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QUALITY OF LIFE AND COPING STRATEGIES FOR THE POST STROKE PATIENT ATTENDED AT CENTRE FOR THE REHABILITATION OF THE PARALYSED (CRP)

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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

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

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DECLARATION

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

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CONTENTS

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Acronyms

ADL: Activity of Daily Living

BMRC: Bangladesh Medical Research Council

BHPI: Bangladesh Health Profession's Institute

CRP: Centre for the Rehabilitation of the Paralysed

IRB: Institutional Review Board

HRQoL: Health Related Quality of Life

ICH: Intracerebral Hemorrhage

PSD: Post-Stroke Depression

QoL: Quality of Life

SPSS: Statistical Package for the Social Sciences

USA: United State of America

WHO: World Health Organization

LS: Life Satisfaction

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ABSTRACT

Purpose: To evaluate the quality of life and coping strategies for stroke patients in a specialized rehabilitation center. ***Objectives***: The goal of this study was to assess the quality of life of stroke patients through evaluate their physical, psychological, social, and environmental health, as well as their problem-focused, emotion-focused, and avoidant coping strategies. ***Methodology:*** The study design was cross-sectional. A total 207 samples were selected conveniently for this study from Centre for the rehabilitation of the paralyzed (CRP), Neurology unit, at Savar. Data was collected by using of questionnaire and quality of life (QoL) and coping strategies were assessed by the WHOQOL BREEF and COPE BREEF questionnaire. The study was conducted by using quantitative descriptive analysis through using SPSS software 20.0 version. ***Results***: Among 207 stroke patients evaluate, 8% (16) participants were 30-39 years, 21% (43) participants were 40-49 years, 45% (94) were 50-59 years, 26% (54) participants were 60-70 year, 67% (140) were male and 33% (67) were female where 81% were ischemic and 19% were hemorrhagic. The study found that quality of life (QoL) and coping strategies for ischemic and haemorrhagic participants. Association also found among socio-demographic information, WHOQOL domain, and COPING domain. Association also found between WHOQOL domain and COPING domain. It was found that the individual with stroke had a poor QoL. ***Conclusion***: Stroke is a devastating condition that reduces a person's quality of life. The stroke patients reported low scores on all of the WHOQOL scales, which indicate poor overall quality of life (QOL). The study found that stroke has a significant impact on one's quality of life. Using coping strategies, it is necessary to take steps to improve QoL, particularly in the areas of physical, psychological, social, and environmental with stroke. As a result, their quality of life will improve in the long run.

Key words: Quality of life (QOL), Coping Strategy, Stroke

CHAPTER-I INTRODUCTION

1.1 Background

In the last few decades, the global burden of disease has shifted from infectious and nutritional disorders to non-communicable diseases. One of them, Stroke is an enormous public health issue. Worldwide, stroke is the second biggest cause of mortality, with rates especially high in Asia and Eastern Europe (Chandratheva et al., 2010). In United States, a stroke occurs every 53 seconds, and 150,000 people die from stroke each year (Miah et al., 2012). Due to a lack of knowledge, it has become a big health-care issue in third-world countries, and the general incidence is expected to rise in the future days (Zaman et al., 2015). Over the next two decades, the number of stroke-related burdens is expected to rise, but there has been a significant advancement in stroke medical management (Langhorne et al., 2011). In Bangladesh stroke is the third highest cause of mortality, around 5.71% of all deaths, and the fifth leading cause of disability, accounting for 2.55% of all cases. The World Health Organization (WHO) ranks 84% of mortality rate due to stroke in Bangladesh and overall prevalence for stroke is 0·30% (Islam et al., 2013).

The WHO definition of stroke was used: “rapidly developed clinical signs of focal disturbance of cerebral function lasting for more than 24 hours or leading to death without any apparent cause other than vascular origin” (Hossain et al., 2011). More people are disabled as a result of a stroke than die. Stroke is a critical problem in Asia, which is more than 60% of the world’s population and many “developing” economics (Feigin et al., 2014). In Bangladesh, the prevalence of stroke has been assessed from a population where the research participants aged 40 years and older. For the age categories 40-49 years, 50-59 years, 60-69 years, 70-79 years, and 80 years and beyond, stroke prevalences were reported as 0.2%, 0.3%, 0.2%, 1.00% and 1.00% respectively (Mohammad et al., 2011). A bulk of the stroke burden was found in developing countries, accounted for 75.2% of all stroke-related deaths and 81.0% of the stroke related DALYs lost (Feigin et al., 2015).

In Pakistan, there is a female stroke is an especially serious problem in Asia, which has more than 60% of the world's population, and many of its countries are "developing" economies. Except in a few nations, such as Japan, stroke mortality in higher in Asia than in Western Europe, the Amaricas, or Australasia (Feigin et al., 2014). The World Health Organization (WHO) developed a worldwide categorization of impairments, disabilities, and handicaps in 1980. The number of deaths is 76 percent, impairment is 76 percent, disability is 42 percent, and handicap is only 2 percent, according to the results of 174 rigorous stroke examinations (Roth et al., 2015).

In Caucasian populations, ischemic stroke accounts for about 80% of all strokes, with 10%-15% intracerebral hemorrhage, 5% subarachnoid hemorrhage, and the balance due to other causes of stroke. Ischemic stroke has a distinct pathogenesis than hemorrhagic stroke, and the clinical variables are not the same. A research in east China found that out of 692 patients, 78% were ischemic and 22% were hemorrhagic. In this area, the rate of ischemic stroke was clearly higher than the rate of hemorrhagic stroke (Sergeev, 2015).

In Western countries, 70% of stroke survivors regain functional independence but 15-30% are, chronically handicapped, and 20% require institutional care at 3 months after start**.** Upper limb disability affects 85 percent of stroke patients, and it lasts for three months. 5 years after a stroke, 55-70% of people are still disabled. Six months after a stroke, 50% of patients had some hemiparesis, 30% were unable to walk without assistance, 26% were ADL dependent, 19% had aphasia, 35% had depressive symptoms, and 26% were institutionalized in a nursing home (Venketasubramanian et al., 2017).

Every year, 200,000 individuals in Germany have their first stroke, and another 60,000 have a stroke after one or more of the pre-stroke symptoms; practically everyone can have a stroke at any moment during their lives in less than five years. Ischemic stroke accounts for about 80% of all strokes, while hemorrhagic stroke accounts for 20%. More than one-fourth of stroke patients are under the age of 65. For the underlying stroke of vascular illnesses, risk factors (hypertension, smoking, lack of exercise, weights, and other risk factors) are critical. Medicines and a healthy lifestyle can help you make the necessary changes (Knecht et al., 2011).

In Singapore stroke injury affects 4.03% of population of 1.8 / 1000 individuals over the age of 50. Struggling with stroke will increase our rapidly growing population in Singapore, and stroke will raise the number of survivors even more. Nearly 40% of stroke survivors suffer from severe impairments, which have a significant impact on social and health-related well-being. Following a stroke of rehabilitation, the multidisciplinary team improves functional results, with the likelihood of institutionalization and a reduction in death (Ng et al., 2013).

Stroke is the third leading cause of mortality in Thailand. Many of the effects of stroke have worsened for survivors, despite initial resistance to progress: In daily life, around half of 12-month stroke survivors rely on others for self-care and personal activities. Through hospital readmissions, community support needs, and rehabilitation groups, it maintains a substantial demand for healthcare. Stroke sufferers must deal not just with the physical effects of their strokes, but also with their functional limitations and limited social relationships (Van der et al., 2015).

There is insufficient data on the incidence and mortality of stroke in Bangladesh. In the western world, ischemic infraction accounts for 85 percent to 90 percent of strokes, while cerebral hemorrhages account for 15 percent to 10%. In Asia, hemorrhages account for a higher number of strokes. Irreversible or non-modifiable factors such as age, sex, and heart disease, as well as modifiable ones such as hypertension, heart disease, diabetes mellitus, hyperlipidemia, smoking, excessive drinking, polycythaemia, and oral contraceptives, are all risk factors for stroke. Cerebrovascular disease morbidity and mortality have decreased in recent years, owing to improved identification and treatment of underlying arterial and heart disease, particularly hypertension. In the treatment of stroke, there is no cure. Early detection and reduction of modifiable risk factors for stroke can help avoid stroke. This is critical in the context of our country, where medical facilities and resources are scarce and the majority of the population lives in poverty (Hossain et al., 2011).

In the last few decades, the mortality rate has steadily decreased, and residual impairments and disabilities have increased and decreased functional outcome and quality of life. For stroke patients at home, family caregivers (spouses, partners, etc.) may play an important role in patients' aid, care, and life satisfaction (LS). Family

caregiver' LS is thus important. Cerebrovascular disease is an important family issue, particularly for spouses (Ferring and Boll, 2010).

Depression, anxiety and reduced QoL as well as other psychosocial maladies are common following a stroke (Ayerbe et Al., 2013). In fact, recent systematic reviews (Mitchell et al., 2017) estimate that one-third of stroke survivors experience depression, whilst a further 25% experience clinical anxiety (Chun et al., 2018). Evidence suggests that psychosocial outcomes such as depression, anxiety and QoL affect each other (Tang et al., 2013). Although these relationships are not well understood, evidence suggests that depression is linked to poor QoL. Meanwhile, self-efficacy has been shown to affect QoL and depression (Zhang et al., 2017).

The present study aimed at assessing, one month after stroke onset, effects on patients' life satisfaction of socioeconomic factors, impaired functions (motor, visual, sensory, language, and memory), quality of life and their coping strategies (via Whoqol bref which measures physical, psychological, environment, and social relationship domains and via cope bref which measures problem focused coping, emotion focused coping and avoidant coping) in Luxembourg. The survey further evaluated the effects of these factors on the family caregivers' life satisfaction (Bucki et al., 2012).

Anxiety has the greatest impact on the quality of life of stroke patients. Post-stroke depression (PSD) is one of the most common emotional complaints among stroke patients (Srivastava et al., 2010). Most studies in South Asia have found a high rate of hemorrhagic stroke when compared to Western countries (19-46%). This finding could be linked to the high prevalence of high blood pressure in South Asia, as well as its poor control. ICH is more common in younger stroke victims (15-45 years old) (32-43%). There are a lot of ICH cases in Bangladesh (31-33%). Cardio embolic stroke is less common in South Asia than in Western countries (Wasay et al., 2014).

It affects not only the QoL and mental health of patients but also those of their close relatives. Compared to controls, stroke survivors commonly have lower QoL, higher prevalence of psychological distress, a greater economic burden, and an impoverishment of their social lives (Mackenbach, 2012). The "Helsingborg Declaration 2006 on European Stroke Strategies" highlights the importance of stroke management in several areas in which family caregivers should play an essential role.

In Sweden, an amendment in 2009 has recognised repercussions for informal caregivers, and recommends to minimise their physical and psychological strains and burden (Owolabi, 2010). But, caregiver an important problem concerns stroke-related QoL domains. In the literature, patient' QoL has been assessed using various generic measures including health-related QoL, Sickness Impact Profile, and Nottingham Health Profile. Most of these measures fail to cover important stroke concerns such as communication, concentration, and memory. A recent review of the literature involving informal caregivers of stroke survivors (with and without aphasia) reported that all instruments used were generic (Kerr et al., 2011).

The conceptual framework for this study was based on Lazarus and Folkman's theory, as well as a review of stress related to caring for a stroke survivor with functional dependency. Personal characteristics of caregivers (age, gender, educational level, number of chronic conditions, relationship to stroke survivor, and monthly family income) were predictive factors, as were functional dependence in stroke survivor's activities of daily living (ADLs), caregiving contextual factors (duration of caregiving and hours of care per day), social support, and coping strategies. The conceptualized outcome variable was perceived HRQoL. This study recommends that quality of life of stroke survivors with chronic diseases, low education, and severe physical restrictions should get emotional and informational support. The findings also suggest that healthcare practitioners should assess stroke survivor's ' physical and mental health and provide appropriate interventions, such as social support and teaching positive coping skills, in order to improve stroke survivors ' health and quality of life (Yu et al., 2013). Furthermore, the number of people who survive a stroke and live with the repercussions is rising (Tramonti et al., 2014). Knowing how a stroke affects HRQOL is critical for developing and evaluating therapeutic and psychological rehabilitation therapies after a stroke. Long-term intervention studies with stroke patients should be conducted in the future to see if changing maladaptive coping methods will indeed enhance HRQoL (Lo Buono et al., 2017).

1.2 Rationale

Stroke is the most life threatening health issue all over the world and which affects the quality of life of an individuals. In general population, stroke and it's complications are very common, affecting up to 25.7 million stroke survivors, 6.5 million deaths due to stroke, 113 million disability per year worldwide (Feigin et al., 2015). The word quality of life needs to be explained here because the quality of life is an important consideration of medical care. Stroke causes disability and affects patient's mobility, self-care, physical functioning, and social functioning, as well as mental status also which is find out by using WHOQOL BREEF and coping strategies. In relation with various studies in different countries, they mentioned the relationship between quality of life and stroke. This study is limited in Bangladeshi perspective.

In Centre for the rehabilitation of the paralysed a large number of people attend to get physiotherapy treatment due to stroke but the aim of the treatment does not succeed always due to patient's Quality of life because they do not follow coping strategy. This information help to set up treatment plan according to patient needs. As a health professional, it will improve our knowledge. From this study, we can find out about their physical, psychological, social, environmental and overall quality of life separately and problem focused coping, emotion focused coping and avoidant coping after this terrible incident and this review was conducted on studies investigating whether the levels of quality of life were influenced by the coping strategies used by stroke patients in Bangladeshi perspective.

1.3 Research Question

What is the quality of life and coping strategy for the post stroke patient?

1.4 Aim of the study

The aim of the study is to know that, to find out the quality of life and coping strategies after post stroke patient.

1.5 Objectives

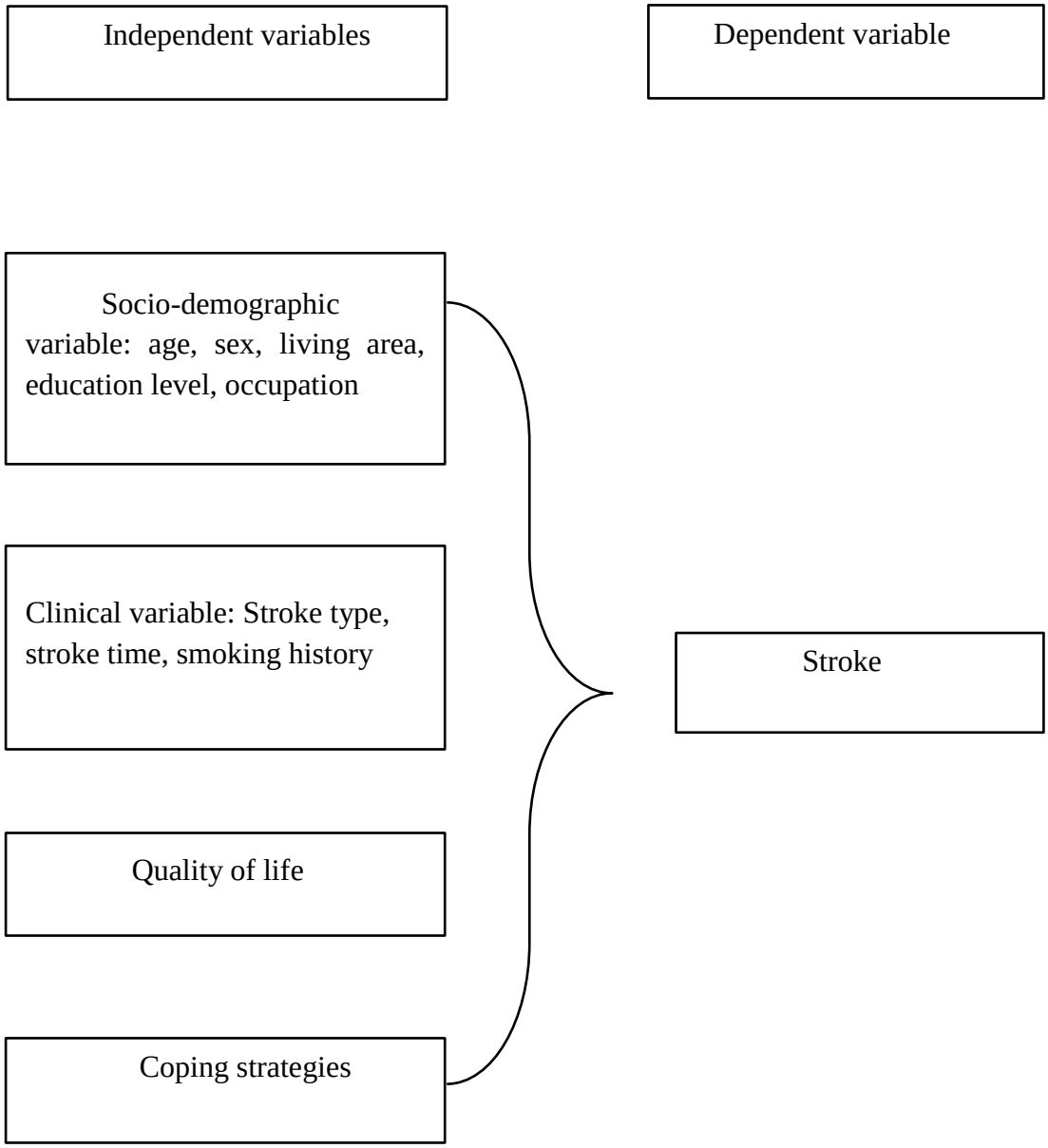
1.5.1 General Objectives

To identify the quality of life and coping strategies for the post stroke patient.

1.5.2 Specific Objectives

1. To identify the socio-demographic factors of the participants.
2. To identify physical health, psychological health, social health, environmental health and overall quality of life of ischemic and hemorrhagic participants from WHOQOL.
3. To explore problem focused coping, emotion focused coping and avoidant coping.
4. To find out the association between socio-demographic profile, WHOQOL domain, and coping domain.
5. To explore the association between WHOQOL domain and COPING domain.

1.6 Conceptual framework



1.7 Operational Definition

Stroke

A clinical syndrome consisting of rapidly developing clinical signs of focal disturbance of cerebral lasting more than 24 hours or leading to death with no apparent cause other than a vascular origin.

Quality of Life

Quality of life (QoL) is defined as ‘individuals’ perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns .

Coping Strategy

Coping strategies refers to a person’s perception of mental and physical health is related to the ways he or she evaluates and copes with the stresses of living.

CHAPTER-II LITERATURE REVIEW

Stroke is a disabling condition that necessitates long-term rehabilitation in order for survivors to reclaim their independence. It has an effect on both the patient and the family. Survivors who are discharged from the hospital require the assistance of family and relatives to carry out daily care activities. It is estimated that about half of stroke survivors who are discharged with one or more disabilities will require assistance in the rehabilitation phase of their lives (Kumar et al., 2017). According to statistics, there were roughly 25.7 million stroke survivors, 6.5 million stroke fatalities, 113 million disability-adjusted life-years (DALYs) lost due to stroke, and 10.3 million new instances of stroke in 2013. (Feigin et al., 2015). Patients and their families are frequently caught off guard when a stroke occurs. Physical impairment has an impact on activities of daily living (ADLs), which require the most assistance from the caregiver, such as eating, bathing, dressing, toileting, and transferring (Carod-Artal, 2009). Psychological impairment includes cognitive, communicative, and behavioral abnormalities, as well as emotional issues (Din et al., 2008)).

Ischemic or hemorrhagic disturbances of the cerebral blood circulation may be the pathological background for stroke. An ischemic stroke, also known as a cerebral infarct, is caused by a blockage or reduction in blood flow in a cerebral artery (which accounts for 80% of all strokes). They are caused by either a clot (thrombus) blocking the blood vessel or plaque buildup within the arteries, often due to cholesterol, narrowing the vessel and resulting in a loss of blood flow (Jameson, 2018). Hemorrhagic stroke: Spontaneous intracerebral hemorrhages (as opposed to traumatic ones) are primarily caused by arteriolar hypertension, with coagulation disorders, vascular malformation in the brain, and diet being less common causes (such as high alcohol consumption, low blood cholesterol concentration, high blood pressure, etc.). The rate of occurrence increases dramatically with age, and in many developing countries, it is due to the adoption of a less healthy lifestyle (Tennakoon et al., 2013).

Stroke rehabilitation is generally effective at improving functional recovery and health-related quality of life (HRQOL). In most South Asian studies, a higher percentage of haemorrhagic stroke (19–46%) was reported compared to Western countries. This finding could be linked to a higher prevalence of hypertension in South Asia, as well as poor control of the condition. Intracerebral haemorrhage (ICH) is more common in younger patients (15–45 years old) who have had a stroke (32–43%) (Siddique et al., 2009). In South Asia, small-vessel disease plays a much larger role in ischaemic stroke than in other parts of the world. The high prevalence of small-vessel disease (for example, 50% according to INTERSTROKE data from India) is most likely due to an equally high prevalence of undiagnosed, untreated, and poorly treated hypertension (Roth et al., 2015).

In one study, researchers compared the frequency of different types of strokes in diabetic and non-diabetic patients and discovered that non-diabetic patients had a much higher rate of haemorrhagic stroke (42 percent) than diabetic patients (12 percent). Several studies have identified the "South Asian pattern" of vascular disease, which includes intracranial atherosclerosis and large-vessel extracranial disease, with regional variations. The most common cause of stroke in Asians is intracranial stenosis, which has a poor prognosis and a high recurrence rate (Wasay et al., 2014). However, improvements in function may not translate into improvements in HRQOL (Isaac et al., 2011) and many studies have found that stroke survivors have poor HRQOL in the long run (Kamel et al., 2010). To improve the HRQOL of stroke patients in the short and long term, it is necessary to understand the dynamic relationship between psychosocial factors and disability. Post-stroke depression has previously been shown to be an important independent cause of poor HRQOL (Kwok et al., 2011).

Studies have shown that stroke patients have a lower quality of life (QoL) than healthy people (Franzen-Dahlin et al. 2008). Physical limitations have been identified as a determinant of QoL, as measured by impaired daily activities, medical problems, and motor impairment (Chuluunbaatar et al. 2016). Psychosocial processes, on the other hand, are increasingly recognized as a factor in determining QoL (Reverte-Villarroya et al., 2020). A difference in coping has been suggested as a contributing factor because a proportion of patients with only a minor physical impairment still have a significantly reduced QoL (Suner-Soler et al., 2020).

Quality of life, according to the World Health Organization Quality of Life Group (1998), is an individual's perception of their own place in life in relation to culture, the value of where they live, and their goals, expectations, and standard. Because health is one of the domains in quality of life, terminology related to health can also be used to describe quality of life (Odetunde et al., 2017).

It's a broad concept influenced by a person's physical health, psychological state, personal beliefs, social relationships, and relationship to key features of their environment in a complex way.' (Schiavolin et al., 2014). The type of stroke the location of the brain lesion gender race, stroke duration, age, and educational level of the patient are the main factors that can influence HRQOL (Lo Buono et al., 2017). In a clinical setting, quality of life assessment usually focuses on HRQoL, or how a disease or its treatment affects physical, emotional, and social well-being. Although HRQoL is a multidimensional construct with different aspects varying from study to study, measures are commonly used to assess physical functioning, psychological well-being, and social functioning. HRQoL is a subjective metric based on how a person perceives the impact of disease and/or treatment on their health. HRQOL is defined as an individual's satisfaction or prosperity in a domain of life that is affected or affected by health (Snaphaan et al., 2009).

HRQOL is defined as the perception of physical and mental health, functional status, social support, economic status, health situation, and risk, according to the United States Disease Control and Prevention Center (Visser et al., 2016). When compared to quality of life, HRQOL is more specific and appropriate for the medical field because it refers to the measurement or assessment of patients' own health in comparison to what they expect of ideal health (Wolters et al., 2010). HRQoL is defined as a personal self-assessed ability to function in the physical, psychological, emotional, and social domains of day-to-day life and reflects an individual's overall satisfaction with life, as measured by self-reported questionnaires (Liu et al., 2009). Patients' quality of life (QoL) assessment provides new and important information that clinicians, researchers, and patients can use to guide treatment decisions and prognosis (Godwin et al., 2013). HRQoL data can also help researchers better understand new treatments, not just in terms of traditional endpoints like survival, but also in terms of what that extra survival means to each patient (Visser et al., 2016).

Following a stroke, physical, social, and cognitive impairment can pose a serious threat to one's quality of life (QoL). In fact, about 25% of patients reported a decrease in QoL in the first three months after a stroke, which was linked to a decrease in overall health and vitality (Leach et al., 2011). QoL refers to a person's physical well-being, psychological state, level of independence, social relationships, personal beliefs, and relationship with the environment (Kwok et al., 2011). Health-related quality of life (HRQoL) assesses how disease, disability, or disorder may affect an individual's well-being over time (Centers for Disease Control and Prevention, 2000). As a result, HRQoL is the study of QoL in relation to health disease, which is defined by complex subjective indicators related to perceived well-being. Individuals' coping style, which they use to deal with their disease state, is an important psychosocial factor that influences QoL after a stroke. In the developed world, factors influencing HRQoL in stroke caregivers have gotten a lot of attention in recent years. Stroke caregivers have lower HRQoL than the general population, according to studies, particularly in the areas of mental health, vitality, and general health (Lo Buono et al., 2017).

Furthermore, caregivers' HRQoL has been shown to be influenced by social support and coping strategies (Rodriguez-Perez et al., 2017). Age, gender, educational level, health status, family income, relationship to stroke survivor, caregiving duration, hours of care per day, and the stroke survivor's functional status are all personal and contextual factors that influence HRQoL. (Yang et al., 2012). A person under stress, according to Lazarus and Folkman (1984), first assesses the severity of the stressor's consequences (primary assessment), then assesses the available resources (e.g. social support) and possible coping strategies (secondary assessment). The amount of stress experienced is determined by the interaction of primary and secondary assessments. Finally, a person's coping strategy is referred to as the coping process (active or passive). The effectiveness of coping strategies has an impact on a person's social functioning, mental well-being, and physical health (Thompson and Ryan, 2009).

The goal of this research was to see if incorporating a problem-solving skills module into post-acute stroke rehabilitation would improve coping strategies and HRQoL. Coping can be classified as functional (adaptation) or dysfunctional (abuse) depending on the outcome of this process (increased stress). Coping is a dynamic process characterized by a series of reciprocal responses in which the individual and

the environment mutually influence each other (Bucki et al., 2012). Coping strategies, which are associated with a better HRQoL (Yu et al., 2013), have two major functions: dealing with the problem that is causing the distress (problem-focused coping) and regulating emotion (emotion-focused coping). After a stroke, patients use insufficient active problem-focused coping strategies (Dewilde et al., 2019). Coping skills may be considered the key psychological resources necessary to rebuild the lives of patients disrupted by the residual deficits caused by a stroke. The possibility of adapting coping strategies that patients can use after a stroke could facilitate the design of better and more effective intervention strategies for these patients (Reverte-Villarroya et al., 2020).

Coping strategies are defined in a variety of ways in the literature. There are several types of coping styles, including (a) emotional-focused coping, which refers to the ability to control negative emotions; (b) cognitive-focused coping, which refers to the ability to think rationally; and (c) behavioral-focused coping, which refers to the ability to (b) problem-focused coping, which includes strategies and actions aimed at reducing the negative impact of a situation through external change; (c) active coping, which is targeted at the source of stress; (d) avoidant coping, which involves avoiding emotional and cognitive events (McGrath et al., 2009). Personal style and cognitive appraisal of the stressful event determine the predominance of one type of strategy over another (Post et al., 2011). Even though research on QoL and coping is still lacking, coping strategies are determinant on HRQoL after stroke because they affect both recovery and adaptation to disability. In addition to functional outcomes, studies on stroke have only recently begun to pay attention to psychological outcomes such as QoL and subjective wellbeing in survivors. This review looked at studies that looked into which coping strategies patients used after a stroke and how they affected their quality of life (Lo Buono et al., 2017)

There have been a few studies on the relationship between coping and quality of life in informal care, and even fewer studies on the relationship between coping and quality of life in informal care of the frail dependent elderly (Kershaw et al., 2008). When searching PubMed for "caregivers AND Coping AND quality of life" with no time limit, only two articles on the dependent elderly and four articles on dependent adults including the elderly (Kate et al., 2014). Furthermore, studies on informal care coping and quality of life have yielded mixed results. As a result, some authors have

linked avoidance coping strategies to a lower quality of life, while others have linked them to a higher quality of life. Similarly, some authors have linked active-type strategies to a lower quality of life while others have linked them to a higher quality of life (van et al., 2011). The failure to control for potential confounders is a flaw in many studies on the relationship between coping and quality of life. Various characteristics of caregivers, such as older age female sex lower perceived care burden and better perceived health status [28], have been linked to an improved quality of life. A higher caregiver quality of life has been linked to a higher functional status of the care recipient (Chronister et al., 2010). A better understanding of the relationship between coping and quality of life is required to support and promote the development of interventions to improve the lives of caregivers (Meyers et al., 2011).

As a result, the goal of this study was to look into the relationship between coping strategies and quality of life dimensions in primary caregivers of dependent elderly relatives, while controlling for age, sex, caregiver's perceived health and burden, and the care receiver's functional capacity. Despite their conceptual differences, both problem-focused and emotion-focused coping can reduce psychological distress and are used in the majority of stressful situations (Cheng et al., 2014). Close friends and sitters to help them recover (spouses, adult children, and siblings) (Yu et al., 2013). Caring for a stroke survivor is extremely stressful, and it can have a negative impact on the caregivers' physical and mental health (Darlington et al. 2009). Stroke caregivers have more somatic symptoms (fatigue, headaches, etc.), depressive symptoms, sleep disorders, and social isolation than non-caregivers, and they have a lower quality of life (Spruit-van Eijk et al., 2010). Individuals' perceptions of their position in life in the context of the culture and value systems in which they live, as well as their goals, expectations, standards, and concerns, are defined as quality of life (QoL). HRQoL refers to health-related aspects of overall quality of life, such as a person's perceived physical and mental health. HRQoL can be used to identify subgroups with poor physical or mental health, which can then be used to guide policies or interventions to improve their health (Visser et al. 2014).

The effectiveness of coping strategies has an impact on a person's social functioning, mental well-being, and physical health. Coping strategies are intended to help people cope with stressful situations and manage the emotional distress that comes with them (Visser et al. 2014). A person's perception of mental and physical health is linked to how he or she evaluates and copes with life's stresses, according to Folkman and Lazarus (1988). Positive coping strategies (such as seeking social support and confronting) have been shown to reduce distress and depression while increasing vitality and mental health (Visser-Meily et al., 2009). Also, among informal caregivers aged 75 and up, self-sustaining coping strategies (e.g., maintaining interests outside of the caring situation) predicted better HRQoL (De Ryck et al., 2014). Passive avoidant coping strategies, on the other hand, can have negative emotional and psychological consequences for stroke caregivers (Baumann et al., 2012). Passive coping was found to be the most important negative predictor of spouses' quality of life one year after a stroke in one study (Visser et al., 2015). When environmental demands exceed an individual's ability to manage or cope with stress, social support can help to mitigate the negative effects of stress on one's health (Lazarus & Folkman 1984). Caregivers who are satisfied with their social support report less stress, better mental well-being, and greater vitality than those who are not (van der et al. 2015). At three months and one year after a stroke, caregivers' HRQoL was predicted by family support (Abd-Allah et al., 2014). In addition, several randomized controlled trials have found that support interventions delivered by their healthcare system improve family caregivers' psychological health and HRQoL (McPherson et al., 2011).

CHAPTER-III METHODOLOGY

3.1 Study Design

In a cross-sectional descriptive study, structured questionnaires were used, and interviews with stroke survivors were conducted. The objectives were easily determined using this study design. The data was gathered in one shot or over a short period of time.

3.2 Study site

The data was gathered at CRP Neurology unit in Savar, Dhaka, by the researcher. At this facility, stroke patients were treated. The stroke patients provided no difficulty in providing information to the researcher.

3.3 Study Population

A population is the total group, set of events, or totality of the observation on which a study is conducted. It is the group in which the researcher is interested and with whom the researcher wishes to generalize the findings of the study. The study's sample population was chosen from stroke patients receiving treatment at CRP. A total of 207 samples were chosen for this study.

3.4 Sampling technique

The researchers chose CRP participants because they were readily available. Convenient sampling is a technique for identifying and contacting a specific group of people. The samples were chosen using a set of inclusion and exclusion criteria.

3.5 Sample size

When the sample frame is finite,

The equation of finite population correction in case of cross sectional study is:

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

$$= \frac{(1.96)^2 \times 0.3 \times 0.7}{(0.05)^2}$$

= 323

Here,

Z (confidence interval) = 1.96

P (prevalence) =0.3 (Islam et al., 2013)

d (margin of error) = 0.05

And, q= (1-p)

= (1-0.3)

= 0.7

The actual sample size was, n= 323

As it is academic thesis, self-funding and data was collected from a single specialized hospital by considering the feasibility and time limitation 207 sample were selected conveniently.

3.6 Inclusion criteria

All the patients who are diagnosed with stroke according to the standard diagnostic criteria (Han et al., 2013) and confirm with computed tomography or magnetic resonance imagining. Patients will be enrolled if they meet the following criteria:

1. Both ischemic and hemorrhagic stroke patient with neurological deficit and with the confirmed diagnosis by the neurologist (Harris et al., 2009).
2. Age of patient ranging from 30 to 70 years (Islam et al., 2013).
3. At least 4 weeks of post stroke (Visser et al., 2016).
4. Ability to walk 10 m independently or using an aid or orthotic with or without supervision or aid (Kim et al., 2012).
5. Able to tolerate the duration of interventions and evaluation (Han et al., 2013).
6. First or second stroke resulting in right or left sided hemiparesis ((Mudge et al., 2009).
7. Both male and female will be included (Moon et al., 2018).
8. Patient has the ability to provide informed consent (Blennerhassett and Dite, 2004).

3.7 Exclusion criteria

1. Patient suffering from unstable cardiac condition, uncontrolled hypertension or congestive heart failure ((Mudge et al., 2009).
2. Participants were excluded if they had progressive neurologic disease and other significant health problems that adversely affected walking ability (Mudge et al., 2009).
3. Participant with aphasia, cardiac arrhythmias and any such conditions for which exercise are contraindicated (Frimpong et al., 2016).
4. Perceptual, apraxic or major cognitive deficits (Michaelsen et al., 2006).

3.8 Data collection Method

The study aims, objectives, and study procedures were explained to participants before data was collected using a questionnaire. They were given the opportunity to ask questions and then asked to sign the written consent form once they were satisfied. The researcher completed the WHOQOL-BREF along with the demographic data after they signed the consent form. Data was collected from the 01-07-2021 to 30-09-2021. For data collection, researchers went to each participant's home, workplace, and training institute. During this stage, the researcher enlisted the assistance of the training institute's director and participants in the study. In some cases, the person being evaluated may be unable to complete the questionnaire (e, g, due to expressive or receptive language deficits, memory impairment, post traumatic distress etc.). In these cases, the form could be completed by someone who knew the person being assessed, as long as the person being assessed was present when the form was completed.

3.9 Data collection tools

The study required a Bengali Consent Form and Questionnaire, as well as other materials such as a pen, pencil, eraser, clip board, white paper, and note book. Demographic data was gathered based on a literature review and the study objectives. Caregivers were asked about their age, gender, educational level, monthly family income, relationship to the stroke survivor, and number of chronic conditions.

Measurement tools

WHOQOL Scale

A quality of life profile is generated by the WHOQOL-BREF (Field Trial Version). It is a comprehensive list of 26 items to assess the quality of life regarding physical, social, psychological and environmental aspects of the caregivers. Scale consists 4 parts namely; physical (7 items), psychological (6 items), social relationship (3 items), and environment (8 items). The initial two items (Items 1 and 2) measure the overall quality of life and satisfaction to heath respectively. There are four domain scores that can be calculated. Separately, two items are examined: question 1 concerns an

individual's overall perception of quality of life, and question 2 concerns an individual's overall perception of health. The four domain scores represent a person's perception of their quality of life in each of the four domains. The domain scores are scaled from high to low in a positive direction (i.e. higher scores denote higher quality of life). The domain score is calculated using the mean score of items within each domain. To make domain scores comparable to those used in the WHOQOL-100, mean scores are multiplied by four. The first method converts scores to a range of 4-20, which is comparable to the WHOQOL-100. The second transformation method is to scale domain scores from 0 to 100 (WHOQOL, 1996).

COPE scale

Carver (1997) developed the Brief COPE Inventory (BCI) to assess ways of coping that might be used to deal with stressful events. There are 28 items and 14 subscales in this self-report questionnaire that assess different ways of coping (two items per scale). The BCI employs a four-point Likert-type scale with ratings ranging from 1 to 4 ('I haven't done this at all' to 'I have done this a lot'). Each coping strategy receives a score of 2–8. (Carver 1997). Cronbach's alpha for the subscales ranged from 0.50 (venting) to 0.90, according to Carver (1997). (substance use). Carver (1997) also cited evidence in support of the BCI's factorial validity (Carver, 1997).

3.10 Data Analysis

Data was entered into an excel spreadsheet and the Statistical Package for Social Science (SPSS) software version 20. SPSS software was also used to analyze the data. The demographic factors such as age, gender, occupation, marital status, and so on were analyzed and discussed using the WHOQOL-BREF and Demographic questionnaire. The physical, psychological, social relationship, and environmental health of quality of life were also discussed using the WHOQOL-BREF questionnaire. There are 26 questions in WHOQOL-BREF. The overall quality of life and level of health satisfaction are graded on a scale of 1-5 (very poor-very good). The domains were rated 1,2,3, and 4 on a scale of 1 to 4. BREEF COPING was also discussed in this study, which has three domains. This survey produced cross-sectional data as a result. A great deal of data is gathered as a result of this survey. All of the findings provided useful information about the characteristics of various

complaints among stroke patients. Chi-Square analysis was used to determine the relationship between the various variables.

Chi-Square (x^2) test

Chi square (x^2) Test is the most popular discrete data hypothesis testing method. It is a non-parametric test of statistical significance for bivibrate tabular analysis with a contingency table. In this study Chi square (x^2) test was done to measure the associations between two variables. It was used to test the statistical significance of results reported in bivariate tables.

Assumption

Different and Independent variable

Variables were quantitative

Normal Distribution of the variable

Formula: the test statistics follow

$X^2 = \sum_{i=1}^{k} (O - E)^2 / E$

Here, x^2 = Chi square value

$\sum$ = The sum of

O = Observed count

E = Expected count

Chi square is the sum of the squared differences between observed (O) and the expected (E) data divided by expected (E) data in all possible categories

3.11 Informed Concent

All participants were given written consent prior to completing the questionnaire (appendix). The researcher explained to the participants his or her role in the study, as well as the study's goal and objective. The researcher received a written consent form from each participant. As a result, the participants said they were aware of the consent process and that their participation was completely voluntary. The participants were told that their personal information would be kept private. The researchers assured the participants that taking part in the study would not harm them. According to the explanation, while the study may not provide immediate benefits to the participants, it may provide benefits in the future for cases similar to theirs. Participants had the option to withdraw their consent and stop participating at any time, with no impact on their current or future care at CRP's Neurology unit. Data from this study was coded anonymously to ensure confidentiality, and no personal information was included in any publication containing the study's findings.

3.12 Ethical consideration

The proposal was approved by the Institutional Review Board (IRB) and the Bangladesh Health Profession Institute (BHPI). The research followed guidelines set forth by the World Health Organization (WHO) and the Bangladesh Medical Research Council (BMRC). Participants gave their written or verbal consent before any data was collected. The participants in the study had signed consent forms, and the purpose of the study and the consent form had been explained to them verbally throughout the research. Their jobs were not harmed as a result of the research. They were told that their participation in the study was completely voluntary and that they had the right to withdraw or stop at any time. They were also assured that their personal information would be kept private. The participant should be assured that his or her name and address will not be used. The participants were also told that the study's findings would not harm them.

3.13 Rigor of the study

The study was carried out in a meticulous manner. The research was carried out in a systematic and orderly manner. It was ensured that participants were not influenced by their previous experiences during the data collection. Whether they had a negative or positive impression, the answer was accepted. There were no leading questions asked, and no significant questions were avoided. To ensure that there were no errors, the supervisor double-checked the participant information. The information was kept completely confidential. In the result section, displaying any personal interpretation had no effect on the outcome. Every section of the study was double- and triple-checked by the research supervisor.

CHAPTER-IV RESULT

Socio-demographic information

This was a cross sectional study. The objective of the study was to explore the demographic profile of stroke patients attended at CRP. Purposive sampling was done to select samples. Total 207 data were collected from the neurology unit of CRP, Savar, Dhaka. Data were numerically coded and captured in Microsoft Excel, using an SPSS 20.0 version software program. The investigator collected the descriptive data and calculated as percentages which were presented in different bar diagrams, pie charts and tables. Here is also showed association with WHOQOL domain, coping domain and socio-demographic profile in different tables.

4.1 Age Groups

A total of 207 stroke patients were participants among them 8% (n=16) participants were 30-39 years, 21% (n=43) participants were 40-49 years, 45% (n=94) were 50-59 years, 26% (n=54) participants were 60-70 year.

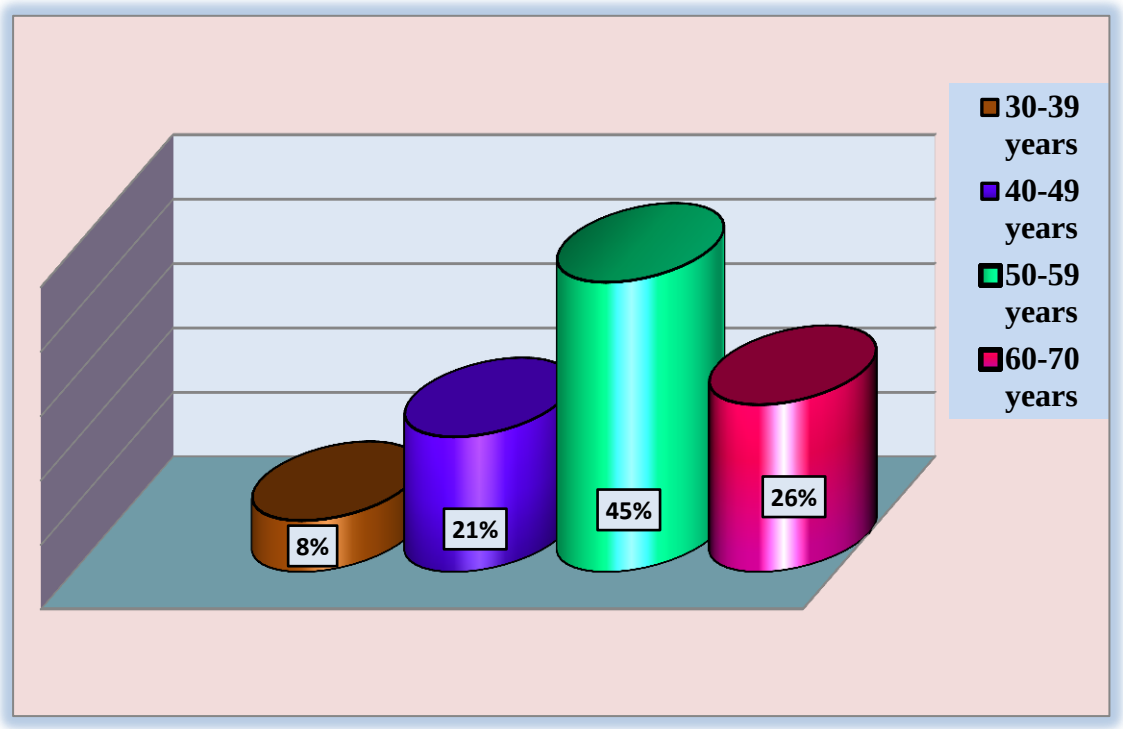


Figure-4.1: Age groups of the participants

4.2 Marital status, Sex and Educational status

Total participants 207 among them 95% (n=197) participants were married, 3% (n=7) participants were single, 1% (n=2) participants were divorce and 1% (n=1) participants were widow. Among them most of the participants 67% (n=140) were male and 33% (n=67) female. In Educational level, 15% (n=30) participants had no formal education, 29% (n=61) participants had primary education, 34% (n=70) participants had secondary education and 22% (n=46) participants had bachelor degree.

Table-4.2: Marital status, Sex and Educational status

Variables	Categories	Number of the participants	percentage
Marital status	Married	197	95%
	Single	7	3%
	Divorce	2	1%
	widow	1	1%
Sex	Male	140	67%
	Female	67	33%
Educational status	No formal education	30	15%
	Primary education	61	29%
	Secondary education	70	34%
	Bachelor degree or above	46	22%

4.3 Living area of the participants

The study was conducted on 207 participants. Among the participants 56% (n=117) were lived in rural area, 34% (n=70) were lived in urban area and 10% (n=20) were lived in semi-urban area.

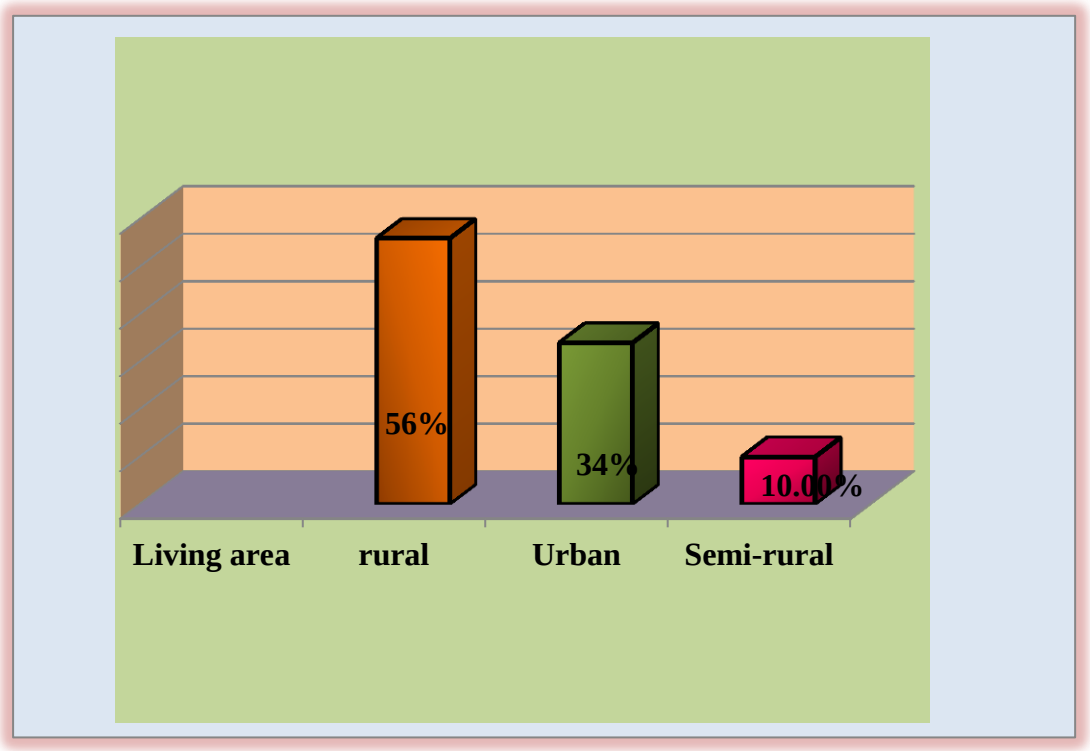


Figure-4.3: Living area of the participants

4.4 Occupation of the participants

207 participants were used for this survey. Among them 8% (n=16) were farmer, 27% (n=57) were service holder, 3% (n=4) were day laborer, 8% (n=4) were garments worker, 2% (n=4) were driver, 20% (n=43) were businessman, 3% (n=6) were teacher, 29% (n=61) were housewife and 4% (n=8) were others.

Table-4.4: Occupation of the participants

Occupation	Number of the participants	Percentage
Farmer	16	8%
Service holder	57	27%
Day laborer	4	3%
Garments worker	8	4%
Driver	4	2%
Businessman	43	20%
Teacher	6	3%
Housewife	61	29%
Other	8	4%

4.5 Monthly Income

The bar chart showed that among the 207 participants it was found that 47% (n= 101) were maintain 10000-250000tk, 51% (n=102) were maintain 26000-40000tk, 2% (n=4) were maintain 41000-60000tk.

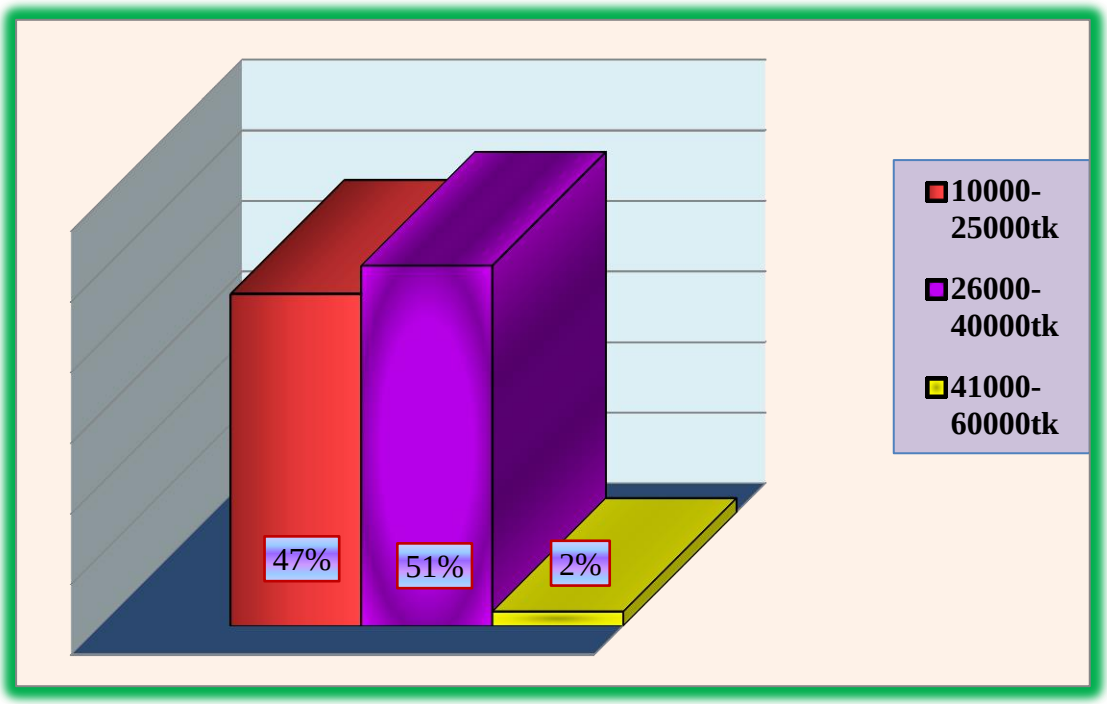


Figure-4.5: Monthly income of the participants

4.6 General Health

This pie chart showed that among the 207 participants it was found that 63% (n=128) were lead good health status, 21% (n=45) were lead fair health status, 16% (n=34) were lead poor health status.

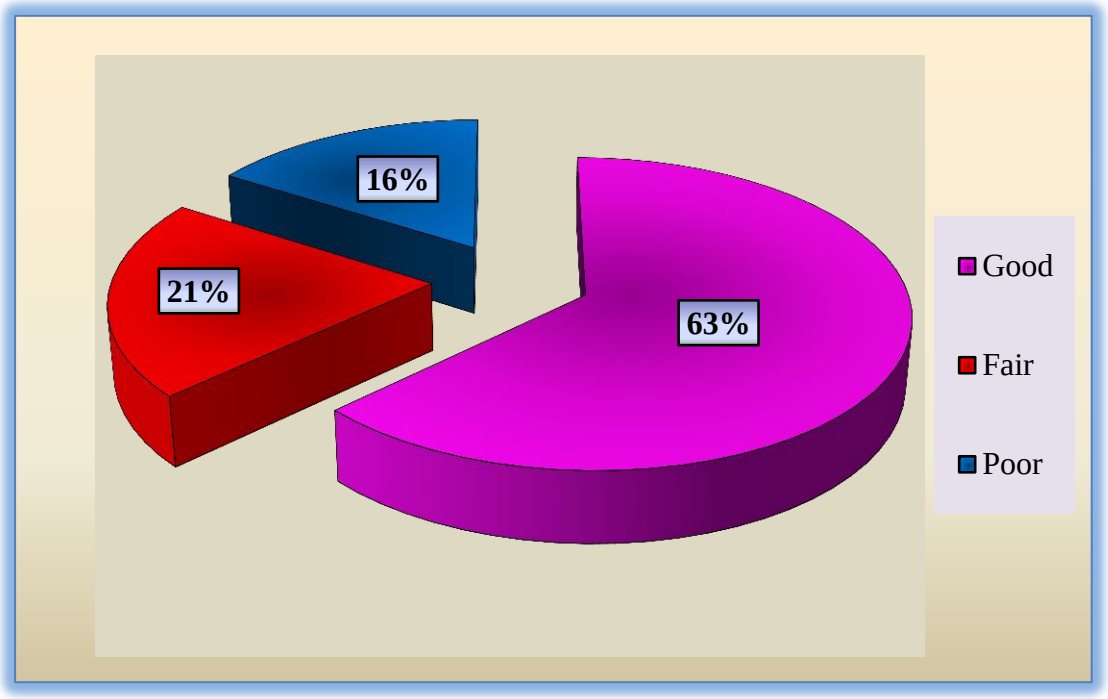


Figure-4.6: General Health of the participants

4.7 Smoking history, Cigarette number, Smoking after stroke and alcohol history

The maximum of the participants near about 34% (n=71) were habituated with smoking before stroke and 66% (n=136) were not habituated with smoking before stroke. From them 27% (n=56) were intake 1-10 number of cigarette and 4% (n=7) were intake 11-20 number of cigarette. After stroke, 13% (n=26) participants were intake smoke, 87% (n=181) were not intake smoke. From the participants 4% (n=9) were intake alcohol and 198% (n=96) were not intake alcohol in lifespan.

Table-4.7: Smoking history, Cigarette number, Smoking after stroke and alcohol history .

Variables	Categories	Number of the participants	Percentage
Smoking History	Yes	71	34%
	No	136	66%
Cigarette number	0	144	69%
	1-10	56	27%
	11-20	07	4%
Smoking after stroke	Yes	26	13%
	No	181	87%
Alcohol history	Yes	9	4%
	No	198	96%

4.8 Stroke time of the participants

This column chart showed that among the 207 participants it was found that 35% (n=73) participants were got stroke before 4-20 weeks ago, 44% (n=91) participants were got stroke 21-40 weeks ago and 21% (n=43) participants were got stroke before 41weeks or above.

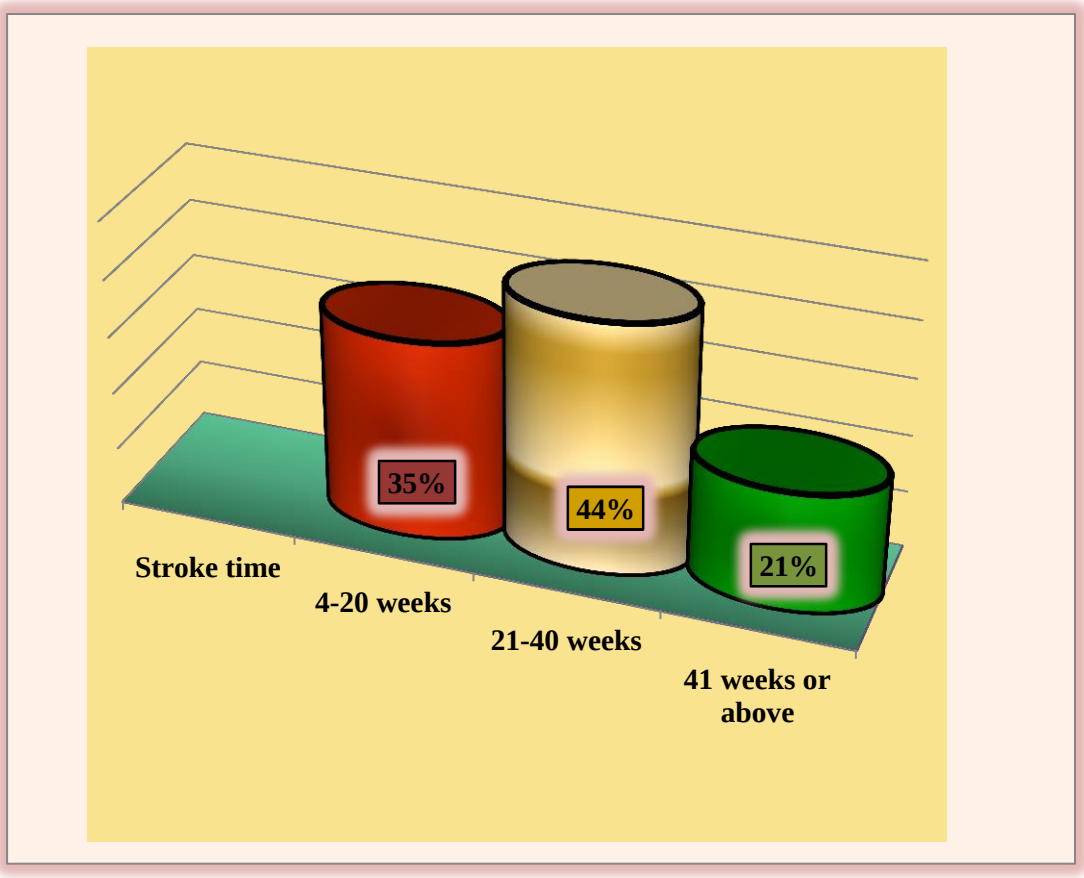


Figure-4.8: Stroke time of the participants

4.9 Stroke Type

This pie chart showed that among the 207 participants it was found that the maximum of the participants near about 71% (n=146) were ischemic stroke, 29% (n=60) were hemorrhagic stroke patients.

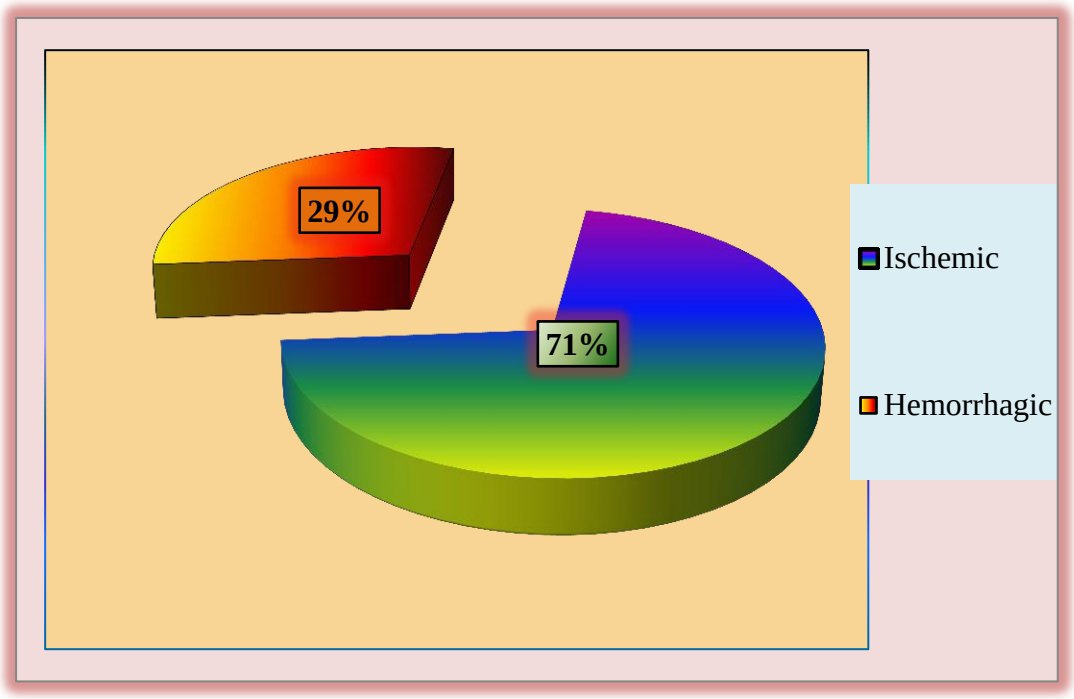


Figure-4.9: Stroke type of the participants

4.10 Have any disease

From 207 participants 22% (n=47) were affected in diabetes, 2% (n=3) were heart disease, 40% (n=83) were hypertension and 36% (n=74) were affected in both diabetes and high blood pressure.

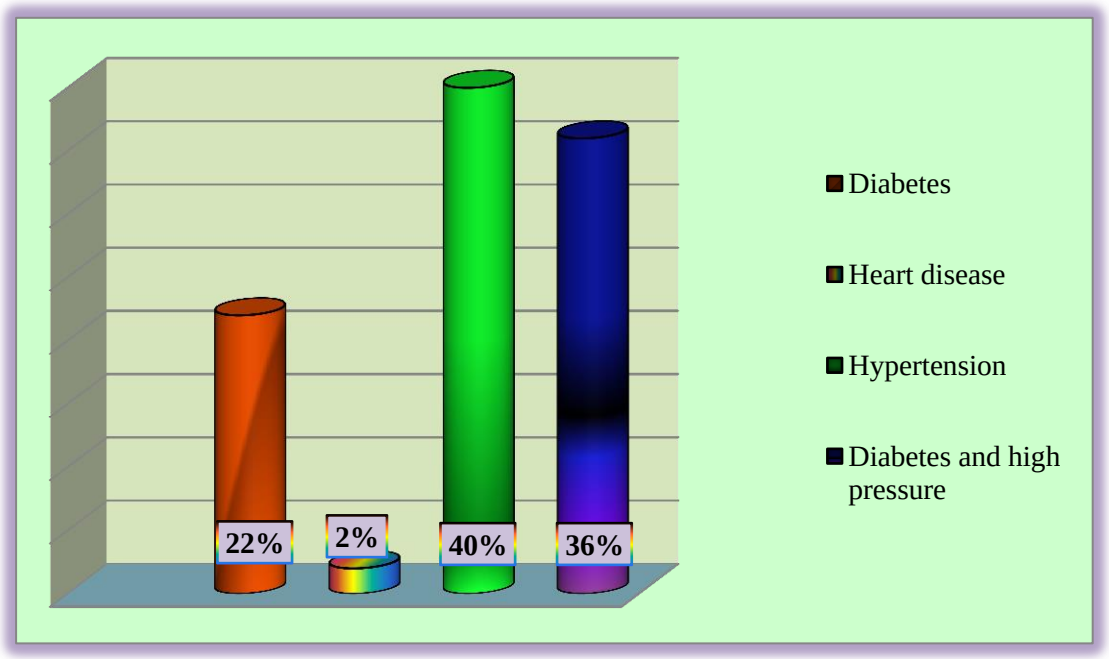


Figure-4.10: Have any disease of the participants

4.11 WHOQOL (Quality of Life) for Ischemic patient:

Domain number	Mean	Std. Deviation
Physical health domain	23.07	0.426
Psychological health domain	17.68	0.286
Social relationship domain	8.98	0.134
Environmental domain	26.62	0.269
Overall quality of life	81.75	1.081

Above table 4.11 shows that the mean±SD of physical health domain is 23.07±0.0426. The mean±SD of psychological health domain is 17.68±0.286. The mean±SD social relationship domain is 8.98±0.134. The mean±SD of environmental health domain is 26.62±0.269. The mean±SD of overall quality of life is 81.75±1.081.

4.12 WHOQOL (Quality of life) for Hemorrhagic patient:

Domain number	Mean	Std. Deviation
Physical health domain	25.62	0.583
Psychological health domain	18.98	0.544
Social relationship domain	9.48	0.206
Environmental domain	27.38	0.489
Overall quality of life	88.18	1.81

Above table 4.12 shows that the mean±SD of physical health domain is 25.62±0.583. The mean±SD of psychological health domain is 18.98±0.544. The mean±SD social relationship domain is 9.48±0.206. The mean±SD of environmental health domain is 27.38±0.0489. The mean±SD of overall quality of life is 88.18±1.81.

4.13 Coping analysis for ischemic participants

Coping domain	Mean	Std. Deviation
Problem focused coping (Domain one)	22.39	0.382
Emotion focused coping (Domain two)	27.78	0.410
Avoidant coping (Domain three)	13.57	0.336

Above table 4.13 shows that the mean±SD of problem focused domain is 22.39±0.382. The mean±SD of emotion focused domain is 27.78±0.410. The mean±SD of avoidant coping is 13.57±0.336.

4.14 Coping analysis for hemorrhagic participants

Coping domain	Mean	Std. Deviation
Problem focused coping (Domain one)	24.07	0.495
Emotion focused coping (Domain two)	30.16	0.650
Avoidant coping (Domain three)	13.85	0.409

Above table 4.13 shows that the mean±SD of problem focused domain is 24.07±0.495. The mean±SD of emotion focused domain is 30.16±0.650. The mean±SD of avoidant coping is 13.85±0.409.

4.15 Subscales of coping strategies for Ischemic and hemorrhagic participants

Subscales	Ischemic participants (Mean±SD)	Hemorrhagic participants (Mean±SD)
Active coping	5.38±1.284	5.79±1.368
Informational support	6.86±1.227	7.31±1.025
Positive reframing	3.72±2.977	3.87±1.617
Planning	6.44±1.310	7.1±1.287
Emotional support	6.14±1.402	6.64±1.506
Venting	4.12±1.535	4.64±1.495
Humor	2.27±0.628	2.44±1.842
Acceptance	6.07±1.842	6.79±1.898
Religion	6.55±1.273	6.90±1.363
Self-blame	2.63±0.969	2.75±1.12
Self-distraction	4.73±1.601	4.73±1.6
Denial	3.15±2.181	3.31±1.467
Substance use	2.16±0.563	2.33±0.724
Behavioral disengagement	3.05±1.033	3.34±1.328

Above table: 4.15 shows that for ischemic participants, the mean±SD of active coping is 5.38±1.284. The mean±SD of informational support is 6.86±1.227. The mean±SD of positive reframing is 3.72±2.977. The mean±SD of planning is 6.44±1.310. The mean±SD of emotional support is 6.14±1.402. The mean±SD of venting is 4.12±1.535. The mean±SD of humor is 2.27±0.628. The mean±SD of acceptance is 6.07±1.842. The mean±SD of religion is 6.55±1.273. The mean±SD of self-blame is 2.63±0.969. The mean±SD of self-distraction is 4.73±1.601. The mean±SD of denial is 3.15±2.181. The mean±SD of substance use is 2.16±0.563. The mean±SD of behavioral disengagement is 3.05±1.033.

For hemorrhagic participants, the mean±SD of active coping is 5.79±1.368. The mean±SD of informational support is 7.31±1.025. The mean±SD of positive reframing is 3.87±1.617. The mean±SD of planning is 7.1±1.287. The mean±SD of emotional support is 6.64±1.506. The mean±SD of venting is 4.64±1.495. The mean±SD of humor is 2.44±1.842. The mean±SD of acceptance is 6.79±1.898. The mean±SD of religion is 6.90±1.363. The mean±SD of self-blame is 2.75±1.12. The mean±SD of self-distraction is 4.73±1.6. The mean±SD of denial is 3.31±1.467. The mean±SD of substance use is 2.33±0.724. The mean±SD of behavioral disengagement is 3.34±1.328.

4.16 Distribution of the respondents association in between socio-demographic profile, WHOQOL domain, and coping domain:

Association	**Chi-Square (x^2) value**	**P value**	**Sig.**
Age of the patient and overall quality of life	193.75	0.006	Significant
Age of the patient and emotion focused coping	93.69	0.01	Significant
Sex of the patient and avoidant coping	34.76	0.004	Significant
Marital status of the patient and psychological health domain	75.44	0.04	Significant
Marital status of the patient and overall quality of life	191.38	0.008	Significant
Educational qualification of the patient and environment domain	78.07	0.01	Significant
Educational qualification of the patient and overall quality of life	183.09	0.02	Significant

Monthly income of the family and psychological health domain	54.34	0.04	Significant
Monthly income of the family and environmental domain	69.95	0.001	Significant
Monthly income of the family and overall quality of life	158.79	0.00	Significant
General health and physical health domain	73.84	0.002	Significant
General health and psychological health domain	64.32	0.005	Significant
General health and social health domain	42.80	0.002	Significant
General health and environmental domain	52.58	0.003	Significant
General health and overall quality of life	123.83	0.04	Significant

Cigarette number and overall quality of life	142.38	0.002	Significant
Cigarette number and emotion focused coping	75.73	0.002	Significant
Smoke after stroke and social health domain	20.39	0.02	Significant
Smoke after stroke and overall quality of life	72.69	0.016	Significant
Type of stroke and overall quality of life	65.41	0.04	Significant
Type of stroke and problem focused coping	31.61	0.04	Significant
Type of stroke and emotion focused coping	33.83	0.04	Significant
Secondary disease and problem focused domain	80.87	0.03	Significant

Above table 4.14 shows that the association found between age of the patient and overall quality of life where p value is 0.006 (P<0.05) and x^2 value is 193.75 which was statistically significant. Association also found between age of the patient and emotion focused coping where p value is 0.01 (P<0.05) and x^2 value is 93.69 which was statistically significant. Association also found between sex of the patient and avoidant coping where p value is 0.004 (P<0.05) and x^2 value is 34.76 which was statistically significant Association also found between marital status of the patient and psychological health domain where p value is 0.04 (P< 0.05) and x^2 value is 75.44 which was statistically significant. Association also found between marital status of the patient and overall quality of life where p value is 0.008 **(**P< 0.05) and x^2 value is 191.38 which was statistically significant. Association also found between educational qualification of the patient and environment domain where p value is 0.01 **(**P< 0.05) and x^2 value is 78.07 which was statistically significant. Association also found between educational qualification of the patient and overall quality of life where p value is 0.02 **(**P< 0.05) and x^2 value is 183.09 which was statistically significant. Association also found between monthly income of the family and psychological health domain where p value is 0.04 **(**P< 0.05) and x^2 value is 54.34 which was statistically significant. Association also found between monthly income of the family and environmental domain where p value is 0.004 **(**P< 0.05) and x^2 value is 69.95 which was statistically significant. Association also found between monthly income of the family and overall quality of life where p value is 0.00 (P< 0.05) and x^2 value is 158.79 which was statistically significant. Association also found between general health and physical health domain where p value is 0.002 (P< 0.05) and x^2 value is 73.84 which was statistically significant. Association also found between general health and psychological health domain where p value is 0.005 (P< 0.05) and x^2 value is 64.32 which was statistically significant. Association also found between General health and social health domain where p value is 0.002 (P< 0.05) and x^2 value is 42.80 which was statistically significant. Association also found between general health and environmental domain where p value is 0.003 (P< 0.05) and x^2 value is 52.58 which was statistically significant. Association also found between General health and overall quality of life where p value is 0.04 (P< 0.05) and x^2 value is 123.83 which was statistically significant. Association also found between cigarette number and overall quality of life where p value is 0.002 (P< 0.05) and x^2 value is 142.38 which was statistically significant. Association also found between

cigarette number and emotion focused coping where p value is 0.002 ($P< 0.05$) and x^2 value is 75.73 which was statistically significant. Association also found between smoke after stroke and social health domain where p value is 0.02 ($P< 0.05$) and x^2 value is 20.39 which was statistically significant. Association also found between smoke after stroke and overall quality of life where p value is 0.016 ($P< 0.05$) and x^2 value is 72.79 which was statistically significant. Association also found between type of stroke and overall quality of life where p value is 0.04 ($P< 0.05$) and x^2 value is 65.41 which was statistically significant. Association also found between type of stroke and problem focused coping where p value is 0.04 ($P< 0.05$) and x^2 value is 31.61 which was statistically significant. Association also found between type of stroke and emotion focused coping where p value is 0.04 ($P< 0.05$) and x^2 value is 33.83 which was statistically significant. Association also found between Secondary disease and problem focused domain where p value is 0.03 ($P< 0.05$) and x^2 value is 80.87 which was statistically significant.

4.17 Distribution of the respondents of association between WHOQOL domain and COPING domain:

Association	**Chi-Square (x^2) value**	**P value**	**Sig.**
Physical health domain and problem focused coping domain	480.29	0.02	Significant
Physical health domain and emotion focused coping domain	518.75	0.03	Significant
Physical health domain and avoidant coping domain	397.81	0.01	Significant
Psychological health domain and problem focused coping domain	383.22	0.44	Not Significant
Psychological health domain and emotion focused coping domain	514.54	0.001	Significant
Psychological health	337.33	0.09	Not Significant

domain and avoidant domain			
Social health domain and problem focused domain	281.41	0.00	Significant
Social health domain and emotion focused coping domain	332.16	0.00	Significant
Social health domain and avoidant coping domain	186.68	0.07	Not Significant
Environment domain and problem focused domain	393.72	0.11	Not Significant
Environment domain and emotion focused coping domain	753.21	0.00	Significant
Environment domain and avoidant coping domain	482.4	0.00	Significant

Overall quality of life and problem focused domain	1032.69	0.12	Not significant
Overall quality of life and emotion focused domain	1318.41	0.00	Significant
Overall quality of life and avoidant domain	963.67	0.00	Significant

Above table 4.15 shows that association found between physical health domain and problem focused coping domain where p value is 0.02 ($P< 0.05$) and x^2 value is 480.29 which was statistically significant. Association found between physical health domain and emotion focused coping domain where p value is 0.03 ($P< 0.05$) and x^2 value is 518.75 which was statistically significant. Association found between physical health domain and avoidant coping domain where p value is 0.01 ($P< 0.05$) and x^2 value is 397.81 which was statistically significant. On the other hand association not found between psychological health coping and problem focused coping domain where p value is 0.44 ($P> 0.05$) and x^2 value is 383.22 which was statistically not significant. Association found between psychological health domain and emotion focused coping domain where p value is 0.001 ($P< 0.05$) and x^2 value is 514.54 which was statistically significant. On the other hand association not found between psychological health domain and avoidant domain where p value is 0.09 ($P> 0.05$) and x^2 value is 337.33 which was statistically not significant. Association found between social health domain and problem focused domain where p value is 0.00 ($P< 0.05$) and x^2 value is 281.41 which was statistically highly significant. Association found between social health domain and emotion focused coping domain where p value is 0.00 ($P< 0.05$) and x^2 value is 332.16 which was statistically highly

significant. On the other hand association not found between social health domain and avoidant coping domain where p value is 0.07 ($P > 0.05$) and x^2 value is 514.54 which was not statistically significant. Association also not found between environment domain and problem focused domain where p value is 0.11 ($P > 0.05$) and x^2 value is 393.72 which was statistically highly significant. Association found between environment domain and emotion focused coping domain where p value is 0.00 ($P < 0.05$) and x^2 value is 753.21 which was statistically highly significant. Association found between environment domain and avoidant coping domain where p value is 0.00 ($P < 0.05$) and x^2 value is 482.4 which was statistically highly significant. Association found between overall quality of life and problem focused domain where p value is 0.00 ($P < 0.05$) and x^2 value is 1032.69 which was statistically highly significant. Association found between overall quality of life and emotion focused domain where p value is 0.00 ($P < 0.05$) and x^2 value is 1318.41 which was statistically highly significant. Association found between overall quality of life and avoidant domain where p value is 0.00 ($P < 0.05$) and x^2 value is 963.67 which was statistically highly significant.

CHAPTER-V DISCUSSION

Now-a-days the quality of life has become a major topic of research in the area of health and the findings contribute to the definition and approval of treatments and evaluation of cost benefits of the Stroke patients. The study was done under the cross sectional survey design. The aim of this study was to find out the quality of life and coping strategies for post stroke patient. The QOL of patient with stroke was measured by the WHOQOL and results showed a greater impact on the physical health domain, mental health domain, social health domain and environmental health domain and also showed association between WHOQOL domain and coping domain.

The mean age of the respondents was 45.4±0.874 years. By sex, 67% (140) were males and 33% (67) were females with a ratio of 2.1: 1. Out of 207 patients, highest 94 (45%) patients belonged to 50-59 age group followed by 54 (26%) were in 60-70 age group and 43 (21%) patients were in 40-49 age group. The least number 16(8%) of patients belonged to 30-39 years age group. The average age of the respondents in a similar study was 50.1±14.8 years. Males made up 73.6% (98), while females made up 26.4% (35) for a 2.7: 1 ratio. The 41-50 age group had the highest percentage (24.8%) of the 133 patients, followed by 28 (21.1%) in the 51-60 age group, and 26 (19.5%) in the 31-40 age group (Miah et al., 2012).

In this study educational level, 15% (n=30) participants had no formal education, 29% (n=61) participants had primary education, 34% (n=70) participants had secondary education and 22% (n=46) participants had bachelor degree. Like this researchers discovered that 31% of literate patients received schooling, 19% received college education, and only 13% attended a university or similar institution in a similar study (Hossain et al., 2011).

Based on extracted data from CRP records, the investigator had observed that the subtypes of the cerebrovascular disease represented 81% ischemic and 19% hemorrhagic. Arterial hypertension was the most frequent risk factor (40%). Nearly 22% suffered from diabetes, and 36% were suffered from both diabetes and hypertension, 2% of the patients presented with a known heart disease. The similar results were noted that patients with ischemic heart disease made up 66.4% of the

total, while those with hemorrhagic heart disease made up 33.2%. Arterial hypertension was the most common risk factor (80.8% vs. 75.3% haemorrhagic). Almost all of the patients had neurological problems, and more than half of them had difficulty speaking. Nearly 40% of the patients had dyslipidemia, 22.7% of the patients had diabetes, and 20.9% of the patients were obese (Baumann et al., 2012).

In this study table 4.11 shows that for the ischemic participants, the mean±SD of physical health domain is 23.07±0.0426. The mean±SD of psychological health domain is 17.68±0.286. The mean±SD social relationship domain is 8.98±0.134. The mean±SD of environmental health domain is 26.62±0.269. The mean±SD of overall quality of life is 81.75±1.081. For hemorrhagic participants, the mean±SD of physical health domain is 25.62±0.583. The mean±SD of psychological health domain is 18.98±0.544. The mean±SD social relationship domain is 9.48±0.206. The mean±SD of environmental health domain is 27.38±0.0489. The mean±SD of overall quality of life is 88.18±1.81. On WHOQOL BREF, caregivers of stroke survivors had similar results in the physical, psychological, social, and environmental quality of life domains. The highest quality of life score (61.45±26.96) was in the social domain, followed by psychological (53.05±17.59), environment (51.23±24.53), and physical (51.23±24.53), (51.23±24.53), (49.14±14.40) (Kumar et al., 2015).

In this study, table 4.15 shows that for ischemic participants, the mean±SD of active coping is 5.38±1.284. The mean±SD of informational support is 6.86±1.227. The mean±SD of positive reframing is 3.72±2.977. The mean±SD of planning is 6.44±1.310. The mean±SD of emotional support is 6.14±1.402. The mean±SD of venting is 4.12±1.535. The mean±SD of humor is 2.27±0.628. The mean±SD of acceptance is 6.07±1.842. The mean±SD of religion is 6.55±1.273. The mean±SD of self-blame is 2.63±0.969. The mean±SD of self-distraction is 4.73±1.601. The mean±SD of denial is 3.15±2.181. The mean±SD of substance use is 2.16±0.563. The mean±SD of behavioral disengagement is 3.05±1.033 and for hemorrhagic participants, the mean±SD of active coping is 5.79±1.368. The mean±SD of informational support is 7.31±1.025. The mean±SD of positive reframing is 3.87±1.617. The mean±SD of planning is 7.1±1.287. The mean±SD of emotional support is 6.64±1.506. The mean±SD of venting is 4.64±1.495. The mean±SD of humor is 2.44±1.842. The mean±SD of acceptance is 6.79±1.898. The mean±SD of religion is 6.90±1.363. The mean±SD of self-blame is 2.75±1.12. The mean±SD of

self-distraction is 4.73±1.6. The mean±SD of denial is 3.31±1.467. The mean±SD of substance use is 2.33±0.724. The mean±SD of behavioral disengagement is 3.34±1.328. Similar study also found that, Acceptance (6.28, SD = 1.31), active coping (5.5, SD = 1.317), positive reframing (3.75, SD = 2.634), and planning (6.63, SD = 1.344) were the four most common coping strategies used by stroke caregivers, according to a study conducted in China. (Yu et al., 2013).

In this study table 4.14 shows that the association found between age of the patient and overall quality of life where p value is 0.006 (P<0.05) and x^2 value is 193.75 which was statistically significant. Association also found between age of the patient and emotion focused coping where p value is 0.01 (P<0.05) and x^2 value is 93.69 which was statistically significant. Association also found between sex of the patient and avoidant coping where p value is 0.004 (P<0.05) and x^2 value is 34.76 which was statistically significant Association also found between marital status of the patient and psychological health domain where p value is 0.04 (P< 0.05) and x^2 value is 75.44 which was statistically significant. Association also found between marital status of the patient and overall quality of life where p value is 0.008 **(**P< 0.05) and x^2 value is 191.38 which was statistically significant. Similar study found that among the stroke patients, the predictors of QoL that reached significance were older age, the female gender, being single, and the disability level. Older patients had lower overall QoL ($\beta = -0.21$, $p < 0.05$), and single patients experienced significant decreases in all four domains ($\beta = -12.27$, $p < 0.001$ in physical; $\beta = -8.03$, $p < 0.05$ in psychological; $\beta = -13.75$, $p < 0.001$ in social; and $\beta = -5.57$, $p < 0.05$ in environmental) comparing to married patients. Female patients had higher overall QoL compared with that of male patients ($\beta = 6.50$, $p < 0.05$) comparing to male patients. Patients who had become more independent had higher QoL scores ($\beta = 14.84$, $p < 0.001$ in physical; $\beta = 10.20$, $p < 0.05$ in social relationship, and $\beta = 6.14$, $p < 0.05$ in environmental aspects) compared with those who became less independent according to the BI score (Chuluunbaatar et al., 2016).

5.1 Limitations

There were a number of limitations and barriers in this research project which had affect the accuracy of the study, these are as follow: The samples were collected only from the CRP at Savar and the sample size was small, so the result of the study could not be generalized to the whole population of Stroke in Bangladesh. There was little evidence to support the result of this project in the context to Bangladesh. A convenience sampling was used that was not reflecting the wider population under study. The research project was done by an undergraduate student and it was first research project for her . So the researcher had limited experience with techniques and strategies in terms of the practical aspects of research. As it was the first survey of the researcher so might be there were some mistakes that overlooked by the supervisor and the honorable teacher.

CHAPTER-VI CONCLUSION & RECOMMENDATION

6.1 Conclusion

Despite the small sample size and the study's limitations, this study provides valuable insight into the quality of life for people who have had a stroke. According to the findings, people who have had a stroke have a significantly lower quality of life and coping strategies.

Quality of life is a term that is used to assess an individual's well-being in a variety of situations. Achieving a satisfactory QoL for stroke patients is a primary goal of treatment and rehabilitation with coping strategies. In order to improve the quality of life of people who have had a stroke, necessary steps should be taken to improve their physical, mental, social, and environmental health, in addition to coping strategies, increased awareness, and proper counseling.

The WHOQOL-BREEF and COPE BREEF questionnaires, which are patient-measured and validated in terms of reliability and reproducibility, were used to assess QoL in stroke patients. This research could result in policy changes that provide them with more support and access to the equipment or lifestyle interventions that they need. Future longitudinal studies with a larger sample size and the evaluation of additional variables will be needed to assess the patient's quality of life after a stroke.

However, despite a growing body of literature over the last decade, quality of life among people who have had a stroke is a complex issue that is still poorly understood. Individuals' expectations and values, and thus their markers with which they judge their quality of life, are thought to change after a stroke.As a result, there have been an increasing number of calls for the use of measures that capture the subjective QoL and coping strategy of stroke patients.

6.2 Recommendations

The study's goal was to evaluate stroke patients' quality of life and coping strategies. Despite the study's limitations, the investigators identified some additional steps that could be taken to improve the success of future research. The following are the main suggestions:

In order to increase the power of generalization, the random sampling technique rather than the convenience sampling technique would be chosen.

Because the study was short in duration, it will be conducted over a longer period of time in the future.

The sample size for this study was 207 participants, but the sample size will be increased in the future.

In this study, the investigator only used participants from one hospital in Savar as a sample for the study. As a result, the investigators strongly recommended that future studies include stroke patients from all over Bangladesh to ensure the study's generalizability.

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Appendix- I: English Verbal Consent Form

(Please read out to the participants)

Greeting!

My name is Jannatul Ferdoushi. I am 4th year student of B.Sc. in Physiotherapy program at Bangladesh Health Professions Institute (BHPI). For my study purpose I am conducting a study on stroke patients and my study title is "Quality of life and coping strategies for thepost stroke patient. I would like to know about some personal and other related information regarding stroke. This will take approximately 30minutes. This is an academic study and will not be used for any other purpose. Your participation in the research will have no impact on your present or future treatment in neurology unit. Researcher will maintain confidentiality of all procedures. Your data will never be used without your permission. Your participation in this study is voluntary and you may withdraw yourself at any time during this study.

If you have any query about the study or your right as a participant, you may contact with me or my supervisor Farjana Sharmin, Junior consultant & out-Patient In charge, Lecturer of BHPI, CRP, Savar, Dhaka.

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

Yes	No

Signature of the Participant……

Date…….

Signature of the Interviewer……...

Date…….

Appendix-II : অনুমতি পত্র

(অংশগ্রহণকারীকে পড়েশোনাতে হবে)

শুভেচ্ছা

আমার নাম জান্নাতুল ফেরদৌসী। আমি বাংলাদেশ হেল্‌থ প্রফেশন ইনসটিটিউট (বিএইচপিআই) এ ফিজিওথেরাপি কোর্সের ৪র্থ বর্ষের একজন ছাত্রী। আমার গবেষণার কাজের জন্য আমি স্ট্রোক রোগীদের উপর একটি গবেষণা পরিচালনা করছি এবং আমার অধ্যয়ন শিরোনাম- "স্ট্রোক পরবর্তী স্বাস্থ্য সম্পর্কিত জীবনের মান ও মোকাবিলা করার কৌশল"। এক্ষেত্রে আমি আপনার এবং স্ট্রোক সম্পর্কে আনুষঙ্গিক কিছু তথ্য জানতে চাচ্ছি। যা প্রায় ৩০ মিনিট সময় লাগবে। এটি একটি শিক্ষাগত গবেষণা এবং অন্য কোন উদ্দেশ্যে ব্যবহার করা হবে না। গবেষণায় আপনার অংশগ্রহণ আপানার বর্তমান বা ভবিষ্যত চিকিৎসার কোনো প্রভাব ফেলবে না। গবেষক গবেষনা চলাকালীন প্রতিটি ধাপে গোপনীয়তা বজায় রাখবেন। আপনার তথ্য আপনার অনুমতি ছাড়া ব্যবহার করা হবে না। এই গবেষণায় আপনার অংশগ্রহণ ইচ্ছা অনুযায়ী এবং এই অধ্যয়নের যে কোন সময়ে নিজেকে প্রত্যাহার করতে পারবেন।

আপনি একজন অংশগ্রহণকারী হিসেবে অধ্যয়ন সর্ম্পকে কোনো প্রশ্ন থাকে তাহলে আপনি আমাকে অথবা আমার সুপারভাইজার ফারজানা শারমিন, জুনিয়র কনসালটেন্ট, বর্হিবিভাগ ইনচার্জ, বিএইচপিআই এর প্রভাষক, সিআরপি, সাভার, ঢাকা।

আমি আপনার অনুমিত নিয়ে এই সাক্ষাৎকার শুরু করতে পারি?

হ্যাঁ	না

অংশগ্রহণকারীর স্বাক্ষরঃ

তারিখঃ

সাক্ষাৎকারকারীর স্বাক্ষর

তারিখঃ

Research Questionnaire

Quality of life and coping strategies for the post stroke patient attended at CRP

Patient's name:

Patient's ID:

Patient's address:

Part-1:Patient's Socio-Demographic Information

[Use tick(√) to mark the correct answer]

QN	Question	Response
1.1	Age	Year
1.2	Sex	1=Male2=Female
1.3	Marital status	1=Married 2=Single 3=Widow 4=Divorced
1.4	Educational status	1=No formal education 2=Primary education 3=Secondary education 4=Bachelor degree or above
1.5	Usually reside	1=Rural 2=Urban 3=semi urban
1.6	Occupation	1=Farmer 2= Service holder 3= Day laborer 4=Garments/ Factory worker 5= Driver 6=Rickshaw puller 7=Businessman 8=Unemployed 9= Teacher 10= Housewife11=Other.....
1.7	Monthly income of the family.	.....
1.8	Status of self reported general health.	1=Good2=Fair 3=Poor

Part-2: Lifestyle Data

QN	Question	Response
2.1	Did you ever smoke in your life?	.....
2.2	If smoke number of cigarettes per day/year.	Per Day
2.3	Did you smoke after stroke?	1=Yes 2=No
2.4	Have you ever consumed a drink that contains alcohol?	1=Yes 2=No
2.5	How long you slept?	..... Hours

Part-3: Co-morbid conditions Data

QN	Question	Response
3.1	How many weeks ago did you have stroke?	.....weeks
3.2	Which type of stroke do you have?	1= Ischemic 2=Hemorrhagic
3.3	Have you ever been diagnosed with any of the following conditions? (more than one answer possible)	1=Diabetes mellitus 2=Heart disease 3=Hypertension 4=Lung disease 5=Diabetes and hypertension 6=Others

Part-4: Quality of life was measured by WHOQOL-BREF

This questionnaire asks how you feel about your quality of life, health, or other areas of your life. Please answer all the questions. If you are unsure about which response to give to a question, please choose the one that appears most appropriate. This can often be your first response. Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life in the last two weeks. For example, thinking about the last two weeks, a question might ask:
Please read each question, assess your feelings, and tick(√)the number on the scale that gives the best answer for you for each question.

	Question	Very poor	poor	Neither poor nor good	Good	Very good
4.1	How would you rate your quality of life?	1	2	3	4	5

		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfi-ed	Very satisfied
4.2	How satisfied are you with your heath?	1	2	3	4	5
The following questions ask about **how much** you have experienced certain things in the last two weeks.						
		Not at all	**A little**	**A moderate amount**	**Very much**	**An extreme amount**
4.3	To what extent do you feel that physical pain prevents you from doing what you need to do?	1	2	3	4	5

4.4	How much do you need any medical treatment to function in your daily life?	1	2	3	4	5
4.5	How much do you enjoy life?	1	2	3	4	5
4.6	To what extent do you feel your life to be meaningful?	1	2	3	4	5
		Not at all	**Slightly**	**A moderate amount**	**Very much**	**Extremely**
4.7	How well are you able to concentrate?	1	2	3	4	5
4.8	How safe do you feel in your daily life?	1	2	3	4	5
4.9	How healthy is your physical environment?	1	2	3	4	5

The following questions ask about **how completely** you experience or were able to do certain things in the last two weeks

		Not at all	**A little**	**Moderat-ely**	**Mostly**	**Comp let-ely**
4.10	Do you have enough energy for everyday life?	1	2	3	4	5
4.11	Are you able to accept your bodily appearance?	1	2	3	4	5
4.12	Have you enough money to meet your needs?	1	2	3	4	5
4.13	How available to you is the information that you need in your day-to-day life?	1	2	3	4	5
4.14	To what extent do you have the opportunity for leisure activities?	1	2	3	4	5
		Very poor	**Poor**	**Neither poor nor well**	**Well**	**Very well**
4.15	How well are you able to get around?	1	2	3	4	5

The following questions ask you to say how **good** or **satisfied** you have felt about various aspects of your life over the last two weeks.

		Very dissatisfied	**Dissatisfied**	**Neither satisfied nor dissatisfied**	**Satisfied**	**Very satisfied**
4.16	How satisfied are you with your sleep?	1	2	3	4	5
4.17	How satisfied are you with your ability to perform your daily living activities?	1	2	3	4	5
4.18	How satisfied are you with your capacity for work?	1	2	3	4	5
4.19	How satisfied are you with yourself?	1	2	3	4	5
4.20	How satisfied are you with your personal relationships?	1	2	3	4	5
4.21	How satisfied are you with your sex life?	1	2	3	4	5
4.22	How satisfied are you with the support you get from your friends?	1	2	3	4	5
4.23	How satisfied are you with the conditions of your living place?	1	2	3	4	5
4.24	How satisfied are you with your access to health services?	1	2	3	4	5
4.25	How satisfied are you with your mode of transportation?	1	2	3	4	5

		Never	**Seldom**	**Quite often**	**Very often**	**Always**
4.26	How often do you have negative feelings, such as blue mood, despair, anxiety, depression?	1	2	3	4	5

Part-5:Coping Strategy Related Information

According to COPE Scale: Carver used this scale to assess different coping strategies in response to stress in stroke patient.

Please read each question, assess your feelings, and tick(√)the number on the scale that gives the best answer for you for each question.

	Question	**Answer**	**Answer**	**Answer**	**Answer**
		1=I have not been doing this at all	**2=A little bit**	**3=A medium amount**	**4=I have been doing this a lot**
5.1	I have been turning to work or other activities to take my mind off things.	1	2	3	4
5.2	I have been concentrating my efforts on doing something about the situation I am in.	1	2	3	4
5.3	I have been saying to myself ,this is not real	1	2	3	4
5.4	I have been using alcohol	1	2	3	4

	or other drugs to make myself feel better.				
5.5	I have been getting emotional supports from others.	1	2	3	4
5.6	I have been giving up trying to deal with it	1	2	3	4
5.7	I have been taking action to try to make the situation better.	1	2	3	4
5.8	I have been refusing to believe that it has happened	1	2	3	4
5.9	I have been saying that things to let my unpleasant feelings escape	1	2	3	4
5.10	I have been getting help and advice from other people.	1	2	3	4
5.11	I have been using alcohol or other drugs to help me get through it	1	2	3	4
5.12	I have been trying to see it in a different light , to make it seem more positive	1	2	3	4
5.13	I have been criticizing myself	1	2	3	4
5.14	I have been trying to come up with a strategy about what to do	1	2	3	4
5.15	I have been getting	1	2	3	4

	comfort and understanding from someone				
5.16	I have been giving up the attempt to cope	1	2	3	4
5.17	I have been looking for something good in what is happening	1	2	3	4
5.18	I have making jokes about it.	1	2	3	4
5.19	I have been doing something to think about it less, such as going to, movies watching tv, reading, sleeping or shopping.	1	2	3	4
5.20	I have been accepting the reality of the fact that it has happened.	1	2	3	4
5.21	I have been expressing my negative feelings	1	2	3	4
5.22	I have been trying to find comfort in my religion or spiritual beliefs.	1	2	3	
5.23	I have been trying to get advice or help from other people about what.	1	2	3	4
5.24	I have been learning to live with it.	1	2	3	4
5.25	I have been taking hard about what steps to take	1	2	3	4
5.26	I have been blaming myself for things that happened.	1	2	3	4

5.27	I have been praying or meditating	1	2	3	4
5.28	I have been making fun of the situation	1	2	3	4

গবেষণার প্রশ্নমালা

স্ট্রোক পরবর্তী স্বাস্থ্য সম্পর্কিত জীবনের মান ও মোকাবিলা করার কৌশল

রোগীর নামঃ

রোগীর আইডিঃ

রোগীর ঠিকানাঃ

অংশ-০১: রোগীর আর্থ-সামাজিক তথ্যবলি

(সঠিক উত্তরে পাশেটিক (√) চিহ্ন প্রদান করুন)

প্রশ্ন নম্বর	**প্রশ্ন**	**উত্তর/প্রতিক্রিয়া**
১.১	বয়স	বছর
১.২	লিঙ্গ	১=পুরুষ২=নারী
১.৩	বৈবাহিক অবস্থা	১=বিবাহিত ২= অবিবাহিত৩=বিবাহ বিচ্ছেদ৪= বিধবা
১.৪	শিক্ষাগত যোগ্যতা	১=শিক্ষাগত যোগ্যতা নাই ২=অক্ষর জ্ঞান সম্পূর্ণ ৩=মাধ্যমিক পাশ ৪=স্নাতক পাশ অথবা এর থেকে বেশি
১.৫	বসবাসের স্থান	১=গ্রাম ২=শহর ৩=উপ-শহর
১.৬	পেশা	১=কৃষক ২= চাকুরিজীবি৩= দিনমজুর ৪=গার্মেন্টস শ্রমিক ৫= ড্রাইভার৬=রিক্সা চালক৭=ব্যবসায়ী৮=বেকার ৯= শিক্ষক ১০= গৃহিণী১১=অন্যান্য
১.৭	পারিবারের মাসিক আয়	
১.৮	নিজের সাধারণ স্বাস্থ্য অবস্থা	১=ভাল ২=খুব ভাল৩=খারাপ

অংশ-০২: জীবনযাত্রা সম্পর্কিত তথ্য

প্রশ্ন নং	প্রশ্ন	উত্তর/প্রতিক্রিয়া
২.১	আপনি কি কখনো ধুমপান করতেন?	১=হ্যাঁ ২=না
২.২	প্রতি দিন কত গুলো সিগারেট পান করেন?	.....প্রতি দিন
২.৩	স্ট্রোক এর পরে কি ধুমপান করে ছিলেন?	১=হ্যাঁ ২=না
২.৪	আপনি কি কখনো মদ্য পান করেছেন?	১=হ্যাঁ ২=না
২.৫	আপনি প্রতিদিন কতক্ষণ ঘুমান?	.....ঘণ্টা

অংশ-৩ ঃ কো-মরবিড তথ্য

প্রশ্ন নং	প্রশ্ন	উত্তর/প্রতিক্রিয়া
৩.১	আপনি কত সপ্তাহ আগে স্ট্রোক করেছেন?	.....সপ্তাহ
৩.২	কোন ধরনের স্ট্রোক হয়েছে?	১= ইস্কেমিক ২=রক্তক্ষরণ
৩.৩	আপনার স্ট্রোক ছাড়া অন্য কোন সমস্যা আছে কিনা? (সম্ভব হলে একটি উত্তর দেন)	১=ডায়াবেটিক মেলাইটিস২=হৃদ রোগ ৩=উচ্চ রক্ষচাপ৪= ফুসফুসের রোগ৫= অন্যান্য

অংশ-৪ ঃ জীবন মানের WHOQOL-BREF দ্বারা পরিমাপ করা হয়েছিল

এই প্রশ্নাবলি আপনাকে আপনার জীবন মানের, স্বাস্থ্য বা আপনার জীবনের অন্যান্য ক্ষেত্রগুলি সম্পর্কে কেমন অনুভব করে তা জিজ্ঞাসা করে। সমস্ত প্রশ্নের উত্তর দিন। কোন প্রশ্নের কোন জবাব দেওয়ার বিষয়ে আপনি যদি অনিশ্চিত থাকেন তবে দয়া করে সবচেয়ে উপযুক্ত বলে মনে করুন এমন একটি চয়ন করুন। যেটি আপনার প্রথম প্রতিক্রিয়া হতে পারে। আপনার মান, দয়া, আশা, আনন্দ এবং উদ্বেগ মনে রাখবেন করে। আমরা জিজ্ঞাসা করব যা আপনি গত দুই সপ্তাহের মধ্যে আপনার জীবন সম্পর্কে ভাবেন। উদাহরণস্বরূপ, গত দুই সপ্তাহের কথা চিন্তা করে কোনও প্রশ্ন জিজ্ঞাসা করতে পারেঃ অনুগ্রহ করে প্রতিটি প্রশ্ন পড়ুন, আপনার অনুভূতিগুলি মূল্যায়ন করুন এবং সেই স্কেলটিতে এমন নম্বরটি টিক চিহ্ন দিন যা প্রতিটি প্রশ্নের জন্য আপনার সেরা উত্তর দেয়।

	প্রশ্ন	**খুব খারাপ**	**খারাপ**	**ভালোও না খারাপও না**	**ভাল**	**খুব ভাল**
৪.১	আপনার জীবনযাত্রার মান কেমন?	১	২	৩	৪	৫

		খুবই অসন্তুষ্ট	অসন্তুষ্ট	সন্তুষ্টও না অসন্তুষ্টও না	সন্তুষ্ট	খুব সন্তুষ্ট
৪.২	আপনা স্বাস্থ্য নিয়ে কি আপনি সন্তুষ্ট?	১	২	৩	৪	৫
নিচের প্রশ্নগুলো গত দু-সপ্তাহে নিম্নে বর্ণিত অভিজ্ঞতাগুলো কি পরিমানে হয়েছে সে সম্পর্কে।						
		একদম না	**কম**	**মোটামুটি**	**অধিকাংশ**	**সম্পূর্ণভাবে**
৪.৩	শারীরিক ব্যাথার জন্য আপনি কি পরিমাণ প্রয়োজনীয় কাজ থেকে বিরত ছিলেন?	১	২	৩	৪	৫
৪.৪	আপনার দৈনন্দিন কার্যক্রম ঠিক রাখতে কতটুকু চিকিৎসা প্রয়োজন?	১	২	৩	৪	৫
৪.৫	আপনার জীবনকে কতটুকু উপভোগ করেন?	১	২	৩	৪	৫
৪.৬	আপনি আপনার জীবনকে কতটা অর্থবহ বলে মনে করেন?	১	২	৩	৪	৫
		একদম না	**কম**	**মোটামুটি**	**অধিকাংশ**	**সম্পূর্ণভাবে**
৪.৭	আপনি কাজে কতটা মনোনিবেশ দিতে	১	২	৩	৪	৫

	পারেন?					

৪.৮	আপনি দৈনন্দিন জীবনে কতটুকু নিরাপদ মনে করেন?	১	২	৩	৪	৫
৪.৯	আপনার ভৌত পরিবেশ কতটুকু স্বাস্থ্যকর?	১	২	৩	৪	৫
নিচের প্রশ্নগুলো জানতে চাওয়া হয়েছে গত দু-সপ্তাহে আপনি কতটুকু সম্পূর্ন ভাবে কোন কাজ করতে বা অভিজ্ঞতা লাভ করতে পেরেছেন।						
		একদম না	**কম**	**মোটামুটি**	**অধিকাংশ**	**সম্পূর্ণভাবে**
৪.১০	আপনার কি প্রতিদিন কাজ কারার মত শক্তি আছে?	১	২	৩	৪	৫
৪.১১	আপনি কি আপনারশরীরের গড়ন নিয়ে সন্তুষ্ট?	১	২	৩	৪	৫
৪.১২	আপনার কি প্রয়োজন মেটাতে যথেষ্ট টাকা আছে?	১	২	৩	৪	৫
৪.১৩	আপনি কি দৈনন্দিন জীবন যাপনের জন্য প্রয়োজনীয় তথ্য পান?					
৪.১৪	আপনার কতটুকু বিনোদনের সুযোগ আছে?	১	২	৩	৪	৫
		খুবই খারাপ	**খারাপ**	**ভালোও না খারাপও না**	**ভাল**	**খুব ভাল**
৪.১৫	আপনি কতটা ভালভবে চলাফেরা করতে পারেন?	১	২	৩	৪	৫
নিচের প্রশ্নগুলো জানতে চাওয়া হয়েছে গত দু-সপ্তাহে আপনার জীবনের বিভিন্ন দিক নিয়ে আপনি কতটুকু সন্তুষ্ট।						
		খুবই অসন্তুষ্ট	অসন্তুষ্ট	সন্তুষ্টও না অসন্তুষ্টও না	সন্তুষ্ট	খুব সন্তুষ্ট
৪.১৬	আপনার ঘুম নিয়ে আপনি কতখানি সন্তুষ্ট?	১	২	৩	৪	৫
৪.১৭	দৈনন্দিন কাজ করার ক্ষমতা নিয়ে আপনি	১	২	৩	৪	৫

	কতটুকু সন্তুষ্ট?					
৪.১৮	আপনার কাজ করার ক্ষমতা নিয়ে আপনি কতটুকু সন্তুষ্ট?					
৪.১৯	নিজেকে নিয়ে আপনি কতটুকু সন্তুষ্ট?	১	২	৩	৪	৫

৪.২০	অন্যদের সাথে আপনার ব্যক্তিগত সম্পর্কসমূহ নিয়ে আপনি কতটুকু সন্তুষ্ট?	১	২	৩	৪	৫
৪.২১	আপনি আপনার যৌনজীবনে কতটা সন্তুষ্ট?	১	২	৩	৪	৫
৪.২২	আপনি আপনার বন্ধুদের কাছ থেকে পাওয়া সাহায্য নিয়ে কতটা সন্তুষ্ট?	১	২	৩	৪	৫
৪.২৩	আপনি আপনার বসবাসরত জায়গা নিয়ে কতটা সন্তুষ্ট?	১	২	৩	৪	৫
৪.২৪	আপনি কি স্বাস্থ্যসেবা পান তাতে কি সন্তুষ্ট?	১	২	৩	৪	৫
৪.২৫	আপনি যাতায়াত ব্যবস্তা নিয়ে কতটুকু সন্তুষ্ট?	১	২	৩	৪	৫
	নিচের প্রশ্নগুলো জানতে চাওয়া হয়েছে গত দু-সপ্তাতে ঐ নির্দিষ্ট বিষয়সমূহ আপনি কত বেশি অনুভব করেছেন?					
		কখনোই না	কখনো কখনো	হঠাৎ	প্রায়	সর্বাদায়
৪.২৬	আপনার হতাশা, উদ্বেগ, অবসন্নতা এইসব নেতিবাচক অনুভূতি কত ঘন ঘন হয়?	১	২	৩	৪	৫

অংশ-৫: কৌশল সম্পর্কিত তথ্য

কোপ স্কেল অনুসারেঃস্ট্রোক রোগীর স্ট্রেসের প্রতিক্রিয়া হিসাবে বিভিন্ন পরিস্থিতি মোকাবিলার কৌশলগুলি মূলায়নের জন্য কার্ভার এই স্কেলটি ব্যবহার করেছিল। অনুগ্রহ করে প্রতিটি প্রশ্ন পড়ুন, আপনার অনুভূতিগুলি মূল্যায়ন করুন এবং সেই স্কেলটিতে এমন নম্বরটি টিকচিহ্ন দেন যা প্রতিটি প্রশ্নের জন্য আপনার সেরা উত্তর দেয়।

	প্রশ্ন	উত্তর			
		১= আমি এটা কখনোই করি নাই	২= কিছুটা	৩=স্বল্প পরিমাণ	৪= আমি এটা অনেক করেছি।
৫.১	আমি মনের চিন্তা ভোলার জন্য কাজ বা অন্য ক্রিয়াকলাপের দিক ঝুকে থাকি	১	২	৩	৪
৫.২	আমি বর্তমান পরিস্থিতে কিছু করার জন্য মনোনিবেশ করছি	১	২	৩	৪
৫.৩	আমি নিজেকে বুঝানোর চেষ্টা করি যা হচ্ছে তা সত্যি নয়	১	২	৩	৪
৫.৪	আমি নিজেকে ভালো রাখার জন্য মাদক ব্যবহার করি	১	২	৩	৪
৫.৫	আমি অন্যের কাছ থেকে মানসিক সমর্থন পেয়ে আসছি।	১	২	৩	৪
৫.৬	আমি এটি মোকাবেলা করার চেষ্টা ছেড়ে দিচ্ছি	১	২	৩	৪
৫.৭	আমি পরিস্থিতি আরো ভালো করার জন্য পদক্ষেপ নিচ্ছি	১	২	৩	৪
৫.৮	আমি বিশ্বাস করতে চাচ্ছি না মারাত্মক কিছু ঘটেছে	১	২	৩	৪
৫.৯	আমি বলছিলাম যে ঘটনাগুলো আমার অপ্রীতিকর অনুভূতিগুলি এড়াতে দেয়	১	২	৩	৪
৫.১০	আমি অন্য লোকের কাছ থেকে সাহায্য এবং পরামর্শ পেয়ে চলেছি	১	২	৩	৪
৫.১১	আমি চাপের মধ্যে দিয়ে যেতে সাহায্য করতে অ্যালকোহল বা অন্যান্য ড্রাগ ব্যবহার করছি	১	২	৩	৪
৫.১২	আমি চাপ আরও ইতিবাচক বলে মনে করার জন্য একটি ভিন্ন পরিস্থিতিতে ভিন্ন দেখার চেষ্টা করেছি	১	২	৩	৪
৫.১৩	আমি নিজের সমালোচনা করেছি।	১	২	৩	৪
৫.১৪	আমি আমার করণীয় সম্পর্কে কৌশল নিয়ে এগিয়ে যাওয়ার চেষ্টা করছি।	১	২	৩	৪
৫.১৫	আমি অন্য কাছ থেকে সান্ত্বনা ও বোধগম্যতা পাচ্ছি	১	২	৩	৪
৫.১৬	আমি নিজেকে মানিয়ে নিতে ছেড়ে দিয়েছি।	১	২	৩	৪
৫.১৭	আমি যা ঘটেছে তাতে ভাল কিছু খুজতে ছিলাম।	১	২	৩	৪

৫.১৮	আমি এটি নিয়ে রশিকতা করি	১	২	৩	৪
৫.১৯	আমি এ সম্পর্কে কম চিন্তা করার জন্য কিছু করে যাচ্ছি। যেমন মুভিতে যাওয়া, টিভি দেখা, পড়া, ঘুমানো বা কেনাকাটা করা	১	২	৩	৪
৫.২০	আমি বাস্তবতামেনে নিচ্ছি যে এটা ঘাটছে	১	২	৩	৪
৫.২১	আমি আমার নেতিবাচক অনুভূতি প্রকাশ করছি	১	২	৩	৪
৫.২২	আমি আমার ধর্ম বা আধ্যাত্মিক বিশ্বাসের সান্ত্বনা মাধ্যমে খুজে পাওয়ার চেষ্টা করছি।	১	২	৩	৪
৫.২৩	আমি যা ঘটছে সেই সম্পর্কে অন্যান্য লোকের কাছ থেকে পরামর্শ বা সহায়তা নেওয়ার চেষ্টা করছি।	১	২	৩	৪
৫.২৪	আমি এইপরিস্থিতির সাথে বাঁচতে শিখছি।	১	২	৩	৪
৫.২৫	আমি যে পদক্ষেপ গ্রহণ করিসে সম্পর্কে কঠোর ভাবে গ্রহণ করি	১	২	৩	৪
৫.২৬	আমি যা ঘটেছিল তার জন্য নিজেকে দোষ দেই।	১	২	৩	৪
৫.২৭	আমি প্রার্থনা বা ধ্যান করি	১	২	৩	৪
৫.২৮	আমি বর্তমান পরিস্থিতি নিয়ে মজা করি।	১	২	৩	৪

Permission Letter

Date: .....
Head
Department of Physiotherapy
Centre for the Rehabilitation of the Paralysed (CRP)
Chapain, Savar, Dhaka-1343.
Through: Head, Department of Physiotherapy, BHPI.

Subject: Prayer for seeking permission to collect date for conducting research project.

Sir,

With due respect and humble submission to state that I am Jannatul Ferdoushi, a student of 4th year B.Sc in Physiotherapy at Bangladesh Health Profession Institute (BHPI). The Ethical committee has approved my research project **"Coping Strategies and Health Related Quality of life after Stroke"** under the supervision of Farjana Sharmin, Junior consultant and outpatient in charge, Lecturer of BHPI. I want to collect data for my research project from the Department of Physiotherapy at CRP. So, I need permission for data collection from Neurology unit of Physiotherapy Department at CRP (CRP, Savar, Dhaka-1343). I would like to assure that anything of the study will not be harmful for the participants.

I, therefore pray and hope that your honor would be kind enough to grant my application and give me permission for data collection and oblige thereby.

Your Faithfully,

Jannatul ferdoushi

Jannatul Ferdoushi
4th year
B.Sc. in Physiotherapy
Class Roll: 07, Session: 2015-16
Bangladesh Health Professions Institute (BHPI)
(An academic Institution of CRP)
CRP-Chapain, Savar, Dhaka-1343.

Approved
03/01/21

Rowshara
03.01.2021

BANGLADESH HEALTH PROFESSIONS INSTITUTE

বাংলাদেশ হেল্‌থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)
(The Academic Institute of CRP)

Ref: CRP/BHPI/IRB/12/2020/427

Date: 23/12/2020

To
Jannatul Ferdoushi
4th Year B.Sc. in Physiotherapy
Session: 2015-2016, Student's ID:112150278
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal "**Quality of life and Coping Strategies for the post stroke patient attended at Centre for the Rehabilitation of the Paralysed (CRP)**" by ethics committee.

Dear Jannatul Ferdoushi,
Congratulations.
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above mentioned dissertation, with yourself, as the principal investigator and Farjana Sharmin as thesis supervisor. The Following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Dissertation/thesis/research Proposal
2	Questionnaire (English & / or Bengali version)
3	Information sheet & consent form.

The purpose of the study is to screen the quality of life and coping strategies for the post stroke patient attended at (CRP). The study involves use of the questionnaire that may take 10 to 15 minutes to answer and there is 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 10:00 AM on 1st March, 2020 at BHPI 23rd IRB Meeting.

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 : 7745464-5, 7741404
E-mail : principal-bhpi@crp-bangladesh.org, Web: bhpi.edu.bd, www.crp-bangladesh.org