

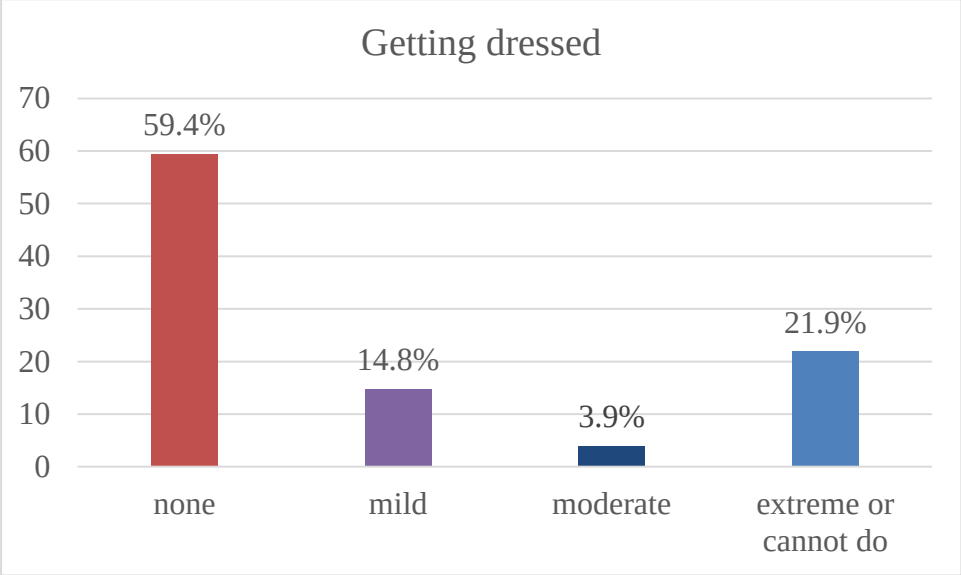


Figure 4.2.9: Getting dressed.

This chart shows the interpretation of getting dressed. 59.4% population could get dressed independently. Other 14.8% &3.9% could get dressed mildly &moderately. Only 21.9% could not dress independently.

4.2.10 Dealing with unknown.

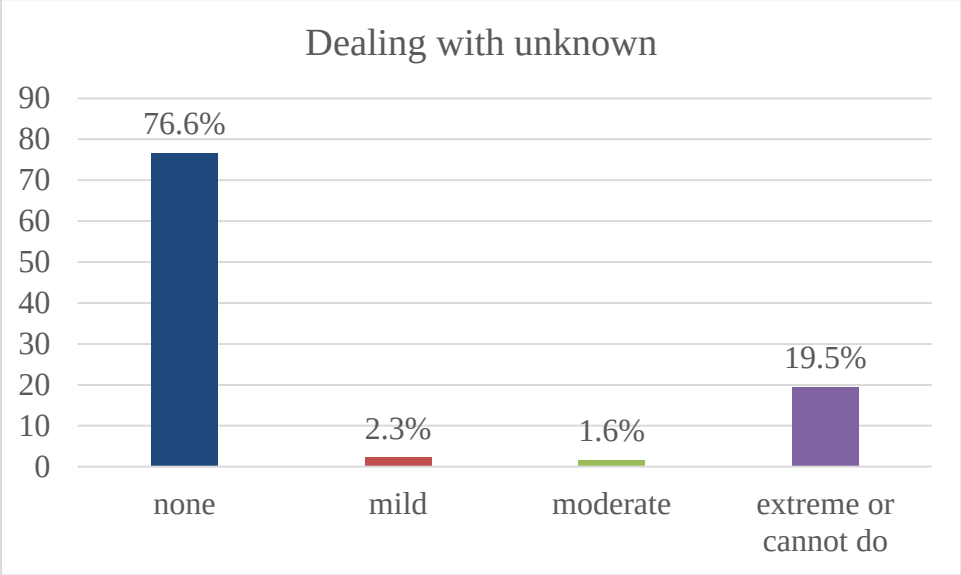


Figure 4.2.10: Dealing with unknown.

The charts shows the interpretation of dealing with unknown. 76.6% population could deal with unknown. 2.3%&1.6% could deal with unknown mildly& moderately. Only 19.5% could not deal with unknown.

4.2.11 Maintaining friendship.

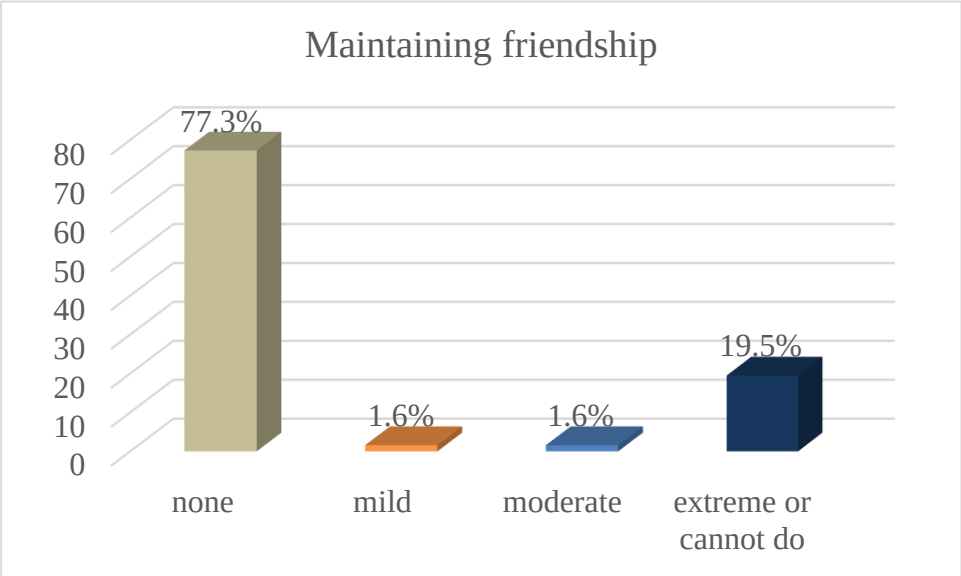


Figure no 4.2.11: Maintaining friendship.

This chart shows the interpretation of maintaining friendship. 77.3% population could maintain friendship. Other population like 1.6% could maintain friendship mildly, moderately. Only 19.5% population could not maintain friendship.

4.2.12 Day to day work of the participants.

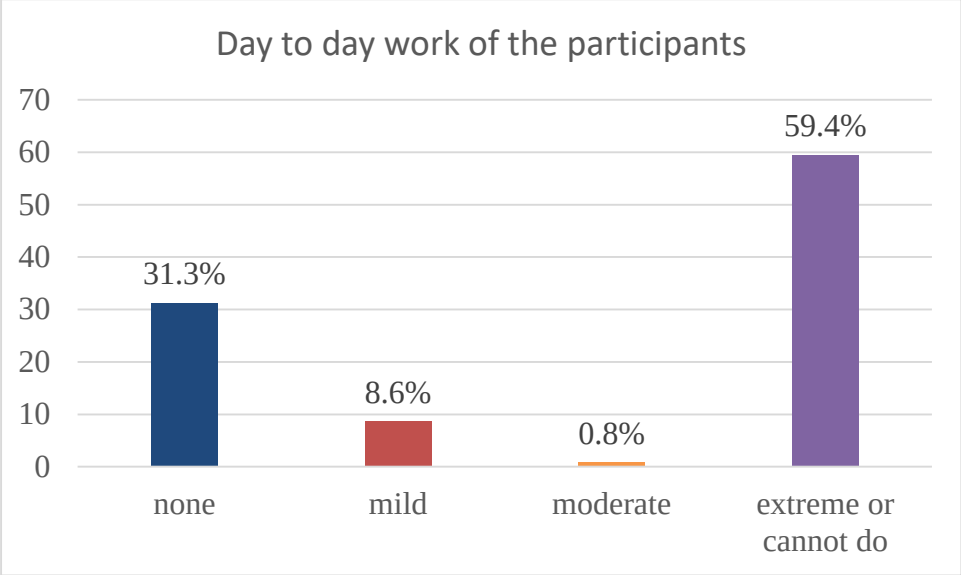


Figure no 4.2.11: Day to day work of the participants.

This chart shows that 31.3% participants could go to day to day work .After RTA where respectively 8.6% and 0.8% could go mildly and moderately. On the other hand 59.4% population could not go to day to day work after road traffic accident.

4.3 Association between type of disability and Disability status measured by WHODAS 2.0 SCORE :(Pearson chi square test)

The below table 4.3 represented the association the type of disability and WHODAS 2.0 score. Majority of physically disable (n=54) had moderate disability score. Only 1 mental disable person had moderate disability score. 13 physically disabled had been scored none. 30 physically disabled person scored mild .extreme was scored by 26 physically disabled and 4 mentally disabled person. The study showed the association was significant.

Table no 4.3: association between type of disability and WHODAS 2.0 score (n=128)

scoring	physical disability	mental disability	total	p value	chi square test
none	13	0	13	0.023*	9.489
mild	30	0	30		
moderate	54	1	55		
extreme	26	4	30		

(*Significant at 95% confidence level)

4.4 Association between type of disability and occupation of the participants (Pearson chi square test)

The table 4.4 below represented the association between type of disability and occupation of the participants. Most of the physically disabled people were housewife. Others population also had physical disability which was the biggest population of this study. Association between type of disability and occupation was insignificant.

Table no 4.4: Association between type of disability and occupation:

occupation of the participants	physical disability	mental disability	total	p value	chi square test
housewife	44	1	45	0.586	3.747
service holder	2	0	2		
business	3	0	3		
day laborer	9	0	9		
farmer	18	0	18		
other	47	4	51		

CHAPTER – V DISCUSSION

Injury is one that requires hospitalization and results in an MAIS 2+ injury score. This study revealed that more number of people with disability were from age group 35-45. Male participants were more in this study which also implies that male population were more physically disabled than female participants. Most of the people with physical disability were from the rural area. Most of the participant were married and illiterate. Very few participants had completed graduation. Majority of female participant were housewife and male were involved in job like builder, rickshaw puller, driver, electrician. Most of the participant had low family income. Road traffic accident was the major cause of disability followed by deformity. Majority of individual were disabled from 20-30 years. Most of the participants lack access to rehabilitation service. The finding of this study can be correlated with each other. According to the society of study place the male are the bread owner of the family which increases the chance of getting work related injuries and all causing physical disability. Similarly, our study showed majority of participants were from age group 35-45, this is the major working age group. Those might had been physically disabled and in this age group, living disability for 20-30 years. Our study finding contradict from major study finding conducted in different countries. The study conducted in Portugal that majority of study population i.e. people with disability are females (Canha et al., 2016). The study conducted in Canada also showed that majority of people with disability were female. This might be due to the cultural difference in those country. Where females also had equally given opportunity in every field. And the majority of participant were disabled from 8 years. The mean age of participant was 51 and had at least completed 10th standard (Turner & Turner, 2004).

Several earlier research have evaluated the cumulative effect of traffic-related injuries and fatalities on disease burden. According to the current study, RTIs caused 4.7 DALY per 1000 residents in the Netherlands. According to a research from a Dutch cohort of patients who had serious trauma, there were 3.9 DALY per 1000 people for RTIs (Holtslag et al., 2008). According to a French study (Lapostolle et al., 2009) that also included mortality, emergency department, and hospital register data, there were 5.4 and 1.7 DALY per 1000 for men and women, respectively. The Netherlands' higher DALY rate (3.2 against 6.0/1000 for men) is likely a result of the country's comparison to France. Similar to Belgian studies (Dhondt et al., 2013).In the context of road safety,

injury severity is evaluated globally using the MAIS, however there is continuous discussion regarding the appropriate MAIS level to utilize as a cut-off point for lowering the health burden of RTI. The burden of road injury that is captured and/or missed when a specific severity cut-off point is chosen is a major problem with regard to the definition of a serious road injury. A person with an injury score of MAIS 3+ is considered to have a significant RTI. In this study we investigated an injury based method to more precisely predict the health risk of RTAs using hospital discharge data (HDD) and mortality data. The most comprehensive data sources were both population based and included both. Disability Adjusted Life Years (DALY). A valuable health measure for RTA were used to compute exposure based rates of the road traffic health burden (Pollinder et al., 2007)

Injury from traffic accidents was a significant public health issue (World health organization, 2018). According to the world health organization, 1.35 million people die each year in traffic accidents and 20 to 50 million more suffer non-fatal injuries. As they frequently had to share the road with swiftly moving motor vehicles, pedestrians, cyclists and motor cycle riders were regarded as vulnerable road users (World Health Organization ,2018).The World Health Organization (WHO) views older people, kids , disable pedestrians as being particularly vulnerable to injury on the road(World Health Organization ,2018). Road Traffic Accidents were a serious health issue. Worldwide, road traffic accidents (RTA) claim the lives of more than 1.2 million people each year and injury millions more (Peden et al., 2004). Belgian road fatalities account for almost one third of all unnatural deaths in people under the age of 40 (Adsei, 2008) which was higher than the average for the population of the European Union (European Road Safety observatory 2011). It was far more difficult to find data on RTA injury rates, most figures came from police data. Police figures do not however , include all RTA victims .As a result , it was unlikely that an accurate assessment of the exact risk of being wounded in a motor vehicle accident can be made and police data will thus be conservative (constant and Lagarde , 2010). The definition of a disability, the standards and procedures for data collecting, the reliability of the sources , and the range of disclosure rates were all variables that effect the prevalence of impairment (Al ju'beh 2015).Bicycle injuries that do not include a motor vehicle in the collision make up by far the majority of all YLDs when broken down by type of road user (13,000YLD).When examining the distribution of MAIS severity levels by age, it was

clear that the percentage of MAIS remains consistent across all age group whereas the percentage of MAIS3+ rises with age. The MAIS rating was barely different between boys and females. In the Netherlands (population: roughly 16.4 million), 127,700 patients visited a hospital annually on an average between 2007 and 2008 owing to RTI. From the RTI after receiving care in the ED, 83% of patients were sent home, compared to 21,400 RTI patients who were hospitalized to hospitals on average. The majority of hospitalized patients (64%) who were less than 65 years old were men. There were women than in the 65+ age group (55%).

More than half (68%) of these patients aged 65 or older rode bicycles. The only age category of admitted patients were more than (63%) of were between ages of 18 and 34. The RTI were brought on by an accident involving a motorized vehicle (auto, motorcycle, or moped). One fourth of the patients who were admitted had a skull – brain damage. Fractures of the upper and lower extremities (16% and 15% respectively) were common kind of injury. The world health organization disability assessment schedule (WHODAS 2.0) demonstrates changes sensitivity in individuals with specific medical illness (such as cataracts, hip or knee issues, depression, schizophrenia, or alcoholism) as it can detect improvements in functioning after treatment. The instrument as a whole displayed a resilient factor structure that stayed stable across countries and various patient populations because all of the items were chosen in accordance with item response theory. Confirmatory factor analysis revealed a strong correlation between the domains and a general disability factor as well as the item factor structure and the domains. These findings were on favor of domains being one-dimensional .The WHODAS 2.0 scored favorably in comparison to other measures of impairment or health status .The WHODAS 5 – point scale , which allows the clinician to categorize a person's level of disability as none (0- 0.49), mild (0.5-1.49), moderate (1.5-2.49), severe (2.5-3.49), or extreme is comparable to the average scores (3.5-4). In the DSM – 5 field trials, it was discovered that the average domain and general disability ratings were trustworthy, simple to use and clinically helpful (APA, 2021).The raw domain score was divided by the average domain score. The raw domain score was divided by the total number of items in the domain to determine the average domain score to compute the average general disability score, divide the raw overall score by the number of elements in the measure. Data that enables comparison to a sizable sample this study, which concentrated on DALYs per kilometer traveled by

mode of transportation, supported more extensive prior research that showed motorcycling had the highest disease burden per kilometer. There is a lack of research to inform future decisions in this area. The definition of a serious motor vehicle accident as a policy indicator has a number of problems, including: when a particular severity cut –off point is chosen, the burden of road injury is recorded. Modern techniques to measure the effect of diseases and injuries on population health may be useful to get insight into burden of road traffic injuries separated by severity cut off point (polinder et al ., 2012).

RTI patients that were treated at the ED represented 83% of RTI incidence, but accounted for 26% of total YLD. For the admitted patients, MAIS2, MAIS3+ accounted for 3%, 41% and 39% of total YLD respectively. IN the Netherlands, RTI caused 76,400 DALYs annually (4.7 DALY per 1000 people), 64% of which were due to non-fatal injury (48,500 YLD versus 27,900YLI). Bicycle injuries that do not include a motor vehicle in the collision make up by far the majority of all YLDs when broken down by type of road user (13,000 YLD). When examining the distribution of MAIS severity levels by age, it is clear that the percentage of MAIS remains consistent across all age groups whereas the percentage of MAIS 3+ rises with age. The MAIS rating is barely different between boys and females.

CHAPTER – VI LIMITATIONS

This study explored the Disability status of people with disability, there were few limitation of the study. The study covers the sample from a particular Centre only so the result of the study cannot be generalized to disability status of overall people with disability in Bangladesh. The convenient sampling method was used for sample collecting due to lack of information on total population, hence there was chances of sampling bias. The study fails to involve the people with disability who were not receiving service. The study did not have control group, thus we cannot say that road traffic accident were more prevalence only among people with disability. The study also failed to found the contributing factors of psychological problem among people with disability thus these were few limitations of this study.

CHAPTER – VII CONCLUSION AND RECOMMENDATION

6.1 Conclusion

This study assessed the disability status among people with disability and also explored the influence of socio-demographic status of individual. From the study results we concluded that physical disability was more prevalence among male with disability. It was also seen that the lack of safety in road and road traffic accidents were the major cause of disability. The disability was seen more among working age group and hence in Bangladesh male were major bread owner of family, it increased risk for physical disability, in other hand increased risk for psychological problem. The psychological problem was seen less among the married individual, hence concluded family support plays important role in preventing psychological problem. Lack of rehabilitation service, family support, and low income of family could be the contributing factor for increasing prevalence of psychological problem among people with disability. The study also concluded that people with disability were at greater risk of having psychological problems. Although the study showed that gender of individual contribute to depression but the other socio-demographic status of people plays less role in disability status of people with disability, the main cause of psychological problem among them is disability itself. The study showed the vulnerability of people with disability, thus proper support from family, society and government are needed to decrease the risk of psychological problems among them. Thus the need of rehabilitation service including physical rehabilitation and psychological rehabilitation is major need.

6.2 Recommendation

This study focused on only one district, thus the community based research in larger scale could be conducted to know the exact condition of people with disability. The appropriate sampling method can be used involving larger population so that the result could be generalized to all population and to avoid sampling bias. Further study could be conducted were all aspect of disability status of people of disability could be assessed. And further the study assessing the contributing factors for psychological problem in people with disability and its solution could also be conducted. Further study could be conducted involving the controlled group of people without disability for clear picture of situation.

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Appendix - A

SAIC COLLEGE OF MEDICAL SCIENCE AND TECHNOLOGY

Approved by Ministry of Health and Family Welfare
Affiliated with Dhaka University

Ref : *Date : .....*

Ref.No: *SCMST/PT/ERB-2017-18/1-2023/26*

3rd January'2023

To

Mocidu Bhuian Priti
4th Professional B.Sc. in Physiotherapy
Saic College of Medical Science and Technology (SCMST)
Mirpur-14, Dhaka-1216.

Sub: Permission to collect data

Dear Priti,

Ethical review board (ERB) of SCMST pleased to inform you that your proposal has been reviewed by ERB of SCMST and we are giving you the permission to conduct study entitled "Disability after road traffic accident in Bangladesh" and for successful completion of this study you can start data collection from now.

Wishing you all the best.

Thanking You,

11.01.'23
Head of ERB
Ethical Review Board
Saic College of Medical Science and Technology

11.01.23
Principal
Saic College of Medical Science and Technology
Mirpur-14, Dhaka-1216

Address: Saic Tower, M-1/6, Mirpur-14, Dhaka-1216.Mobile:01936005804
E-mail: simt140@gmail.com, Web:www.saicmedical.edu.bd

Appendix - C

সম্মতিপত্র

আসসালামু আলাইকুম / নমস্কার

আমি মুয়িদু ভূঞা প্রীতি সাইক কলেজ অব মেডিকেল সাইন্স এন্ড টেকনোলজি এর বিএসসি ইন ফিজিওথেরাপী বিভাগের শেষ বর্ষের ছাত্রী। আমি আমার শেষ বর্ষের পড়াশুনা শেষ করার জন্য একটি গবেষণা করছি। যার শিরোনাম হচ্ছে "বাংলাদেশে সড়ক দূর্ঘটনার পর পঙ্গুত্ব" এটা আমার অধ্যয়নের একটি অংশ। উল্লেখ্য, অধ্যয়ন পরিচালনার জন্য প্রয়োজনীয় কিছু প্রশ্নের তালিকা নিচে দেওয়া আছে। আপনাকে আমার গবেষণার জন্য নির্বাচন করা হয়েছে। এই গবেষণার জন্য আপনাকে কিছু প্রশ্ন করা হবে। যা ১৫/২০ মিনিটের মতো লাগবে। আমার গবেষণার নাম হচ্ছে "বাংলাদেশে সড়ক দূর্ঘটনার পর পঙ্গুত্ব"।

সাক্ষাৎকার নেওয়ার সময় যদি আপনি কোন মানসিক অশান্তি, সামাজিক ও অর্থনৈতিক ঝুঁকি অথবা অন্য কোন শারীরিক সমস্যাবোধ করেন তাহলে আমাকে বলবেন। আমি তাৎক্ষণিক সাক্ষাৎকার বন্ধ করে দিব। আমি প্রতিশ্রুতি দিচ্ছি যে, এটি আপনার কোন ঝুঁকির কারণ হবে না। এই সাক্ষাৎকারে আপনার অংশগ্রহণ হচ্ছে আপনার নিজের ইচ্ছায় এবং আপনি যেকোন সময় চাইলে এটা বন্ধ করে দিতে পারেন। সাক্ষাৎকার চলাকালীন সময় যদি আপনার কোন প্রশ্নের উত্তর দিতে ইচ্ছা না হয় তাহলে আপনি সেটা বাদ দিতে পারেন। সাক্ষাৎকার বিষয়ে আপনার কোন কিছু জানার থাকলে আপনি আমার সুপারভাইজার অধ্যাপক আবিদ হাসান খান এর সাথে যোগাযোগ করতে পারেন মিরপুর, ঢাকা। সাক্ষাৎকার শুরুর আগে কি আপনার কোন প্রশ্ন আছে?

হ্যাঁ ☐ না ☐

গবেষকের স্বাক্ষর:.....তারিখ: .....

অংশগ্রহণকারীর স্বাক্ষর :..... তারিখ: .....

মোবাইল নম্বর: .....

স্বাক্ষীর স্বাক্ষর:..... তারিখ:.....

স্বাক্ষীর মোবাইল নম্বর: .....।

Consent Form (English)

Assalamu Alaikum/ Adab,

I am Moeidu Bhuian Priti. I am conducting this thesis for my B.Sc. In Physiotherapy program titled “disability due to road traffic accident in Bangladesh” by this I would like to know the type of disabilities occur after road traffic accident. Now I want to ask some personal, pain and disability related question. This will take approximately 15-20 minutes.

I would like to inform you that this is a purely academic study and will not be used for any other purpose. Your participation in the research will research will have no impact on your present or future treatment in the area. All information provided by you will be treated as confidential and in the event of any report or publication it will be ensured that the source of information remains secret.

Yours participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative questions. You also have the right not to answer a particular question that you don’t like or do not want to answer during interview.

If you have any query about the study or your right as a participant, you may contact with me and/or my research supervisor, Abid Hasan Khan, Lecturer, Department of physiotherapy, Saic College of Medical Science and Technology, Mirpur-14, Dhaka-1216.

So, may I have your consent to proceed with the interview?

Yes Δ No Δ

Signature and date of the Participant …….

Signature and date of the Interviewer ……

Signature and date of the Physiotherapist …….

Appendix - D

প্রশ্নপত্র (বাংলা)

শিরোনাম: বাংলাদেশে সড়ক দূর্ঘটনার পর পঙ্গুত্ব।

তারিখ: কোড নং: | | | |

নাম:

ঠিকানা:

মোবাইল:

অংশ-ক: সাধারণ সম্পর্কিত তথ্য

প্রশ্ন নং	প্রশ্ন	উত্তর
০১	আংশগ্রহনকারীর বয়স কত?	
০২	আংশগ্রহনকারীর লিঙ্গ? ১. পুরুষ ২. মহিলা ৩. অন্যান্য	
০৩	আপনি কোথায় থাকেন? ১. শহর ২. মফস্বল ৩. গ্রাম	
০৪	বৈবাহিক অবস্থা? ১. বিবাহিত ২. অবিবাহিত	
০৫	আপনার পেশা কি? ১. গৃহিনী ২. কর্মজীবী ৩. ব্যবসা ৪. দিন মজুর ৫. কৃষক ৬. অন্যান্য	
০৬	আপনার শিক্ষার স্তর কত? ১. প্রাইমারি ২. এস.এস.সি ৩. এইস.এস.সি ৪. স্নাতক ৫. অন্যান্য	
০৭	পারিবারের মাসিক আয় কত?	

অংশ-খ: রোগী সম্পর্কিত তথ্য

প্রশ্ন নং	প্রশ্ন	উত্তর
০৮	অক্ষমতার ধরণ কী? ১. শারীরিক প্রতিবন্ধী ২. মানসিক প্রতিবন্ধী	
০৯	দূর্ঘটনার সময় কত?	
১০	আঘাতের কারণ কী? ১. সড়ক দূর্ঘটনা ২. জন্মগত আঘাত	
১১	আপনি কি কোন পূনর্বাসন সেবা নিচ্ছেন? ১. হ্যাঁ ২. না	

<u>প্রশ্নাবলী (বাংলা)</u>

English Questionnaire

ANEXURE II
QUESTIONNARIE

1st Part: (Socio-demographic Information)

1. Name: (…….)
2. Age: (……)
3. Gender: □ Male □ Female □ Other
4. Marital status: □ Married □Unmarried
5. Education: (……)
6. Type of disability: (…….)
7. Duration: (……..) (By day)
8. Cause of injury: (…….)
9. Any physiotherapy service are available here?

   □ Yes □ Not

10. Are you taking physiotherapy service or not?

    □Yes □ Not

WHODAS 2.0

(World health organization disability assessment schedule 2.0)

In the past 30 days, how much difficulty did you have in:		None	Mild	Moderate	Severe	Extreme or cannot do
S1	Standing for long periods such as 30 minutes?	1	2	3	4	5
S2	Taking care of your household responsibilities?	1	2	3	4	5
S3	Learning a new task, for example, learning how to get to a new place?	1	2	3	4	5
S4	How much a problem did you have joining in community activities (for example, festivities, religious or other activities) in the same way as anyone else can?	1	2	3	4	5
S5	How much you have been emotionally affected by your health problems?	1	2	3	4	5
	In past 30 days, how much difficulty did you have in:	None	Mild	Moderate	Severe	Extreme or cannot do
S6	Concentrating on doing something for 10 minutes?	1	2	3	4	5

S7	Walking a long distance such as a kilometer [or equivalent]?	1	2	3	4	5
S8	Washing your whole body?	1	2	3	4	5
S9	Getting dressed	1	2	3	4	5
S10	Dealing with people you do not know?	1	2	3	4	5
S11	Maintaining a friendship?	1	2	3	4	5
S12	Your day to day work/school?	1	2	3	4	5
H1	Overall, in the past 30 days, how many days were these Difficulty present?		Record number of days……..			
H2	In the past 30 days, for how many days were you totally, Unable to carry out your usual activities or work because of any health condition?		Record number of days……..			
H3	In the past 30 days, not counting the days that you were Totally unable, for how many days did you cut back or reduce your usual activities or work because of any health condition?		Record number of days……..			

This condition our interview. Thank you for participating