UNDERSTANDING PSYCHOSOCIAL IMPACT OF CHRONIC PAIN

Thesis submitted in partial fulfillment of the requirements for the Degree of M.Phil. in Clinical Psychology awarded by the University of Dhaka

Submitted by

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May, 2017

DEDICATION

To those people who are leading life with chronic pain and persons engaged in the healing process.

APPROVAL OF THE THESIS

This is to certify that the thesis titled "**Understanding Psychosocial Impact of Chronic Pain**" is an original work submitted by **Umme Salma Afroz** to fulfill the requirements for the degree of Master of Philosophy in Clinical Psychology. The research was carried out by her under our guidance and supervision. We have read the thesis and believe this to be an important work in the field of clinical psychology.

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DECLARATION

I declare that the research is entirely my own work done as a part of the degree of Master of Philosophy (M.Phil) under the Department of Clinical Psychology; University of Dhaka and the thesis doesn't contain any material, which has been received for the award of any other degree or diploma in any university or comparable institution. Moreover, I avow that, to the best of my knowledge and belief, the thesis doesn't contain any material previously published or written by another person, except where due reference is mentioned.

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ABSTRACT

Pain is one of the major health concerns among the people who seek medical support all over the world. When a patient comes with pain due to a treatable cause and it diminish after appropriate treatment within the estimated time of cure then it is called acute pain. But if still pain remains after suggested treatment and anticipated time of cure or it exceed the time frame of 3 months then it is called chronic pain. Chronic pain is a complex construct to understand. It is not just limited in physical suffering but also have psychological and social impact on a sufferer. Literature was reviewed to explore the commonly suggested psychological and social consequences of chronic pain. This study was aimed to see the impact of pain on these psychosocial aspects among the people with chronic pain in the context of Bangladesh. A questionnaire survey design was used to conduct the study. The research questionnaire contains demographic data sheet, Mc. Gill Pain Questionnaire Short Form, a composite questionnaire regarding various social and psychological impacts, The Pain Catastrophizing Scale, Self Reporting Questionnaire, Perceived Stress Scale, Beck Hopelessness Scale, WHO Quality of Life Brief, Copping questionnaire and General Health Questionnaire. A total of 400 adult pain patients comprised the sample. Purposive sampling technique was used to recruit participants from the Department of Orthopedic and Traumatology, outdoor and Physiotherapy Center of Department of Physical Medicine and Rehabilitation and Pain Clinic under the Department of Anesthesia, Analgesia and Intensive Care Medicine of Bangabandhu Sheikh Mujib Medical University (BSMMU). Descriptive statistics, correlational analysis and multivariate multiple regression analysis was used for data analysis.

Result revealed a very high prevalence of psychiatric morbidity (86%) and distress (92%) among the individual suffering from chronic pain. A large portion (90.3%) of

respondents reported that they had experienced moderate level of stress. One third (35.5%) of the respondents reported that they had poor quality of life. This study also found pain has significant positive correlation with depression and anxiety, psychiatric morbidity, stress, hopelessness and pain catastrophizing. Level of activity showed poor but significant negative correlation with pain. Pain showed significant impact on depression, magnification of catastrophizing, rumination of catastrophizing, hopelessness of catastrophizing, problem focused copping, emotion focused copping and stress. But pain showed no significant impact on functional impairment. Age of chronic pain patient has significant impacts on functional difficulty, psychiatric morbidity, hopelessness and two domain of quality of life namely physical and environmental quality of life. Intensity of pain, duration of pain and age of the patient can explain significant proportion of variance (34.7%) in catastrophizing by hopeless thinking. By providing a vivid picture of psychological and social impact of pain, the findings reiterated the need for considering integration of biological, psychological and social aspect of intervention to reduce suffering of chronic pain patients.

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BHS	Beck Hopelessness Scale
GHQ-28	General Health Questionnaire-28
IASP	International Association for the study of Pain
PCS	The Pain Catastrophizing Scale
PPI	Present Pain Intensity
PRI	Pain Rating Index
PSS-10	Perceived Stress Scale-10
SF-MPQ	Short Form-McGill Pain Questionnaire
SRQ-20	Self Reporting Questionnaire-20
VAS	Visual Analog Scale
WHOQOL Bref-26	World Health Organization Quality of Life Bref-26

A**CKNOWLEDGEMENT**

I would like to thank my supervisor Dr. Muhammad Kamruzzaman Mozumder, whose guidance, patience and encouragement were very much crucial in the entire journey of my research. Mahjabeen Haque, my co-supervisor, whose continuous support boosted my confidence.

I also acknowledge the support and advice provided by the faculty members of the Department of Clinical Psychology, University of Dhaka, in particular Dr. Mahmudur Rahman and Tarun Kanti Gayen.

I warmly place my gratification to all the research assistants who worked sincerely with enthusiasm to accumulate data for this research.

I am indebted to all the participants for their time, patience and contribution, without all these, the research was completely impossible.

I would like to thank Dr. Michael JL Sullivan for permitting me to use his psychometric tool.

My friends and senior fellows were always there beside me as invaluable support and encouragement. They made my journey smooth with their love and care. I am very much grateful to them.

I am grateful for the financial support that I have received as scholarship from University of Dhaka.

I acknowledge the support and tolerance of my parents, siblings, nieces and nephew. I have deprived them from my time but still they love me unconditionally.

I want to express my special gratitude to my beloved husband Mohammad Rafi for his never ending love, caring and support when I was striving to survive with my research.

Most of all, I would like thank almighty Allah for the wonderful life with the wonderful people surrounding me.

With Thanks,

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CHAPTER 1

INTRODUCTION

Pain is an unavoidable experience of human life. Every person goes through the experience of painful situations at some point in their lives. Feeling of pain is universal but this may vary in terms of their underlying cause, duration and pain site of the body. Pain is also inextricably associated to our survival. Threats to human life can come from any part of environment and nature. When anything bad happens to us or anything cause damage to our tissues, then we experience pain through our nervous system. Feeling of pain helps us to understand our defenseless situation and to create a defense system to protect us. Thus, pain plays a role of alert system to initiate effective response for protection.

Pain is a personal state of suffering which is unique for each person. This unique state is complex to understand and cannot be communicate directly. Though pain experience is common to all, one can assume another's pain but is unable to hold exact meaning of pain as it is experienced by an individual (Thompson & Fay, 2015). A person can express that she or he is in pain through behavior and behavior is the outcome of interaction between interpersonal, intrapersonal or contextual issues (Hadjistavropoulos et al., 2011). Therefore, there is no easy way to understand internal experience and there is a great chance to misinterpret the matchless meaning of pain for a person's own context (Thompson & Fay, 2015).

1.1 Definition of Pain

Definition of the term Pain evolved over time. In the period of ancient time pain was understood as intrusion of evil sprite or presence of magical fluid. Then, pain was

understood as a physical sensation that perceived by nerves and send to the brain to proceed appropriate responses. Currently, International Association for the Study of Pain (1994) provides a worldwide accepted definition which defined pain as “An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage".

This definition is significant to clarify some facts about pain. Thompson and Fay (2015) described four vital part of this definition in their research paper. In short, pain is subjective, people acquire the meaning of pain by learning, it initiates an unpleasant emotion and it is a psychological condition of person rather than merely a sensation by external harsh stimuli.

1.2 Types of Pain

Pain can be classified in many ways according to different dimensions. Such dimension includes causation, localization, length of suffering etc. For this research we used length of suffering dimension for classification which divided pain into two types, chronic pain and acute pain. When a patient comes with pain due to a treatable cause and it diminish after appropriate treatment within the estimated time of cure then it is called acute pain. But if still pain remains after suggested treatment and anticipated time of cure then it is called chronic pain. In the current study, pain duration of three months is considered as the principal criteria of chronic pain.

1.2.1 Acute pain. Acute pain is the most common and frequently happening pain condition among people. It is associated with actual or potential tissue damage and lasts for less than 3 months. Pain is reduces with the scale of time (Loeser & Melzack, 1999;

Sarafino, 1998). Acute pain generally is a response to tissue damage such as burn, cut, infections or injuries. It is usually cured after proper treatment (Kulmala & Ojala, 2015).

1.2.2 Chronic pain. Chronic pain can be described as ongoing or recurrent pain, lasting beyond the usual course of acute illness or injury of more than 3 to 6 months, and which adversely affects the individual's well-being. A simpler definition for chronic or persistent pain is pain that continues when it should not (International Association for the Study of Pain, 2004).

These definitions of two types of pain reveal some significant differences between acute and chronic pain. First, acute pain is a state of recent start with short duration. Chronic pain may have sudden start or gradual development and lasts three months or more. Secondly, intervention of chronic pain is focused on rehabilitation and management whereas intervention of acute pain concern with the treatment of underlying cause. Third difference is, patient has little active role in the recovery process of acute pain. Chronic pain patient has to take a major role in the intervention plan. Forth is quality of chronic pain is influenced by psychological and social aspect of sufferer unlike acute pain experience (Koestler & Myers, 2002). Finally, impact of chronic pain encompasses the biological, psychological as well as social characteristic of a person which is not in case of acute pain (Bailly, Foltz, Rozenberg, Fautrel, & Gossec, 2015; Flor, Turk, & Berndt Scholz, 1987).

1.3 Epidemiology of Chronic Pain

Chronic pain is a common and overpriced physical complain among the people who seek medical help all over the world. A cross-sectional Internet-based survey in United States shows that, a significant number of US adults are suffering from chronic

pain. The number is about one third of total population of US (Johannes, Le, Zhou, Johnston, & Dworkin, 2010). In Portugal, 37% adults are chronic pain patients (Azevedo, Costa-Pereira, Mendonça, Dias, & Castro-Lopes, 2012). In the Republic of Ireland, a research found that the prevalence of chronic pain was 35.5% (95% CI = 32.8–38.2) (n = 428) in the Republic of Ireland (Raftery et al., 2011). Among 17,543 Australian adults, 17.1% of males and 20.0% of females were suffering from chronic pain (Blyth et al., 2001). In New Zealand, among adult population, 16.9% complain for chronic pain (Dominick, Blyth, & Nicholas, 2011). In case of Asian countries, the prevalence for chronic pain in adult people is ranges from 7.1% (Malaysia) to 61% (Cambodia and Northern Iraq) and it higher in older people which range from 42% to 90.8% (Zaki & Hairi, 2015).

Though it is a persistent problem, it is associated with long term treatment requirement and other monetary loss such lower work time, lower productivity and in extreme cases, job loss is ultimate consequences. A research of US showed that the countrywide expenditure for chronic pain ranged from $560 to $635 billion, which was bigger than the expenses associated with other prominent health issues such as heart disease, cancer and diabetes (D. J. Gaskin & Richard, 2012). These different studies from different countries reported evidence that chronic pain is a prevalent health problem as well as expensive in terms of treatment and loss of work force.

In the context of Bangladesh, Sonia Akter (2012); (D. J. Gaskin & Richard, 2012) have found that, 58.6% of women who are homemakers, suffered from low back pain (LBP) and 42.9 % of them were suffering from more than one year.

Another research found the prevalence of LBP among shopkeepers was 51% and the rate is higher in men than women. Prevalence is also associated with total work hours of a day and rate was higher among those who worked for long period (Kamal, 2012).

Shakoor, Islam, Ullah, Ahmed, and Al Hasan (2007) did a study with 102 patients of chronic low back pain and 58.8% of them were female. They also found that females are affected earlier than man. In the context of rural Bangladesh, point prevalence of LBP was 63% (A. A. Khan, Uddin, Chowdhury, & Guha, 2014). Haq et al. (2005) stated that the point prevalence of musculoskeletal pain in rural, urban slum and affluent urban communities were 26.2%, 24.9% and 27.9% respectively. Women are more vulnerable to this problem than men.

1.4 Biopsychosocial Approach of Chronic Pain

Chronic pain is a complex construct to understand. It is not just limited in physical suffering but also have psychological and social impact on a sufferer. For over 30-year period, pain was understood by the biological aspect which was useful and effective to some extent. There was such issues associated with perception of pain that biological model was not being able to explain. People may experiences pain without definite underlying physical cause or after the elimination of underlying cause if there was any (Loeser, 2005). This characteristic of the construct 'Pain' lead the researchers to think in a new dimension. As reported in Thompson and Fay (2015) Meljack and Wall proposed “Gate control Theory of Pain” in 1965 which started to explain complex phenomena such phantom pain and tried to incorporate psychological aspect of pain such as the role of stress in pain perception. Following this development, in 1977, biopsychosocial model which was more comprehensive and open to incorporate social aspect of person in

perception of pain was introduced and promulgated by Engel (Jemmott & Locke, 1984; Thompson & Fay, 2015). This biopsychosocial approach explains chronic pain as an interaction between biological, psychological and social aspect of an individual (Gatchel, Peng, Peters, Fuchs, & Turk, 2007)

Pain can contribute to the generation of several psychosocial manifestations such as anxiety, depression, loneliness, hopelessness, deteriorated relationship status, lower activity level, etc. These consequences and pain is experienced by a patient of chronic pain simultaneously. Interaction between pain and other psychosocial impacts ultimately influence each other in a complex manner which can be understood by five factor model of human behavior (Greenberger & Padesky, 1995). This model states that environment, cognition, emotion, physical reaction and behavior of a person influence each other. Changes in one part of the model result in change in rest of the parts in the model.

1.5 Common Painful Conditions

In our lifetime we have to encounter lots of situation that can produce pain in different ways. There are several different pattern of pain that can happen in different parts of human body. Among these types, abdominal pain, pelvic pain, foot pain, headache is some example. These pains may happen due to various different causes such as osteoarthritis, migraine, physical trauma, degeneration or fracture in spine or deteriorated discs, etc. In the next section we will discuss some pain conditions which are frequently encountered by the general physicians or pain physicians to be specific (see, Silver, 2004; Task Force on Taxonomy of the International Association for the Study of Pain, 1994).

1.5.1 Arthritis. Arthritis is one of the common forms of chronic pain. In the United States, in time between 2013-2015, 22.7% adults had doctor-diagnosed arthritis

and 43.5% had activity limitation due to arthritis (Barbour, Helmick, Boring, & Brady, 2017). It occurs when the cartilage deteriorates. Older people are more prone to develop degenerative arthritis or osteoarthritis. Sufferer of this problem can face serious consequences depends on the condition of affected cartilage.

1.5.2 Back pain. This type of pain is common and all of us will experience at some point in our life. Usually it happens due to muscle strains or ligamentous sprains. Some times in serious cases it also involves the spinal cord which may cause extensive pain and disability. Generally, prevalence of back pain is higher among older people and chance of occurrence increases with age. The most common back pain is low back pain (LBP). An epidemiological study of low back pain estimates of the 1 year incidence of a first-ever episode range between 6.3% and 15.4% and estimates of the 1 year incidence of any episode range between 1.5% and 36% (Hoy, Brooks, Blyth, & Buchbinder, 2010). Today it becomes easy to diagnose the reason and the area of pain with the advancement of science which provide excellent imaging method like MRI (magnetic resonance imaging) scans and CT (computed tomography) scans but sill, sometimes it not be possible to locate actual source of pain.

1.5.3 Facial pain. Two underlying causes of face pain is misalignment of the jaw and poor dental hygiene. Depending on underlying cause, this problem is treatable. Trigeminal neuralgia and temporomandibular joint disorder (TMJ) are prevalent face pain. TMJ located in jaw and not directly associated with problem of teeth or gums. A symptom of the problem is pain and some noises like popping, cracking or crunching, clicking. Sometimes headaches and neck pain also occur. Trigeminal neuralgia is more intensive and excruciating and it happens when a blood vessel create pressure on trigeminal nerve which very sensitive.

1.5.4 Migraine. Migraine is a common neurologic problem where headache is constant element. Headache associated with migraine is sever and sometimes accompanied by nausea and vomiting. A study found that 18.2% among females and 6.5% among males of United Stats are suffering from migraine (Lipton, Stewart, Diamond, Diamond, & Reed, 2001).

1.5.5 Muscle and soft tissue pain syndrome. Fibromayalgia and myofascial pain syndrome are situated in this type of pain condition. These two types of pain involve muscular pain with sleep problem, chronic fatigue and digestive problem.

1.5.6 Neck pain. Neck pain is very common and it has treatment based on underlying cause. It can happen due to muscle strain, poor body posture, ligament sprains and lot of other issues can be responsible for initiating neck pain.

1.6 Literatures Review

Harald Breivik, Beverly Collett, Vittorio Ventafridda, Rob Cohen and Derek Gallacher (2006) have found in a research which was a large scale computer-assisted survey with a large number of participants from 15 different European countries and Israel that 21% had depression associated with chronic pain, 61% had low ability or unable to work outside of home, 19% had job loss and 13% had changed their job because of chronic pain. They also stated that chronic pain can interfere with a person's daily activity such as household chores, social activities, driving, maintaining independent life style, family relationships as well as sexual relationship (Breivik, Collett, Ventafridda, Cohen, & Gallacher, 2006). Eccleston et al. (2005) cited Hunfeld et al.,2002; Goldman and McGrath,1991; Perquin et al.,2000; Malleson et al., 2001 in their article as they had found chronic pain as disabaling in different areas of functioning such as social functioning,

physical functioning, family functioning. Adolescents with chronic pain and their family members often come to physicians with complains of multiple problems, including concentration difficulties, feeling of irritability, depression and anxiety. Another study said that chronic pain have profound level of impact on employment status, decreased money and compromised household activity (Kemler & Furnée, 2002). Intensity and daily experience of pain can interfere in the physical activities and recreational activities of older patients which is an ultimate consequence of decreased quality of life (Pickering, Deteix, Eschalier, & Dubray, 2001). Functional impairment is also reported in case of children with chronic pain and their family (Palermo & Mizell, 2000). Chronic pain had most momentous impact on household responsibilities, recreational activities, job responsibilities and sleep. A research uncovered that 13% of the research respondents were reported depressive mood and 49% experienced difficulties in work place (Azevedo, et al., 2012). It is assumed that activity can increase pain and chronic pain sufferer minimizes the risk of intensive pain by limiting their activity but research reported that pain intensity and level of activity is not significantly correlated (Linton, 1985).

Depression is found to be associated with chronic pain as a consequence of chronic pain rather an antecedent factor to develop chronic pain. Systematic review of eighty three studies explored this finding (Banks & Kerns, 1996; Fishbain, Cutler, Rosomoff, & Rosomoff, 1997) High rate of depression is observed among chronic pain patient than patient of other chronic physical illness (Banks & Kerns, 1996). Severe depression is associated with hopelessness and suicidality among chronic pain patients (Tang & Crane, 2006). Heighten level of anxiety and chronic pain is frequently co-occurring problem. A research showed that pain was significantly associated with panic disorder and post traumatic stress disorder (McWilliams, Cox, & Enns, 2003). Anxiousness and sleep problem is associated with chronic pain (Davison & Jhangri, 2005). A study reported that

increase in stress level among female patient of Fibromyalgia and osteoarthritis was going larger in scale with time (Davis, Zautra, & Reich, 2001).

Chronic pain has remarkable impact on health care seeking which is also influenced by tradition and customs of particular society, age, socioeconomic condition as well as depression and anxiety level (Andersson, Ejlertsson, Leden, & Scherstén, 1999). Chronic pain is associated with increased distress among the patient. This elevated distress level is correlated with multiple health care contacts and also can increase the probability of health care seeking (Andersson et al., 1999; Von Korff, Wagner, Dworkin, & Saunders, 1991). Another research found that 60 % of their respondents visited doctor at least two to nine times and 11% of them had seen doctors 10 times (Breivik et al., 2006).

A prolong suffering from physical problem affect couple relationship. Patient and spouse both may face the similar consequences of chronic illness. Flor et al. (1987) found that, partner's low mood can influence pain perception, inability to regulate life events and dissatisfaction with marriage. Pain is positively associated with marital discord and sexual dissatisfaction as well as increased distress level in the spouse. Researchers claimed that pain is not the only factor behind these misshapen but couple's current copping is also responsible. A research found that sexual problem is highly prevalent among the chronic pain patients. Sexual difficulties include lack of interest, problem with sexual arousal, sex position that increase pain, performance anxiety, etc (Ambler, de C Williams, Hill, Gunary, & Cratchley, 2001). Another research reported that sexual difficulty is a common agenda in case of people with chronic pain but there was no significant association between sexual problem and intensity of pain or duration of pain. On the other hand, this research finding supported that, sexual impairment showed significant association with emotional distress, functional disability and age (Monga, Tan, Ostermann, Monga, &

Grabois, 1998). On other hand, pain behavior and perception of pain intensity of patient is influenced by some factors. One of the factors is solicitousness and attention provided by the spouse (Block & Boyer, 1984). In case of unmarried male, partner's response is less influential to the sufferer's perception and response pattern toward pain in contrast with married man. Married female patients of chronic pain have less influence of significant others upon their pain behavior or intensity than unmarried female. Therefore, gender and marital status is playing a mediator role in pain response (Flor, Turk, & Rudy, 1989). On the other hand, disharmony and negative communication pattern can drive the patient of chronic pain into severe depression which is considers as a risk factor for maintenance of chronic condition (Kerns, Haythornthwaite, Southwick, & Giller Jr, 1990). Romano et al. (1995) found that above mentioned finding is true in case of depressed patient when they were assessed by self reporting method. Observational method found that solicitousness did not influence psychosocial dysfunction. These research findings establish qualified support in the favor of operant conditioning in case of pain intensity and perception.

Quality of life may be understood as physical, psychological and social well being as well as satisfaction with life. Chronic pain may play a role of stressor that compromise the actual coping ability and produce a negative impact on quality of life. Chronic pain is not directly associated with decreased quality of life rather connected in a complex fashion with other mediator factors (Wahl et al., 2009). In another study , researchers have found that gender, age, level of anxiety, level of depression and number of pain sites have an influence on quality of life of people with chronic pain and it was reported that chronic pain was the best predictor of quality of life for the research participants (Dick, Rashiq, Zhang, & Ohinmaa, 2007). This result also reflected that chronic pain may interplay with above mentioned biological, social and psychological to create impact on quality of life.

A survey was conducted among the general Scottish people of Grampian region (N= 4611) with a target to see the prevalence of severe chronic pain and impact of chronic pain upon general health, regular functioning and employment. Result regarding impacts found that pain is significantly associated with all the aspect of general health. Pain had also influence on daily activity and employment status (Smith et al., 2001).

Studies have shown huge number of evidence of association between beliefs, catastrophizing, coping, chronic pain and functional disability. A study with one hundred sixty nine chronic pain patients found belief as a noteworthy predictor for both disability and depression, copping had significant effect on physical disability and catastrophizing had considerable effect on depression (Turner, Jensen, & Romano, 2000).

A qualitative research with chronic low back pain patient was aimed to understand the impact pain on relationship with family, friends and work colleagues found some intrapersonal factors that contributed in disturbed relationship. They found that, a person with low back pain experience interrupted activity in daily life which is responsible to develop negative self perception, shame and frustration. These intrapersonal manifestations disrupt the relationship with significant people of a person's life in family and society (Bailly et al., 2015).

A research explored that there is an issue of drug dependency and drug abuse in the patient of chronic pain. Most of the participants were dependent on pain medicine (Maruta, Swanson, & Finlayson, 1979). Though psychiatric morbidity such as depression, anxiety has association with chronic pain and drug dependency, therefore chronic pain patient also showed significant dependency upon pain medicine (Ballantyne & LaForge, 2007).

From above discussion of different literature related to various impacts due to chronic pain it is apparent here that there are several psychological and social consequences of pain. The major emotional impact of pain is depression and anxiety associated with negative thoughts about self, others and future. Pain sufferer can experience restricted life style with affected relationships including family and society, lower level of activity, economic deterioration in terms of costs related to treatment as well as reduction of working hours or job loss. Therefore, people with chronic pain in our country may also have these impacts. Choudhury et al. (2013) found no evidence of differences between Bangladeshi, British Bangladeshi and white British in the impact of chronic pain on the quality of life.

1.7 Psychosocial Impacts

The discussion presented in the previous section briefly introduced the impacts of chronic pain on the persons' life. These literature reviews suggested the common or frequently happening negative consequences of chronic pain which considered as the dependent variable of present research. For greater understanding, the following sections present a detailed discussion on these impacts based on published literature.

1.7.1 Impact on self care. Self care is a basic activity of all human being and is an indicator of sound mental health of an individual. It encompasses the activity according to one's own needs and meeting these needs by self. Persistent or recurrent pain can restrict one person’s basic movement and if pain affect in any particular body part which is associated with desired activity then that specific activity reduce in terms of quality and frequency. Though, self care is own need, a person may still overlook the necessity of that

task. Researchers have found that self care of a person can be affected by chronic pain (Andersson et al., 1999)

1.7.2 Impact on activity. A functional person needs to do different types of activity in daily life such as general activity, social activity, professional activity and recreational activity. For the living, a person needs to do lots of work which include shopping, cooking, cleaning, washing clothes, etc. People have to meet some specific responsibility compatible with the role in a relationship, in the family, in the work place and in the community they belong. Illness can affect such activity which is related to these responsibilities. Research have shown enough evidence that pain can interfere with general activity (Breivik et al., 2006); social activities as well as activities in work place (Bailly et al., 2015; Breivik et al., 2006); recreational activity (Pickering et al., 2001).

1.7.3 Impact on relationships. Relationships are important aspect of a person's life. Every relationship requires reciprocity of emotion, support and responsibility congruent with their role. There are several types of relation that a person may have such as relation with family members, relation with kith and kin, relation with friends or relation with colleagues. A person with chronic pain have to go through some restriction imposed by prolong physical complain which are related to their limited activity, limited movement and limited communication. These limitations adversely affect their significant relationship (Bailly et al., 2015; Breivik et al., 2006).

1.7.4 Impact on sexual life. Chronic pain is known to affect sexual functioning and sexual life. Disturbed sexual life is common among people with prolonged pain. Sexual life may be independently affected by pain as well as with its complex interaction

with various psychological condition, age and lower activity level (Ambler et al., 2001; Monga et al., 1998).

1.7.5 Economic impact. Though chronic pain is a problem that usually persists beyond the expected time to cure, the patient's suffering requires repeated intervention. The people with chronic pain visit several physicians to resolve their pain and need to have several medical examinations to find out the exact underlying cause of pain. These procedures create financial suppression on a person and her or his family. On the other hand, chronic pain is proved as disabling phenomena in several functioning aspect of a person which can affect work or professional activity and in case of severe disability job loss may happen. These conditions directly hamper the income of the person (Kemler & Furnée, 2002). Therefore, chronic pain affect a person financially in terms of treatment expenditure, loss of activity level, restricted outdoor movement can causes in lower job responsibility, constricted work hours (Breivik et al., 2006).

1.7.6 Quality of life. Quality of life is a comprehensive term that encompasses physical well being, psychological well being and overall satisfaction with life. Chronic physical illness or condition such as diabetic, hypertension, obesity, chronic pain has significant association with decreased quality of life (Dick et al., 2007; King, 1996; Kolotkin, Meter, & Williams, 2001; Nachemson, 1994; Rubin & Peyrot, 1999). Quality of life can be measured in different domain of life. In the current research quality of life was measured in four domains and these are physical well being, psychological well being, satisfaction with relationships and satisfaction with environment. Chronic pain can also hamper the quality of life among the family members of pain patient (Hunfeld et al., 2001).

1.7.7 Impact on mental health. Psychological state of a person covers a wide range of mental health issues. Present research tended to focus the most common psychological manifestation associated to chronic pain. Previous literatures in this field reported significant level of association of depression (Fishbain et al., 1997; Haley, Turner, & Romano, 1985), anxiety and stress (Davison & Jhangri, 2005; McWilliams et al., 2003), hopelessness with chronic pain. Dependency upon pain medicine is also an outcome of chronic pain suffering (Ballantyne & LaForge, 2007). Studies have found the association between pain catastrophizing, copping and pain (Geisser, Robinson, Keefe, & Weiner, 1994; Rosenstiel & Keefe, 1983).

1.8 Rational of Current Study

Existence of chronic pain is recorded since the ancient time in history. Pain is being a concern from the beginning of mankind. Researchers placed a great emphasis to understand this phenomenon in last century. Researchers working on chronic pain usually concern about four domains. One is the process of development and maintenance of chronic pain, second is focused on the intervention procedures, the third domain of research concerns about epidemiology of chronic pain and the forth area of research is the impact of chronic pain. The present research is focused on the fourth domain.

Today we know that chronic pain is not just a physiological sensation but it is a psychological state which is experienced through the interaction between biological, psychological and social factors of a person. This understanding is important to device an appropriate intervention plan for chronic pain. Sometimes this is not a disease which is curable but a problem or condition which need to be managed or rehabilitated. In our country, we have access to all this knowledge about chronic pain. We know the multidimensional aspect of chronic pain but in reality, we have little practice of this

knowledge in Bangladesh in the area of chronic pain. Treatment of people with chronic pain is still focused on underlying biological pathology where psychological and social aspects are left unaddressed.

We are also lagging behind in the field of research about psychosocial aspect of chronic pain. There is no published empirical findings regarding psychosocial impact of chronic pain among Bangladeshi population As mentioned in Section 1.7, pain exerts influence on numerous psychological and social areas of human life that can be affected by chronic pain. Considering these issues mentioned above, the present research was necessary to have an understanding about the volume and pattern of psychosocial impact caused by chronic pain.

1.9 Objectives of Present Study

General objective. The overall aim of this study is to understand the impact of chronic pain on different psychological and social aspect of life among individuals suffering from chronic pain in Bangladesh.

Specific objectives. Present study is focused on the following specific objectives.

1. To assess the state of functioning of chronic pain patients.
2. To assess social impact of chronic pain.
3. To measure psychological state of chronic pain patients.
4. To explore interrelation between pain with psychological and social aspects of patients life.
5. To identify the amount of influence pain exerts on the psychosocial variables.
6. To identify the amount of influence other predictor variables exert on the psychosocial variables.

CHAPTER 2

METHODOLOGY

2.1 Research Design

This study was aimed at understanding the psychological and social state of chronic pain patients among Bangladeshi population. As reflected in the literature cited in Chapter 1, chronic pain impacts on multiple aspects of life from biological, psychological and social sphere. Therefore it was necessary to adopt a suitable design that can incorporate complex interplay of such a large number of factors. A quantitative questionnaire survey design was chosen to conduct this study. This approach is widely used in cases where the study requires involvement of specific factors. This design also has the ability to generate large amount of data within estimated time and is also able to make descriptive statements about the target population (Mathers, Fox, & Hunn, 2007).

2.2 Target Population

Target population of current research was adult (age $\geq$ 18 years) chronic pain patients who had been suffering from diagnosed pain for a duration of at least three months length. This study focused on a specific physical complains which was chronic pain. However, chronic pain may arise due to different diseases such as cancer, musculoskeletal problem, arthritis, cardiac diseases, diabetics, simple headache and many other conditions. Therefore, underlying causes of chronic pain may range from benign to malignant. Current study was intended to see the impacts of chronic pain, not the impacts of other condition. Hence, it was necessary to exclude such conditions which have strong psychosocial effects upon sufferer. These conditions were cancer pain, pain due to cardiac

problem and diabetes, acid burn pain, limb loss or fracture and pain from any terminal diseases. Beside these conditions, patient of psychogenic pain where the medical examination fails to find any organic basis (Sarafino, 1998) and patient with any known psychiatric history was also excluded.

2.3 Site of Data Collection

Four different sites of Bangabandhu Sheikh Mujib Medical University (BSMMU) had been chosen as the data collection site. These sites were 1) outdoor of the Department of Physical medicine and Rehabilitation; 2) Physiotherapy center which was a specialized service center under the Department of Physical Medicine and Rehabilitation; 3) outdoor of the Department of Orthopedics and Traumatology, and 4) Pain Clinic under the Department of Anesthesia, Analgesia and Intensive Care Medicine. Selection of study site was decided based on client flow. The researcher consulted several physicians and incorporated their suggestion in deciding the study sites. Data were collected concurrently from these four sites.

2.4 Sample Size

To determine sample size, a commonly used rule-of-thumb for calculating sample size in multivariate regression was used in this research (HairJR, Black, Babin, & Anderson). The formula is "N > 50+8m" (where, "m" is the number of variable). As there were 5 independent variables and 33 dependent variables, therefore the "m" was 38 (5+33) and according to the formula sample size should be greater than 354. In current research, the sample size was 400.

2.5 Sampling

Purposive sampling technique was applied to recruit participants from three different department of Bangabandhu Sheikh Mujib Medical University (BSMMU). Though chronic pain is very common among patients who seek medical help, selection was done carefully through keen screening by inclusion and exclusion criteria. This purposeful selection of respondent indeed was essential to increase the strength of findings.

2.6 Participants

Participants were selected from the target population, based on their written informed consent. Total numbers of initiated interviews were 418. Eighteen interviews were incomplete due to withdrawal of participation during data collection. Finally, usable data for this study was of 400 participants. Back pain, neck pain, foot pain, arthritis and other degenerative spinal pain were the common problems among the participants. Age of participants ranged from 18 years to 85 years. Mean age was 41.71 years (SD = 12.1). Maximum duration of suffering in chronic pain was 360 months with an average of 28 months. Past treatment history revealed that 50.8% received pain medicine, 48.3% received multiple treatment and only 1% of the participants reported to received psychotherapy along with pain medicine. Currently, 58.3% are receiving pain medicine, 31.5% are getting multiple treatments and only 0.5% of the respondents are having psychotherapy along with other treatment. A detailed description of participants is provided in Table 2.1.

Table 2.1. Demographic information of the participants

Variables	**n**	**%**
Age group		
18 to 40	205	51.3
41 and above	195	48.8
Gender		
Male	175	43.8
Female	225	56.3
Occupation		
Service	52	13.0
Business	57	14.3
House Wife	189	47.3
Student	21	5.3
Unemployed	24	6.0
Others	57	14.3
Marital Status		
Unmarried	37	9.3
Married	342	85.5
Divorce	4	1.0
Widow	17	4.3
Education		
Illiterate	89	22.3
Primary Level	108	27.0
SSC Level	111	27.8

Variables	n	%
HSC Level	53	13.3
Graduation Level	29	7.3
Post Graduation Level	10	2.5
Socio Economic Status		
Rich	25	6.3
Middle	249	62.3
Poor	126	31.5
Types of Treatment received in past		
Pain Medicine	203	50.8
Physiotherapy	3	0.8
Multiple treatment	193	48.3
Psychotherapy along with other treatment	4	1
Types of Treatment receiving now		
Pain Medicine	233	58.3
Physiotherapy	34	8.5
Exercise	2	0.5
Multiple treatment	126	31.5
Psychotherapy along with other treatment	2	0.5

2.7 Instruments

A good survey requires appropriate tools that can collect data according to the research objectives. The survey questionnaire used in this study consisted of ten different sections containing demographic information, Short Form McGill Pain Questionnaire (SF-MPQ), composite questionnaire related to different psychological and social areas of impact due to chronic pain revealed by literature review and mind map, The Pain Catastrophizing Scale (PCS), Self Reporting Questionnaire-20 (SRQ-20), Perceived Stress Scale-10 (PSS-10), Beck Hopelessness Scale (BHS), WHOQOL Bref-26, COPE Inventory and lastly General Health Questionnaire-28 (GHQ-28) (see Appendix 4). The following section describes the instruments used in this research.

2.7.1 Demographic Questions. These questions devised to have information on socio-demographic data such as age, sex, occupation, marital status, educational attainment, socio-economic status. It also included duration of pain, different treatment attained by participant, current treatments that participant is going through; number of doctor participant went to consult till the date of participation and satisfaction level with last treatment. Satisfaction level with treatment was measured by a visual rating scale where the participants had to rate their satisfaction level from 0- 100. In this scale, 0 means "No satisfaction" and 100 means "Higher level of satisfaction". This section contains 11 items (see Section A, Appendix 4).

2.7.2 Short Form McGill Pain Questionnaire, (Melzack, 1987). This questionnaire, developed by Melzack (1987) is a widely used tool for assessing subjective experience of pain (see Section B, Appendix 4). This scale contains total 17 items in three sections namely pain rating index, visual analog scale and present pain intensity. The 15-

item pain rating index (PRI) section contain two subscales, these subscales were sensory subscale (item 1-11); and affective subscale (item 12-15). Participants rate the intensity of their pain measured on a four-point Likert (1932) type response option (on a scale of 0-3) on pain rating index. The second section is an 11-point visual analog scale (VAS) that measure overall level of pain where 0 means "No pain" and 10 means "Worst level of pain". The present pain intensity (PPI) subscale, which is also a single item subscale with five-point Likert (1932) type response option where respondent are asked to choose the option that best reflects her or his experience. Bengali version of Short Form McGill Pain Questionnaire (SF-MPQ) used in this research was translated and adapted by Akter (2016). She reported excellent Cronbach's alpha (0.825) internal consistency reliability of the tool. Test-retest reliability (r= 0.991) and construct validity assessed in divergent validation method ($t=14.93$, $p<0.05$; between clinical and non clinical samples) of the instrument has been reported (Shamima Akter, 2016).

2.7.3 Composite Questionnaire. This section contains 22 items. These items were assessed the degree to which a person is being affected by chronic pain in the different psychological and social aspect of his or her life. This section contained questions about self-care, overall social life, relationships, daily activities, recreational activity, professional activity, sexual life, financial loss, suicidal thought and attempts, emotional distress, negative thoughts and job loss. These questions were devised through mind map and the study of different research addressed psychological and social impacts due to chronic pain. Initially during the ground work of the study, mind map which is visual thinking equipment that used to jot down the possible areas of human life that could be influenced by chronic pain. Then, through literature review, the items of this section were generated. Chapter one has detail discussion about common psychological and social impacts of chronic pain.

First 11 items were designed to assess impacts on five social areas of human life namely impact on self-care (item C1), impact on relationship (item C4-C7), impact on activity (item C2, C3, C8, C9), economic impact (item C11), and impact on sexual life (item C10). The responses were elicited by a visual rating scale with two opposite point denoted by 0 and 100 (see Section C, Appendix 4). Here, 0 means "No impact" and 100 means "Highest level of impact". Remaining 11 items contained such issues where the expected response was "yes" or "No". Item C12 to item C22 designed to see whether the respondent has mistrust upon treatment, dependency on pain medicine, suicidal thought, desire of death, suicidal attempt, feeling of being separated, feeling of being neglected, feeling of being burden, uncontrolled emotion, fear or concern about future and job loss respectively (see Section C, Appendix 4).

2.7.4 The Pain Catastrophizing Scale, (PCS; Sullivan, Bishop, & Pivik, 1995). It is a 13-item scale that assesses the level of catastrophic thinking in relation to pain that could increase the probability of chronicity as well as heightened the level of pain and emotional distress. This scale has three subscales namely rumination, magnification and helplessness. The PCS has adequate to excellent internal consistency, coefficient alphas for total PCS score is .89; for rumination subscale is .87; for magnification subscale is .66 and for helplessness subscale is .78 (Sullivan, Bishop, & Pivik, 1995). This scale proved its usability in different culture and it is already adapted in several languages. Iranian version of PCS showed its reliability (Cronbach's alpha value of reliability= 0.93) and validity for Iranian population (Raeissadat, Sadeghi, & Montazeri, 2013). Cronbach's alpha of German version of PCS for three subscale helplessness, magnification, rumination and total score of PCS were 0.89, 0.67, 0.88, and 0.92, respectively (Meyer, Sprott, & Mannion, 2008). For Turkish version of PCS, Cronbach's alpha was 0.90 (SÜREN et al., 2014). PCS was not adapted in Bengali for our population. When it was

decided to use this tool as a measure of catastrophic thinking, adaptation of the tool was first priority.

Adaptation of this instrument started with explicit permission from the original author (see Appendix 7). Bengali translation of the tool was done by the researcher. In third step, Bengali translation was given to five clinical psychologists for assessing the congruence of meaning of Bengali version with the English version of PCS. After receiving their feedback about translation, the final draft of Bengali PCS was done. Then the final draft of Bengali PCS was submitted to an expert of both Bengali and English language for back translation from Bengali to English. In the final step, the back translation of PCS was send back to the original author of PCS for review of back translation. Review of back translation state that it was loyal to the meaning and intention of original PCS (See, Appendix 8). Therefore the appropriateness of PCS Bengali version was confirmed. Then it was ready to use in current research.

2.7.5 Self Reporting Questionnaire – 20 (SRQ-20; WHO, 1994). In the current research this tool was used as measure of psychological morbidity of the participants. It is a 20 item scale with "Yes" and "No" response (see Section E, Appendix 4). Total score of the scale may range from 0 to 20. SRQ-20 has a cutoff value of "8" which indicate that the participants who scored more than 8 had clinical level of psychological morbidity (World Health Organisation, 1994). It has been reported that, SRQ-20 has been validated in several countries of the world including Bangladesh and is widely used as a research tool (N. Z. Khan et al., 2008; Milad et al., 2013). In Bangladesh sensitivity and specificity of SRQ 20 has been reported to be 62 and 69 respectively using 6/7 as the cutoff value (Islam, Ali, Ferroni, Underwood, & Alam, 2003). A recently completed study reported

adequate test-retest reliability (r = 0.815) and internal consistency reliability (Cronbach's alpha = 0.774) of the scale (Mozumder, 2017).

2.7.6 Perceived Stress Scale-10 (PCS-10; Cohen & Williamson, 1988). It is a 10 items scale which was used to measure the extent to what a chronic pain patient perceives their life situation as stressful. Higher score on the scale shows higher level of perceived stress. This scale shows adequate reliability (Alpha= .78) and validity (Cohen & Williamson, 1988) as it has correlation with other measures (Job Responsibilities Scale, life events scales) of stress. Bengali version of this tool is appended with this report (see Section F, Appendix 4). The Bengali version of this instrument has been reported to have good internal consistency (Cronbach's alpha = 0.73), test-retest reliability at two-week interval (r = 0.74) and convergent validity with GHQ-28 (r= 0.57) (Mozumder, 2017).

2.7.7 Beck Hopelessness Scale (BHS; Beck & Steer, 1988). BHS is designed to measure the negative and positive beliefs about future within last week. This tool contains 20 positive and negative statements. Participants were asked to mention which statements were true and which statements were false for them. BHS has been reported high internal reliability across various clinical and non-clinical population ranging from 0.87 to 0.93 and one week test-retest reliability r= 0.69 for psychiatric outpatient sample (A. T. Beck & Steer, 1988). It also has moderate to high correlations (r = .62 to .74) with clinical ratings of hopelessness for patients in primary care practices and for patients who attempted suicide in hospital settings (Beck et al., 1974). Many other prospective studies have shown that BHS is a significant tool for assessing threat for suicide besides measuring hopelessness (Beck et al., 1990; Nordstrom et al., 1995). There are four level of severity of hopelessness. Score from 0-3 indicate minimal level, 4-8 as mild, 9-14 as moderate and 15+ as severe level of hopelessness. Severe level of hopelessness assume high risk of

suicide while moderate level of hopelessness indicate no possibility of immediate risk but regular monitoring is required. Bengali version of BHS translated was used for the present study (see Section G, Appendix 4). A recently completed study reported adequate test-retest reliability (r = 0.866) of the scale (Mozumder, 2017).

2.7.8 WHO Quality of Life Brief (WHOQOL-BREF; WHO, 1996). The WHOQOLBREF assess the quality of life in four domains of human life, namely physical, psychological, social relationships, and environmental. This instrument consisted of 26 items. A higher score on scale indicate a better quality of life. The Bengali version of the WHO quality of life brief scale (see Section H, Appendix 4) was used in the study (Izutsu et al., 2005). WHOQOL-BREF has been widely used in many countries as it is accepted for its reliability and validity in different countries and culture. Bangladeshi validation study reported sufficient discriminate validity ($p < 0.05$) and sufficient internal consistency reliability of the tool where the Cronbach's alpha is ranged from 0.57 - 0.89 for the four domains, and it also reported sufficient test retest reliability (r ranging from .22 - .77) (Tsutsumi et al., 2006).

2.7.9 Cope Inventory (Carver, Scheier, & Weintraub, 1989). Cope Inventory was developed by Charles S. Carver, Michael F. Scheierand Jagdish Kumari Weintraub to assess the ways to response toward stress. This tool was used in this research with a purpose to assess the current coping of the participants. Cope inventory was adapted in Bangladesh and test-retest correlation of the Bengali version ranged from 0.39 to 0.89 which is very close to the original scale (0.46 to 0.86) (Rahman & Islam, 2011). It measures three types of coping strategies of human being and these types are problem focused coping, emotion focused coping and dysfunctional coping. This tool has total 60 items with 15 subscales contains four items each of them (see Section I, Appendix 4).

2.7.10 General Health Questionnaire - 28 (GHQ-28; Goldberg, 1978). GHQ-28 is a familiar for the researcher, the world over. It is translated and validated for roughly 40 different languages. For this study we used Bengali version of the scale (see Section J, Appendix 4). This scale contains 28 items and four subscales namely, somatic symptoms, anxiety and insomnia, social withdrawal, and depression. This tool was used in this research for assessing the level of distress among the patient of chronic pain. Cutoff value of the tool is 25 which indicate that score below than 25 express non distress level and the score more than 25 express distress level. Bengali version of GHQ 28 used in this study has been translated by (Banoo, 2001) and reported to be evaluated by a panel of 14 judges (Psychiatrist and Psychologist) and have adequate test-retest reliability (Spearman rho = 0.682). A recent study by Mozumder (2017) found similar test-retest reliability (r = 665) of the scale and excellent internal consistency reliability indicated by Cronbach's alpha for full scale (0.918) and each of the four subscales (alpha ranged from 0.752 to 0.838).

2.8 Data Collection

The survey was conducted through face-to-face interview of participants. Data were collected by the principle researcher and eight research assistants. There were four different sites of data collection and two research assistants were assigned for each site.

2.8.1 Research assistants. Recruitment of research assistants was the first step of data collection. All the research assistants were student and they were from different departments of Dhaka University including counseling psychology. Eight students were selected through interviewing from 18 initial applicants.

2.8.2 Training of research assistants. Training of research assistants was done in three steps. First step was done in lecture method where the principal researcher provided

a through description of the research purpose, target population of research, data collection site, procedure for selection of participants, participants' rights and other ethical issues. In second step, they were provided with a through description of the research questionnaire and all the tools. This step was done through discussion using participatory method. In this step, each and every single item and response patterns were discussed with the whole data collection team. The third and final step was done by observation method where the main researcher took interview and research assistants were observed the whole procedure. There were always an opportunities to communicate about any problem during data collection phase with the principle researcher to discus and find out solution regarding the issues of concern.

2.8.3 Data collection procedure. Data collection took place in outdoor building of Bangabandhu Sheikh Mujib Medical University (BSMMU). Researcher took formal permission from the Chairman of respective departments (See, Appendix 5 & Appendix 6) before data collection. Explanatory statement (See, Appendix 2) was provided to give an overview of the research purpose and procedure to the participant. The explanatory statements were presented verbally along with a printed copy given to the participants during enrolment in the survey. The questionnaire was administered by the interviewers, except for those educated participants who preferred for self-administration of the questionnaire in front of the interviewer.

2.9 Data Analysis

Data preparation and analysis was carried out in statistical data analysis software, PASW Statistics 18 (SPSS, 2009).

2.9.1 Data preparation. Data preparation started with data entry. Data were checked several times manually. Random selections of 20 questionnaires (5% of total data) were checked. "Randomization engine" from www.Random.org was used (IP: 110.76.129.222; Timestamp: 20170321; 17:53:08 UTC) for this randomization. The calculated percentage of error was 0.4%, which was not much to worry.

After checking for errors, missing values in the data set were dealt. Analysis for missing value indicated very little amount of data (only 13) are missing (Figure 1). However, as these 13 missing value were distributed over 13 variables among 10 cases. The researcher decided to impute the missing value using multiple imputation method in SPSS 18.

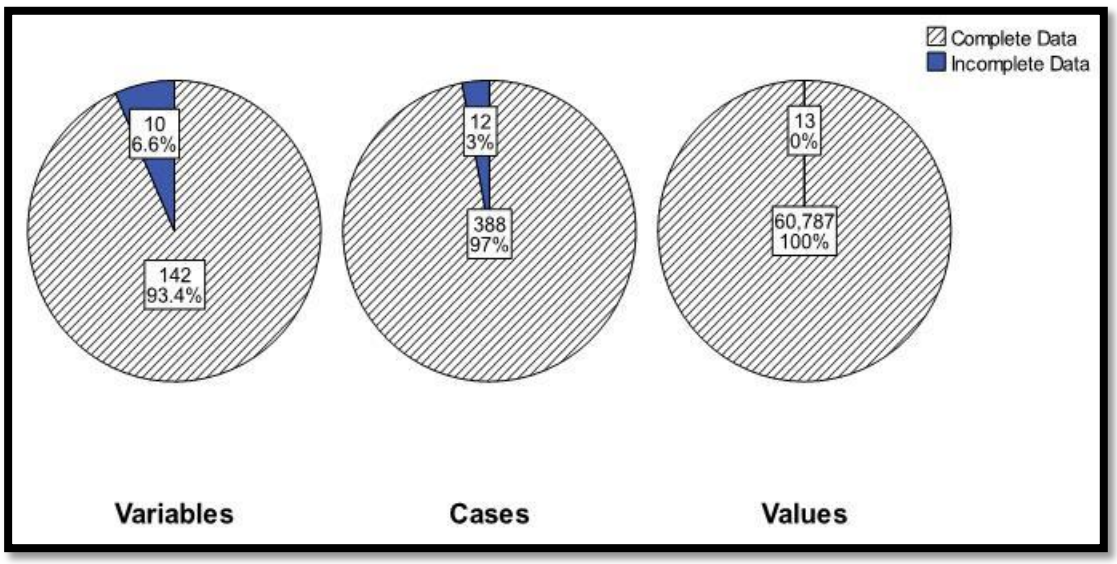

Figure 2.1: Proportion of missing value distributed according to variables, cases, and values.

2.9.2 Analysis. Data analysis was carried out in three levels. First level consists of general descriptive analysis of different dependent variables to see the impact of chronic pain. In second level, correlation analysis was done between independent and dependent

variables. Third level was concerned about multivariate regression analysis to identify impact of pain on different dependent variables.

2.10 Ethical consideration

The research was submitted to and approved by the ethics Committee at the Department of Clinical Psychology, University of Dhaka (see Appendix 1). The following section presents discussion on the major issues that were taken under consideration in maintaining the ethical standards of the present research.

2.10.1 Informed consent. All the participants were provided detailed information about the nature, purpose and possible future utilization of the research. This information was provided verbally as well as with written explanatory statement (See, Appendix 2). These detailed information helped the participants understand their contribution and to make decision regarding their participation in the study. Written informed consent (See, Appendix 3) was taken from each participant. Most of the participants provided signature on the consent document however, for a few illiterate participants, thumb marks were taken. In case of illiterate participants, the consent document was readout loud by a witness from the participant's side who confirmed the content to the participant.

2.10.2 Wellbeing of the participants. The completion of research questionnaire was time consuming and it took at least 50-60 minutes. However, there were a few items which were emotionally loaded. Referral information (where to get mental health support) was provided to the participants in cases where emotional distress identified or expressed by the participants.

2.10.3 Right to withdraw. The respondents' right to withdraw from research was clearly stated in explanatory statements as well as in informed consent form and was maintained

2.10.4 Confidentiality and privacy. Confidentiality and privacy was strictly maintained. No identifiable details of the participants were required or collected in this study. The consent Forms were kept separate from the questionnaire using an interview ID generated by the researcher.

2.10.5 Participants' right to know the findings. Researcher's contact number was provided in the explanatory statement document if any one feel interested about the findings of the research which is consider as right of the participants who make a significant contribution to the knowledge.

CHAPTER 3

RESULT

The findings of current research are presented in three different sections. First section presents psychosocial state of the individual with chronic pain, the second section presents interrelation of pain with psychosocial variables and the third section presents the impact of pain and other predictor variables on psychosocial variables.

3.1 Psychosocial State of Individual with Chronic Pain

Descriptive analysis was carried out to gain insight about the psychological and social state of people with chronic pain.

A common impact of pain on an individual's life is reduction of functioning. The general impact on overall functioning is presented in Table 3.1. Participants were asked to rate the impact on a scale of 0-100. Multiple items were used to assess impact on each area and the mean impact on each are is presented. A noteworthy impact have been observed on economic sector (Mean = 41.18, SD = 23.37), level of activity (Mean = 36.29, SD = 21.76), and on self-care (Mean = 31.96, SD = 25.24) among the chronic pain patients.

Table 3.1. Impact on overall functioning

Areas of impact	**Mean**	**SD**
Self-care	31.96	25.240
Activity	36.29	21.758
Relationship	26.94	20.784
Economic	41.18	23.371
Sexual Life	21.34	25.973

Living with pain often brings changes in thought pattern, feeling and behavior. Some of these specific psychosocial aspects were explored and are presented in Table 3.2.

Table 3.2. Specific psychosocial impact

Areas of impact	**n**	**%**
Mistrust upon treatment	201	50.3
Dependency on pain medicine	204	51
Suicidal thought	72	18
Desire to die	100	25
Suicidal attempt	10	2.5
Feeling of separation	90	22.5
Feeling of being neglected	155	38.8
Feeling of being burden	244	61
Uncontrolled emotion	233	58.3
Fear about future	312	78
Quitted job	48	12

The findings indicated that 78% of the participants reported fear about future making it the most prevalent concern among the chronic pain patients. Feeling of being burden was the next most common (61%) followed by uncontrolled emotion (58.3%). Mistrust upon treatment developed in case of 50.3% participants while dependency on pain medicine developed among 51.0% respondent. Among the participants, 25 % expressed that they had desired death while 18% reported suicidal thoughts and 2.5% reported about attempting suicide. Feeling of separation had been reported by 22.5%,

feeling of being neglected was found among 38.8% and job loss was present among 12% of total participants.

Specific psychological state of individuals with chronic pain was measured with multiple instruments. The result is presented on Table 3.3.

Table 3.3. Mental health state of individuals with chronic pain.

Tools	**n**	**%**
General Health Questionnaire -28 (GHQ-28)		
Non Distressed	32	8.0
Distressed	368	92.0
Self Reporting Questionnaire-20 (SRQ-20)		
Non Clinical	56	14.0
Clinical	344	86.0
Perceived Stress Scale-10 (PSS-10)		
Low stress	14	3.5
Moderate stress	361	90.3
High perceived stress	25	6.3
Beck Hopelessness Scale (BHS)		
None/nominal	81	20.3
Mild	138	34.5
Moderate- May not be in Immediate risk	122	30.5
Severe - in Suicide risk	59	14.8
Overall perception of quality of life		
Very Poor	14	3.5
Poor	142	35.5
Neither Poor nor Good	191	47.8
Good	50	12.5
Very Good	3	.8

GHQ-28 score indicated 92% of the total participants as distressed. Usign score 8 as the cutoff value, SRQ-20 identified 86% participants as clinical i.e., have psychological morbidity. PSS-10 found that 90.3% chronic pain patients perceived moderate level of stress in their life. BHS reported 34% had mild hopelessness, 30.5% had moderate level of hopelessness and 14.8% had severe level of hopelessness. 3.5% respondents reported their overall perception of quality of life as very poor and 35.5% of them felt that they had poor quality of life.

3.2 Interrelation between pain and other psychosocial factors

Bivariate correlations were calculated for 29 variables. Pain rating index (PRI), visual analog scale (VAS) and present pain intensity (PPI) were the three subscale of Short Form-McGill Pain Questionnaire (SF-MPQ). These subscales are designed to measures pain in three different methods. Therefore, 29 variables comprised of three measures of pain variables, duration of pain, age and the remaining 24 variables were dependent variables which were the measures of social and psychological impacts of pain. Most of the dependent variables showed poor correlation with pain. Some of them were moderately correlated with pain (PRI). Psychiatric morbidity (SRQ-20), pain catastrophizing (PCS), magnification subscale of PCS, hopelessness subscale of PCS and depression is moderately and significantly correlated with pain. Few dependent variables showed poor negative correlation with pain such as impact on self care, impact on relationships, impact on economic condition, impact on activity, hopelessness (BHS), social dysfunction subscale of GHQ. PCS had maximum correlation with pain (PRI) which is 0.515.

Table 3.4. Interrelations among the variables

		1	2	3	4	5	6
1	PRI	1					
2	VAS	.267**	1				
3	PPI	.164**	.368**	1			
4	Age	-.015	.071	.002	1		
5	Duration of Pain	.111*	.076	.011	.177**	1	
6	Impact_Selfcare	-.020	.133**	.194**	.170**	-.072	1
7	Impact_Relation	-.061	.006	.166**	.132**	-.101*	.537**
8	Impact_Activity	-.100*	.188**	.213**	.168**	-.043	.630**
9	Impact_Economic	-.091	.069	.087	.141**	-.037	.325**
10	Impact_Sexual	.009	-.079	.036	-.016	-.097	.335**
11	SRQ-20	.313**	.117*	.140**	.157**	.143**	.157**
12	BHS	-.010	.090	.193**	.182**	.039	.474**
13	PSS-10	.147**	.083	.189**	.045	.119*	.149**
14	PCS	.515**	.318**	.292**	.028	.176**	.000
15	PCS_Rumination	.293**	.239**	.225**	.039	.168**	-.062
16	PCS_Magnification	.387**	.261**	.300**	-.007	.186**	.015
17	PCS_Hopelessness	.584**	.305**	.241**	.031	.116*	.039
18	GHQ-28	.139**	.125*	.342**	.046	.102*	.284**
19	GHQ_Somatic	-.011	.123*	.358**	.034	.107*	.156**
20	GHQ_Anxiety	.032	.044	.244**	.051	.079	.223**
21	GHQ_ Social Dysfunction	-.042	.146**	.337**	-.022	.081	.148**
22	GHQ_Depression	.345**	.072	.130**	.061	.048	.294**
23	QOL_ Physical	.035	-.222**	-.180**	-.237**	-.138**	-.426**
24	QOL_Psychological	.039	-.123*	-.142**	-.126*	-.038	-.350**
25	QOL_Social Relations	.014	.014	.034	-.059	-.019	-.397**
26	QOL_Environmental	.041	-.081	-.006	-.187**	-.013	-.367**
27	COPE_Problem Focused	.197**	-.085	.093	-.109*	.095	-.368**
28	COPE_Emotion Focused	.290**	-.121*	.055	-.028	.062	-.174**
29	COPE_Dysfunctional	.072	-.301**	-.080	-.109*	-.071	.095

Note: * $p < 0.05$, ** $p < 0.01$

Table 3.4. Interrelations among the variables (Continued)

		7	8	9	10	11	12
7	Impact_Relation	1					
8	Impact_Activity	.594**	1				
9	Impact_Economic	.370**	.441**	1			
10	Impact_Sexual	.457**	.336**	.267**	1		
11	SRQ-20	.157**	.180**	.136**	.049	1	
12	BHS	.377**	.484**	.231**	.192**	.321**	1
13	PSS-10	.119*	.079	-.043	.034	.337**	.307**
14	PCS	-.076	-.027	-.077	-.163**	.458**	.193**
15	PCS_Rumination	-.112*	-.051	-.054	-.193**	.361**	.174**
16	PCS_Magnification	-.060	.042	-.104*	-.147**	.396**	.202**
17	PCS_Hopelessness	-.033	-.037	-.054	-.093	.415**	.138**
18	GHQ-28	.370**	.329**	.089	.201**	.438**	.524**
19	GHQ_Somatic	.240**	.282**	.057	.168**	.295**	.351**
20	GHQ_Anxiety	.312**	.245**	.074	.176**	.367**	.329**
21	GHQ_ Social Dysfunction	.203**	.211**	.037	.049	.263**	.384**
22	GHQ_Depression	.331**	.245**	.089	.189**	.370**	.474**
23	QOL_ Physical	-.366**	-.513**	-.239**	-.187**	-.378**	-.532**
24	QOL_Psychological	-.269**	-.336**	-.165**	-.110*	-.323**	-.454**
25	QOL_Social Relations	-.362**	-.294**	-.219**	-.448**	-.311**	-.331**
26	QOL_Environmental	-.299**	-.371**	-.253**	-.156**	-.313**	-.386**
27	COPE_Problem Focused	-.256**	-.319**	-.213**	-.126*	-.008	-.254**
28	COPE_Emotion Focused	-.134**	-.213**	-.181**	-.006	.107*	-.104*
29	COPE_Dysfunctional	.156**	.025	.041	.233**	.046	.100*

Note: * $p < 0.05$, ** $p < 0.01$

Table 3.4. Interrelations among the variables (Continued)

		13	14	15	16	17	18
13	PSS-10	1					
14	PCS	.348**	1				
15	PCS_Rumination	.330**	.834**	1			
16	PCS_Magnification	.261**	.827**	.608**	1		
17	PCS_Hopelessness	.295**	.890**	.553**	.622**	1	
18	GHQ-28	.405**	.342**	.258**	.334**	.297**	1
19	GHQ_Somatic	.288**	.205**	.152**	.256**	.149**	.773**
20	GHQ_Anxiety	.218**	.173**	.113*	.175**	.159**	.740**
21	GHQ_ Social Dysfunction	.358**	.297**	.292**	.294**	.204**	.769**
22	GHQ_Depression	.339**	.327**	.214**	.271**	.336**	.722**
23	QOL_ Physical	-.311**	-.225**	-.200**	-.206**	-.179**	-.551**
24	QOL_Psychological	-.293**	-.146**	-.118*	-.109*	-.140**	-.458**
25	QOL_Social Relations	-.224**	.034	.056	.048	-.002	-.375**
26	QOL_Environmental	-.270**	-.072	-.038	-.063	-.079	-.319**
27	COPE_Problem Focused	.075	.219**	.164**	.226**	.184**	-.062
28	COPE_Emotion Focused	.131**	.260**	.187**	.250**	.235**	.077
29	COPE_Dysfunctional	-.031	-.071	-.168**	-.011	-.007	.148**

Note: * p < 0.05, ** p < 0.01

Table 3.4. Interrelations among the variables (Continued)

		19	20	21	22	23	24
19	GHQ_Somatic	1					
20	GHQ_Anxiety	.501**	1				
21	GHQ_ Social Dysfunction	.620**	.434**	1			
22	GHQ_Depression	.289**	.352**	.351**	1		
23	QOL_ Physical	-.454**	-.451**	-.470**	-.313**	1	
24	QOL_Psychological	-.345**	-.368**	-.435**	-.259**	.650**	1
25	QOL_Social Relations	-.240**	-.358**	-.197**	-.313**	.492**	.471**
26	QOL_Environmental	-.256**	-.225**	-.274**	-.212**	.564**	.612**
27	COPE_Problem Focused	-.014	-.049	-.064	-.056	.278**	.340**
28	COPE_Emotion Focused	-.005	.039	-.057	.198**	.204**	.300**
29	COPE_Dysfunctional	.052	.135**	-.092	.279**	.105*	.151**

Note: * p < 0.05, ** p < 0.01

Table 3.4. Interrelations among the variables (Continued)

		25	26	27	28	29
25	QOL_Social Relations	1				
26	QOL_Environmental	.524**	1			
27	COPE_Problem Focused	.317**	.406**	1		
28	COPE_Emotion Focused	.189**	.306**	.676**	1	
29	COPE_Dysfunctional	-.097	.129**	.259**	.469**	1

Note: * p < 0.05, ** p < 0.01

3.3 Impact of pain and other predictors on psychosocial outcome variable

Multivariate regression analysis was carried out to determine whether intensity of pain, duration of pain and age can significantly predict the psychosocial impact on a person. Findings revealed that, intensity of pain has significant impact on the psychosocial variables (F=14.56, P<0.01) so does age (F=3.087, P<0.01). However, duration of pain shows no significant impact on psychosocial variables (see Table 3.5).

Table 3.5. Multivariate Regression

Predictor	**Wilk's Lambda**	**F***	**Sig.**	η_p^2
Pain intensity	0.538	14.562	0.000	0.462
Duration of Pain	0.916	1.564	0.052	0.084
Age	0.846	3.087	0.000	0.154

Note: * df = 22, 373; η_p^2 = Partial Eta Squared.

Separate impact of each of the three predictors were analyzed and are presented in the following sections (Table 3.6 - Table 3.8)

Table 3.6 presents impact of pain on the psychosocial variables. Pain has significant impact (p<0.01) on psychiatric morbidity (F=41.71, η_p^2 = 0.096), depression subscale of GHQ (F= 52.80, η_p^2 = 0.118), rumination dimension of pain catastrophizing (F= 33.83, η_p^2 = 0.079), magnification dimention of pain catastrophizing (F= 64.33, η_p^2 = 0.14), hopelessness dimention of pain catastrophizing (F= 198.75, η_p^2 = 0.335), problem focused copping (F= 14.14, η_p^2 = 0.035), emotion focused copping (F= 34.95, η_p^2 = 0.081) and perceived stress (F= 7.65, η_p^2 = 0.019).

Table 3.6. Impact of Pain intensity on the psychosocial variables

	Outcome variable	**SS**	**MS**	F*	**Sig.**	$\boldsymbol{\eta_p^2}$
1	Impact Self care	10.500	10.500	.017	.896	.000
2	Impact Sexual	92.870	92.870	.138	.711	.000
3	Impact Economic	1393.948	1393.948	2.657	.104	.007
4	Impact Relation	355.259	355.259	.843	.359	.002
5	Impact Activity	1522.572	1522.572	3.329	.069	.008
6	SRQ-20	581.655	581.655	**41.714**	.000	**.096**
7	BHS	.583	.583	.024	.878	.000
8	QOL Physical	143.956	143.956	.826	.364	.002
9	QOL Psychological	108.821	108.821	.615	.433	.002
10	QOL Social Relations	30.941	30.941	.094	.759	.000
11	QOL Environmental	91.904	91.904	.539	.463	.001
12	GHQ Somatic	2.648	2.648	.231	.631	.001
13	GHQ Anxiety	2.708	2.708	.251	.617	.001
14	GHQ Social Dysfunction	11.036	11.036	1.131	.288	.003
15	GHQ Depression	948.324	948.324	**52.807**	.000	**.118**

	Outcome variable	SS	MS	F*	Sig.	η_p^2
16	PCS Rumination	330.413	330.413	**33.827**	.000	.079
17	PCS Magnification	307.482	307.482	**64.331**	.000	**.140**
18	PCS Hopelessness	2378.497	2378.497	**198.755**	.000	**.335**
19	COPE Problem Focused	844.810	844.810	**14.147**	.000	.035
20	COPE Emotion Focused	1228.540	1228.540	**34.953**	.000	.081
21	COPE Dysfunctional	96.415	96.415	2.501	.115	.006
22	PSS-10	118.715	118.715	**7.652**	.006	.019

Note: SS= Sum of Squares; MS = Mean Square; η_p^2 = Partial Eta Squared;

The result indicates that intensity of pain predicts a large portion of variance (33.5%) in the hopelessness dimension of the pain catastrophization of pain. For ease of understanding, percentage of variance of all the significant outcome variables on different psychosocial aspects explained by intensity of pain are presented in the Figure 3.1.

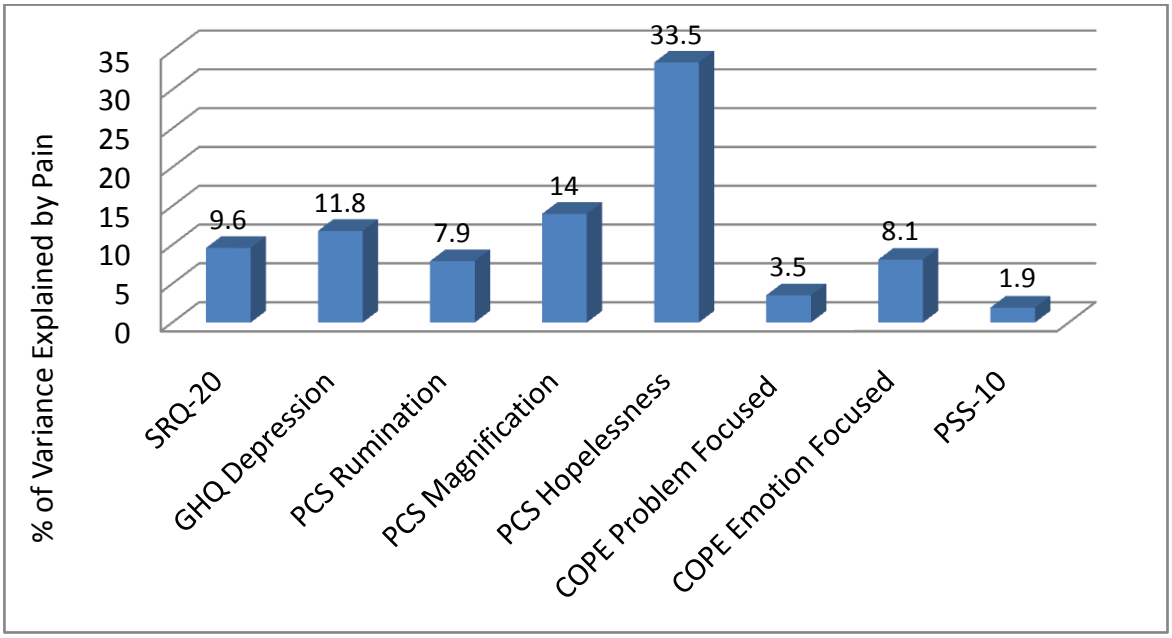

Figure 3.1. Comparative percentage of variance on different psychosocial aspects explained by intensity of pain.

It was assumed that length of suffering from pain can be a contributor of the poor psychosocial state of the individual with chronic pain. Although it did not show any overall significant impact (see Table 3.5), it still impacted a few psychosocial variables (Table 3.7).

Table 3.7. Impact of duration of pain on the psychosocial variables

	Outcome variable	**SS**	**MS**	**F***	**Sig.**	η_p^2
1	Impact Self care	2302.981	2302.981	3.721	.054	.009
2	Impact Sexual	2144.725	2144.725	3.177	.075	.008
3	Impact Economic	1018.351	1018.351	1.941	.164	.005
4	Impact Relation	2455.219	2455.219	**5.825**	.016	.015
5	Impact Activity	713.245	713.245	1.559	.212	.004
6	SRQ-20	43.304	43.304	3.106	.079	.008
7	BHS	.113	.113	.005	.946	.000
8	QOL Physical	1016.638	1016.638	**5.834**	.016	.015
9	QOL Psychological	34.087	34.087	.193	.661	.000
10	QOL Social Relations	38.791	38.791	.118	.731	.000
11	QOL Environmental	23.132	23.132	.136	.713	.000
12	GHQ Somatic	61.986	61.986	**5.408**	.021	.014
13	GHQ Anxiety	18.914	18.914	1.754	.186	.004
14	GHQ Social Dysfunction	34.320	34.320	3.516	.062	.009
15	GHQ Depression	.189	.189	.011	.918	.000
16	PCS Rumination	63.897	63.897	**6.542**	.011	.016
17	PCS Magnification	43.463	43.463	**9.093**	.003	.023
18	PCS Hopelessness	25.459	25.459	2.127	.145	.005

	Outcome variable	SS	MS	F*	Sig.	η_p^2
19	COPE Problem Focused	178.390	178.390	2.987	.085	.008
20	COPE Emotion Focused	6.139	6.139	.175	.676	.000
21	COPE Dysfunctional	87.700	87.700	2.275	.132	.006
22	PSS-10	46.200	46.200	2.978	.085	.008

Note: SS= Sum of Squares; MS = Mean Square; * df =1; η_p^2 = Partial Eta Squared.

For the ease of understanding, percentage of variance of few affected outcome variables on different psychosocial aspects explained by length or duration of pain are presented in the Figure 3.2.

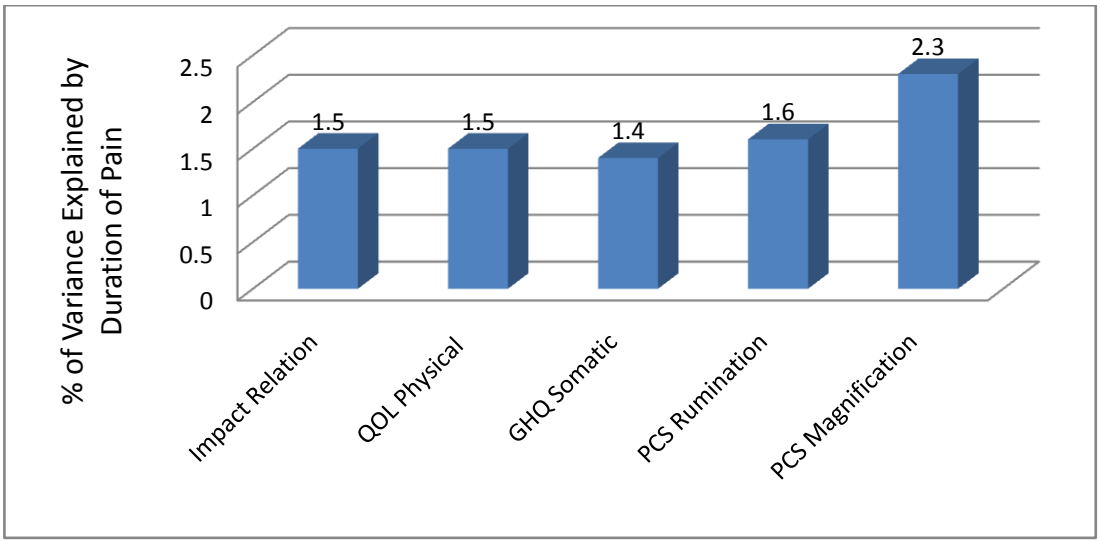

Figure 3.2. Comparative percentage of variance on different psychosocial aspects explained by duration of pain.

Age is an important aspect of the person with chronic pain and play significant role to create negative psychosocial consequences within the life of pain sufferer The Table 3.8 furnished bellow illustrates the impact of age on the psychosocial variables of interest in the present research.

Table 3.8. Impact of Age on the psychosocial variables

	Outcome variable	SS	MS	F*	Sig.	η_p^2
1	Impact Self care	8884.973	8884.973	**14.354**	.000	.035
2	Impact Sexual	.134	.134	.000	.989	.000
3	Impact Economic	5227.393	5227.393	**9.966**	.002	.025
4	Impact Relation	3972.822	3972.822	**9.426**	.002	.023
5	Impact Activity	6019.724	6019.724	**13.161**	.000	.032
6	SRQ-20	130.016	130.016	**9.324**	.002	.023
7	BHS	316.203	316.203	**12.833**	.000	.032
8	QOL Physical	3525.955	3525.955	**20.233**	.000	.049
9	QOL Psychological	1075.283	1075.283	6.081	.014	.015
10	QOL Social Relations	388.000	388.000	1.182	.278	.003
11	QOL Environmental	2562.166	2562.166	**15.023**	.000	.037
12	GHQ Somatic	1.413	1.413	.123	.726	.000
13	GHQ Anxiety	5.120	5.120	.475	.491	.001
14	GHQ Social Dysfunction	5.407	5.407	.554	.457	.001
15	GHQ Depression	35.245	35.245	1.963	.162	.005
16	PCS Rumination	2.003	2.003	.205	.651	.001
17	PCS Magnification	1.389	1.389	.291	.590	.001
18	PCS Hopelessness	9.852	9.852	.823	.365	.002
19	COPE Problem Focused	373.123	373.123	**6.248**	.013	.016
20	COPE Emotion Focused	14.518	14.518	.413	.521	.001
21	COPE Dysfunctional	140.779	140.779	3.652	.057	.009
22	PSS-10	4.783	4.783	.308	.579	.001

Note: SS= Sum of Squares; MS = Mean Square; * df =1; η_p^2 = Partial Eta Squared.

The table indicates that age has significant impact on a number of variables however, partial eta square suggest very poor impact of age on these variables. Age has significant impact ($p<0.01$) on self care (F= 14.35, η_p^2 = 0.035), economic loss (F= 9.97, η_p^2 = 0.025), relationship (F= 9.42, η_p^2 = 0.023), level of activity (F= 13.16, η_p^2 = 0.032), psychiatric morbidity measured by SRQ-20 (F= 9.32, η_p^2 = 0.023), hoplessnes (F= 12.83, η_p^2 = 0.032), physical wellbeing (F= 20.23, η_p^2 = 0.049),satisfaction with environment (F= 15.02, η_p^2 = 0.037) and problem focused copping (F= 6.25, $\eta_p^2 = 0.016$).

For the convenience, percentage of variance of all the significant outcome variables on different psychosocial aspects explained by age are presented in the Figure 3.3 Graph is showing that age is able to explain variance the most in physical wellbeing.

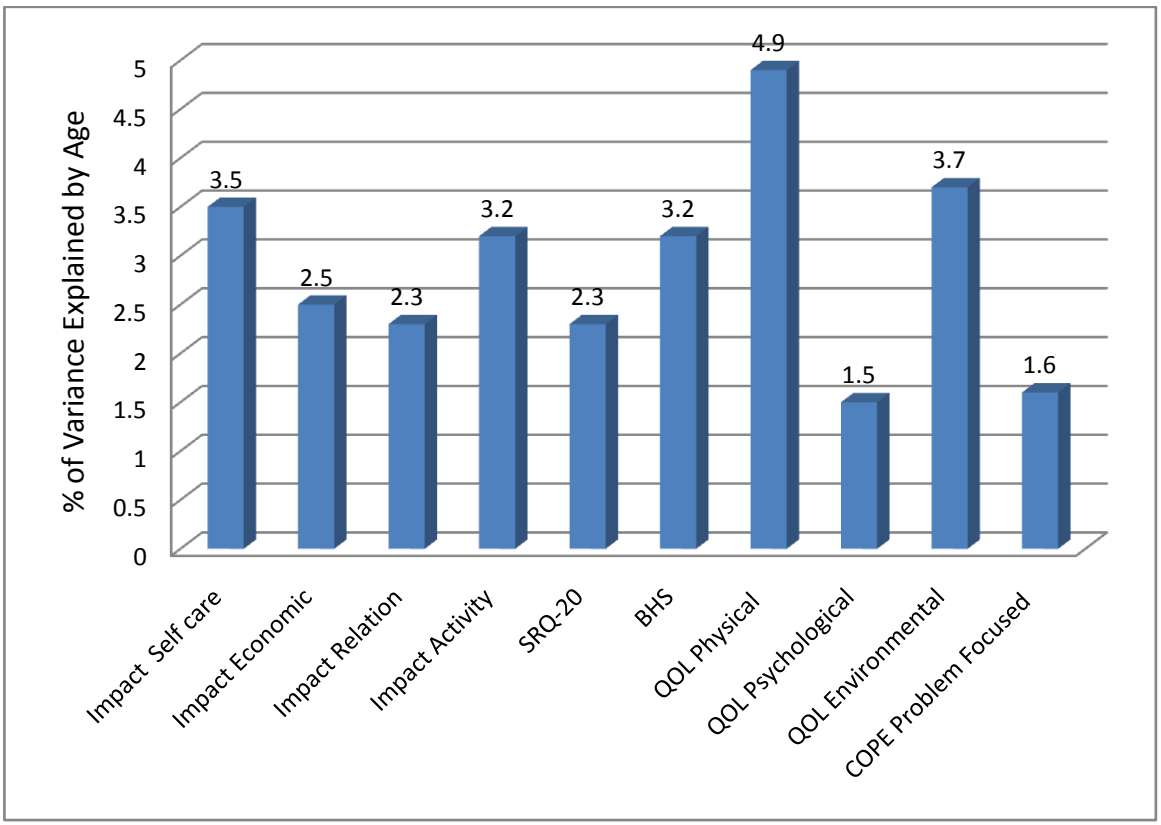

Figure 3.3. Comparative percentage of variance on different psychosocial aspects explained by age.

Pain, duration of pain and age jointly influence psychosocial variables and table 3.9 is furnished below to present the amount of impact upon outcome variables.

Table 3.9. Joint effect of intensity of pain, duration of pain and age on the psychosocial variables.

	Outcome variable	**SS**	**MS**	**F***	**Sig.**	η_p^2
1	Impact Self care	10099.572	3366.524	**5.439**	.001	.040
2	Impact Sexual	2226.786	742.262	1.099	.349	.008
3	Impact Economic	7440.740	2480.247	**4.728**	.003	.035
4	Impact Relation	6223.394	2074.465	**4.922**	.002	.036
5	Impact Activity	8119.907	2706.636	**5.918**	.001	.043
6	SRQ-20	819.881	273.294	**19.599**	.000	.130
7	BHS	327.568	109.189	**4.431**	.004	.033
8	QOL Physical	5370.915	1790.305	**10.273**	.000	.073
9	QOL Psychological	1308.244	436.081	2.466	.062	.018
10	QOL Social Relations	505.243	168.414	.513	.673	.004
11	QOL Environmental	2693.441	897.814	**5.264**	.001	.039
12	GHQ Somatic	68.722	22.907	1.999	.114	.015
13	GHQ Anxiety	32.354	10.785	1.000	.393	.008
14	GHQ Social Dysfunction	43.314	14.438	1.479	.220	.011
15	GHQ Depression	995.758	331.919	**18.483**	.000	.123
16	PCS Rumination	439.170	146.390	**14.987**	.000	.102
17	PCS Magnification	382.561	127.520	**26.680**	.000	.169
18	PCS Hopelessness	2503.436	834.479	**69.732**	.000	.347
19	COPE Problem Focused	1446.132	482.044	**8.072**	.000	.058

	Outcome variable	SS	MS	F*	Sig.	η_p^2
20	COPE Emotion Focused	1287.136	429.045	**12.207**	.000	.085
21	COPE Dysfunctional	352.105	117.368	**3.045**	.029	.023
22	PSS-10	194.126	64.709	**4.171**	.006	.031

Note: SS= Sum of Squares; MS = Mean Square; * df =3; η_p^2 = Partial Eta Squared.

Intensity of pain, duration of pain and age are able to explain 4 % variance in self care, 0.8 % variance in sexual life, 3.5 % variance in economic loss, 3.6 % variance in relationships, 4.3 % variance in activity level, 13% variance in psychiatric morbidity, 3.3% variance in hopelessness, 7.3 % variance in physical wellbeing , 1.8 % variance in psychological wellbeing, 0.4% variance in satisfaction with social relationship, 3.9 % variance in satisfaction with environment, 1.5 % variance in somatic symptoms, 0.8 variance in anxiety, 1.1 % variance in social dysfunction, 12.3 % variance in depression, 10.2 % variance in rumination of pain catastrophizing, 16.9 % variance in magnification of pain catastrophizing, 34.7 % variance in hopeless thinking of pain catastrophizing, 5.8 % variance in problem focused copping, 8.5 % variance in emotion focused copping, 2.3 % variance in dysfunctional copping and 3.1 % variance in perceived stress.

CHAPTER 4

DISCUSSION

The present research was conducted to see the psychological and social impacts of chronic pain on the patient's life. Although, numerous studies have been conducted on psychological and social impact of pain in the international arena, research on this has received limited interest in Bangladesh context. The findings of the present study filled the knowledge gap and contributed in the understanding of chronic pain and its impact on Bangladeshi patients'.

As part of this study, data were collected from 400 diagnosed chronic pain patients selected from Bangabandhu Sheikh Mujib Medical University (see Chapter 2). Analysis of demographic pattern suggested chronic pain to be more prevalent among women (56.3 %) compared to men (43.8 %). This finding is similar with previous studies conducted home and abroad (Sonia Akter, 2012; Breivik et al., 2006). Data shows that, major portion of participants were house wife (47.3 %) which was about half of the total sample size which is also in line with the findings from earlier research (Sonia Akter, 2012).

Length of sufferings in chronic pain is a significant concern for the patients as well as the professionals involved in the treatment of pain. Maximum duration of pain found in this study was 360 months (i.e., 30 years) with an average duration of 27.97 months (i.e., 2 years and 3 months). This lengthy period of suffering from chronic pain may be an important factor to produce various negative consequences such as depression and anxiety (Katon, Lin, & Kroenke, 2007).

Patients' past treatment history showed that approximately 50% of the participants reported that they received only pharmacological treatment while 58 % participants reported being on pharmacological treatment for their pain during the time of interview. Current findings exposed dominance of biological approach in the intervention for chronic pain in Bangladesh while psychotherapy is well regarded approach in managing pain worldwide. Approximately, only 1% of the respondents had experienced psychotherapy for pain as intervention in combination with other types of treatment such as physiotherapy and exercise.

Chronic pain can affect a person's self care, activity level, relationships, sexual life as well as economic condition. Self care is a person's basic activity that requires ability to do by self. Pain can restrict the ability to do this activity. Current research found moderate level of impact in self care (mean =31.96, SD = 25.24) of the participants. The most affected area reported by the respondent was economic loss. This loss may happen in many forms. Expenses of treatment, job loss, limited work hours, limited job responsibility, etc create a combined impact on economic condition. According to the research data the mean value of economic loss was 41.18. A research conducted in United Stat of America, found chronic pain as an expensive problem which is similar to the finding of current research (D. J. Gaskin & Richard, 2012). Impact in the level of activity was also measured by four basic areas of functioning namely, general activities, recreational activities, outdoor activities such as shopping and professional activities. Participants were reported moderate level of impact in activity level (Mean =36.29, SD = 21.76). Minimal level of impact have found in the area of relationships and sexual life (Mean = 26.94, SD= 20.78; Mean = 21.34, SD = 25.97 respectively). The cultural context and family bonding may provide the explanation of this minimal level of impact. Answer of the question is beyond the capacity of current research.

Some specific psychosocial phenomena such as mistrust upon treatment, dependency on pain medicine, feeling of being burden, uncontrolled emotion and fear about future were reported by large portion of the respondents. It is apparent that significant number of people with chronic pain is having these experiences. These experiences can contribute to the deterioration of the perception of pain and ultimately results in negative psychological state (M. E. Gaskin, Greene, Robinson, & Geisser, 1992). Dependency on pain medicine may compromise the ability to take responsibility to manage chronic pain by own. Besides these, respondent also reported that they feel isolated (22.5%) and neglected (38.8%) in their family which reflects lack of family support when it is established that family support is important to minimize impact of pain (Jamison & Virts, 1990). Though, they have to suffer with their pain alone and this lack of expression regarding their pain may contribute in exacerbating their negative mental state which may result into serious depression and even suicidality (Ojala et al., 2014; Tang & Crane, 2006).

This research found that 18 % respondents have suicidal thought while 25 % reported desiring death and 2.5 % reported history of suicidal attempt because of chronic pain. These figures are expressing a real threat for the target population of current research. In Bangladesh overall suicide rate is reported to be 7.3 per 100,000 per year (Mashreky, Rahman, & Rahman, 2013). Globally, suicide risk associated with chronic pain is increasing and a research found that it is getting doubled. Tang and Crane (2006) reported the lifetime prevalence of suicide attempt was 5% to 14 % among the chronic pain patients. In the context of Bangladesh, this aspect of chronic pain patients is not well talked yet. Therefore, it should be an important area of concern in devising intervention guideline on chronic pain.

Chronic pain is responsible to generate negative emotions rather than the negative emotion influence chronic pain (M. E. Gaskin et al., 1992). Current study has found noteworthy psychological impact of chronic pain. On the measure of perceived stress, 90.3% respondent reported themselves as moderately stressed. This finding reflects that people with chronic pain perceive their life as stressful and they also feel that they are unable to control life situations. Similar finding has been reported from a phenomenological research aimed at acquiring insight about the experience of chronic pain (Ojala et al., 2014). Research suggests that women are more vulnerable to stress with fibromyalgia syndrome (Davis et al., 2001).

One of the objectives of present study was to see the psychiatric morbidity among chronic pain patients. The result indicated a large number of participants had clinical level of psychiatric morbidity (86%) as indicated by SRQ-20. This finding suggested that a large portion of chronic pain patients had experienced neurotic symptoms such as tension headache, loss of appetite, sleep problem, digestion problem, anxiety, fatigue, problem in decision making, tearfulness, worthless feeling, etc. Scores on General Health Questionnaire (GHQ-28) indicated large amount of (92%) chronic pain patients to be clinically distressed which encompass somatic condition, anxiety and sleep problem, social dysfunction and depression. This number of people showed significant symptoms indicating lower psychosocial well being.

Feeling hopeless is a common negative consequence for any chronic sufferings which is also true in case of chronic pain. Severe level of hopelessness was found among 14.8% of chronic pain patients enrolled in this study. Hopelessness is significantly associated with self-efficacy (Anderson, Dowds, Pelletz, Edwards, & Peeters-Asdourian, 1995) which is important to properly cope with chronic pain's impacts. Hopelessness is

also a strong predictor of suicidality (A. Beck, Brown, Berchick, Stewart, & Steer, 1990; Tang & Crane, 2006). Another 65% of respondents had mild to moderate level of hopelessness (Mild = 34.5%, Moderate= 30.5%). Therefore, according to the previous research findings, there is a possibility to have lower copping ability and lower self-efficacy among the chronic pain patients.

The findings revealed relatively poor score in four domains of quality of life indicating poor wellbeing on physical, psychological, relationships and environmental aspect of life among the chronic pain patient in line with many other studies that support the findings (Gagliese & Melzack, 2003; Hunfeld et al., 2001).

In assessing impact of intensity of pain we realized there are other aspects such as duration of pain and age which also contribute in the psychosocial factors. Bi-variate correlation index explained simple association between variables of present study. Correlation analysis reported that pain is significantly associated with activity level, relationships, psychiatric morbidity, hopelessness, perceived stress, catastrophizing, distress level, problem focused copping, emotion focused copping and duration of pain. Duration of pain is significantly associated with impact on relationship, psychiatric morbidity, perceived stress level, catastrophizing, level of distress and quality of life in physical domain is evident from current research findings. Age showed significant association with impact on self care, relationship, activity, economic loss, psychiatric morbidity, hopelessness, quality of life in physical, psychological and environmental domains, problem focused copping and dysfunctional copping. To achieve more precise insight about the specific impact of the three predictor variables namely intensity of pain, duration of pain and age on the psychosocial variables multivariate multiple regression was used.

Multivariate multiple regression analysis revealed that, intensity of pain, duration of pain and age have impact on a number of psychological and social variables. Result showed that, intensity of pain independently contributed to psychiatric morbidity, depression, rumination, magnification and hopelessness of catastrophizing, problem focused copping, emotion focused copping and perceived level of stress. Effect size of the impact of intensity of pain has a wide range (1.9% - 33.5%). Age was also found to have significant correlation with the psychosocial impacts. Age independently impacted on self care, economic loss, impact on relationship, impact on activity level, psychiatric morbidity, hopelessness, quality of life in physical domain, quality of life in environmental domain. However, the effect size of the impact of age was not low (1.5% - 4.9%). Regression model for duration of pain and the psychosocial variables was non-significant. The overall regression model with three predictor variables (insanity of pain, duration of pain, age) and the psychosocial outcome variables indicated three predictors together could significantly predict 16 out of 22 outcome variables (Table 3.9).

CHAPTER 5

CONCLUTION AND RECOMMENDATION

This study was attempted to understand psychological and social impacts that stem from chronic pain in Bangladesh context. Literature review helped to find out the common psychosocial consequences that occur due to chronic pain. Initial mind map also help to jot down few of impacts that were also supported by research findings. The main purpose of the study was to have an insight about the extent to which these psychosocial consequences occur among the patient of chronic pain in Bangladesh. To my knowledge, this is the first study about the psychosocial impacts of chronic pain within the context of Bangladeshi population.

Based on extensive literature on psychosocial impacts of pain, the present research focused on some specific areas that could be affected by chronic pain. These areas included five broad categories of functional impairment namely self care, general activity, relationship, economic ability and sexual life. Impact of the chronic pain on mental health included psychiatric morbidity, level of distress, hopelessness, pain catastrophizing, perception of stress, coping and quality of life. The present research also enquired about impact on some specific area of thinking, feeling and behavior which included mistrust on treatment, dependency on pain medicine, suicidal thought, desire to die, suicidal attempt, feeling of being separated, feeling of being neglected, feeling of being burden, uncontrolled emotion, fear or concern about future and job loss. Questionnaire survey design was chosen to conduct the study. Four hundred adult chronic pain patients were purposively selected from four different site of Bangabandhu Sheikh Mujib Medical University (BSMMU).

Current research revealed very high prevalence of psychiatric morbidity (86%) and distress (92%) among the people of chronic pain. 90.3% respondents had moderate level of perceived stress and 35.5% reported poor quality of life. This study also found that pain has significant positive correlation with many psychological and social variables including depression and anxiety (Psychiatric morbidity), stress, hopelessness and pain catastrophizing. Four domain of quality of life was not significantly correlated with pain. Level of activity showed poor but significant negative correlation with pain. Multivariate segregation revealed that pain has significant impact on depression, magnification of catastrophizing, rumination of catastrophizing, hopelessness of catastrophizing , problem focused copping, emotion focused copping and stress. But pain showed no significant impact on functional impairment. Age of chronic pain patient has significant impacts on functional difficulty, psychiatric morbidity, hopelessness and two domain of quality of life namely physical and environmental. Pain, duration of pain and age of the patient can explain significant proportion of variance (34.7%) in catastrophizing by hopeless thinking.

Chronic pain is a common health concern all over the world and Bangladesh is no exception. According to the result found from current study, chronic pain populations of Bangladesh have experienced noteworthy psychological and social consequences results from chronic pain suffering.

Recommendations

- Chronic pain has shown to be highly impactful on psychological aspect of people with chronic pain which is a substantial concern for the individual and the society. This concern is needed to be addressed efficiently.

- In the context of Bangladesh chronic pain is still treated from biological perspective where as multidimensional approach of treatment for chronic pain is being successfully practiced worldwide. Findings from the research clearly suggest the need for adopting multidimensional approach for chronic pain management.

- Psychiatric morbidity, catastrophic thinking regarding pain and hopelessness can affect treatment outcome of pain. Therefore, management of these psychological manifestations will elevate treatment outcome.

- This research finding will serve as baseline for future research in the field of chronic pain in specific areas of impact in Bangladesh context.

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APPENDICS

APPENDIX 1
Scanned copy of ethical approval

চিকিৎসা মনোবিজ্ঞান বিভাগ
ঢাকা বিশ্ববিদ্যালয়
কলা ভবন (৫ম তলা)
ঢাকা–১০০০, বাংলাদেশ

DEPARTMENT OF CLINICAL PSYCHOLOGY
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Certificate of Ethical Approval

Project Number : **MP170401**

Project Title : **Understanding Psychosocial Impact of Chronic Pain**

Investigators : **Umme Salma Afroz** and **Muhammad Kamruzzaman Mozumder**

Approval Period : **1 January 2016** to **31 December 2017**

Terms of Approval

1. Any changes made to the details submitted for ethical approval should be notified and sought approval by the investigator(s) to the Department of Clinical Psychology Ethics Committee before incorporating the change.
2. The investigator(s) should inform the committee immediately in case of occurrence of any adverse unexpected events that hampers wellbeing of the participants or affect the ethical acceptability of the research.
3. The research project is subject to monitoring or audit by the Department of Clinical Psychology Ethics Committee.
4. The committee can cancel approval if ethical conduction of the research is found to be compromised.
5. If the research cannot be completed within the approved period, the investigator must submit application for an extension.
6. The investigator must submit a research completion report.

12-04-2017

Chairperson
Ethics Committee
Department of Clinical Psychology
University of Dhaka

APPENDIX 2
Explanatory statement

গবেষণা বিষয়ক ব্যাখ্যা মূলক বিবৃতি

(অংশগ্রহণকারীকে দেয়ার জন্য)

গবেষণার শিরোনামঃ "দীর্ঘস্থায়ী ব্যথার মনোসামাজিক প্রভাব অনুধাবন।"

আমি....., উম্মে সালমা আফরোজ (এম. ফিল গবেষক, চিকিৎসা মনোবিজ্ঞান বিভাগ, ঢাকা বিশ্ববিদ্যালয়), কতৃক পরিচালিত উপরে উল্লেখিত গবেষণায় কাজ করছি।

গবেষণার লক্ষ্যঃ

দীর্ঘমেয়াদী ব্যথায় ভোগার কারণে একজন ব্যক্তির যে যে মনোসামাজিক পরিবর্তন হয়,তা বিষদভাবে বোঝার চেষ্টা করাই এই গবেষণার উদ্দেশ্য।

কেন আপনাকে এই গবেষণায় অংশগ্রহণের অনুরোধ করা হচ্ছেঃ

এই অনুসন্ধানমূলক গবেষণায় আমি এমন ব্যক্তিদের কাছ থেকে তথ্য নিতে চাই যার বয়স কমপক্ষে ১৮ বছর এবং যারা দীর্ঘমেয়াদী (তিন থেকে ছয় মাসের অধিক সময় ধরে) ব্যথায় ভুগছেন এবং যে ব্যথার কারণ অন্য কোন দীর্ঘমেয়াদী শারীরিক অসুখ নয় যেমন- ক্যান্সার, ডায়বেটিস, এমন কোন অবস্থা যার উল্লেখযোগ্য মাত্রার মনোসামাজিক প্রভাব আছে (এসিডদগ্ধ, অঙ্গহানী)।

গবেষণায় যা করা হবেঃ

গবেষণায় অন্তর্ভূক্তির শর্ত সমূহ পূরণ করলে আপনাকে একটি জরিপে অংশগ্রহণ করতে হবে যেখানে দীর্ঘমেয়াদী ব্যথার মনোসামাজিক প্রভাব সংক্রান্ত প্রশ্নমালা থাকবে।

গবেষণায় অংশগ্রহণ করলে যে পরিমাণ সময় দিতে হবেঃ

জরিপের প্রশ্নমালা সম্পন্ন করতে আপনাকে ৫০-৬০ মিনিট সময় দিতে হবে।

সম্ভাব্য সুবিধাঃ

এই গবেষণার মাধ্যমে দীর্ঘমেয়াদী ব্যথার মনোসামাজিক প্রভাব সম্পর্কে জানা যাবে। প্রাপ্ত জ্ঞান থেকে কিভাবে এই প্রভাব সমূহকে দীর্ঘমেয়াদী ব্যথার চিকিৎসায় বিবেচ্য বিষয় হিসাবে অন্তর্ভুক্ত করা যাবে তার একটি নির্দেশনা পাওয়া যেতে পারে। যা এই ধরণের শারীরিক সমস্যার মনোবৈজ্ঞানিক চিকিৎসার ক্ষেত্রে আমাদের দেশে একটি নতুন সংযোজন হবে। এই গবেষণায় অংশ গ্রহণ আপনাকে ব্যক্তিগতভাবে কোন প্রত্যক্ষ সুবিধা না দিলেও দীর্ঘমেয়াদী ব্যথার সামগ্রিক চিকিৎসা ব্যবস্থার উন্নয়নে ভূমিকা রাখবে বলে আশা করছি।

সম্ভাব্য অসুবিধাঃ

এই জরিপে অংশগ্রহণ করতে আপনাকে ৫০-৬০ মিনিট সময় দিতে হবে যা সাময়িকভাবে আপনার মধ্যে বিরক্তি বা অস্বস্তির উদ্রেগ করতে পারে। কিন্তু এটি কোন দীর্ঘস্থায়ী ক্ষতির কারণ হবে বলে মনে হয় না।

গবেষণায় অংশগ্রহণ প্রত্যাহারঃ

এই গবেষণায় অংশগ্রহণ সম্পূর্ণ আপনার স্বেচ্ছাধীন। অংশগ্রহণ করতেই হবে এমন কোন দায়বদ্ধতা আপনার নেই। এমনকি গবেষণাটিতে অংশগ্রহণ করার সিদ্ধান্ত গ্রহণের পরও যে কোন পর্যায়ে আপনি আপনার অংশগ্রহণ প্রত্যাহার করতে পারেন।

গোপনীয়তাঃ

আপনার গোপনীয়তা রক্ষা করার বিষয়টি সর্বোচ্চ বিবেচনায় রাখা হবে। এমন কোন তথ্য কারও কাছে বা কোন প্রতিবেদনে প্রকাশ করা হবেনা যা থেকে আপনাকে চিহ্নিত করা সম্ভব।

গবেষণার ফলাফলঃ

এই গবেষণা সম্বন্ধে আরো কিছু জানার, কোন প্রশ্ন কিংবা কোন অভিযোগ থাকলে এবং গবেষণার ফলাফল জানতে হলে এর গবেষক উম্মে সালমা আফরোজের সাথে ই-মেইল (salma_shan@hotmail.com) অথবা ফোন (০১৯৩৬৯৫২৭৩৫) এর মাধ্যমে যোগাযোগ করতে পারেন।

আপনার সহায়তার জন্য ধন্যবাদ।

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গবেষকের স্বাক্ষর তারিখ

APPENDIX 3
Consent form

গোপনীয়

গবেষণায় অংশগ্রহণের সম্মতিপত্র

গবেষণার শিরোনামঃ Understanding Psychosocial Impact of Chronic Pain.

আমি, উম্মে সালমা আফরোজ (এম. ফিল গবেষক, চিকিৎসা মনোবিজ্ঞান বিভাগ, ঢাকা বিশ্ববিদ্যালয়, গবেষণা তত্বাবধায়কঃ ডঃ এম. কামরুজ্জামান মজুমদার, সহযোগী অধ্যাপক, চিকিৎসা মনোবিজ্ঞান বিভাগ, ঢাকা বিশ্ববিদ্যালয় এবং মেহজাবীন হক, সহযোগী অধ্যাপক, কাউন্সেলিং ও এজুকেশনাল সাইকোলজি বিভাগ, ঢাকা বিশ্ববিদ্যালয়) কতৃক পরিচালিত উপরে উল্লেখিত গবেষণায় অংশগ্রহণের সম্মতি দিচ্ছি। আমাকে গবেষণাটি সম্বন্ধে বিস্তারিতভাবে বুঝিয়ে বলা হয়েছে এবং আমি এই সংক্রান্ত ব্যাখ্যামূলক বিবৃতি পড়েছি (বা আমাকে পড়ে শোনানো হয়েছে) যা আমার কাছে রেকর্ড হিসাবে রাখা আছে। আমি বুঝতে পারছি যে, সম্মতি প্রদানের মানে হচ্ছেঃ

আমি গবেষণার প্রশ্নমালাটি পূরণ করার সম্মতি দিচ্ছি।

এবং
আমি বুঝতে পারছি যে, আমার অংশগ্রহণ স্বেচ্ছামূলক; আমি ইচ্ছা করলে যে কোন পর্যায়ে আমার অংশগ্রহণ প্রত্যাহার করতে পারি যার জন্য আমাকে কোন ভাবেই ক্ষতিগ্রস্ত করা হবেনা।

এবং
আমি বুঝতে পারছি যে, গবেষণায় যে তথ্য আহরোন করা হয়েছে তা প্রকাশনা বা উপস্থাপনায় কোন অবস্থাতেই অংশগ্রহণকারীর নাম-পরিচয় লিপিবদ্ধ থাকবেনা বা প্রকাশ করা হবেনা।

এবং
আমি বুঝতে পারছি যে, আমি যা তথ্য দেব তার গোপনীয়তা রক্ষা করা হবে, এবং এমন কোন তথ্য কারো কাছে বা কোন রিপোর্টে প্রকাশ করা হবেনা যা থেকে আমাকে চেনা সম্ভব।

অংশগ্রহণকারীর নামঃ .....

স্বাক্ষরঃ .....বা টিপসইঃ ..... তারিখঃ .....

স্বাক্ষাৎকার গ্রহণকারীর স্বাক্ষরঃ .....

APPENDIX 4
Survey questionnaire

গবেষনা প্রশ্নমালা

Interview ID:	

Section A. Demographics

A1. বয়স .....

A2. লিঙ্গঃ ১ পুরুষ ২ নারী

A3. পেশা ১ চাকুরী ২ ব্যবসা ৩ গৃহিনী ৪ ছাত্র/ছাত্রী
৫ বেকার ৬ অন্যান্য.....

A4. বৈবাহিক অবস্থাঃ ১ অবিবাহিত ২ বিবাহিত ৩ বিবাহ বিচ্ছেদ ৪ বিধবা-বিপত্নীক

A5. শিক্ষা ১ নিরক্ষর ২ প্রাইমারী পর্যন্ত ৩ এস.এস.সি. পর্যন্ত
৪ এইচ.এস.সি. পর্যন্ত ৫ গ্রাজুয়েশন পর্যন্ত ৬ পোষ্ট গ্রাজুয়েশন পর্যন্ত

A6. আর্থ-সামাজিক অবস্থা ১ উচ্চবিত্ত ২ মধ্যবিত্ত ৩ নিম্নবিত্ত

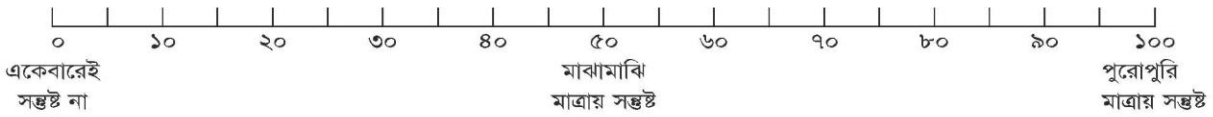
A7. কত দিন যাবৎ ব্যথায় ভুগছেন? ..... মাস

A8. ব্যথার জন্য কি কি চিকিৎসা নিয়েছেন? ১ ব্যথানাশক ঔষধ ২ ফিজিওথেরাপি ৩ ব্যয়াম
৪ সাইকোথেরাপি

A9. বর্তমানে কি চিকিৎসা নিচ্ছেন? ১ ব্যথানাশক ঔষধ ২ ফিজিওথেরাপি ৩ ব্যয়াম
৪ সাইকোথেরাপি

A10. আপনি এ পর্যন্ত কতজন চিকিৎসকের কাছে ব্যথার জন্য চিকিৎসা নিয়েছে? ..... জন

A11. বর্তমানে যে চিকিৎসা নিচ্ছেন তাতে আপনি কতখানি সন্তুষ্ট তা নিচের স্কেলের মাধ্যমে প্রকাশ করুন?



১

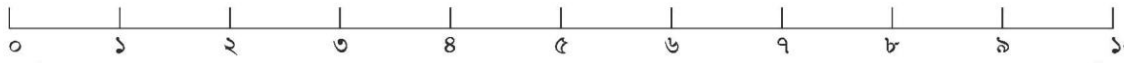
গবেষনা প্রশ্নমালা

Section B. Mc.Gill Pain Questionnaire Short Form

নিচের শব্দগুলোর মধ্যে যেগুলো আপনার ব্যথাকে নির্দেশ করে সেগুলোতে টিক (√) দিন। লক্ষ্য করুন প্রতিটি শব্দের পাশে চার ধরণের বিবৃতি আছে। আপনার ক্ষেত্রে প্রযোজ্য যে কোন একটিকে বেছে নিয়ে টিক চিহ্ন দিন।

		একদমই নেই (০)	**মৃদু (১)**	**মাঝারি (২)**	**তীব্র (৩)**
B1.	দপদপ করা/কেঁপে কেঁপে উঠা				
B2.	টনটন করা				
B3.	সূঁচ ফোটানো				
B4.	চিলিক মারা				
B5.	খিলধরা				
B6.	কামড়ানো				
B7.	জ্বালাপোড়া				
B8.	চাপ দিয়ে ধরে রাখা				
B9.	তীব্র				
B10.	স্পর্শকাতর				
B11.	ছিড়ে যাওয়া				
B12.	ক্লান্তিকর				
B13.	অসুস্থকারী				
B14.	ভয় ধরানো				
B15.	যন্ত্রণাদায়ক				

B16. সাধারনভাবে আপনার ব্যথাকে আপনি নিচের কোন স্থানে নির্দেশ করবেন?



ব্যথা নেই

সর্বোচ্চ খারাপ মাত্রার ব্যথা

B17. এই মূহুর্তে আপনার ব্যথার তীব্রতা কেমন?

০-ব্যথা নেই .....

১-মৃদু ব্যথা .....

২-অস্বস্তিদায়ক .....

৩-পীড়াদায়ক .....

৪-ভয়ংকর .....

৫-তীব্র যন্ত্রণাদায়ক .....

গবেষনা প্রশ্নমালা

Section C: Impact of Cronic Pain

আপনার ক্ষেত্রে নিচের উক্তিগুলোর মাত্রা উপরের স্কেল অনুযায়ী ০-১০০ এর মধ্যে যে কোন সংখ্যা দিয়ে প্রকাশ করুন।

	উক্তি	১-১০০
C1	নিজের দেখাশোনা ও যত্ন নেয়ার ক্ষেত্রে সমস্যা হয়।	
C2	আমার প্রতিদিনের স্বাভাবিক কাজকর্ম ব্যহত হয়।	
C3	বিনোদনমূলক কাজকর্ম ব্যহত হয়।	
C4	সামাজিক জীবন ব্যহত হয়।	
C5	পরিবারের সাথে সম্পর্কে প্রভাব পরেছে।	
C6	আত্মীয়দের সাথে সম্পর্কে প্রভাব পরেছে।	
C7	বন্ধুত্ব ও অন্যান্য সম্পর্কে প্রভাব পরেছে।	
C8	বাহিরে কাজের (যেমনঃ বাজার যাওয়া, ব্যাংক এ যাওয়া, বাচ্চাদের স্কুলে যাওয়া, ইত্যাদি) ক্ষেত্রে সমস্যার সৃষ্টি হয়।	
C9	পেশাগত কাজ ঠিকমত করতে পারি না।	
C10	যৌন জীবনে নেতিবাচক প্রভাব পরছে।	
C11	অর্থনৈতিক ক্ষতির সম্মুখীন হয়েছি।	

আপনার ক্ষেত্রে নিচের উক্তিগুলো প্রযোজ্য কিনা তা "হ্যাঁ" অথবা "না" তে গোল চিহ্ন দিয়ে প্রকাশ করুন।

C12	এক চিকিৎসার উপর বেশিদিন আস্থা রাখতে পারছি না।	হ্যাঁ	না
C13	ব্যথানাশক ঔষধ এর প্রতি নির্ভরশীলতা বেরেছে।	হ্যাঁ	না
C14	নিজের জীবন নিজে শেষ করে দেয়ার চিন্তা করি।	হ্যাঁ	না
C15	নিজের মৃত্যু হোক এমন প্রার্থনা বা দোয়া করি।	হ্যাঁ	না
C16	আত্মহত্যার চেষ্টা করেছি।	হ্যাঁ	না
C17	পরিবারের অন্য সদস্যদের থেকে আমাকে আলাদা করে দেখা হয়।	হ্যাঁ	না
C18	আমার শারীরিক সমস্যাকে অনেকেই গুরত্তের সাথে নেয় না বা অবহেলা করে।	হ্যাঁ	না
C19	আমার নিজেকে বোঝা মনে হয়।	হ্যাঁ	না
C20	আবেগ নিয়ন্ত্রনে রাখতে পারি না।	হ্যাঁ	না
C21	ভবিষ্যৎ নিয়ে উৎকণ্ঠা বোধ হয়।	হ্যাঁ	না
C22	চাকুরী ছেড়ে দিতে হয়েছে।	হ্যাঁ	না

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Section D: The Pain Catastrophizing Scale (PCS)

আমরা প্রত্যেকেই জীবনের কোন না কোন সময় শারীরিক ব্যথার অভিজ্ঞতার মধ্য দিয়ে যাই, যেমন- মাথা ব্যথা, দাঁত ব্যথা, হাড়ের জোড়ায় ব্যথা, মাংসপেশীর ব্যথা ইত্যাদি। মানুষ প্রায়শই এমন পরিস্থিতির সম্মুখিন হয় যা তার ব্যথার কারণ হতে পারে যেমন- অসুস্থতা, কোন ক্ষত, দাঁতের চিকিৎসা অথবা কোন অপারেশন।

আপনার যখন ব্যথা হয়, সেই সময় আপনার মনে কি ধরণের চিন্তা ও অনুভূতি তৈরী হয় তা পরিমাপ করাই আমাদের উদ্দেশ্য। এখানে তেরটি ভিন্ন ভিন্ন উক্তি আছে যা ব্যথার সাথে সম্পর্কিত চিন্তা ও অনুভূতিকে প্রকাশ করে। যখন আপনার ব্যথা হয় তখন এই চিন্তা ও অনুভূতিগুলোর তীব্রতার মাত্রা নিচের স্কেলের সাহায্যে নির্দেশ করুন।

০-একেবারেই না ১-সামান্য মাত্রায় ২-মাঝামাঝি মাত্রায় ৩-বেশী মাত্রায় ৪-সবসময় মনে হয়

যখন ব্যথা হয়.....

D1 ☐ ব্যথা শেষ হবে কিনা তা নিয়ে সারাক্ষণ দুঃশ্চিন্তা করতে থাকি।

D2 ☐ আমার মনে হয় আমি আর পারছি না।

D3 ☐ এটা ভয়ানক এবং আমার মনে হয় এই অবস্থার আর উন্নতি হবেনা।

D4 ☐ এটা ভয়াবহ এবং আমার মনে হয় এটা আমাকে বিপর্যস্ত করে দেয়।

D5 ☐ আমার মনে হয় আমি এটা আর সহ্য করতে পারবো না।

D6 ☐ আমার ভয় হয় যে ভবিষ্যতে ব্যথাটা আরো খারাপ হবে।

D7 ☐ আমি অন্যান্য যন্ত্রণাদায়ক বিষয়গুলো নিয়ে ভাবতে থাকি।

D8 ☐ আমি অস্থির হয়ে চাইতে থাকি যে ব্যথাটা চলে যাক।

D9 ☐ এটাকে আমি মন থেকে তাড়াতে পারি না।

D10 ☐ এটা কতটা কষ্টকর তা নিয়ে আমি ভাবতে থাকি।

D11 ☐ এই ব্যথা চলে যাক এটা যে আমি কত তীব্রভাবে চাই, সেটাই ভাবতে থাকি।

D12 ☐ ব্যথার তীব্রতা কমানোর জন্য আমার কিছুই করার নেই।

D13 ☐ গুরুতর কিছু হতে পারে বলে আমার আশংকা হয়।

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Section E. Self Reporting Questionnaire-20

E1	আপনার কি ঘনঘন মাথা ব্যথা হয় ?	১ হ্যা	২ না
E2	আপনার কি ক্ষুধা মন্দা আছে ?	১ হ্যা	২ না
E3	আপনার কি ঘুমের সমস্যা হচ্ছে ?	১ হ্যা	২ না
E4	আপনি কি অল্প কিছুতেই আতংকিত হচ্ছেন ?	১ হ্যা	২ না
E5	আপনার কি হাত কাঁপে ?	১ হ্যা	২ না
E6	আপনি কি বিচলিত, স্নায়ুবিকভাবে উত্তেজিত অথবা উদ্বিগ্ন হচ্ছেন ?	১ হ্যা	২ না
E7	আপনার কি হজমে অসুবিধা আছে (হজম কম হয়)?	১ হ্যা	২ না
E8	পরিস্কারভাবে চিন্তাভাবনা করতে কোন অসুবিধা হচ্ছে কি?	১ হ্যা	২ না
E9	আপনার নিরানন্দ বোধ হয় কি ?	১ হ্যা	২ না
E10	আপনার কি অতি সহজেই কান্না পায় ?	১ হ্যা	২ না
E11	আপনার প্রতিদিনের কাজ করে তৃপ্তি পান না, এমন হয় কি ?	১ হ্যা	২ না
E12	আপনার কি সিদ্ধান্ত নিতে অসুবিধা হয় ?	১ হ্যা	২ না
E13	আপনার দৈনন্দিন কাজ কি ব্যহত হচ্ছে ?	১ হ্যা	২ না
E14	আপনি কি জীবনের ক্ষেত্রে অবদান রাখতে অসমর্থ হচ্ছেন ?	১ হ্যা	২ না
E15	আপনি কি বৈষয়িক বিষয়ে আগ্রহ হারিয়ে ফেলেছেন ?	১ হ্যা	২ না
E16	আপনার কি অনুভূতি হচ্ছে যে, আপনি একজন মূল্যহীন ব্যক্তি ?	১ হ্যা	২ না
E17	আপনার নিজের জীবন শেষ করে দেওয়ার চিন্তা কি আপনার মনে আসছে ?	১ হ্যা	২ না
E18	আপনার কি সারাক্ষণ ক্লান্তি বোধ হয় ?	১ হ্যা	২ না
E19	আপনার পাকস্থলিতে কি আপনি অস্বস্থি (গোলপাক খায়) বোধ করেন ?	১ হ্যা	২ না
E20	আপনি কি অতি সহজেই উদ্বিগ্ন হন ?	১ হ্যা	২ না
	মোট হ্যাঁ উত্তর		

Section F. Perceived Stress Scale -10

নিচের প্রশ্নের বিষয়গুলো গত **এক মাসে** আপনার মধ্যে কি পরিমানে ঘটেছে তা ডান পাশের পাচটির মধ্যে উপযুক্ত ঘরে টিক (√) চিহ্ন দিয়ে নির্দেশ করুন।

		কখনই না ০	অনেকাংশে না ১	মাঝে মাঝে ২	প্রায়শই ৩	ঘন ঘন ৪
F1	গত এক মাসে অনাকাঙ্ক্ষিত কোন ঘটনার জন্য আপনি কতটুকু বিপর্যস্ত ছিলেন ?	০	১	২	৩	৪
F2	গত এক মাসে আপনি কতটুকু অনুভব করতে পেরেছিলেন যে আপনার জীবনের গুরুত্বপূর্ণ ঘটনাগুল আপনি নিয়ন্ত্রণ করতে পারছেন না ?	০	১	২	৩	৪
F3	গত এক মাসে আপনি কতটুকু ঘাবড়ে যাওয়া এবং চাপ অনুভব করেছিলেন ?	০	১	২	৩	৪
F4	গত এক মাসে আপনার ব্যক্তিগত সমস্যাগুলো নিয়ন্ত্রনের ক্ষেত্রে আপনি কতটুকু আত্মবিশ্বাসী ছিলেন?	০	১	২	৩	৪
F5	গত এক মাসে আপনি কতটুকু অনুভব করেছিলেন যে চলমান ঘটনাগুলো আপনার অনুকুলে যাচ্ছে ?	০	১	২	৩	৪
F6	গত এক মাসে আপনি কতটুকু অনুভব করেছিলেন যে আপনার যা করণীয় তা আপনি করতে পারেন নি ?	০	১	২	৩	৪
F7	গত এক মাসে আপনি আপনার জীবনের বিরক্তি/ তিক্ততা কতটুকু নিয়ন্ত্রন করতে পেরেছিলেন ?	০	১	২	৩	৪
F8	গত এক মাসে আপনি কতটুকু অনুভব করেছিলেন যে আপনি সবকিছুর উর্ধ্বে ? (আপনার প্রাধান্য বেশি)	০	১	২	৩	৪
F9	গত এক মাসে নিয়ন্ত্রনের বাহিরে যাওয়া কোন ঘটনার জন্য আপনি কতটুকু ক্রোধান্বিত হয়েছিলেন ?	০	১	২	৩	৪
F10	গত এক মাসে আপনি কতটুকু অনুভব করেছিলেন যে জীবনের জটিলতাগুল এতই বড় যে আপনি তা অতিক্রম করতে পারবেন না ?	০	১	২	৩	৪

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Section G. Beck Hopelessness Scale

বাক্যগুলির কোনটি গত **এক সপ্তাহে** আপনার মনের অবস্থাকে কতটা সঠিক ভাবে তুলে ধরে সে অনুসারে "সত্য" বা "মিথ্যা" এর চারপাশে গোল দাগ দিন।

G1	আমি আশা এবং উৎসাহ নিয়ে ভবিষ্যতের অপেক্ষায় আছি।	সত্য	মিথ্যা
G2	আমি সব আশা ছেড়ে দিয়েছি কারণ নিজের ভাল কোন কিছু করার জন্য আমার আর কিছুই করার নেই।	সত্য	মিথ্যা
G3	যখন খারাপ সময়ের ভিতর দিয়ে যাই, তখন আমি বুঝতে পারি যে সময় সবসময় খারাপ যাবে না	সত্য	মিথ্যা
G4	দশ বছর পর আমার জীবন কেমন হবে তা আমি কল্পনাও করতে পারি না।	সত্য	মিথ্যা
G5	আমি যেসব কাজ খুব বেশী করতে চাই, তা শেষ করার মত যথেষ্ট সময় আমার আছে।	সত্য	মিথ্যা
G6	যেসব বিষয়/কাজ নিয়ে আমি উদ্বিগ্ন থাকি আমি আশা করি যে ভবিষ্যতে আমি সেসব বিষয়ে সফল হব।	সত্য	মিথ্যা
G7	আমার মনে হয় আমার ভবিষ্যত অন্ধকারাচ্ছন্ন ।	সত্য	মিথ্যা
G8	আমি সাধারণভাবে একজন ভাগ্যবান এবং জীবনের ভাল জিনিসগুলোর অধিকাংশই একজন সাধারণ মানুষ অপেক্ষা বেশী পাওয়ার আশা করি।	সত্য	মিথ্যা
G9	আমি বিশ্রাম নেয়ার কোন সুযোগই পাইনা আর ভবিষ্যতে যে পাব তা বিশ্বাস করার মত কোন কারণও নেই।	সত্য	মিথ্যা
G10	অতীত অভিজ্ঞতা গুলো আমাকে ভবিষ্যতের জন্য সুন্দরভাবে তৈরী করে দিয়েছে।	সত্য	মিথ্যা
G11	আমি আমার সামনে আনন্দের পরিবর্তে শুধু নিরানন্দ দেখি।	সত্য	মিথ্যা
G12	যা আমি পেতে চাই তা পাওয়ার কোন আশা আমার নাই ।	সত্য	মিথ্যা
G13	আমি আশা করি ভবিষ্যতে আমি বর্তমান অবস্থার চেয়ে বেশী সুখে থাকবো।	সত্য	মিথ্যা
G14	আমি যে ভাবে চাই, কোন কিছুই সেভাবে হয় না।	সত্য	মিথ্যা
G15	ভবিষ্যত সম্পর্কে আমি বেশ আস্থাশীল।	সত্য	মিথ্যা
G16	যা আমি চাই তা কখনোই পাই না, তাই নিজের জন্য চাওয়াটা বোকামী।	সত্য	মিথ্যা
G17	ভবিষ্যতে আমার প্রকৃতই সুখি/তৃপ্ত হবার (অর্থাৎ আমি প্রকৃতপক্ষে সন্তুষ্ট থাকব) সম্ভাবনা খুবই কম।	সত্য	মিথ্যা
G18	ভবিষ্যত আমার কাছে অস্পষ্ট এবং অনিশ্চিত।	সত্য	মিথ্যা
G19	আমি খারাপ সময়ের চাইতে ভাল সময়ের জন্য বেশী অপেক্ষা করবো।	সত্য	মিথ্যা
G20	কোন কিছু পাওয়ার জন্য চেষ্টা করার কোন মানে হয় না, কারণ সম্ভবতঃ সেটা পাওয়া যাবে না।	সত্য	মিথ্যা
		মোটঃ	

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গবেষনা প্রশ্নমালা

Section H. WHO QOL Brief -26

গত দুসপ্তাহের কথা ভেবে নিচের বিষয়গুলোতে উত্তর দিন

		খুব খারাপ	খারাপ	ভালও নয় খারাপও নয়	ভাল	খুব ভাল
H1	আপনার জীবন যাত্রার মান কেমন?	১	২	৩	৪	৫

		খুব অসন্তুষ্ট	অসন্তুষ্ট	সন্তুষ্টও নয় অসন্তুষ্টও নয়	সন্তুষ্ট	খুব সন্তুষ্ট
H2	আপনার স্বাস্থ্য নিয়ে কি আপনি সন্তুষ্ট?	১	২	৩	৪	৫

		একদম না	কম	মোটামুটি	বেশী	খুব বেশী
H3	শারীরিক ব্যথার জণ্য আপনি কি পরিমান প্রয়োজনীয় কাজ থেকে বিরত ছিলেন?	১	২	৩	৪	৫
H4	আপনার দৈনন্দিন কার্যক্রম ঠিক রাখতে চিকিৎসা কতটুকু প্রয়োজন?	১	২	৩	৪	৫
H5	আপনি জীবনকে কতটুকু উপভোগ করেন?	১	২	৩	৪	৫
H6	জীবনকে আপনার কতটুকু অর্থপূর্ণ মনে হয়?	১	২	৩	৪	৫
H7	আপনি কাজে কতটুকু মনসংযোগ করতে পারেন?	১	২	৩	৪	৫
H8	আপনি দৈনন্দিন জীবনে কতটুকু নিরাপত্ত অনুভব করেন?	১	২	৩	৪	৫
H9	আপনার ভৌত পরিবেশ কতটুকু স্বাস্থ্যকর?	১	২	৩	৪	৫

		একদম না	কম	মোটামুটি	অধিকাংশ	পরিপূর্ণভাবে
H10	আপনার কি প্রতিদিন কাজ করার মত শক্তি আছে?	১	২	৩	৪	৫
H11	আপনি কি আপনার শরীরের গড়ন নিয়ে সন্তুষ্ট?	১	২	৩	৪	৫
H12	আপনার কি প্রয়োজন মেটাতে যথেষ্ট্য টাকা আছে?	১	২	৩	৪	৫
H13	আপনি কি দৈনন্দিন জীবন-যাপনের জন্য প্রয়োজনীয় তথ্য পান?	১	২	৩	৪	৫
H14	অবসর কাটানোর / বিনোদনের সুযোগ আপনার কতটুকু আছে?	১	২	৩	৪	৫

		খুব খারাপ	খারাপ	ভালও না মন্দও না	ভাল	খুব ভাল
H15	আপনি কতটা ভালভাবে চলাফেরা করতে পারেন?	১	২	৩	৪	৫

গবেষনা প্রশ্নমালা

		খুব অসন্তুষ্ট	অসন্তুষ্ট	সন্তুষ্টও নয় অসন্তুষ্টও নয়	সন্তুষ্ট	খুব সন্তুষ্ট
H16	আপনার ঘুম নিয়ে আপনি কতখানি সন্তুষ্ট?	১	২	৩	৪	৫
H17	দৈনন্দিন কাজ করার সক্ষমতা (এবিলিটি) নিয়ে আপনি কতটুকু সন্তুষ্ট?	১	২	৩	৪	৫
H18	আপনার কাজ করার ক্ষমতা/দক্ষতা (ক্যাপাসিটি) নিয়ে আপনি কতটুকু সন্তুষ্ট?	১	২	৩	৪	৫
H19	নিজেকে নিয়ে আপনি কতটুকু সন্তুষ্ট?	১	২	৩	৪	৫
H20	অন্যদের সাথে আপনার ব্যক্তিগত সম্পর্কসমূহ নিয়ে আপনি কতটুকু সন্তুষ্ট?	১	২	৩	৪	৫
H21	অপনার যৌন জীবন নিয়ে আপনি কতটুকু সন্তুষ্ট?	১	২	৩	৪	৫
H22	বন্ধুদের কাছ থেকে পাওয়া সাহায্যে আপনি কতটুকু সন্তুষ্ট?	১	২	৩	৪	৫
H23	আপনি অপনার বাসস্থানের অবস্থা নিয়ে কতটুকু সন্তুষ্ট?	১	২	৩	৪	৫
H24	আপনি যে স্বাস্থ্যসেবা পান তাতে কি সন্তুষ্ট?	১	২	৩	৪	৫
H25	আপনি যাতায়াত ব্যবস্থা নিয়ে কতটুকু সন্তুষ্ট?	১	২	৩	৪	৫

		কখনো না	কখনো কখনো	মাঝে মাঝে	প্রায়শই	সব সময়
H26	আপনার হতাশা, উদ্বেগ, অবসন্নতা এই সব নেতিবাচক অনুভূতি কত ঘন ঘন হয়?	১	২	৩	৪	৫

Section I. Copping

এই প্রশ্নমালার মাধ্যমে আপনি কোন চাপমুলক পরিস্থিতিতে সাধারনত কি করেন বা কেমন অনুভব করেন তা নির্দেশ করতে পারেন। প্রতিটি উক্তি আলাদাভাবে বিবেচনা করে আপনার জন্য সবচেয়ে সঠিক উত্তরে টিক দিন।

আপনি কি আজকাল		কখনোই করি না ১	খুব সামান্য পরিমান করি ২	মাঝে মাঝে করি ৩	অনেক বেশি পরিমান করি ৪
I1	অভিজ্ঞতার আলোকে আমি একজন ব্যক্তি হিসাবে গড়ে ওঠার চেষ্টা করি।				
I2	মন থেকে কিছু সরিয়ে ফেলার জন্য আমি কাজ করি অথবা অন্য বিকল্প কাজ কর্মে মনোনিবেশ করি।				
I3	আমার মন খারাপ হয় এবং আমি আমার অনুভুতি প্রকাশ করে ফেলি।				

গবেষনা প্রশ্নমালা

	আপনি কি আজকাল	কখনোই করি না ১	খুব সামান্য পরিমান করি ২	মাঝে মাঝে করি ৩	অনেক বেশি পরিমান করি ৪
I4	আমার কি করণীয় সে সম্পর্কে আমি অন্য কারো কাছ থেকে উপদেশ গ্রহণের চেষ্টা করি।				
I5	আমি এ ব্যাপারে কিছু করার ক্ষেত্রে আমার প্রচেষ্টার উপর জোর দিই।				
I6	আমি নিজেকে বলি যে, "এটা সত্য নয়"				
I7	আমি সৃষ্টিকর্তার উপর বিশ্বাস রাখি।				
I8	আমি পরিস্থিতিটা নিয়ে হাসি।				
I9	আমি নিজের কাছে স্বীকার করি যে, আমি এটা মোকাবিলা করতে পারি না এবং এটার জন্য চেষ্টা করা ছেড়ে দিই।				
I10	কোন কিছু খুব তাড়াহুড়া করে করা থেকে নিজেকে বিরত রাখি।				
I11	আমি আমার অনুভূতি নিয়ে কারো সাথে আলোচনা করি।				
I12	আমি ভালো অনুভব করার জন্য মদ বা ঔষধ ব্যবহার করি।				
I13	যা ঘটার ঘটেছে এই ধারণায় আমি অভ্যস্ত হয়ে পড়ি।				
I14	পরিস্থিতিকে ভালো করে বোঝার জন্য আমি কারো সাথে কথা বলি।				
I15	অন্য চিন্তা বা কাজে মন বিক্ষিপ্ত হওয়া থেকে আমি নিজেকে দুরে রাখি।				
I16	আমি এটা বাদে অন্য কিছু নিয়ে দিবাস্বপ্ন দেখি।				
I17	আমার মন খারাপ হয় এবং এ ব্যাপারে আমি সত্যিই সচেতন				
I18	আমি সৃষ্টিকর্তার সাহায্য চাই।				
I19	আমি কাজের পরিকল্পনা তৈরি করি।				
I20	আমি এটা নিয়ে হাশি-তামাশা করি।				
I21	আমি মনে নিই যে, এটা ঘটেছে এবং একে পরিবর্তন করা যাবে না।				
I22	পরিস্থিতি অনুকূলে না আসা পর্যন্ত আমি কোন কিছু করা থেকে বিরত থাকি।				
I23	আমি বন্ধু-বান্ধব এবং আত্মীয় স্বজনের কাছ থেকে আবেগীয় সমর্থন পেতে চেষ্টা করি।				
I24	আমি আমার লক্ষ্যে পৌছানোর চেষ্টা ছেড়ে দিই।				

গবেষনা প্রশ্নমালা

	আপনি কি আজকাল	কখনোই করি না ১	খুব সামান্য পরিমান করি ২	মাঝে মাঝে করি ৩	অনেক বেশি পরিমান করি ৪
I25	আমি সমস্যা থেকে নিস্কৃতি পাওয়ার জন্য বাড়তি পদক্ষেপ নিয়ে থাকি।				
I26	আমি মদ্যপান করে অথবা ঔষধ খেয়ে কিছুক্ষণের জন্য নিজেকে হারিয়ে ফেলতে চেষ্টা করি।				
I27	এটা যে ঘটেছে তা আমি বিশ্বাস করতে চাই না।				
I28	আমি আমার অনুভূতিগুলো প্রকাশ করি।				
I29	আরো ইতিবাচক করার লক্ষ্যে আমি তা ভিন্ন আঙ্গিকে দেখার চেষ্টা করি।				
I30	আমি এমন কারো সাথে কথা বলি যে এই সমস্যার বাস্তব কিছু করতে পারবে।				
I31	আমি সচরাচরের তুলনায় বেশি ঘুমাই।				
I32	কি করতে হবে তার একটা কৌশল আমি বের করার চেষ্টা করি।				
I33	আমি এই সমস্যা সমাধানের দিকে মনোনিবেশ করি এবং প্রয়োজনে অন্যান্য কাজ কিছুটা সরিয়ে রাখি।				
I34	কারো কাছ থেকে আমি সহানুভূতি পেয়ে থাকি এবং সে আমাকে বুঝতে পারে।				
I35	আমি এটা নিয়ে কম চিন্তা করার জন্য মদ্য পান করি অথবা ঔষধ খাই।				
I36	আমি এটা নিয়ে ছেলেখেলা করি।				
I37	আমি যা চাই তা পাওয়ার চেষ্টা ছেড়ে দিই।				
I38	যা ঘটেছে তাতে আমি ভালো কিছু খুঁজি				
I39	কিভাবে সমস্যাটি সবচেয়ে ভালোভাবে সমাধান করতে পারব তা নিয়ে আমি চিন্তা করি।				
I40	আমি এমন ভাব করি যেন আসলে ঘটে নাই।				
I41	খুব দ্রুত কিছু করার ফলে যাতে পরিস্থিতি খারাপ না হয়ে যায় সে ব্যাপারে আমি নিশ্চিত হই।				
I42	কোন কিছুর সাথে মোকাবেলা করার সময় যাতে অন্যকিচু প্রতিবন্ধকতা সৃষ্টি না করে সে জন্য আমি যথাসাধ্য চেষ্টা করি।				
I43	আমি ভাবনা চিন্তা কমানোর জন্য সিনেমায় যাই অথবা টেলিভিশন দেখি।				

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গবেষনা প্রশ্নমালা

	আপনি কি আজকাল	কখনোই করি না ১	খুব সামান্য পরিমান করি ২	মাঝে মাঝে করি ৩	অনেক বেশি পরিমান করি ৪
I44	এটা যে ঘটেছে সেই বাস্তবতাকে আমি মেনে নেই।				
I45	যাদের একই ধরনের অভিজ্ঞতা আছে তাদের জিজ্ঞাসা করি তারা এই অবস্থায় কি করেছে।				
I46	আমি প্রচন্ড মানসিক কষ্ট অনুভব করি এবং নিজেকে সেই অনুভূতিগুলো অনেকটাই প্রকাশ করতে দেখি।				
I47	সমস্যা থেকে বের হয়ে আসার জন্য আমি সরাসরি পদক্ষেপ নিই।				
I48	আমি ধর্ম-কর্মে স্বান্তনা খোজার চেষ্টা করি।				
I49	কোন কিছু করার জন্য সঠিক সময় পর্যন্ত অপেক্ষা করতে নিজেকে বাধ্য করি।				
I50	আমি পরিস্থিতিটা নিয়ে মজা করি।				
I51	সমস্যা সমাধানের জন্য আমি আমার প্রচেষ্টার মাত্রা কমিয়ে দেই।				
I52	আমি কেমন অনুভব করি তা নিয়ে কারো সাথে কথা বলি।				
I53	আমি সমস্যা অতিক্রম করার জন্য মদ্য খাই অথবা ঔষধ ব্যবহার করি।				
I54	আমি এটা নিয়ে বাঁচতে শিখি।				
I55	সমস্যার উপর মনোনিবেশ করার জন্য আমি অন্যান্য কাজ সরিয়ে রাখি।				
I56	কি পদক্ষেপ নেওয়া যায় তা নিয়ে আমি গভীরভাবে চিন্তা করি।				
I57	আমি এমন আচরণ করি যেন এটা কখনোই ঘটে নাই।				
I58	আমার যা করা দরকার তা করি এবং এক একটা করে পদক্ষেপ নিয়ে থাকি।				
I59	আমি অভিজ্ঞতা থেকে শিক্ষা নিয়ে থাকি।				
I60	আমি সচরাচররের তুলনায় বেশি প্রার্থনা করি।				

গবেষনা প্রশ্নমালা

Section J. General Health Questionnaire-28

গত কয়েক সপ্তাহের কথা ভেবে নিচের প্রশ্নগুলোর উত্তর দিন।

আপনি কি আজকাল

J1	সম্পূর্ণ ভালো এবং সুন্দর স্বাস্থ্য অনুভব করেছেন?	সচরাচরের চেয়ে ভালো	সচরাচরের মতো	সচরাচরের চেয়ে খারাপ	সচরাচরের চেয়ে অধিক খারাপ
J2	ভালো টনিক খাওয়ার দরকার মনে করেছেন?	একেবারেই না	সচরাচরের চেয়ে বেশী না	সচরাচরের চেয়ে বেশী	সচরাচরের চেয়ে অধিক বেশী
J3	ক্লান্ত এবং কিছু ভালো লাগছেনা এমন অনুভব করেছেন?	ঐ	ঐ	ঐ	ঐ
J4	আপনি কি অসুস্থবোধ করেছেন?	ঐ	ঐ	ঐ	ঐ
J5	মাথায় কোন ব্যথা অনুভব করেছেন?	ঐ	ঐ	ঐ	ঐ
J6	আপনার মাথায় আটসাট অথবা চাপ অনুভব করেছেন?	ঐ	ঐ	ঐ	ঐ
J7	হঠাৎ হঠাৎ কিছু সময়ের জন্য গরম ভাব বা ঠান্ডাবোধ করেছেন?	ঐ	ঐ	ঐ	ঐ
J8	দুশ্চিন্তার কারণে নিদ্রাহীনতায় ভুগছেন?	একেবারেই না	সচরাচরের চেয়ে বেশী না	সচরাচরের চেয়ে বেশী	সচরাচরের চেয়ে অধিক বেশী
J9	অবসরে ঘুমিয়ে থাকতে অসুবিধা হয়েছে?	ঐ	ঐ	ঐ	ঐ
J10	অবিরত মানসিক চাপ অনুভব করছেন?	একেবারেই না	সচরাচরের চেয়ে বেশী না	সচরাচরের চেয়ে বেশী	সচরাচরের চেয়ে অধিক বেশী
J11	খিটখিটে বা বদমেজাজী হয়ে যাচ্ছেন?	ঐ	ঐ	ঐ	ঐ
J12	কোন উপযুক্ত কারণ ছাড়াই ভয়ে চমকে উঠছেন বা আতঙ্কিত হচ্ছেন?	ঐ	ঐ	ঐ	ঐ
J13	লক্ষ্য করেছেন যে, সবকিছুই আপনার সাধ্যের বাইরে চলে যাচ্ছে?	ঐ	ঐ	ঐ	ঐ
J14	সহজেই ভীত বা আবদ্ধ অনুভব করছেন?	ঐ	ঐ	ঐ	ঐ
J15	নিজেকে ব্যস্ত রাখতে এবং কাজে ডুবে থাকতে পারছেন?	সচরাচরের চেয়ে অনেক বেশী	সচরাচরের মতো	সচরাচরের চেয়ে কম	সচরাচরের চেয়ে অনেক কম
J16	আপনি যা করেন তা করতে অপেক্ষাকৃত বেশী সময় লাগাচ্ছেন?	সচরাচরের চেয়ে তাড়াতাড়ি	সচরাচরের মতো	সচরাচরের চেয়ে বেশী	সচরাচরের চেয়ে অনেক বেশী

গবেষনা প্রশ্নমালা

আপনি কি আজকাল

J17	সব মিলিয়ে এটি অনুভব করছেন যে আপনি ঠিকমতো কাজ করছেন?	সচরাচরের চেয়ে ভালো	একই রকম	সচরাচরের চেয়ে কম ভালো	সচরাচরের চেয়ে অনেক কম ভালো
J18	আপনার কাজ যে ভাবে করছেন তাতে সন্তুষ্ট হচ্ছেন?	অনেক সন্তুষ্ট	সচরাচরের মতো একই রকম	সচরাচরের চেয়ে কম সন্তুষ্ট	অনেক কম সন্তুষ্ট
J19	বিভিন্ন ব্যপারে আপনি মূল্যবান ভূমিকা রাখছেন বলে আপনার মনে হয়েছে?	সচরাচরের চেয়ে বেশী	সচরাচরের মতো	সচরাচরের চেয়ে কম	সচরাচরর চেয়ে অনেক কম
J20	বিভিন্ন বিষয়ে সিদ্ধান্ত নেয়ার ক্ষমতা আছে বলে অনুভব করেছেন?	ঐ	ঐ	ঐ	ঐ
J21	আপনার প্রতিদিনের স্বাভাবিক কাজ-কর্ম উপভোগ করতে সক্ষম হচ্ছেন?	ঐ	ঐ	ঐ	ঐ
J22	নিজেকে একজন অপদার্থ ব্যক্তি হিসাবে ভাবছেন?	একেবারেই না	সচরাচরের চেয়ে বেশী না	সচরাচরের চেয়ে বেশী	সচরাচরের চেয়ে অধিক বেশী
J23	অনুভব করছেন যে, জীবন সম্পূর্ণরূপে নৈরাশ্যজনক?	ঐ	ঐ	ঐ	ঐ
J24	অনুভব করছেন যে, বেঁচে থেকে লাভ নেই?	ঐ	ঐ	ঐ	ঐ
J25	এমন সম্ভাবনার কথা কি ভেবেছেন যে, আপনি নিজেকে মেরে ফেলতেও পারেন?	নিশ্চয়ই না	আমি এমনটি ভাবিনা	এটা আমার মনে দাগ কেটেছে।	নিশ্চয়ই হ্যাঁ
J26	মাঝে-মধ্যে এমনকি মনে হচ্ছে যে, আপনার স্নায়ু (নার্ভ) খুবই দূর্বল বলে কিছুই করতে পারছেননা?	মোটেও না	সচরাচরের চেয়ে বেশী না	বরং সচরাচরের চেয়ে বেশী	সচরাচরের চেয়ে অধিক বেশী
J27	এমন ভাবছেন যে, আপনি যদি মরে যেতে পারতেন এবং সবকিছু থেকে দূরে চলে যেতেন	ঐ	ঐ	ঐ	ঐ
J28	নিজের জীবন শেষ করে ফেলার চিন্তা আপনার মনের মধ্যে অবিরত আসছে?	নিশ্চয়ই না	আমি এমনটি ভাবিনা	এটা আমার মনে দাগ কেটেছে।	নিশ্চয়ই হ্যাঁ

আপনার সহযোগীতার জন্য ধন্যবাদ।

১৪

APPENDIX 5

Scanned copy of permission letter from Dept. of Physical Medicine and Rehabilitation

5/1/17
Prof. Dr. Shamsun Nahar
MBBS, FCPS (Phys Medicine)
Professor & Chairman
Dept of Phys Med & Rehabilitation
Bangabandhu Sheikh Mujib Medical University
Shahbag, Dhaka

02/01/2017

To
Chairman
Department of Physical Medicine and Rehabilitation
Bangabandhu Sheikh Mujib Medical University (BSMMU)
Sahabag, Dhaka.

Subject: Application for permission to collect research data.

Dear Sir,
With due respect I would like to state that for conducting a research entitled "Understanding Psychosocial Impact of Chronic Pain" under the supervision of Dr. Muhammad Kamruzzaman Mozumder, Chairman and Associate Professor, Department of Clinical Psychology, University of Dhaka and Mahjabeen Haque, Associate Professor, Department of Educational and Counselling Psychology, University of Dhaka. I am seeking permission to collect research data from person with chronic pain. The purpose of this research is to understand the process that how a person affected by chronic pain. A written informed consent will be taken from each client before taking interview and all the information collected from them will be kept confidential. I am also assuring that no violation of research ethics will be occurred in conduction of this study. So, I pray and hope that you will give permission to collect data from your department.

Sincerely yours,

(Umme Salma Afroz)
M. Phil Researcher
Department of Clinical Psychology
University of Dhaka

Attachments:
1. Consent form
2. Research questionnaire
3. Research protocol

সুপারিশ করা হল
02/01/17
Dr M Kamruzzaman Mozumder
Chairman
Department of Clinical Psychology
University of Dhaka

APPENDIX 6
Scanned copy of permission letter from Dept. of Orthopedics and Traumatology

02/01/2017

To
Chairman
Department of Orthopedics and Traumatology
Bangabandhu Sheikh Mujib Medical University (BSMMU)
Sahabag, Dhaka.

Subject: Application for permission to collect research data.

Dear Sir,
With due respect I would like to state that for conducting a research entitled "Understanding Psychosocial Impact of Chronic Pain" under the supervision of Dr. Muhammad Kamruzzaman Mozumder, Chairman and Associate Professor, Department of Clinical Psychology, University of Dhaka and Mahjabeen Haque, Associate Professor, Department of Educational and Counselling Psychology, University of Dhaka. I am seeking permission to collect research data from person with chronic pain. The purpose of this research is to understand the process that how a person affected by chronic pain. A written informed consent will be taken from each client before taking interview and all the information collected from them will be kept confidential. I am also assuring that no violation of research ethics will be occurred in conduction of this study. So, I pray and hope that you will give permission to collect data from your department.

Sincerely yours,

(Umme Salma Afroz)
M. Phil Researcher
Department of Clinical Psychology
University of Dhaka

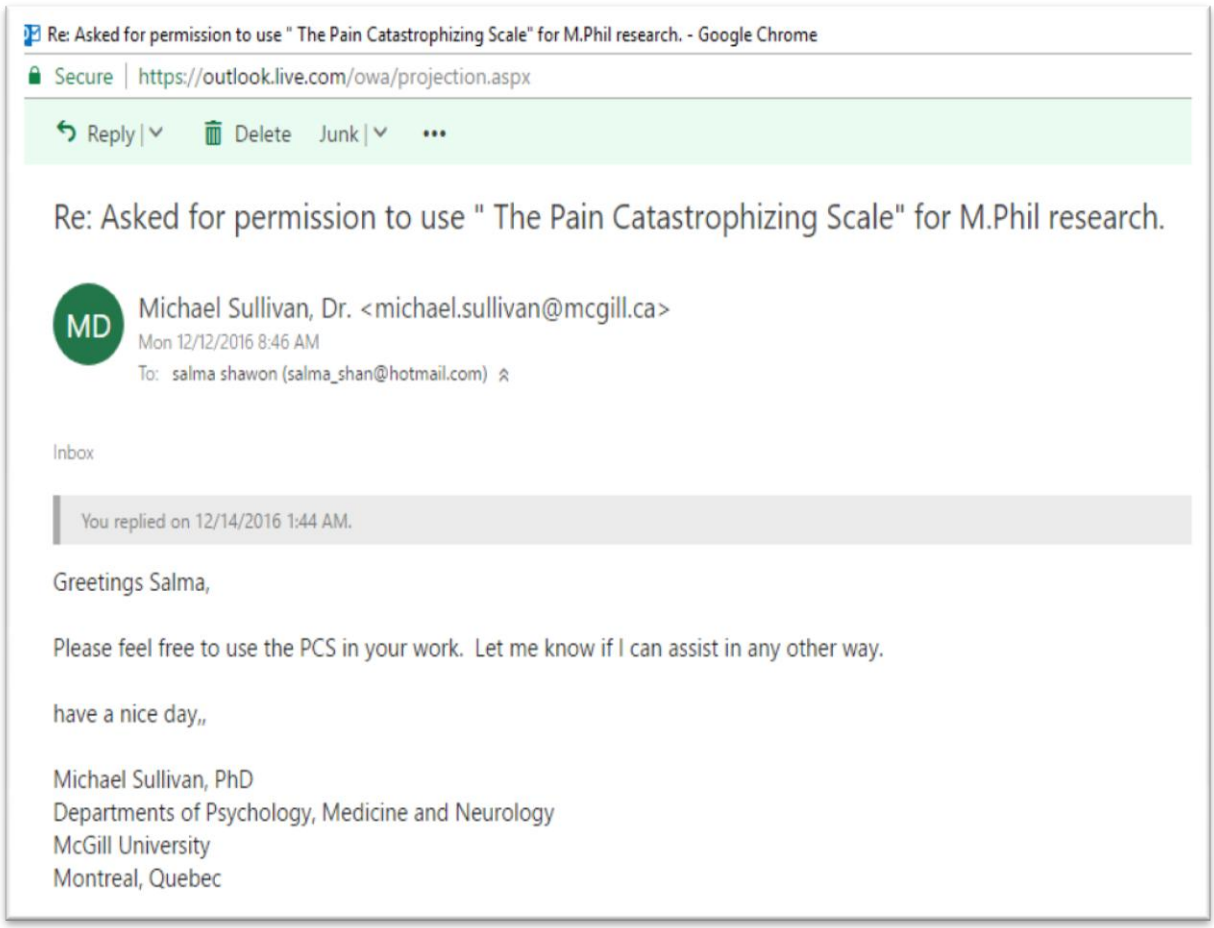
Attachments:
1. Consent form
2. Research questionnaire
3. Research protocol

সুপারিশ করা হল

02/01/17

Dr. M. Kamruzzaman Mozumder
Chairman
Department of Clinical Psychology
University of Dhaka

APPENDIX 7
Copy of email of permission for pain catastrophizing scale



Re: Asked for permission to use " The Pain Catastrophizing Scale" for M.Phil research. - Google Chrome

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Reply | Delete Junk | •••

Re: Asked for permission to use " The Pain Catastrophizing Scale" for M.Phil research.

MD Michael Sullivan, Dr. <michael.sullivan@mcgill.ca>
Mon 12/12/2016 8:46 AM
To: salma shawon (salma_shan@hotmail.com)

Inbox

You replied on 12/14/2016 1:44 AM.

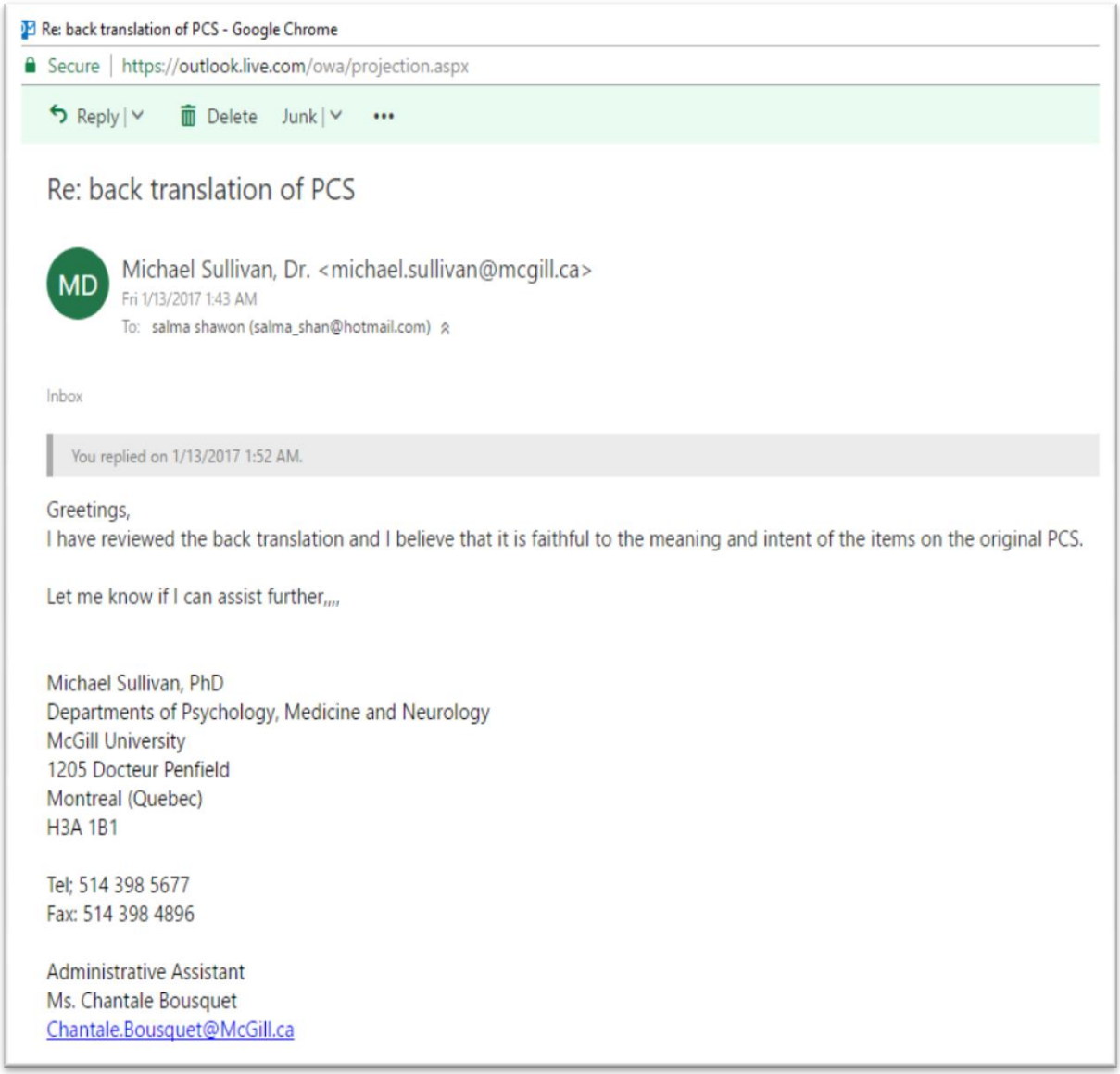
Greetings Salma,

Please feel free to use the PCS in your work. Let me know if I can assist in any other way.

have a nice day,,

Michael Sullivan, PhD
Departments of Psychology, Medicine and Neurology
McGill University
Montreal, Quebec

APPENDIX 8
Copy of email of review of back translation



Re: back translation of PCS - Google Chrome

Secure | https://outlook.live.com/owa/projection.aspx

Reply | Delete Junk | •••

Re: back translation of PCS

MD

Michael Sullivan, Dr. <michael.sullivan@mcgill.ca>
Fri 1/13/2017 1:43 AM
To: salma shawon (salma_shan@hotmail.com)

Inbox

You replied on 1/13/2017 1:52 AM.

Greetings,
I have reviewed the back translation and I believe that it is faithful to the meaning and intent of the items on the original PCS.

Let me know if I can assist further,,,,

Michael Sullivan, PhD
Departments of Psychology, Medicine and Neurology
McGill University
1205 Docteur Penfield
Montreal (Quebec)
H3A 1B1

Tel; 514 398 5677
Fax: 514 398 4896

Administrative Assistant
Ms. Chantale Bousquet
Chantale.Bousquet@McGill.ca