



MSc in Rehabilitation Science

“Expectation of physiotherapy treatment in acute and chronic neck pain patient about pain relieves and competence improvements.”



Bangladesh Health Professions Institute (BHPI)

Faculty of Medicine

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“Expectation of physiotherapy treatment in acute and chronic neck pain patient about pain relieves and competence improvements.”

By

Apurbo Roy

MSc in Rehabilitation Science

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Roll no: 202

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Supervisor's Statement

As supervisors of MR Apurbo Roy's MSc Thesis work, we certify that we consider his thesis "Expectation of physiotherapy treatment in acute and chronic neck pain patient about pain relieves and competence improvements." to be suitable for examination.

Prof. Dr. Mahmudul Haque

Professor

Department of Community Medicine (Rtd)

NIPSOM, Mohakhali, Dhaka-1212.

Signature 

Date: 16.03.2021



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

“Expectation of physiotherapy treatment in acute and chronic neck pain patient about pain relieves and competence improvements”

Submitted by **Apurbo Roy**, for the partial fulfillment of the requirements for the degree of M.Sc in Rehabilitation Science.

Prof. Dr.Mahmudul Haque

Department of Community Medicine(Rtd)

NIPSOM, Mohakhali, Dhaka-1212

Prof. Md. Obaidul Haque

Vice Principle

BHPI, CRP, Savar , Dhaka.

Dr. Kamal Ahmed

Associate Professor

IHT, Mohakhali, Dhaka.

Shamima Islam Nipa

Lecturer

Department of Rehabilitation Science

BHPI, CRP, Savar, Dhaka.

Date of approval: *March, 2021*



Declaration


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

- ❖ This work has not previously been accepted in substance for any degree and is not concurrently submitted in candidature for any degree.
- ❖ This dissertation is being submitted in partial fulfillment of the requirements for the degree of MSc in Physiotherapy.
- ❖ This dissertation is the result of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged by giving explicit references. A Bibliography is appended.
- ❖ I confirm that if anything identified in my work that I have done plagiarism or any form of cheating that will directly awarded me fail and I am subject to disciplinary actions of authority.
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Signature: 

Name: Apurbo Roy

Date: 16.03.2021



Signature

Date: 16. 03. 2021

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LIST OF ABBREVIATIONS

NP	Neck Pain
CR	Cervical Radiculopathy
CNR	Cervical Nerve Root
NM	Neural Mobilization
ULNTT	Upper limb Neural Tension Testing
ULTT	Upper Limb Tension Test
ONDI	Oswestry Neck Disability Index
NDIQ	Neck Disability Index Questionnaire
CPR	Clinical Prediction Rule
BHPI	Bangladesh Health Professions Institute
BMI	Body mass Index
CRP	Centre for the Rehabilitation of the Paralyzed
RCT	Randomized Control Trail
SD	Standard Deviation
EBPT	Evidence-based physical therapy
BMRC	Bangladesh Medical Research Council
MT	Manual Therapy
PT	Physiotherapy
ROM	Range of Motion
SPSS	Statistical Packages for the Social Science
USA	United States of America
NPRS	Numeric Pain Rating Scale
WHO	World Health Organization

ABSTRACT

Background: Regarding expectations, little is known about how they differ amongst various patient groups. The current study's objectives were to compare patients with neck complaints' expectations regarding pain and function before and after receiving physiotherapy treatment from ten clinical physiotherapists. It also sought to determine whether differences in patients' expectations varied among those with neck complaints and whether changes in expectations were related to patient characteristics. With regard to participants' expectations for pain relief, information about everyday activities, and information unique to their illness, we specifically sought to uncover themes and evaluate the nature of those expectations (values or probabilities). Additionally, we looked into the elements that participants felt had an impact on their expectations, such as but not limited to media, other people's experiences, and prior interactions with the patient.

Methods: The study was cross sectional design conducted between June 2019 to May 2020. Measurement was before starting the physiotherapy intervention and after the intervention period (at first 5 sessions and after that 10 seconds). Questionnaires (the patient Neck Outcome Expectancies, or PNOE, questionnaire and a numeric rating scale or NRS) focused on expectations regarding pain and functioning were completed immediately prior to and after a consultation with a physiotherapy specialist.

Results: In total, 100 patients were included. According to the study's findings, 71% of patients expected to feel better about their neck problems during the following month, 27% expected significant improvement, and 2% expected no change. When asked about the ability to use and perform neck movement, they said that it will be better, which signifies 70%, and in the case of neck discomfort, they said it will be considerably worse or worse, which respectively denote 12% and 60%. The mean value was and the standard deviation was 5.25 ± 0.479 , 2.23 ± 0.75 , and 4.81 ± 1.13 correspondingly. After five therapy sessions, the patient expected to feel better about their neck condition, reporting 76% improvement and the same 18% improvement. When asked about their capacity to utilize and perform neck movements, they responded that it was 60% the same. In the case of neck discomfort, they indicated it was 30% worse, a little worse, and the same, which represent 42% and 26%, respectively. The average value and standard deviation were 4.73 ± 0.565 , 3.00 ± 0.804 , and 3.73 ± 0.851 , respectively.

Conclusion: Patients with neck pain had high general expectations for physical therapy. Most patients specifically expected manual therapy and exercise to be beneficial treatments for neck pain. Patients with low general expectations for pain relief had worse outcomes at 6 months than patients who expected complete pain relief.

1.1 Background of the study:

An expectation is a belief about what might happen in the near future. Expectations are unprecedented notion for the person and manifested by both past individual experiences and the experiences of family members and hail-fellows.

Moreover, patient expectations can be influenced during a patient encounter by the interactions between patient and the healthcare provider. These newly formed expectations can be positive when patient feel better after an individual physiotherapy intervention (increased expectation of benefit) or negative (decreased expectation of benefit) and can potentially influence clinical outcomes (Benedetti et al, 2003).

From the physiotherapy perspective, most of the symptoms and diagnoses are often accompanied by expectations about the musculoskeletal complaint, the subsequent physiotherapy treatment (Lurie et al, 2008) and the prognosis and outcome (Haanstra et al, 2014). Patient expectations are typically distinct and heterogenous. However, conceptualized categories such as socioeconomic background (Ozegovic et al, 2009) previous health experiences (Janzen et al, 2006) personality and emotional distress (Kapoor et al, 2006) and musculoskeletal pain (Goldstein et al, 2002) can affect expectations. Patient expectations are prominent for several reasons, but pre-eminently due to the suggested association with treatment outcomes (O'Malley et al, 2004). This relationship is mainly observed within the musculoskeletal field in neck pain (Bishop et al, 2013).

In a systematic review, positive Physiotherapy treatment expectations were associated with exalted health outcomes in 15 of 16 studies (Mondloch et al, 2001). Unrealistic expectations, whether high or low, are suggested to negatively influence outcomes (Iles et al, 2009). This notion has invigorated hypotheses regarding clinical utilizations of expectations, e.g., as described by Mondloch et al (2001) and Myers et al (2007), suggesting that adjustments of negative, unrealistic and non-beneficial expectations (Goossens et al, 2005) could improve outcomes (Foster et al, 2008).

However, few clinical trials have examined these hypotheses. Morrey (2008) attempted to modify expectations in a randomized controlled trial (RCT), and their results suggested that

expectations are constant. This trial was, however, a surgical trial, so the results may be less applicable to conservative approaches (Bialosky et al, 2010). Additionally, in a systematic review of patient-Therapist relationships, 10 of the 19 included studies demonstrated that positively enhancing patient expectations significantly improved health outcomes (Blasi et al, 2015).

Howsoever, this review did not specifically target neck pain patients or expectations specifically regarding pain and functioning. Furthermore, patient expectations have been noted to be relevant in patient communication, especially in reducing misunderstanding Britten (2000), increasing satisfaction Moyer (1988) and encouraging shared decision making (Hoffmann et al, 2013).

The inclusion of a discussion of expectations in Physiotherapy treatment session could be useful for further improvement of patient communication and care. Phyiotherapist have been shown to have a strong influence on patient attitudes and beliefs (Darlow ET AL, 2013) and it is likely that the dialog during a Physiotherapy trtreatment session can influence patient expectations.

Finally, little is known about how expectations vary among different patient groups in this context. The aims of the present study were to compare expectations regarding pain and function before and after Physiotherapy treatment with ten clinical physiotherapists and to assess whether changes in expectations varied among patients with neck complaints, and were associated with patient characteristics. Specifically, we aimed to identify themes related to participants' expectations of pain relief, activities of daily living and condition specific information and assess the nature of their expectations (values or probabilities). We also explored factors that participants perceived as having influenced their expectations including, but not limited to, patients' previous experiences, others' experiences, and media.

1.2 Rationale:

Patient expectation in health care continues to increase and this is something that needs to be managed adequately in order to enhance outcomes and decrease accountability. Understanding patient's expectations can ameliorate their satisfaction level. In the environment of the Physiotherapy Department, with the acutely ill, dangerous and time-dependent issues as well as high level of stress, managing patient expectations can indeed be challenging. Thus, knowing the

expectations of our patients can help fudge these reactions, enhance their healthcare experience, and reduce our exposure to liability.

Patients with unmet expectations may never complain to the physiotherapist directly but instead they just will not return for ongoing and follow-up care. Patients' expectations in the context of physiotherapy treatment represent a growing area of research, with accumulating evidence suggesting their influence on health outcomes across a variety of medical conditions. However, the aggregation of evidence is complicated due to an inconsistent and disintegrated application of expectation constructs and the heterogeneity of assessment strategies. Therefore, based on current expectation concepts, this critical review provides an integrated model of patients' expectations in physiotherapy treatment.

Moreover, some review existing assessment tools in the context of the integrative model of expectations and provide recommendations for improving future assessment. The integrative model includes expectations regarding treatment and patients' treatment-related behavior. Treatment and behavior outcome expectations can relate to aspects regarding benefits and side effects and can refer to internal (e.g., symptoms) and external outcomes (e.g., reactions of others).

Furthermore, timeline, structural and process expectations are important aspects with respect to physiotherapy treatment. Additionally, generalized expectations such as generalized self-efficacy or optimism have to be considered. Moreover, they merely assess single aspects of expectations, thus impeding the integration of evidence regarding the differential aspects of expectations. As many instruments assess treatment-specific expectations, they are not comparable between different conditions. To generate a more comprehensive understanding of expectation effects in physiotherapy treatments, we recommend that future research should apply standardized, psychometrically evaluated measures, assessing multidimensional aspects of patients' expectations that are applicable across various physiotherapy treatments. In the future, more research is needed on the interrelation of different expectation concepts as well as on factors influencing patients' expectations of illness and treatment. Considering the importance of patients' expectations for health outcomes across many physiotherapy conditions, an integrated understanding and assessment of such expectations might facilitate interventions aiming to optimize patients' expectations in order to improve health outcomes. Awareness about the

patients' needs and expectations is quite important in improving the quality of the services they are provided with.

Since meeting the needs and expectations of the patients is one of the basic issues in patient care, the present study aimed to investigate the patients' expectations from physiotherapist and physiotherapy care. This study aimed to investigate how the meeting of patients' expectations is related to increased satisfaction with physiotherapy treatment. This study investigated whether treatment outcomes measured by patient-reported outcome measures fulfill patients' main expectations (i.e. decreased pain or improved functioning).

The ever-increasing demand for health care services, together with heightened expectations for quality care, continues to put pressures on health care professionals. We introduce our perspective on managing patient expectations through gaining research insights on health service experiences of patients and their support network. Drawing upon research from social psychology, we examine the types of threat that typically confront patients during health care service experiences, and their subsequent coping strategies. We call for enhanced focus on social science research for effective delivery of high-quality health care services. Having identified what can go wrong, we identify the characteristics of effective consultations and consider strategies for improving communication.

In recommending a clear and more focused approach to the identification and management of patient beliefs and expectations, we consider not only the nature of the therapeutic climate, but also the style and content that could enhance the effectiveness of the communication. Having identified techniques for facilitating self-disclosure, we conclude by offering suggestions on how to 'close down' the consultation and hand over.

The patients and their relatives coming to the hospital not only expect world-class treatment, but also other facilities to make their stay comfortable in the hospital. This change in attitude and expectation has come due to tremendous growth of media and its exposure, as well as commercialization and improvement in the facilities. A number of studies suggest that failure to identify patient expectations can lead to patient dissatisfaction with care, lack of compliance and inappropriate use of medical resources. It has been suggested that identifying patient expectations in multicultural contexts can be especially challenging. Managing patient expectations will also save you from potential financial losses, like lawsuits from patients who

agreed to treatment that they did not fully understand. Expectations of healthcare quality are believed to influence how patients experience and rate healthcare.

The fulfillment of certain expectations has been related to satisfaction with the physiotherapy treatment that in turn would improve compliance. Patient satisfaction is also correlated with the patient's reported intention to change physician. The higher the perceived fulfillment of the expectation is, the higher the satisfaction is. When fulfillment is lower than the expectation, the greater the gap and the lower the satisfaction. Today patient satisfaction is considered a key measure of quality of care and patients reporting higher satisfaction were more likely to have a higher quality of life.

The result also may be used in quality assurance program of the institution, to health planners and to prepare training based on the findings and finally it will be a guide for further related studies. So this study assessed the perception of patients towards nursing care and its associated factors. Expecting to recover from a musculoskeletal injury is associated with actual recovery. Expectations are potentially modifiable, although it is not well understood how injured people formulate expectations. A better understanding of how expectations are formulated may lead to better knowledge about how interventions might be implemented, what to intervene on, and when to intervene.

1.3 Statement of hypothesis:

My hypothesis is that patients with higher expectations would have been more likely to experience clinically relevant improvements than patients with lower expectations independently from allocation to physiotherapy treatment.

1.3 a. Alternative hypothesis:

There is difference in Patient Neck Outcome Expectations (PNOE), neck pain and functional outcome.

1.3 b. Null hypothesis:

There is no difference in Patient Neck Outcome Expectations (PNOE), neck pain and functional outcome.

1.4 Operational definition:

Expectation:

Someone believes that something is going to happen or something should be a certain way. It is a psychological matter to hope to achieve something or reach a certain destination.

Acute pain:

Acute pain is a type of pain that typically lasts less than 3 to 6 months, or pain that is directly related to soft tissue damage. Acute pain is of short duration but it gradually resolves as the injured tissues heal.

Chronic pain:

Intermittent or continuous pain which is lasting more than 3 months and the pain severity is worse.

Pain relieves:

After treatment session patient feel better due less pain.

Competance improvement:

Patient is competant to perform any functional activities without fear and hesitation.

Assumptions allude to what patient's figure they will get, what they want, what they feel to be significant or what they feel qualified for when looking for care. Neck pain is a significant general medical issue, as it comprises an extraordinary weight for the general public just as the individual (Hoy et al., 2014). Wellbeing recuperation after musculoskeletal wounds is a perplexing issue, and there is developing acknowledgment of the significance of psychosocial factors, like recuperation assumptions, in this interaction. Patient experience, fulfillment, discernment and assumption, along with comparative terms like patient evaluation, viewpoint and view, are totally related ideas now and then utilized reciprocally by various creators. Patients are major to medical care administrations, yet, at numerous occasions, their perspectives and information have not been taken by suppliers. Patients have begun to really focus more on them, and patient-arranged medical care has developed as a main territory of value. In the viewpoint of medical services, patient fulfillment has been characterized as a blend of encounters, assumptions and requirements perceived (Merkouris et al, 1999). It has likewise been characterized as the patients' abstract appraisal of their intellectual and passionate responses attributable to the cooperation between their expectations concerning ideal consideration and their bits of knowledge of the genuine care (Johansson, Oléni and Fridlund, 2002). It is recommended that difficult work to improve medical care will be unused except if they repeat what patients need from the service. (Wensing and Elwyn, 2003).

Patients' fulfillment depends on a few factors, for example, nature of clinical administrations conveyed, openness of medication, conduct of specialist and other wellbeing staffs, cost of administrations, medical clinic infrastructure, physical comfort, passionate help, and regard for patient preferences (McKinley and Roberts,2001). Patients are continually judging and they judge an association against their very own arrangement of assumptions. At the point when people enquire loved ones for recommendations, they don't enquire for provides details regarding the event of exact occasions. All things considered, they enquirek, "How was the consideration? Is it true that you were fulfilled? Would you suggest this hospital?"(Drain and Clark, 2004).

There is general understanding that the recurrence of neck torment in different populaces is very high and this side effect significantly influences the individual's personal satisfaction and need for medical services (Côté et al, 1998). Neck torment is normal among grown-ups in created nations and contributes critically to the interest for clinical benefits and the financial weight of nonappearance from work because of infection. Populace based examinations recommend a lifetime predominance of more than 70% and a point commonness of somewhere in the range of 12% and 34% (Croft et al., 2001).

Just about 40 years prior, (Barsky, 1981) composed of "covered up" reasons why patients look for clinical consideration, and he recommended that patient disappointment should trigger investigation for neglected assumptions. Ensuing exploration has shown that patient assumptions, unmistakable from demands (Uhlmann, 1984) are pervasive. General classifications incorporate assumptions for data, backing, and clinical finding or treatment (Valori et al, 1996).

Shockingly, doctors frequently underestimate or don't perceive patient assumptions (Van et al, 1994) and assumptions are thusly regularly neglected (Marple et al, 1997)). Neglected assumptions have been related with diminished patient fulfillment (Brody et al, 1989) no adherence (Linn et al, 1982) and potentially more awful wellbeing related results (Brody and Millar, 1986). The positive connection among assumptions and fulfillment is clarified through a digestion impact. At the point when patients see that their post-utilization administration experience performs near their pre-utilization assumptions, they tend to "absorb" their post-utilization insights towards their standard assumptions (i.e., the assistance "meets assumptions") and depend intensely on these underlying assumptions to shape fulfillment judgments (R. Oliver, 2010).

The importance of patients' assumptions for wellbeing results has gotten expanding consideration in late years. Patient fulfillment is characterized as the mix of encounters, assumptions and requirements saw (Merkouris et al, 1999). Notwithstanding, it has likewise been characterized as the patients' abstract assessment of their psychological and enthusiastic responses because of the communication between their assumptions about ideal nursing care and their impression of the

real nursing care (Johansson et al, 2002). Merkouris et al. characterized fulfillment as comprising of three progressive factors, these being relational connections, fulfillment with the medical services framework and with specialized gear (Merkouris et al, 2004).

In their writing concentrate on persistent fulfillment, (Johansson et al, 2002) examined the socio-segment foundation of the patients, their assumptions for physiotherapy care, actual climate, correspondence and data, commitment and investment, relational relationship, specialized ability, and underlying elements of medical services association. The discoveries of the examination showed that these eight components influence patient fulfillment with the physiotherapy care offered in wellbeing frameworks (Johansson et al, 2002).

In a large portion of the examinations evaluated, patients' assumptions for physiotherapy care were discovered to be gladness, concern, getting, kindness and generosity. The greater part of the patients (90%) clarified that physiotherapist offered treatment and care inside a suitable timescale. Simultaneously, patients expected that their physiotherapists would focus on them and ease their torment (Elibol et al, 1998).

It is vital that these extra factors that are guessed to be engaged with the cycle of assumption assessment are firmly identified with (Wicker's, 1969) rundown of "individual" and "situational" factors. Wicker accepted that "individual" factors (e.g., capacity, movement level, and contending thought processes) and "situational" factors (e.g., standardizing solutions of legitimate conduct and the quantity of elective practices accessible) impacted the connection among mentality and conduct.

The significance of assumptions has especially gotten clear in research on self-influenced consequences, of which hope is accepted to be a center mechanism (Price et al, 2008). On the one hand, patients with pain, particularly constant pain, have a more broad and complex history of agony and, frequently ineffective, torment treatment. This may make them more impervious to assumption interventions (Geers et al, 2015). Then again, patients are probably going to have a higher craving for help with discomfort, conceivably making them more delicate to assumption interventions (King, 2001).

Three normal, brief, and simple to execute mediations that have been found to incite or potentially upgrade assumptions are promising for usage in clinical practice: verbal recommendation, molding, and symbolism. Verbal recommendation involves directions in regards to treatment results given by, for instance, a medical services supplier. Verbal recommendations, for example, saying that a fake treatment or dynamic treatment is a viable pain relieving, can actuate assumptions for help with discomfort and produce comparing encounters of pain relief (Schmid et al, 2013). Molding involves the matching of an impartial upgrade with an unconditioned improvement that triggers a specific reaction. For instance, blending a fake treatment with diminished pain incitement can deliver expected and experienced relief from discomfort when just getting the fake treatment treatment (Kirsch et al, 2014) particularly when molding is matched with a verbal suggestion (Bartels et al, 2014).

Mental symbolism of a future occasion or wanted result involves effectively producing a multisensory intellectual portrayal of an occasion and regularly includes moderately verifiable suggestions (Hackmann et al 2011). For instance, envisioning an ideal future self or wellbeing can build general uplifting assumptions (i.e,optimism) (Peerdeman et al, 2015) and correspondingly decrease agony and clinical consideration utilization (Hanssen et al, 2013).Thus, prompting assumptions for relief from discomfort, through verbal recommendation, molding, and symbolism, can lessen torment. Be that as it may, the relative adequacy of these assumption acceptances, especially in clinical populaces, is for the most part hazy.

Patient fulfillment can be characterized as satisfaction or meeting of assumptions for an individual from a help or item. At the point when a patient goes to a clinic, he has a preset picture of the different parts of the medical clinic according to the standing and cost included. Despite the fact that, their primary assumption is getting relieved and returning to their work, however there are different components, which influence their fulfillment. Some of the time, they may have appraised a clinic low based on data, they have from various sources however they discover it over their assumption and they are fulfilled. Additionally, on the off chance that they have an exclusive requirement from a clinic, yet in the event that they discover it beneath their assumption, they won't be fulfilled. Clinics have extended as far as accessibility of claims to fame, improved advancements, offices and expanded rivalry and the assumptions for patients and their family members have expanded manifold. Buyer assumption in any clinical experience

impacts whether how soon and how frequently they look for care from which clinical office. Elevated requirement from a clinical association is a positive pointer of its standing in the general public and is vital for pulling in patients, though low assumption discourages patients from taking opportune clinical assistance, hence adversely influencing himself just as the clinical consideration supplier. Nonetheless, an extremely high and ridiculous assumption may prompt disappointment regardless of sensible great principles of clinical practice. Already, there were not many government clinics with no charge to the patients. Subsequently, the assumptions were additionally negligible. In any case, presently, the situation has changed. The emergency clinics (even Govt.) have begun charging the patient for the sake of client charges. Private medical clinic care cost has gone high. With the approach of Consumer Protection Act (1986), the patient's assumption has likewise gone high. Presently emergency clinics must be extremely cautious about quiet disappointment to evade any pointless suit. Medical clinics have developed from being a segregated sanatorium to five star offices. The patients and their family members going to the medical clinic anticipate top notch therapy, yet additionally different offices to make their visit agreeable in the clinic. This adjustment in assumption has come because of gigantic development of media and its openness, just as progress in the offices. Information on assumption and the components influencing them, joined with information on genuine and saw medical services quality, gives the essential data to planning and actualizing projects to fulfill patients. Human fulfillment is a perplexing idea that is influenced by various elements like way of life, past experience, future assumption and the estimations of individual and society regarding moral and efficient standings (Patient Satisfaction At Tertiary Care Hospitals In Kashmir: A Study From The Lala Ded Hospital Kashmir India, 2009).

Patient convictions and assumptions impact counseling, reaction to treatment and clinical result, yet are every now and again not explicitly tended to during meetings.

- ❖ Establishing a remedial environment and encouraging self-exposure support effective distinguishing proof of patients' convictions and assumptions.
- ❖ Addressing explicit concerns, and explaining mixed up convictions at the beginning will encourage the advancement of a concurred game plan.
- ❖ All patients ought to be given a dependable however straightforward clarification of the contrast among intense and constant torment, the significance of focal agony components and the improvement of incapacity.

- ❖ This clarification should be given utilizing language and wording that patients comprehend, to guarantee that it shapes their convictions and assumptions and advances their torment adapting techniques.

Ability physiotherapists need to perform key assignments of the counsel:

❖ **Inspiring patients' issues and concerns:**

- ✓ Establish eye to eye connection and show interest
- ✓ Encourage patients to be accurate about the grouping in which their issues happened, inspiring key occasions with patients' discernments and sentiments
- ✓ Use "dynamic posting" to explain patients' interests
- ✓ Respond to signs about trouble and issues by explaining and investigating them

Avoid hindering:

Summarise data, offer a chance to address false impressions, and explicitly enquire about sway on the patient and their family

Giving data :

- ✓ Check what patient considers may not be right and what those convictions have meant for them .
- ✓ Ask patients what data they might want and focus on data needs .
- ✓ Present data by class and check patient has perceived prior to proceeding onward .
- ✓ Consider utilization of extra or valuable data .
- ✓ Examine treatment alternatives .
- ✓ Properly illuminate patients and check in the event that they need to be engaged with choices .
- ✓ Determine patient's viewpoint prior to talking about existence changes .
- ✓ Be steady .
- ✓ Use compassion .

Feedback your instincts about how they are feeling (Main, Buchbinder, Porcheret and Foster, 2010). Perceiving patient assumptions is a significant component of a successful specialist patient relationship in wandering care (Strasser, 1992).

Low assumptions are tricky for a few reasons. One, if individuals anticipate low quality consideration, either in light of the fact that they don't have a clue what great consideration is or in light of the fact that they have gotten acclimated with low quality consideration, they are less inclined to consider wellbeing frameworks responsible for terrible showing. This is a botched chance to improve medical care through criticism. Also, individuals with low assumptions are less compelling in looking for better consideration. A developing writing in wellbeing financial aspects and wellbeing administrations research has discovered that "dynamic" patients, the individuals who settle on essential choices about where to get to mind with an end goal to get better administrations, can extricate greater consideration from the system (Cohen et al, 2016). They select, sidestep, and relinquish care dependent on whether an office is seen to have the option to live up to their desires of quality (Roder-DeWan et al, 2019). Along these lines, bringing assumptions may result up in more individuals getting better mind and give input to wellbeing frameworks to progress. At long last, proportions of wellbeing quality assumptions can be utilized as securing vignettes to allow better correlation of self-announced help quality and fulfillment across countries (Valentine et al, 2015).

Patients' assumptions adjust reactions to intercessions in fake treatment research and in clinical investigations. In test research, the guidance to get a functioning intercession goes with huge impacts on torment decrease (impact size=0.75) (Peerdeman et al, 2016). Assumptions can be viewed as a significant driver of changes in side effects and other wellbeing related outcomes (Kirsch, 1999). Clinical examinations have uncovered that patients' uplifting assumptions are identified with diminished agony after a clinical treatment (Bishop et al, 2015) and this marvel has likewise been noticed for other ailments. However, there are additionally considers that found no impact of assumptions on the outcome (Foster et al, 2010). These distinctions in the relationship of assumptions and results may be part of the way clarified by the way that each examination utilized a recently concocted measure, and contrasts between measures may stow away or misrepresent relationship among assumptions and intercession results. Furthermore, the match between assumptions for patients and treatment suppliers may be important for the accomplishment of a particular treatment (Barth et al, 2016). Expectation is a notable and

frequently utilized term. A reasonable definition and a sharp qualification from related builds is significant for the improvement of a measure (Haanstra et al, 2015). With regards to clinical medicines, the term 'assumptions' depicts insights about treatment-related wellbeing results later on after a particular intervention (Constantino et al, 2012). Patients can think about a treatment pretty much gainful for their grumblings or infection at a particular time-point (ie, result expectations) (Constantino et al, 2012). Job assumptions additionally catch the job of a patient and the specialist during the treatment. All in all, a patient should seriously think about himself somewhat inert during treatment in characterizing treatment objectives and anticipates that an active therapist should accomplish a decent treatment result. Nonetheless, our motivation was to build up a scale on 'patient assumptions' that covers treatment-related result expectations. (Bowling et al, 2012) provide a canny outline about the hypothetical supporting of assumptions. Following the definition by (Bowling et al, 2012) we thusly planned our measure to evaluate assumptions identified with a clinical intercession with a clinically important result from a patient's point of view. Prior discoveries about the assumption result relationship in clinical examinations have been restricted by the variety of measures. A few creators guaranteed variety in covered ideas, time-point of appraisal and issues to assess the legitimacy of the measures (Zywiell et al, 2013). A solid measure is an essential to precisely foresee treatment reactions dependent on pretreatment assumptions. For additional examination in the field of assumptions, a solid measure with high acknowledgment across clinical fields would be required for a few reasons. Initial, a dependable measure with high interior consistency at a particular time-point is an essential to utilize assumptions as a vigorous indicator. Second, roof impacts are a typical issue in the estimation of assumptions, since patients who are looking for help from a particular treatment frequently anticipate huge advantages; else, they would not be pulled in by this treatment.

Fulfillment is an expansive term and comparable to evaluating result, it has been portrayed as a multidimensional measure that incorporates a scope of issues remembering the patient's conviction for what the treatment can give, assumptions for what they need the treatment to accomplish, the degree of pre-treatment indications and the overall change in these side effects, just as the interaction and conveyance of the treatment which can incorporate climate, area and staff issues (Gepstein et al, 2006). Both assumption and fulfillment were investigated regarding

pain and personal satisfaction. The impact of the fundamental infection measure and ensuing physiotherapy the executives on fulfillment was additionally investigated.

Wellbeing tension is an expansive term that incorporates fears that are identified with wellbeing or sickness (The American Heritage Dictionary of the English Language, 2014). Assumption is an expectation of something occurring. The hope hypothesis in brain science recommends that the contrast between that which is gotten and what one expects or needs to get decides fulfillment and seen likely advantages (Isaac, Zerbe, and Pitt, 2001). What individuals foresee or hope to get from their medical services contrasted and their view of what they get practically speaking are significant in visualizing the patient's expectation of therapy and wellbeing results. Haggerty et al. (2005) noticed huge collaboration between doctors' proposals and patients' tension or assumption.

Starting with the discoveries of Beecher (Beecher, 1955), self-influenced consequences have gotten expanding consideration in clinical examination, and it has been shown that self-influenced consequences contribute considerably to clinical results (Benedetti, 2008). Critically, the fake treatment reaction depends on various hidden components: other than learning systems (Colloca and Miller, 2011, Rechar et al, 2017) and context oriented elements (Kaptchuk et al, 2008, Rief et al, 2016), patients' anticipations have been recognized as center instruments of the fake treatment reaction (Schwarz et al, 2016, Rutherford et al, 2016). For example, expecting a positive result by taking a specific medication prompts significant enhancement for both patient announced results, like agony and personal satisfaction (Bingel et al, 2011, de et al, 2010), and target measures, for example immunological boundaries (Benedetti et al, 2003, Goebel et al, 2002). In addition, late proof proposes that patients' hopes can likewise upgrade pharmacological impacts of a medication (Kube and Rief, 2013). Also, assumptions impact the course and the therapy achievement of different ailments like malignancy (Nestoriuc et al, 2016), coronary illness (Barefoot et al, 2011), or constant obstructive pneumonic infection (Zoeckler et al, 2014). Intriguingly, patients' preoperative assumptions anticipate a medical procedure results (Auer et al, 2017), and even patients who got a trick a medical procedure report generous manifestation decrease in examination with those patients who got a medical procedure (McRae et al, 2004, and Moseley et al, 2002). Given this effect of assumptions among patients with ailments, clinical examination in the course of recent years has pointed toward using these assumption impacts by creating assumption centered mental mediations (EFPI) to advance

treatment achievement (Rief and Glombiewski, 2016). In contrast to some different insights, assumptions explicitly allude to future occasions or encounters, and along these lines they are amazing indicators of future prosperity (Laferton et al, 2017). Thus, altering patients' assumptions offers new pathways to improve treatment for mental and actual medical conditions. Notwithstanding, the specific components being tended to through EFPI vary significantly. In this efficient survey, we initially portray distinctive assumption systems that can be tended to with mental mediations. Then, we depict an orderly quest for EFPI having tended to these instruments with regards to ailments. Accordingly, we sum up the proof that has so far been found for the adequacy of these distinctive assumption intercessions. At last, we give recommendations to additional creating EFPI and confronting future difficulties.

Different expectation mechanisms :

Expectation optimization :

Thusly of thinking, it has been proposed that if assumptions end up being low, or "incorrect," one of the assignments of the advisor may be to evaluate whether they can be altered and, provided that this is true, to improve the patient's assumptions, for instance, by utilizing the procedure of inspirational meeting or by giving more information (Price, 1999).

Moreover, patients' assumptions and inspiration ought to not exclusively be utilized as prognostic rules, however friendly clinical specialists ought to likewise utilize these models to choose whether recovery is needed in a specific case or not (Raspe, 1997).

Studies have shown that patients treated with exercise based recuperation for neck pain had a more terrible result in the event that they had low assumptions for relief from discomfort or treatment accomplishment at gauge (Hill et al., 2007; Bishop et al., 2013), both in present moment just as long haul (Hill et al., 2007).

In any case, none of the two investigations thought about possible jumbling factors, which could inclination the affiliation. Assumptions for recuperation are prescient for recuperation likewise among patients with whiplash related turmoil (WAD) (Holm et al., 2008; Carroll et al., 2009).

As most examination has zeroed in on the result assumption level that a patient has while showing up for, or simply starting, treatment, it has to a great extent been dealt with, at any rate

exactly, as a moderately quality like trademark (Dew and Bickman, 2005). Nonetheless, there is developing acknowledgment that anticipations are not enduring attribute factors, yet rather state factors that can be obtained or changed after some time, maybe most remarkably when patients are given convincing or potentially novel data (Constantino and Westra, 2012; Kirsch, 1985). However, in spite of the clinical reality that patients' result assumption is pliable, there is little exploration zeroing in on this conviction across the full course of treatment or at posttreatment. In another investigation of patients accepting CBT, psychotropic prescription, or both for tension, there was a quadratic example to patients' result assumption (i.e., a somewhat transformed U-shape bend), demonstrating that while hope expanded early, it at that point leveled and began to diminish later in treatment (Brown et al., 2014). As the exploration has set up that early hopes anticipate result and, at any rate as proven by the little surviving writing, change after some time, it likewise appears to be clinically critical to elucidate associates, or determinants, of a patient's result assumption both as it exists early and as it shifts over treatment. This data can help advise clinicians how to address most adequately this apparently powerful conviction and to gain by its variability. As to mental factors, higher early result assumption has been related with higher general expectation (Ametrano et al., 2016; Goldfarb, 2002; Swift et al., 2012) and more noteworthy mental mindedness (Ametrano et al., 2016; Beitel et al., 2009; Constantino, Coyne, Mcvicar, and Ametrano, 2017). We are additionally mindful of one investigation that likewise tended to patient factors, however this time as relates of posttreatment result assumption (i.e., a prognostic conviction about keeping up one's treatment gains subsequent to finishing treatment) in bunch CBT for sadness (Constantino, Vîslă, Ogrodiczuk, Coyne, and Söchting, 2016). Specialist factors can likewise impact patients' result assumption. In a CBT for GAD study, more noteworthy advisor skill in conveying CBT was related with higher ensuing patient result assumption, which was thusly connected with better generally speaking treatment result (Westra, Constantino, Arkowitz, and Dozois, 2011). Moreover, the specialist's arrangement of a convincing treatment reasoning has been appeared to identify with higher resulting result assumption (Ahmed and Westra, 2009; Kazdin and Krouse, 1983). In one investigation, the CBT reasoning's facilitative impact on result assumption was particularly prominent for socially restless simple patients who announced a low degree of realized pretreatment associates of result assumption (i.e., trust, inspiration for commitment in treatment, and mental mindedness; (Ametrano, Constantino, and Nalven, 2017), displaying one

manner by which clinicians can react to patient correspond markers with a sharp anticipation based intercession (i.e., utilizing powerful language in reasoning conveyance). At long last, in regards to social factors in psychotherapy, some examination has shown that higher partnership quality identifies with more hopeful resulting result assumption (Višlā, Constantino, Newkirk, Ogrodniczuk, and Söchting, 2016). Besides, despite the fact that there is modest quantity of examination on specialist factors/activities that may identify with patient result assumption, we are uninformed of exploration that looks at the impact of the advisor oneself on result assumption; that is, between-advisor contrasts in the normal degree of result assumption detailed across their individual caseloads. This need is surprising in that the individual of advisor has been appeared to profoundly affect treatment cycles and results (Baldwin and Imel, 2013).

The general flourishing significance of neck torture can't be denied, with a consistent best confirmation affiliation listing routineness assessments of some spot in the extent of 30 and half of the grown-up people each year (Hogg-Johnson et al, 2008). One of striking disclosures in psychotherapy research is that patients' pretreatment feelings in the achievement of the treatment is maybe the most grounded marker of the last treatment outcome (Kirsch, 1999).

In mental treatment for awfulness, for example, pretreatment trust was found to address in any event 40% of the adjustment in the outcome (Ilardi, 1994). Even more lately, the piece of treatment trust has gained extended thought close by progressing torture. Kole-Snijders et al, 1999) reported that the evaluations of treatment trustworthiness was one of the more grounded markers of aftereffect of a mental direct treatment of patients with consistent low back torture. These revelations all around are consistent with response expectation speculation, which holds 3 essential assumptions:

1. Expectations for non-volitional outcomes are satisfactory to cause the ordinary outcome;
2. Response trust impacts are not interceded by other mental components; and
3. Effects of response trusts are self-asserting and obviously automatic (Kirsch, 1999).

A common model is that the expectation to be tense for a particular introduction can gather anxiety (Gursky and reiss, 1987). Moreover, the desire to experience less torture in the wake of taking a drug will cause coming about torture relief (Montgomery et al, 1998).

Following a comparative theory, one may predict that the expectation to have the choice to show up at one's utilitarian goals after a mental direct program will energize development levels. Without a doubt, patients' feelings of what they need to do are astounding markers of genuine functioning (Lackner et al, 1996). With regard to treatment trust, this line of reasoning may suggest that patients with constant torture who don't actually acknowledge that that they can deal with their distress will have lower treatment expectation (when the treatment is highlighted improving adjusting and control) and therefore will have a lower treatment result (on torture adjusting) eventually.

(Martin et al, 1977) discovered essential relationship between permissive assumptions and pretreatment quantifies and proposed that patients' assumptions can all things considered be gotten from quiet viewpoint on their maladjustment and results before the treatment. Patients' sentiments about torture and treatment achievement in many cases botch for the method for speculation and adequacy of the treatment offered (Turk and Rudy, 1990).

In relentless musculoskeletal distress, in which the association between unequivocal anatomic disclosures and torture related signs are often unsure, feelings and mindsets about torture are seemed to hold strong relationship with torture and torture disability (Jansen et al, 2006). Patients encountering torture are known to differentiate liberally toward them toward genuine torture, torture related wretchedness, and anticipated torture experiences. Torture may have a strong instructive worth with respect to one's suitability choices of executing real tasks, which along these lines impacts motivation to perform tasks (de Gier et al, 2003).

(Linton, 2000) showed that patients who have an exaggerated negative course toward genuine misery and predicted torture experiences are at an especially high peril for making torture related fear, avoidance and long stretch impediment. These high torture catastrophizers overpredict pain (Crombez et al, 2002) are less open to new information to change torture behavior (Goubert et al, 2002) and have negative expectations about their ability to perform real tasks (Schmidt et al, 1985).

As referred to previously, this offers an expected explanation for the treatment deterrent that is as often as possible found in patients with steady pain (Turk and Rudy, 1990). As a segment of their arrangement of encounters of dissatisfaction prescriptions and related feelings, catastrophizing

patients overpredicting future anguish may underpredict future treatment result as they experience extended frailty concerning their pain (Sullivan et al, 1995).

Right when patients' presumptions are thought of, they are generally assessed going before a treatment. Regardless, expectations may affect treatment result, going before similarly as after treatment. Pretreatment any expectation of a patient entering another treatment may be high as patients are (too) merry when entering a treatment (Weinberger and Eig, 1999). As an outcome, this can have a brief (useful result) on treatment result. The pretreatment expectation can, in any case, change quickly after the patient has truly experienced an illustration of the treatment (Hardy et al, 1995).

In any case, factors like length of treatment, the relationship with the guide, such a language used to the patient, the hidden proportion of information provided for the patient, and change in the comprehension of the treatment thinking can be related to this change in confidence in near and dear treatment success (Horvath, 1990). Second, post-treatment trust and break faith was found to be related to patients' attributions of healing change about their improvement (or nonappearance of improvement) (Weinberger, 1995).

Exactly when torture patients property remedial change to inside factors like the acquiring of new adjusting capacities, supportive change will as a rule be all the more consistent. On the other hand, if patients quality supportive change to outside factors, similar to the hidden bonanza of the trained professional, any posttreatment updates will by and large be brief, too as can without a doubt change into negative treatment outcomes (Dolce et al, 1986). These disclosures stress the meaning of assessing not solely patients' pretreatment trusts, yet furthermore post-treatment delivered trust.

Clinical consideration presumptions may be positive or negative and with the ultimate objective of this article are described as the general conviction a clinical outcome will occur (Wiles et al, 2008). For example, an individual experiencing business related neck torture may have negative presumptions for recovery under the thought of a clinical consideration provider directed by their worker's compensation ensure while having motivating longings for recuperation under the possibility of a human organizations supplier suggested by a mate. The type of need right as of now is deficiently depicted. Success needs have been seemed to imagine certified thriving

achieves various illnesses, for example, low back pain, myocardial dead tissue and weight decline programs (Mondloch et al, 2001).

What stays problematic, yet of fundamental clinical utility, is whether the people who desire to return to work also experience prosperity recovery more quickly than the people who don't envision returning to work (Ozegovic et al, 2010). Past research has perceived patients' suspicions as conceivably the fundamental markers of treatment results provoking the recommendation that pre-treatment presumptions be consistently assessed (Airaksinen et al, 2006).

Existing hypothetical models on assumptions (Leung et al, 2009) need experimental help and numerous definitions and scientific classifications have been proposed. These join separations between result wants (feelings that treatment will provoke a particular result) and self-practicality wants (feelings in one's own ability to play out a particular treatment schedule) (Crow et al, 1999). Others (Thompson and Sunol 1995) have suggested that wants have both calculative/scholarly portions similarly as energetic ones. (Kravitz, 1996) consequently proposed a differentiation between esteem assumptions (for example romanticized assumptions communicated as expectations, wishes, wants, needs or needs) and likelihood assumptions (for example prescient assumptions, communicated as probabilities, probabilities or convictions).

Another issue in assumptions research is the vulnerability with respect to what elements impact patients' assumptions. (Janzen et al. 2006) propose a theoretical model wherein assumptions originate from past experience, information and convictions. (Stewart-Williams, 2004) recommend that recommendations and perceptions of others (for example family, companions or associates) may likewise impact assumptions. The people's experience is generally significant in the development of recuperation assumptions and influences expectations about torment, progress, execution and treatment (Iles et al, 2012).

Understanding suppositions in regards to treatment reasonability have been seemed to have a huge anyway awesome connection with their clinical outcomes and satisfaction with treatment. Patient assumptions for development with spine medical procedure have commonly been demonstrated to be very high (Mcgregor and Hughes, 2002). Ridiculously exclusive requirements have been believed to be answerable for neglected assumptions and diminished patient fulfillment (Linder-Pelz, 1982).

Then again, the assumption for advantage is felt to bring about progress in indications and capacity through "self-influenced consequences," expanded inspiration for development, and expanded consistence with treatment plans (Iversen et al, 1998). Albeit many have proposed that great specialist patient connections can have a remedial impact independent of a particular medicines given by the expert, the degree to which this supposition that depends on thorough observational proof isn't known (Blasi et al, 2001).

Notwithstanding, little examination has tentatively analyzed whether patient and clinician assumptions for level of help with discomfort with the investigation treatment foresee genuine agony relief (Turner et al, 2002).

Patients' assumptions regarding a treatment can be made positive in the event that they are advised to anticipate that the therapy should be "acceptable", "safe", and "successful"; or adversely, in the event that they are educated that the treatment they are going to get is "perilous", "risky", "ineffectual", "restricted", or has "likely results". Assumptions can likewise be kept nonpartisan, by retaining data or by giving disconnected data about the impacts of a particular treatment. The articulation "energetic thought" is used to insinuate courses through which prosperity specialists can cut down pointless emotions, for instance, fear or pressure by offering assistance, sympathy, comfort, and warmth. Passionate and psychological consideration are relied upon to work in an intelligent way, and to improve significantly the adequacy of treatment or actual care (Blasi et al, 2001).

A few investigations have attempted to evaluate the relationship of treatment assumptions and result. Lutz et al found that patients that normal more quick recuperation with medical procedure for sciatica had comparative practical results however were more fulfilled than patients who expected a more slow recuperation (Lutz et al, 1999). Essentially, in a randomized preliminary looking at knead treatment and needle therapy for low back torment, (Kaluokalani et al, discovered that patients who had better standards of advantage from the treatment they got had improved results contrasted with the individuals who were allocated to a treatment for which they had lower assumptions.

Along these lines, despite the fact that assumptions appear to assume a huge part in interceding a few parts of patient reaction to, and fulfillment with, treatment for neckpain, the subtleties of this job stay muddled. Patient inclinations for a specific treatment, which are identified with, yet

unmistakable from, their assumptions for the aftereffects of that treatment, may likewise assume a significant part in influencing treatment result. Understanding the helpful impacts of patient inclinations has been alluded to as a "imperative and impressive exact errand (Mcpherson et al, 1997).

To all the more likely comprehend treatment inclinations, results assumptions, and the relationship of these components, we explored benchmark information from a huge report contrasting Physiotherapy treatment for patients and neck pain. We depict the gauge attributes of patients Physiotherapy treatment inclinations and the relationship of explicit assumptions with those inclinations. We speculated that assumptions for different various parts of treatment would be significant drivers of treatment inclination, and subjects with various inclinations and assumptions for torment soothe and competence enhancements would vary in clinically significant manners that would should be represented in any investigations taking a gander at the relationship of inclination and assumptions with result.

Patient inclination is one of the mainstays of proof based practice, close by research proof and clinical experience. Patient inclinations are identified with the result of treatment through at any rate two routes (Brody et al, 2012). To begin with, patient inclinations are identified with results through quiet participation in dynamic in regards to treatment. Shared dynamic can impact patients' convictions and feelings. Expanding patient cooperation in decision making can build fulfillment with, and adherence to, a treatment regimen. In the Patient Protection and Affordable Care Act (United States Congress, 2010) passed in the United States, rules are given to encourage shared dynamic among patients, medical care experts, and parental figures. Second, patients' inclinations are likely interwoven with their assumptions for a given treatment. That is, a patient may have an inclination for a specific treatment since the individual in question has a particular assumption for that treatment. (Thompson and Sunol, 1995) built up a model of medical services assumption that included anticipated, ideal, and regulating expectations. A foreseen want is what the patient thinks will happen considering treatment.

For example, the patient may have a foreseen want for a half decline in torture considering exercise based recovery. An ideal assumption is the thing that the patient needs to occur during treatment, for instance, total relief from discomfort. A standardizing assumption is the thing that the patient thinks ought to happen with therapy, for instance, how a medical services

supplier may talk, dress, and act, just as how the therapy ought to be performed (Thompson and Sunol, 1995). Early ID of indicators of unfriendly results gives freedoms to focused mediations that can diminish the probability of creating ongoing disability (Loisel et al, 2001).

These analysts injected individuals with saline and told 1 assembling that it was a stunning painkiller. The other gathering was informed that it was a medication that expanded torment. Precisely the same intercession (saline infusion) was related with a significant increment in torment resilience in the gathering expecting less torment and a significant decline in torment resistance in those advised to anticipate more agony (Benedetti et al, 2003).

Subsequently, understanding patient assumptions for mediations is an integral a piece of creating significant treatment designs that incorporate the patient. As such, the inspiration driving this helper examination was 2-wrinkle. In the first place, we analyzed patient assumptions for treatment effectiveness of intercessions gave by an actual specialist to neck torment, at that point evaluated explicit patient assumptions for treatment adequacy of individual interventions generally utilized by actual advisors to oversee patients with neck torment. Assessing these information gave data about the overall expectations for treatment viability held by patients preceding starting treatment by an actual specialist. Second, we surveyed the degree to which the patients' expectations of the treatment adequacy of spinal control influenced the clinical results of patients tried out a clinical preliminary of a subset of mediations for patients with neck pain (Bishop, 2013).

Actual experts consider various components in the treatment of patients with musculoskeletal misery. The current composing proposes what is an influential piece of clinical outcomes related to musculoskeletal torture for which actual experts a large part of the time don't account. The reason for this clinical point of view is to feature the likely part of assumption in the clinical results related with the recovery of people encountering musculoskeletal pain (Bialosky et al, 2010). Taking everything into account, the instruments through which dynamic recovery intercessions change musculoskeletal torture are likely multifaceted and ward upon a variety of factors related to the counsel, the patient, and the environment (Whyte et al, 2003).

Other vague impacts may result from doctor consideration, interest, and concern; the standing, cost, and grandness of the treatment; and the qualities of the setting (Turner et al, 2002). Nonetheless, discoveries from different examinations have shown that patient anticipations are

not prescient of manifestation changes. In 2 forthcoming examinations, for instance, patients' anticipations of torment didn't foresee their pre or post changes in torment reports (Galer et al, 1997).

A superior comprehension of hopes and results in observational examinations could be gotten from zeroing in because of anticipations on changes in symptoms (Maxwell and Delaney, 1999) mental factors, for example, dread are helpful in coordinating treatment (Cleland et al, 2007). Similarly, factors identified with patient assumptions are related with both clinical outcomes (Iles et al, 2009) fulfillment with treatment (Bell et al, 2002) and impact of behavior (Booth-Kewley et al, 2009).

Factors that evaluate patients' assumptions for recuperation might be valuable to recognize the individuals who have the main concerns. There is proof that patient assumptions are a free indicator of delayed incapacity, disclosing up to 7% of the variance in get back to-work (RTW) outcomes (Boersma and Linton, 2006).

This variable has stayed in prescient models of RTW even subsequent to controlling for a large group of other factors (Schul et al, 2004) and scientists have presumed that singular view of work status might be similarly significant as agony decrease or actual proportions of solidarity, perseverance, or adaptability for a feasible RTW (Franche et al, 2002). This mirrors results from other clinical orders and wellbeing worries, in which assumptions autonomously foresee recuperation, including a medical procedure and relocate medicine (Jones et al, 2002).

One issue in understanding the effect of patient assumptions on neck torment recuperation is that the idea needs hypothetical and empiric turn of events. For instance, tradable phrasings have been utilized to evaluate an assortment of assumptions: assumptions for treatment viability, for goal of torment, for utilitarian recuperation or for get back to work (Toyone et al, 2005)

The absence of understanding in outcomes from these investigations could demonstrate that a significant relationship doesn't exist, exists under specific conditions, or exists however the estimates used to assess the relationship were bad measures. These potential clarifications for the conflicting outcomes feature the requirement for additional assessment of result hopes as indicators of side effect changes. In the event that hopes undoubtedly foresee manifestation

changes and analysts need to comprehend the instrument through which anticipations work, it is critical to comprehend determinants of hope satisfaction. In view of Fulfillment Theory, hope satisfaction is characterized as the degree to which a patient's apparent event concurs with their earlier assumption regarding that occurrence (Linder-Pelz et al, 1982). Understanding the indicators of assumption satisfaction is a vital forerunner for planning intercessions that lead to hope satisfaction and consequently fulfillment. Medical care experts may contrarily impact patient beliefs (Vlaeyen and Linton, 2006).

There is solid proof that patients' convictions about low back pain are related with their clinicians' convictions, and moderate proof recommends that patient and clinician dread shirking convictions are likewise associated (Darlow et al, 2012). There is inadequate proof, nonetheless, to presume that clinicians can change patients' convictions, and there has been no depiction of the effect of the clinicians' convictions.

Evaluating how certain the patient is in the adequacy of treatment before its introduction is one method of estimating uplifting assumptions. Treatment certainty has for some time been perceived by numerous spectators as an urgent angle in the assurance of positive results. For instance, Antonovsky (1987) accepted that the "unique sensation of trust in a positive result" is the way to remaining solid and reacting well to most any treatment. Little is thought about whether treatment certainty is similarly significant for a wide range of treatment utilized in treating a similar condition.

Albeit exceptionally associated, these convictions might be thoughtfully unmistakable and formed by various components; for instance, assumptions for getting back to work may rely more upon working environment factors, while convictions about viability of treatment may rely more upon trust in suppliers. Another issue is that couple of studies have endeavored to comprehend the horde of components that may add to helpless patient assumptions, including wellbeing history, educational experience, family and social impacts, torment convictions, conditions of injury, or early supplier collaborations. A more clear comprehension of these elements is important to decide if patient assumptions can be modified through mediation (Kapoor et al, 2006).

Thompson and Sunol have proposed four working meanings of assumptions, in light of usually utilized definitions in the writing:

- ❖ Ideal, which is the thing that an individual wish for, an ideal result;
- ❖ Predicted, which is a more practical, foreseen result (likely dependent on the wellsprings of information, individual encounters and announced encounters from others);
- ❖ Normative, which is the thing that an individual thinks ought to be the result, what they 'merit' in a circumstance;
- ❖ Unformed, which addresses a state where an individual is reluctant or incapable to communicate their assumptions, because of any explanation (Thompson and Sunol, 1995).

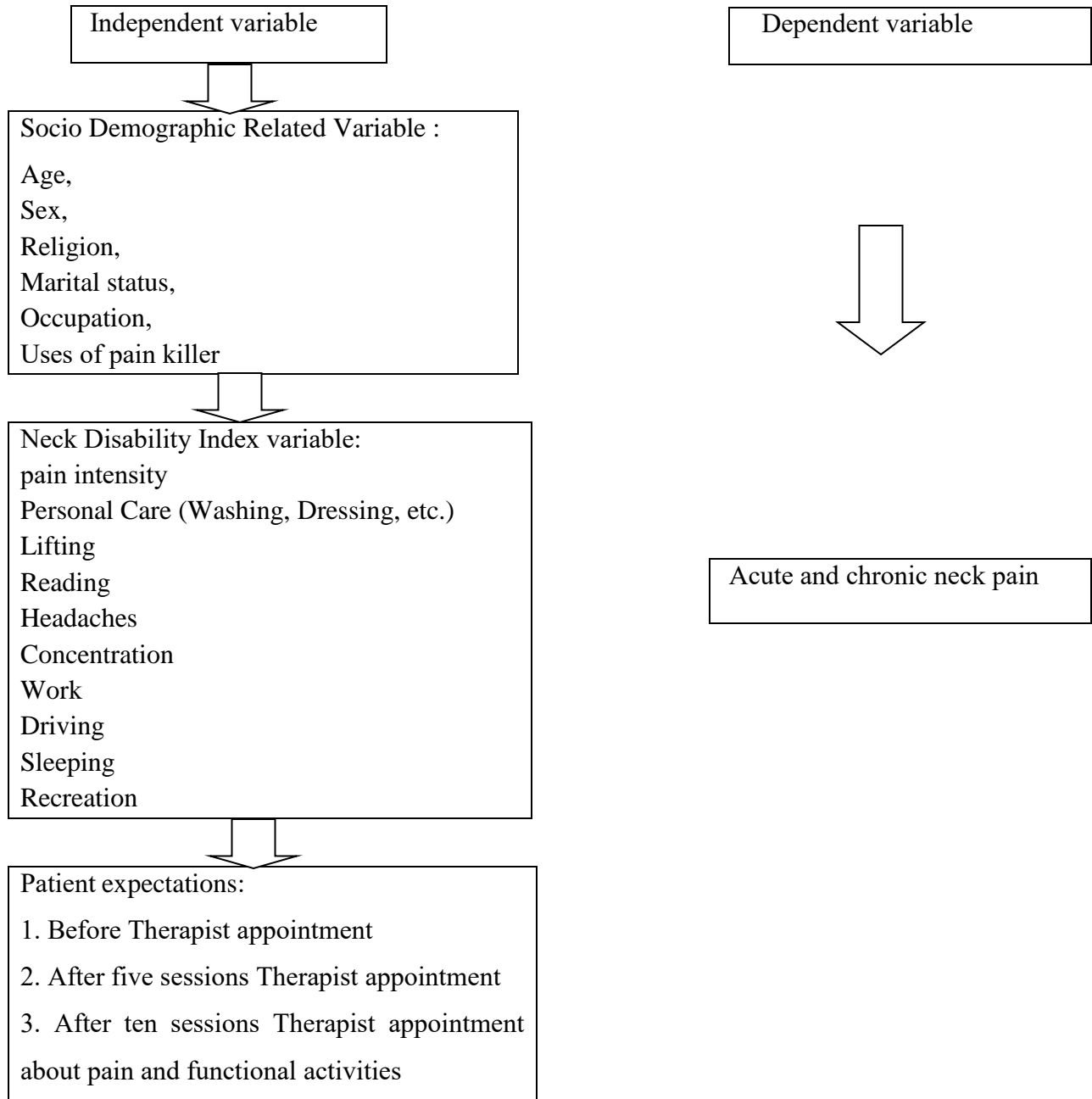
Two bigger spaces, measure assumptions and result assumptions, were found. The six subdomains under result assumptions were help with discomfort, improvement in exercises of every day living, improvement in biomechanical working, general recuperation, acquiring information/getting determination and acquiring inspiration. Neck pain is not quite the same as back torment; in any case, it is conceivable that patients expect improvement in comparative subdomains for result assumptions while accepting treatment for neck torment. The subdomains could be utilized in shaping every one of the four distinct sorts of meanings of assumptions portrayed by Thompson and Sunol (1995).

A deliberate survey that included 12 subjective and eight quantitative investigations about assumptions on evaluation and treatment found that patients with back torment expected to get data about their condition, an unmistakable conclusion of the reason for their torment, an actual assessment, and torment relief. The creators, in any case, presumed that new procedures to more readily live up to patients' desires should be created. Meijer et al. investigated assumptions and encounters of multidisciplinary therapy in two gatherings of patients that were debilitated recorded due to musculoskeletal issues of the furthest points. Most treated patients had no earlier assumptions, however saw multidisciplinary treatment if all else fails for their torment problems.

Musculoskeletal problems are profoundly predominant in everyone. Constant musculoskeletal agony (CMP) of moderate to serious force happens in 19% of grown-ups in European nations (Breivik et al, 2006) with a higher commonness in female than in male subjects (Breivik et al, 2006 Picavet & Schouten, 2003, and Leveille et al, 2005). This distinction in commonness among

people is to a great extent unexplained. A few examinations have detailed sex contrasts concerning different agony related things in patients with CMP (Bernardes et al, 2008 and Wijnhoven et al, 2006). For instance, sex contrasts have been accounted for in the impact of persistent agony on cytokine blood levels (Aloisi et al, 2005), ischaemic torment resilience (Edwards et al, 2003), the danger of creating constant torment problems (Breivik et al, 2006 and Leveille et al, 2005) and catastrophizing perceptions (Edwards et al, 2004). Sexual orientation contrasts have likewise been accounted for to affect the consequences of treatment of patients with CMP (Edwards et al, 2003, Keogh et al, 2005 and Jensen et al, 2001), despite the fact that others have discovered no sex distinction in treatment result (Gatchel et al, 2005). These days, objective setting is typically unequivocally set by advisors along with patients and in light of this cooperation, patients pre-treatment assumption are probably going to impact the substance of the restoration treatment. Supposedly, there has been no examination into sexual orientation distinction in assumptions regarding restoration treatment. Contrasts in pre treatment assumptions among male and female patients may clarify sex contrasts in the substance just as result of recovery treatment and are in this way a fascinating subject for research. Prior to examining whether contrasts in pre-treatment assumptions impact results among male and female patients with CMP, in any case, it is critical to know whether such contrasts really exist.

3.1 Conceptual framework



3.2 Objectives of the study:

3.2 a. General objective:

To determine expectation of acute and chronic neck pain patient about pain relieves and competence improvements.

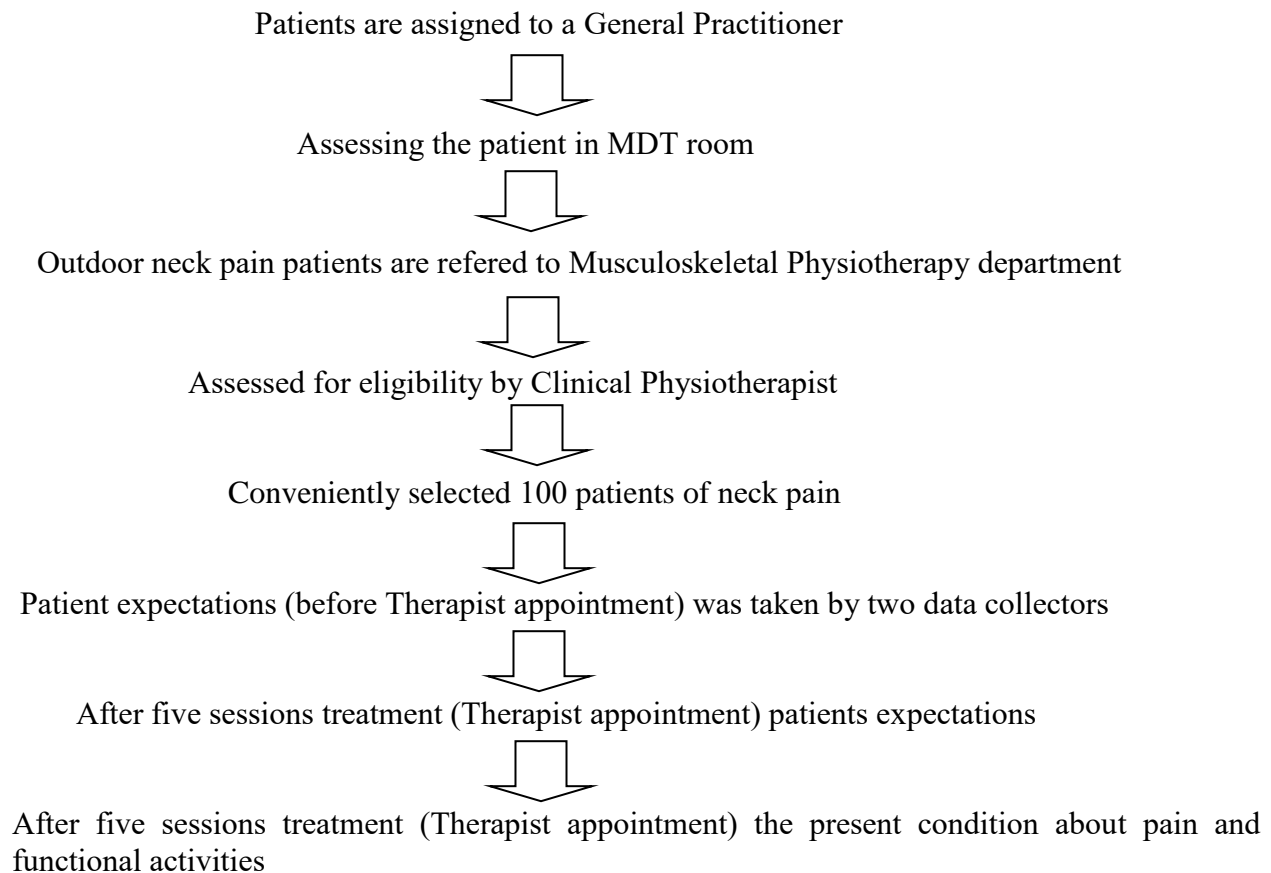
3.2 b. Specific objectives:

1. To find out the socio-demographic factors of the participants
2. To compare expectations regarding pain and function before and after Physiotherapy treatment
3. To compute the functional outcome in relation to pain (by Oswestry Neck Disability Index (ONDI)).
4. To evaluate the relationship between patient expectations of physiotherapy treatment against neck pain and patient based functional outcomes after several physiotherapy session.
5. To analyze differences between males and females in expectations about rehabilitation outcome.

3.3 Study design:

The study was cross sectional design conducted between June 2019 to May 2020. Measurement was before starting the physiotherapy intervention and after the intervention period (at first 5 sessions and after that 10 sessions).

Flow chart of the phases of cross sectional study



3.4 Study site:

Musculoskeletal unit of the Centre for the Rehabilitation of the Paralyzed (CRP), Savar was selected for the study site.

3.5 Study Population:

The study population consisted of both male and female who complain of neck pain.

3.6 Study period:

This study was conducted between June 2019 to May 2020.

3.7 Sample Size:

The researcher used convenient sampling procedure for this research. 100 participants were selected for this study.

3.8 Inclusion Criteria:

- ❖ Patients had pain for more than 3 months.
- ❖ Patient with >15 year age range.
- ❖ Both male and female was included.
- ❖ The participants were those individuals who continue physiotherapy treatment at least 12 sessions.
- ❖ Unilateral upper-extremity pain, paresthesia or numbness.
- ❖ Patients with decrease range of motion related to neck pain.

3.9 Exclusion Criteria:

- ❖ History of previous cervical or thoracic spine surgery.
- ❖ Bilateral upper-extremity symptoms.
- ❖ Signs or symptoms of upper motor neuron disease.
- ❖ Cervical spine injections (steroidal) in the past 2 weeks.
- ❖ Current use of steroidal medication prescribed for radiating symptoms.
- ❖ Traumatic injuries of upper limb and cervical spine.
- ❖ Circulatory disturbances of upper extremity.
- ❖ Known history of high level Spinal cord injury and malignancy.
- ❖ Patients with vertebro basilar artery insufficiency.
- ❖ Hypermobility (Hypermobility describes joints that stretch further than normal).
- ❖ Acute inflammation.
- ❖ Congenital Spine curvature disorder.
- ❖ Thoracic outlet syndrome.

3.10 Diagnostic tools:

A Pretested, modified, an interviewer administered, structured questionnaire were designed for information on related neck pain associated with the use of instruments i.e. pen, pencil, papers, watch, recording software in mobile phone,goniometre.

The Questionnaire included items on socio demographic variables, patient expectations (before Therapist appointment) related variables, after five sessions treatment (Therapist appointment) the present condition about pain and functional activities related variables, severity of pain was measured by Numeric pain assessment tools where No pain(0)=1, Mild(1-3)=2, Moderate(4-6)=3, Severe(7-9)=4, Worst(10)=5, Modified cervicle range of motion related variables, where No movement possible(0)=1, Severe restriction(1-3)=2, Modereate restriction(4-6)=3, Mild restriction(7-9)=4, No movement restriction=(10)=5, Neck Disability Index Questionnaire (Oswestry Neck Disability Index) and Hopkins symptom checklist-10 related variables were used.

3.11 Sampling Technique:

Convenient sampling was applied considering the inclusion and exclusion criteria. Consecutive patients with reports of unilateral upper-extremity pain, paresthesia or numbness with neck pain were screened by a physical therapist for study eligibility.

3.12 Data collection procedures:

Information assortment strategies was directed through evaluating the patient in MDT room. In the wake of screening the patient at outside division, the patient evaluated by qualified physiotherapist in crisis musculoskeletal branch of CRP. Those patients who satisfied all the consideration and avoidance rules; was picked for the investigation and capable specialist had spoken with two understudy for beginning information assortment upto patient assumptions (before Therapist appointment) and the Hopkins manifestation agenda 10 for finding passionate stress. This measure was started by taking authorization with verbal assent form. When the patient had finished five meetings of physiotherapy treatment then assumption related information was gathered by two collaborators again. And at last after ten meetings physiotherapy treatment information authorities had taught to gather information again for understanding the current circumstance about torment and fuctional activities. All information was recorded by an account programming in cell phone. Entire interaction was observed and assessed by scientist in week by week meeting. The investigation convention was appropriately endorsed from moral councils of Bangladesh Health Professions Institute (BHPI). Following ten months 100 information was gathered by taking consent from Head of the physiotherapy office. Consenting members from that point got three structures in regards to assumptions. One was finished preceding the physiotherapy treatment, the second was finished straightforwardly after five meetings physiotherapy treatment lastly after ten meetings physiotherapy treatment patients were confronted ultimate result which means the assessment and current circumstance about torment and practical exercises. These three gatherings thought about the current status of torment and capacity and assumptions about progress in torment and capacity .The doctors didn't get any guidelines in regards to the investigation.

3.13 Data Management:

Baseline variables were included age, sex and occupation, uses of pain killer, marital status and religion. Outcome expectations were taken at the baseline (neck disability index questionnaire) and after five session treatment (therapist appoinment) patient expectations and ten sessions' treatment (therapist appointment) the present condition about pain and fuctional activities. Measurements was made by NPRS (Numeric Pain Rating Scale), where (0-10) point, where 0 is no pain and 10 is the worst pain and by NDI (Neck Disability Index) scale has 50 scores, where Minimum score: 0 with a minimum disability of 0%, and Maximum score: 50 with maximal disability of 100%. After collecting data, all interviewed Questionnaire were checked for its completeness, correctness and internal consistency to exclude missing or inconsistent data and those was discard. The primary outcome, namely, expectations, was measured using the Norwegian version of the Patient Neck Outcome Expectancies (PNOE) questionnaire. This measure contains questions about expectations regarding the overall problem, the specific pain, and one's ability to move his or her neck during the next month. The three questions are scored on a six-point numeric rating scale (NRS), ranging from one ("much worse") to six ("much better"). Evidence for the unidimensionality of this measure was obtained from a confirmatory factor analysis in which one factor accounted for 89% of the item variance, and the internal consistency was calculated, with a Cronbach's alpha of 0.94 (O'Malley et al, 2004). Expectations (PSOE) were measured both before and after the physiotherapy treatment. Three 11-point NRSs (11NRS) were included to define the present status before the consultation. The scales recorded pain during rest, pain during activity, and physical functioning. The scales were scored between

zero, indicating “no pain/no movement limitations,” and ten, indicating “worst possible pain/no movement possible.” The Hopkins Symptom Checklist-10 (HSCL-10) (Derogatis et al, 1974) was included as a measurement of emotional distress. A Cronbach’s alpha of 0.88 has been demonstrated, (Strand et al, 2003) which is considered a reliable score (Nunnally, 1978). Each question has four response categories (not at all, a little, quite a bit, and extremely) and is scored from one to four. A mean value higher than the suggested cut-off score of 1.85 suggested elevated emotional distress (Strand et al, 2003).

3.14 Outcome Measurement Tools:

Primary and secondary outcome e.g. disability and pain perception & ROM were assessed by using Neck Disability Index, Numeric Pain Rating Scale and Goniometre respectively.

3.15 Data Analysis:

To discover the (assumption for physiotherapy treatment in intense and persistent neck torment patient about torment assuages and competence upgrades) related information were gathered in 10 months. There were segment information that got by the examiner and proportion information that scored by posing inquiry about the neck issues with NPRS (Numeric Pain Rating Scale), ROM by goniometer and NDI (Neck Disability Index) scale. The outcomes are communicated by means, and standard deviation (SD). Measurable investigation was performed utilizing SPSS 20. Assumptions were scored by the convention of O'Malley et al. The scores on the three PNOE questions were added, yielding a greatest complete score of 18. A score of nine rose to an assumption for no adjustment in status. Scores under nine demonstrated an assumption for irritation of status, while scores over nine showed an assumption for development.

Changes in assumptions were characterized as the distinction in PNOE esteems when the physiotherapy counsel. This distinction was delegated "unaltered" if assumptions were indistinguishable when the conference (contrast score of nothing). "Improved" suggested that assumptions about torment and utilitarian status were more idealistic after the meeting contrasted and previously (positive distinction score). Conversely, "more awful" demonstrated that assumptions were more cynical after the meeting (negative distinction score). A test for minor homogeneity (Stuart A,1955) was utilized to analyze the disseminations of the "improved," "unaltered" and "more terrible" arrangements when the physiotherapy treatment. The invalid speculation was that the extents of patients detailing "improved," "unaltered," and "more awful" assumptions were the equivalent when the physiotherapy counsel (negligible homogeneity). A p -esteem < 0.05 for the trial of minor homogeneity demonstrated a subjective change in assumptions, for example, from "unaltered" to "improved." A mean worth was determined from the three 11NRS, from here on characterized as "Agony Function." Univariable and multivariable straight relapse models were utilized to survey the connection between the adjustment in assumptions (PNOE) from before to after the physiotherapy conference (subordinate variable) and the autonomous factors, which included age, sex, occupation, conjugal status, day by day utilization of analgesics. All factors were checked for deviations

from ordinariness, non-straight impacts, multicollinearity and homoscedasticity. Initially, univariable examinations were performed on every one of the autonomous factors. Furthermore, all free factors were remembered for a multivariable model.

3.16 Quality control and assurance:

Assessment of the gauge information assortment followed the endorsed surveys. Follow-up to the polls were correspondence with the numerous subgroup populaces to normalize the phrasing of the inquiries. This additions better comprehension of the qualities inside the subgroups and expanded comprehension by the questioners. Moreover, the polls ought to be finished and clear just as the individual giving the meeting, and the mechanical instruments and specialized estimations should be exact.

Regularly, QA, QC, and testing were continued during the start, all through, and after the get-together period of information with the expectation to improve the plan and last execution on finish of the activity.

3.17 Ethical Permission:

The examination convention was properly endorsed from moral boards of Bangladesh Health Professions Institute (BHPI). All the subjects were educated in insight regarding the sort and nature of the investigation. They were clarified about security and straightforwardness of methodology and data assent was acquired. Again prior to starting the information assortment, analyst acquired the authorization from concerned specialists guaranteeing the security of the members. To dispense with the moral cases, the members set allowed to get treatment for different purposes of course. Every member educated about the examination prior to starting and given composed assent. Prior to information assortment, consent from the Ethical Committee of Bangladesh Health Professions Institute (BHPI) took and a mentioned letter hand over to the proper authority of the investigation zone for taking authorization and looking for help for smooth admittance to information assortment. All moral issues identified with research including human subjects tended to as indicated by the rules of Bangladesh Medical Research Council (BMRC) and Ethical Review Committee of World Health Organization (WHO) before information assortment.

One hundred patients with neck pain were enrolled in the study. This cross sectional study was conducted at CRP to identify the expectation of physiotherapy treatment in acute and chronic neck pain patient about pain relieves and competence improvements.” A pre-tested modified interviewer administrated structured questionnaire was used to collect the information. A total of 100 patients were interviewed to collect the information. Section 1: contained socio-demographic related variables; section 2: Neck disability index questionnaire; section 3: contained patient expectations (before therapist appointment); section 4: contained the Hopkins symptom checklist-10; and section 5: contained after five sessions treatment (Therapist appointment) patient expectations; section 6: After ten session treatment (Thereapist appointment) the present condition about pain and functional activities. Subjects of this group scored their pain on Numeric Pain Rating Scale (NPRS), Range of Motion (ROM) and disability on Oswestry Neck Pain Disability Index before and after completing treatment. The data were entered and analyzed by using SPSS (Statistical Package for Social Sciences) software version 20.

Socio-demographic characteristics of participants:

Table 1: Distribution of respondents by age (n= 100)

Age in years	Frequency	percentage
21-30 years	31	31.0
31-40 years	32	32.0
41-50 years	20	20.0
51-60 years	15	15.0
61-70 years	2	2.0
Total	100	100.0
Mean±SD	38.97±1.114	

The table reveals that the mean age of the participants were 38.97±1.114 years with a range from 21 to 70 years. It is found from table 1 that 20.5%, 21.2%, 13.2%, 9.9 and 1.3% of the participants belonged to age group 21-30 years, 31-40 years, 41-50 years, 51-60 and 61-70 years respectively.

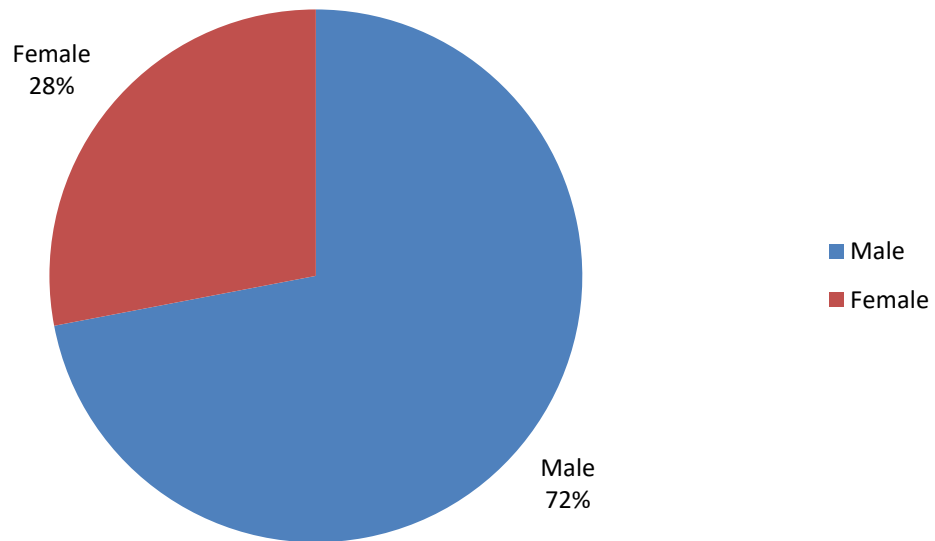


Figure 1: Distribution of participants by sex (n=100)

The figure 1 reveals that about 72% participants were male and 28% participants were female.

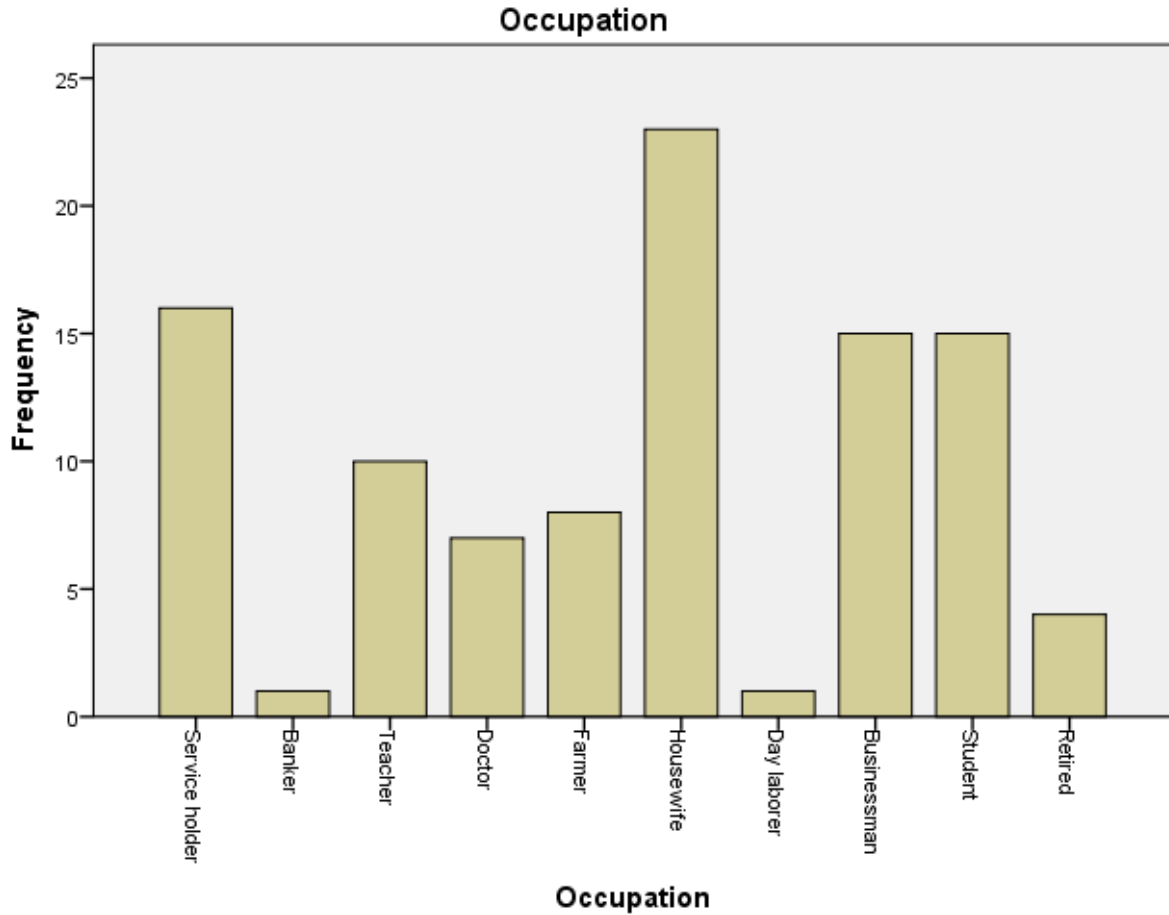


Figure 2: Distribution of participants by occupation (n=100)

The figure 2 shows that among the participants 23% were housewife, 16% were service holder. In addition to businessman, student, teacher, farmer, doctor, banker and day laborer were 15%,15%,10%,7%,6%,1%,1% respectively,where mean value and standard deviation respectiely 5.56 and 2.21.

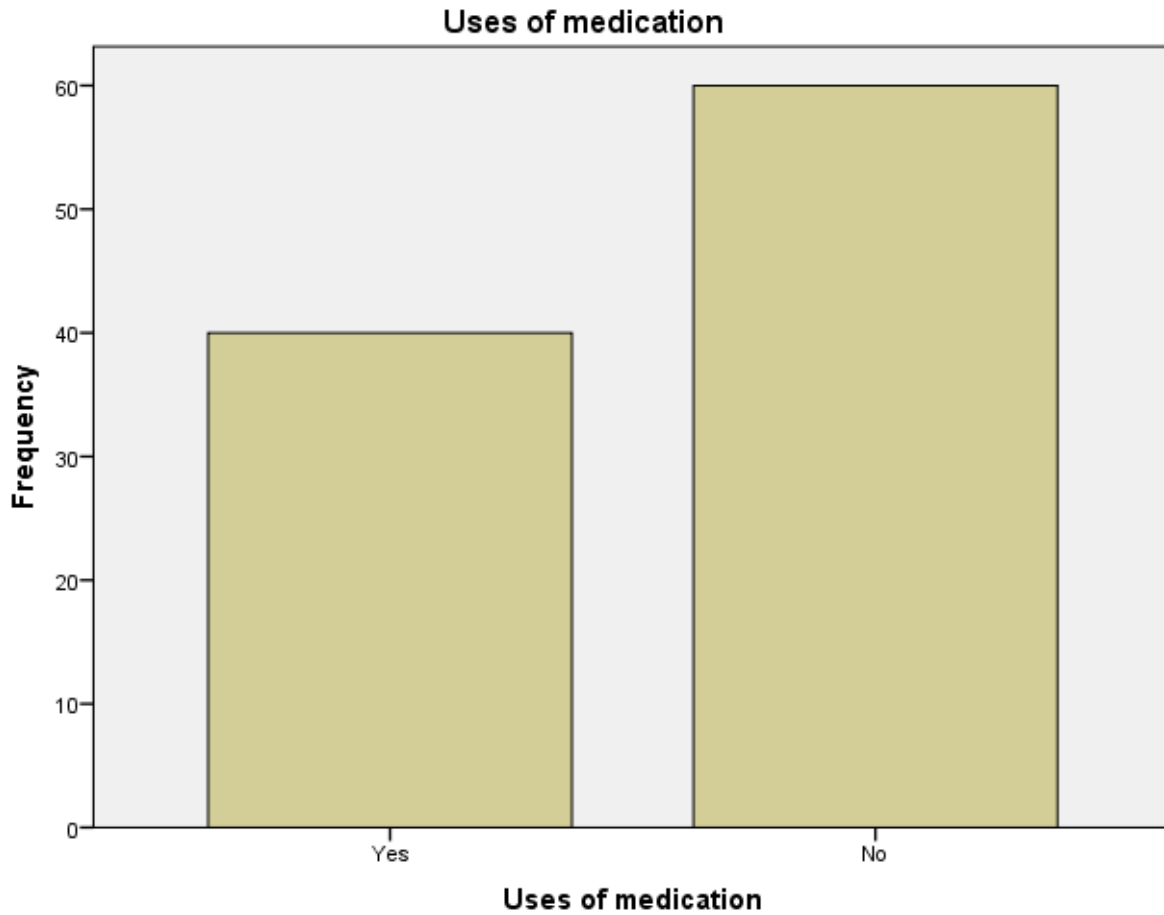


Figure 3: Distribution of participants by uses of medicine (n=100)

This figure give information that 40% participant were use pain killer and rest of the participant 60%,they are not taking any pain killer for relieve the pain. So,the mean and standard deviation is respectively 1.6 and 0.492.

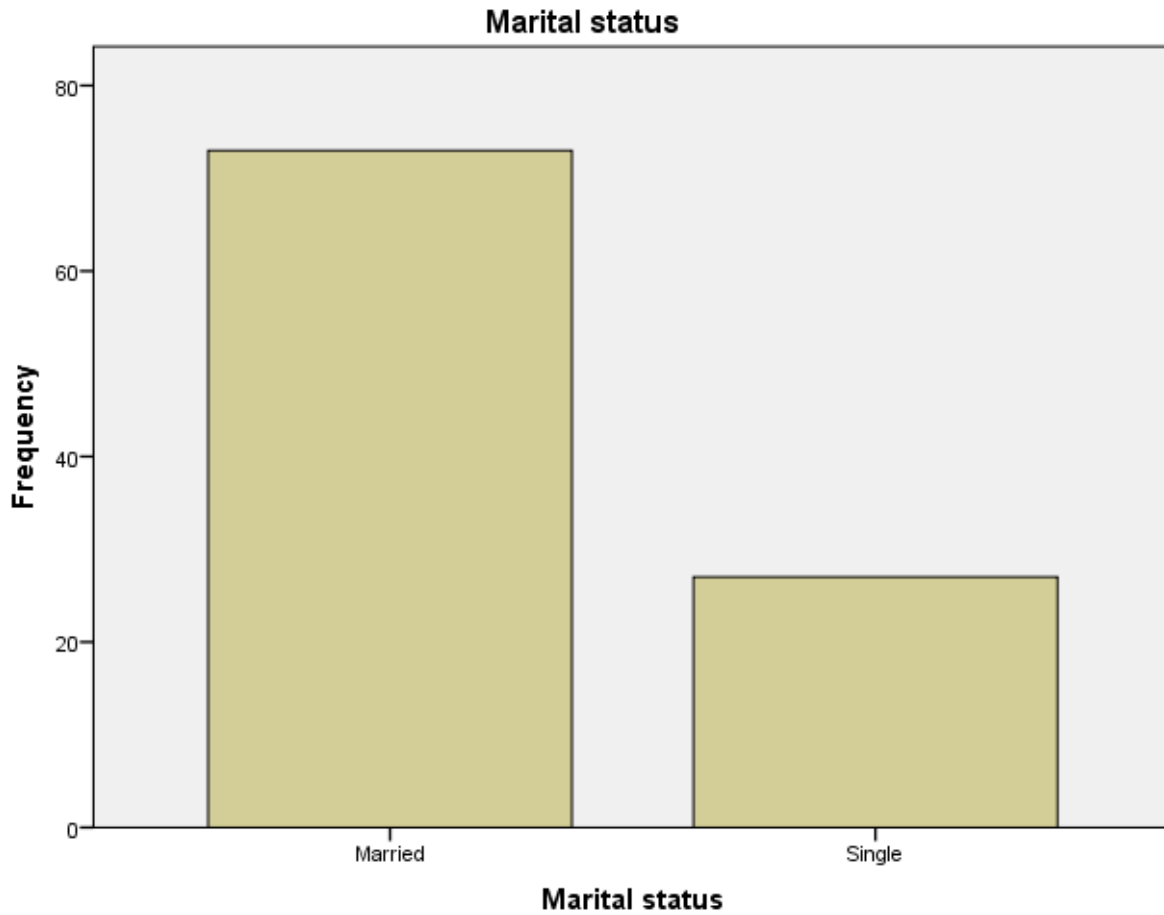


Figure 3: Distribution of participants by uses of medicine (n=100)

This figure illustrate that, Among them 73% are married and rest of the 37% are single.

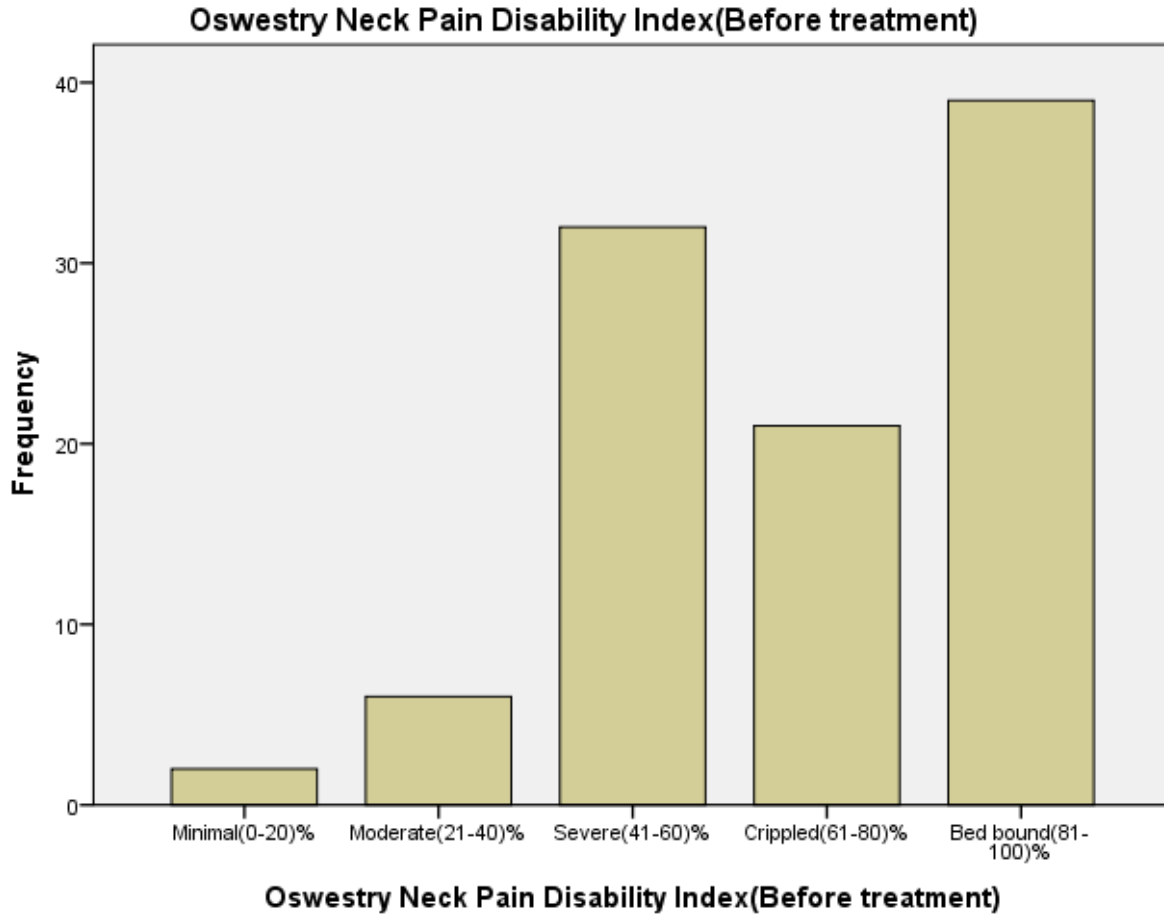


Figure 4: Distribution of participants according to the Oswestry neck pain disability index(before treatment)(n=100)

This figure shows that, near about 40% patients are bed bounded due to pain disability where 33% in severe case in situation, 20% crippled, moderate and minimal condition are respectively 7% and 2%. The mean value and standard deviation are respectively 3.89 and 1.06

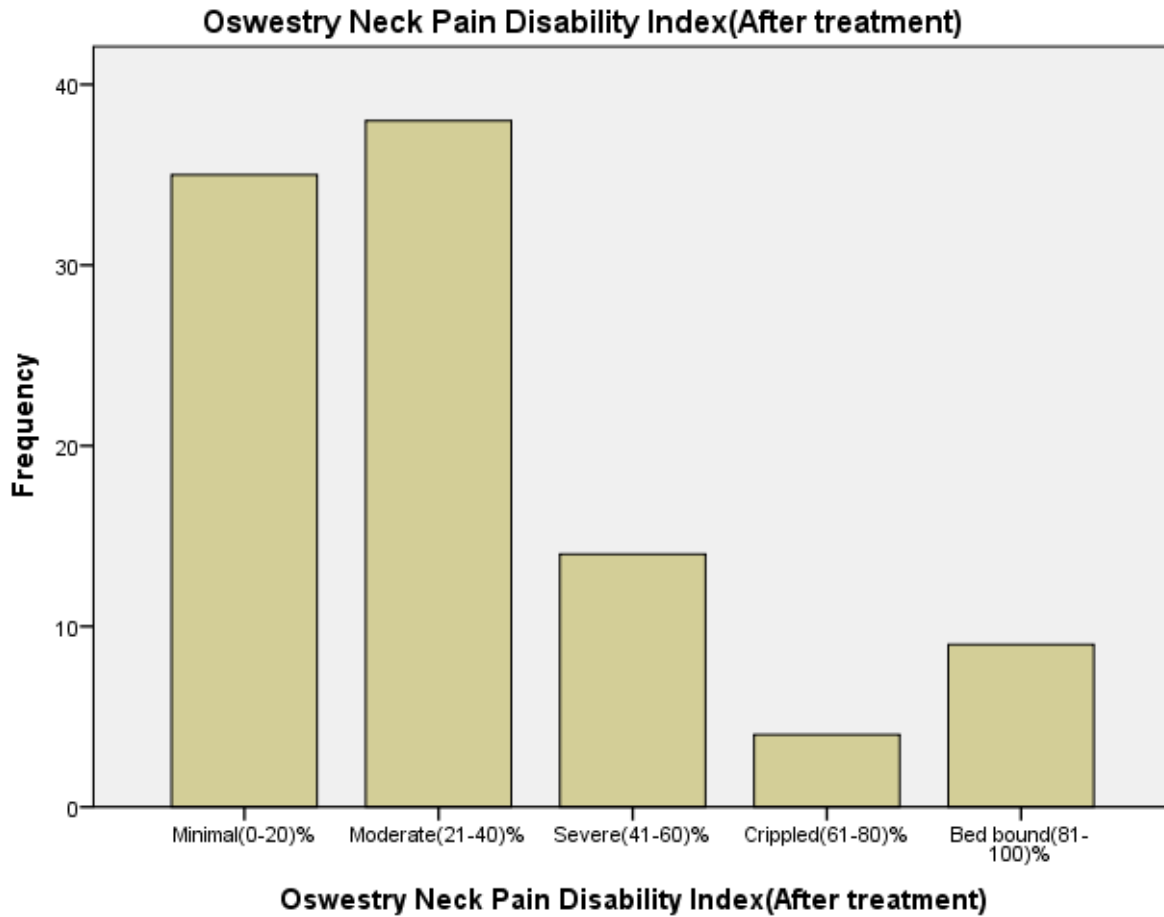


Figure 5: Distribution of participants according to the Oswestry neck pain disability index (before treatment) (n=100)

This figure shows that, near about 40% patients are moderate due to pain disability where 35% in minimal case in situation, 4% crippled, severe and bed bound condition are respectively 13% and 9%. The mean value and standard deviation are respectively 2.14 and 1.20

Table 2: Distribution of participants by Oswestry Neck Pain Disability Index (n=100):

Disability status before treatment	Oswestry Neck Pain Disability Index(Before treatment)		Oswestry Neck Pain Disability Index(After ten sessions treatment)	
	Frequency	Percent	Frequency	Percent
Minimal(0-20)%	2	2.0	35	35.0
Moderate(21-40)%	6	6.0	38	38.0
Severe(41-60)%	32	32.0	14	14.0
Crippled(61-80)%	21	21.0	4	4.0
Bed bound(81-100)%	39	39.0	9	9.0
Total	100	100.0	100	100.0
Mean±SD	3.89±1.06		2.14±1.20	

This table shows that before treatment 39 patients was in bed bound but after ten sessions physiotherapy treatment the patient number was 9 which denotes significantly improvement. On the other hand after treatment 38 patients was in moderate level. The mean and standard deviation before treatment was 3.89 and 1.06. On the other hand, the mean and standard deviation after treatment was 2.14 and 1.20

Table 3: Distribution of Patient expectations (Before therapist appointment):

Patient neck outcome expectation	Compared with now, I think my neck problem overall next month will be:		Compared with now, I expect my neck pain next month will be:		Compared with now, I expect my ability to use and move my neck next month will be:	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Much worse	0	0	12	12.0	4	4.0
Worse	0	0	60	60.0	4	4.0
A little worse	0	0	21	21.0	3	3.0
The same	2	2.0	7	7.0	2	2.0
Better	71	71.0	0	0	70	70.0
Much better	27	27.0	0	0	17	17.0
Total	100	100.0	100	100.0	100	100.0
Mean ±SD	5.25±0.479		2.23±0.75		4.81±1.13	

This table shows patient expectation before therapist treatment where patient said they will feel better of their neck problem in next month which denotes 71%, much better 27% and the same 2%. In neck pain case they said it will have much worse or worse which respectively denotes 12% and 60% and at last when the question was the ability to use and perform neck movement they replied it will be better which was 70%. The mean value and standard deviation was respectively 5.25±0.479, 2.23±0.75 and 4.81±1.13.

Table 4: Distribution of after five session's treatment (Therapist appointment) Patient expectations:

Patient neck outcome expectation	Compared with previous,at present my neck problem current situation		Compared with previous,at present my neck pain condition:		Compared with previous,at present my ability to use and move my neck	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Much worse	0	0	0	0	3	3.0
Worse	0	0	30	30	5	5.0
A little worse	5	5	42	42	20	20.0
The same	18	18	26	26	60	60.0
Better	76	76	2	2	12	12.0
Much better	1	1	0	0	0	0
Total	100	100.0	100	100.0	100	100.0
Mean±SD	4.73±0.565		3.00±0.804		3.73±0.851	

This table shows patient expectation after five sessions therapist treatment where patient said they feel better of their neck problem which denotes 76%, and the same 18%. In neck pain case they said it was 30% worse,a little worse and the same which respectively denotes 42% and 26% and at last when the question was the ability to use and perform neck movement they replied it was 60% the same.The mean value and standard deviation was respectively 4.73±0.565, 3.00±0.804, 3.73±0.851

Table 5: Distribution of Pain status before and after treatment:

Pain severity	Pain status before treatment				Pain status after ten sessions physiotherapy treatment			
	Pain at rest		Pain during activity		Pain at rest		Pain during activity	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
No pain(0)	25	25.0	25	25.0	3	3.0	0	0
Mild(1-3)	34	34.0	24	24.0	5	5.0	1	1.0
Moderate(4-6)	7	7.0	20	20.0	20	20.0	9	9.0
Severe(7-9)	20	20.0	20	20.0	60	60.0	43	43.0
Worst pain(10)	14	14.0	11	11.0	12	12.0	47	47.0
Total			100	100.0	100	100.0	100	100.0
Mean±SD	2.66±1.42		2.68±1.33		3.73±0.851		4.36±0.689	

This table shows pain status before treatment and after ten sessions therapist treatment where table illustrate mild pain present in 34% at rest and 25% in pain during activity. However after ten sessions treatment severe pain was present at rest which denotes 60% and after ten sessions treatment which was worst 47%. Moreover, the mean pain status before treatment was 2.66±1.42 and 2.68±1.33. After ten sessions treatment pain status was 3.73±0.851 and 4.36±0.6689. So, after ten sessions treatment pain was increased.

Table 6: Distribution of Neck movement condition before and after treatment:

Neck movement ability status	Neck movement condition before the treatment		Neck movement condition after ten sessions physiotherapy treatment	
	Ability to use as well as move your neck		Ability to use as well as move your neck	
	Frequency	Percent	Frequency	Percent
No Movement Possible(0)	14	14.0	0	0
Severe Restriction(1-3)	20	20.0	30	30.0
Moderate Restriction(4-6)	27	27.0	42	42.0
Mild Restriction(7-9)	23	23.0	26	26.0
No Movement Restriction(10)	16	16.0	2	2.0
Total	100	100.0	100	100.0
Mean±SD	3.07±1.28		3.00±0.804	

This table shows 27% moderate restriction was present in neck movement condition before the treatment where the lowest value was 14% which denotes no movement possible. On the other hand, after ten sessions physiotherapy treatment no change was occurred I mean 42% moderate restriction was present where only 2% no movement restriction was present. However, the mean value before and after treatment was 3.07 ± 1.28 and 3.00 ± 0.804 respectively. So, after ten sessions treatment neck movement condition was same, likewise there was no improvement in joint ROM.

Table 7: Distribution of The Hopkins Symptom checklist-10:

Responses	Suddenly scared for no reason		Feeling fearful		Faintness,dizziness or weakness		Feeling tense or keyed up		Blaming yourself for things	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Not at all	19	19.0	16	16.0	18	18.0	17	17.0	18	18.0
A little	41	41.0	45	45.0	42	42.0	44	44.0	41	41.0
Quite a bit	29	29.0	27	27.0	29	29.0	27	27.0	30	30.0
Extremely	11	11.0	12	12.0	11	11.0	12	12.0	11	11.0
Total	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0
Responses	Difficulties in falling asleep or staying asleep		Feling blue		Feelings of worthlessness		Feeling everything is an effort		Feeling hopeless about the future	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Not at all	16	16.0	18	18.0	16	16.0	18	18.0	16	16.0
A little	44	44.0	42	42.0	44	44.0	41	41.0	45	45.0
Quite a bit	28	28.0	29	29.0	28	28.0	30	30.0	27	27.0
Extremely	12	12.0	11	11.0	12	12.0	11	11.0	12	12.0
Total	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0
Aver. mean and st. deviation	2.34					0.8977				

The table shows 41% patient was (a little) Suddenly scared for no reason,45%(a little) feeling fearful,42% (a little) Faintness, dizziness or weakness, 44%(a little) Feeling tense or keyed up, 41% patient was (a little) Blaming yourself for things,44% (a little) Difficulties in falling asleep or staying asleep, 42% (a little) Feeling blue, 44% (a little) Feelings of worthlessness, 41% patient was (a little) Feeling everything is an effort,45% (a little) Feeling hopeless about the future.The table illustrates that the average mean and standard deviation was 2.34 and 0.8977 which denotes patient was in mental distress situation as the average score ≥ 1.85 is considered a valid cut-off value for prediction of mental distress.

Specific objective 2:

- **To compare expectations regarding pain and function before and after physiotherapy treatment.**

Paired sample t test:

Hypotheses:

1.Null(Ho):

There is no difference between pre and post test mean expectations regarding pain and function.

2.Alternative(Ha):

There is difference between between pre and post test mean expectations regarding pain and function.

- ✓ Where $p=0.05$;Two tailed,Check assumptions by Scale of measurement(SOM)- Continuous,Normality and Normality of different scores.
- ✓ Reject null hypotheses($P<0.05$),Fail to reject null hypotheses($P>0.05$)

Calculating effect size:

$$d = \frac{M1 - M2}{SP}$$

$$= \frac{3.89 - 2.14}{1.13}$$

$$= 1.54$$

Where, d =cohen's d
M1=Pre test mean
M2=Post test mean
SP=pooled SD $[\frac{SD1 + SD2}{2}] = \frac{1.06 + 1.20}{2} = 1.13$
cohen's criteria:
Small effect=0.20
Medium effect=0.50
Large effect=0.80

A paired samples t-test with an α of 0.05 was to compare the mean expectation scores measured by Oswestry Neck Pain Disability Index of 100 acute and chronic neck pain patients before (M=3.89,SD=1.06) AND after (M=2.14,SD=1.20)ten sessions physiotherapy treatment. Visual inspection of the histograms for both pre and post test scores and their differences indicated that the assumptions of the normality was not violated. The paired sample t test revealed that on average,expectation scores in the post test were 1.75 points less,95% CI

[1.47,2.02] than the pre test scores. The difference was statistically significant, $t(100)=12.542$, $P<0.001$, two tailed, and large, $d=1.54$. So, reject the null hypothesis.

There is difference between pre and post test mean expectations regarding pain and function.

Specific objective 03:

- **To compute the functional outcome in relation to pain (by Oswestry Neck Disability Index (ONDI):**

To test the hypotheses that the pre-test Oswestry Neck Pain Disability Index(Before treatment) (M=3.89,SD=1.06) and post-test Oswestry Neck Pain Disability Index (After treatment) (M=2.14,SD=1.20), a dependent sample t-test is performed. Prior to conducting the analyses the assumption of normally distributed difference scores was examined. The assumption was considered satisfied, as the skew and kurtosis levels were estimated at -1.29 and 1.77, respectively, which is less than the maximum allowable values for a t-test (i.e., skew < 2.0 and kurtosis < 9.0; (posten,1984). It will also be noted that the correlation between the two conditions was estimated at $r=.76$, $p<0.001$, suggesting that the dependent sample t-test is appropriate in this case.

Table 8: Paired Samples Statistics:

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Oswestry Neck Pain Disability Index(Before treatment)	3.8900	100	1.06263	.10626
Pair 1 Oswestry Neck Pain Disability Index(After treatment)	2.1400	100	1.20621	.12062

Specific objective 04:

- To analyze differences between males and females in expectations about rehabilitation outcome

1. One categorical, independent variable with two levels (e.g., Sex: male/female)
2. One continuous, dependent variable (e.g., acute and chronic neck pain measured by Numeric pain rating scales)

Hypotheses:

1. Null (H₀):

There is no difference between males and females in expectations about rehabilitation outcome.

2. Alternative (H_a):

There is difference between males and females in expectations about rehabilitation outcome.

- ✓ Where $p=0.05$; Two tailed, Check assumptions by Scale of measurement (SOM)- Continuous, Independence of observation, random sampling, Normality and homogeneity of variance.
- ✓ Reject null hypotheses ($P < 0.05$), Fail to reject null hypotheses ($P > 0.05$)

An independent sample t test was used to compare the mean expectations between males ($n=72$) and females ($n=28$) about rehabilitation outcome. Neither Shapiro-wilk statistic was significant, indicating that the assumption of normality was not violated. Levene's test was also non-significant; thus, an equal variance can be assumed for both groups. The t test was not statistically significant, with mean expectation of Females ($M=2.25$, $SD=1.07$) was significantly higher (mean difference 0.16, 95% CI [0.382, -0.382], than the males ($M=2.09$, $SD=1.25$), $t(98)=-0.567$, $p=0.001$, two tailed, Hedges's $g_s=-0.137$. The small effect size indicates that the chance that for a randomly selected pair of individuals the expectation score of a female is higher than the score of a male.

Effect size allow us to measure the magnitude of mean differences.

This is usually calculated after rejecting the null hypothesis is a statistical test. If the null hypotheses is not rejected, effect size has little meaning.

Effect size independent t test:

$$\begin{aligned}d &= M1 - M2 / \sqrt{SP} \\ &= 2.09 - 2.25 / \sqrt{1.16 \times 1.16} \\ &= -0.16 / 1.16 \\ &= -0.137 \\ &= \text{Small effect}\end{aligned}$$

Where, $d = \text{Cohen's } d$
 $M1 = \text{Pre test mean}$
 $M2 = \text{Post test mean}$
 $SP = \text{pooled SD} [SD1 + SD2 / 2] = 1.25 + 1.07 / 2 = 1.16$
Cohen's criteria:
Small effect = 0.20
Medium effect = 0.50
Large effect = 0.80

Table 9: Mean differences of expectation scores between male and female patients:

	Sex	N	Mean	SD	t
Expectation level	Male	72	2.09	1.25	-0.567*
	Female	28	2.25	1.07	

*P=-0.001

The difference was not statistically significant, $t(98)=-0.567$, $P<0.001$, two tailed, and small, $d=-0.137$

So, Failed to reject null hypothesis.

There is no difference between males and females in expectations about rehabilitation outcome.

Specific objective 05:

- **To evaluate the relationship between patient expectations of physiotherapy treatment against neck pain and patient based functional outcomes after several physiotherapy session.**

Hypotheses:

1.Null(H_0):

There is no difference between patient expectations of physiotherapy treatment against neck pain and patient based functional outcomes after several physiotherapy session.

2.Alternative(H_a):

There is difference patient expectations of physiotherapy treatment against neck pain and patient based functional outcomes after several physiotherapy session.

- ✓ Where $p=0.05$; Two tailed, Check assumptions by Scale of measurement(SOM)- interval/ratio, linear relationship, no outliers, Normality and homoscedasticity.
- ✓ Reject null hypotheses($P<0.05$), Fail to reject null hypotheses($P>0.05$)

To assess the size and direction of the linear relationship between the scores of patient expectations of physiotherapy treatment against neck pain and patient based functional outcomes after several physiotherapy sessions, a bivariate Pearson's product-moment correlation coefficient (r) was calculated. The bivariate correlation between these two variables was positive and strong, $r(100)=0.249$, $P<0.05$ (two tailed)

Prior to calculating r , the assumptions of normality, linearity and homoscedasticity were assessed and found to be supported. Specifically, a visual inspection of the normal Q-Q and detrended Q-Q plots for each variable confirmed that both are normally distributed. Similarly, visual inspection of the scatterplot of before and after expectations about physiotherapy treatment confirmed that the relationship between these variables was linear and heteroscedastic.

Table 10: To evaluate the relationship between patient expectations of physiotherapy treatment against neck pain and patient based functional outcomes after several physiotherapy session

	Mean	Std. Deviation	N
Oswestry Neck Pain Disability Index(Before treatment)	3.8900	1.06263	100
Oswestry Neck Pain Disability Index(After treatment)	2.1400	1.20621	100

		Oswestry Neck Pain Disability Index(Before treatment)	Oswestry Neck Pain Disability Index(After treatment)
Oswestry Neck Pain Disability Index(Before treatment)	Pearson Correlation	1	.249*
	Sig. (2-tailed)		.013
	N	100	100
Oswestry Neck Pain Disability Index(After treatment)	Pearson Correlation	.249*	1
	Sig. (2-tailed)	.013	
	N	100	100

*. Correlation is significant at the 0.05 level (2-tailed).

In this chapter the results are discussed in relation to the aim and objectives of the study, as well as relevant literature. The primary aim of this study was to determine expectation of acute and chronic neck pain patient about pain relieves and competence improvements, the treatment approaches used by physiotherapists, and the documented outcomes in the management of patients with NP at CRP, Savar, Dhaka.

The examiner took 100 samples to conduct this study. The analysis of the study sample reveals that more males than females were treated during the study period. This five range from 21 to 70 years denotes the age range patient mean and standard deviation was 2.25 ± 1.114 . Among the patient profile 32% patients are in (31-40) year of age range was in the highest value and only 2% are in (61-70) years age range group which denotes the lowest value. Other study in Norway mean age was 50.1 (Skatteboe et al. 2017).

In my study, the participants 23% were housewife, 16% were service holder. In addition businessman student, teacher, farmer, doctor, banker and day laborer were 15%, 15%, 10%, 7%, 6%, 1%, 1% respectively, where mean value and standard deviation respectively 5.56 and 2.21. Occupation is very important variable to be considered not only in research process, but also in daily practice as it can influence decision making in the management options. It is difficult to find reasons why more males than females attended for physiotherapy treatment although similar trends regarding gender, age and attendance for treatment were found in many studies: Chiu, Lau, Ho et al., (2006); Tseng et al. (2005) and Côté et al., (2003).

Some patients I mean 40% participant were use pain killer and rest of the participant 60%, they are not taking any pain killer for relieve the pain. So, the mean and standard deviation is respectively 1.6 and 0.492. In contrast, it had no effect to changing the expectation level about the physiotherapy treatment.

Before the physiotherapy treatment, near about 40% patients are bed bouned due to pain disability where 33% in severe case in situation, 20% crippled, moderate and minimal condition are respectively 7% and 2%. The mean value and standard deviation are respectably 3.89 and 1.06. After the physiotherrapy treatment near about 40% patients are moderate due to pain disability where 35% in minimal case in situation, 4% crippled, severe and bed bound condition

are respectively 13% and 9%.The mean value and standard deviation are respectably 2.14 and 1.20.The results showed that after the treatment the pain was decreased and patient was functional rather than before the treatment.

The results also gives the information that before treatment 39 patients was in bed bound but after ten sessions physiotherapy treatment the patient number was 9 which denotes significantly improvement.On the other hand after treatment 38 patients was in moderate level.The mean and standard deviation before treatment was 3.89 and 1.06.In additioin to, the mean and standard deviation after treatment was 2.14 and 1.20.So researcher undoubtedly said that patient was so confident to do functional work than previous which upgrade the expectatiopn level; about the physiotherapy treatment.

In this study result showed patient expectation before therapist treatment where patient said they will feel better of their neck problem in next month which denotes 71%, much better 27% and the same 2%. In neck pain case they said it will have much worse or worse which respectively denotes 12% and 60% and at last when the question was the ability to use and perform neck movement they replied it will be better which 70% .The mean value was and standard deviation was respectively 5.25 ± 0.479 , 2.23 ± 0.75 and 4.81 ± 1.13 . Patient expectation after five session's therapist treatment where patient said they feel better of their neck problem which denotes 76%, and the same 18%. In neck pain case they said it was 30% worse,a little worse and the same which respectively denotes 42% and 26% and at last when the question was the ability to use and perform neck movement they replied it was 60% the same.The mean value and standard deviation was respectively 4.73 ± 0.565 , 3.00 ± 0.804 , 3.73 ± 0.851

After physiotherapy treatment it would be clear that patient felt better which they thought in the before trreatment when they said about their expectation about physiotherapy treatment.But, initially pain was increased after physiotherapy treatment.

pain status before treatment and after ten sessions therapist treatment where result illustrated mild pain present in 34% at rest and 25% in pain during actiity.However after ten sessions treatment severe pain was present at rest which denotes 60% and after ten sessions treatment which was worst 47%.Moreover, the mean pain status before treatment was 2.66 ± 1.42 and 2.68 ± 1.33 . After ten sessions treatment pain status was 3.73 ± 0.851 and 4.36 ± 0.6689 .So, after ten sessions treatment pain was increased.

This result showed 27% moderate restriction was present in neck movement condition before the treatment where the lowest value was 14% which denotes no movement possible. On the other hand, after ten sessions physiotherapy treatment no change was occurred I mean 42% moderate restriction was present where only 2% no movement restriction was present. However, the mean value before and after treatment was 3.07 ± 1.28 and 3.00 ± 0.804 respectively. So, after ten sessions treatment neck movement condition was same, likewise there was no improvement in joint ROM.

In this study the result showed 41% patient was (a little) Suddenly scared for no reason, 45% (a little) feeling fearful, 42% (a little) Faintness, dizziness or weakness, 44% (a little) Feeling tense or keyed up, 41% patient was (a little) Blaming yourself for things, 44% (a little) Difficulties in falling asleep or staying asleep, 42% (a little) Feeling blue, 44% (a little) Feelings of worthlessness, 41% patient was (a little) Feeling everything is an effort, 45% (a little) Feeling hopeless about the future. The table illustrates that the average mean and standard deviation was 2.34 and 0.8977 which denotes patient was in mental distress situation as the average score ≥ 1.85 is considered a valid cut-off value for prediction of mental distress.

Expectations should, in our opinion, be considered malleable. We were unable to find comparable literature regarding this alteration in patient expectations. However, if only pre-consultation expectations are considered, a study by Boonstra et al. suggested that 61% of rehabilitation patients expected less pain and that 53% expected more activity prior to intervention, which are similar rates to those presented in our study. In contrast, 10% of the patients in our study were more pessimistic regarding future pain and functional status after the first consultation. This negative alteration may have been due to clarification of an unrealistic prior expectation. Sanderson et al. (2012) investigated how expectations changed over 3 months in subjects with low back pain, and no change was found.

In this study, we measured general expectations for treatment in patients with neck pain. The majority of patients had high general expectations of benefit. In fact, more than three quarters of patients enrolled expected to get moderate relief from pain, to improve function, and to prevent disability.

Our data suggest that holding a low or negative general expectation for complete pain relief before treatment affects outcomes 6 months after treatment. So, what might a practitioner do to

enhance or increase expectations? The interaction between the practitioner and patient may provide the ideal opportunity to develop positive general expectations for physical therapy. Consider the education provided to the patient about prognosis and the type of therapy that will be provided. An individual with high pain-related fear, who is experiencing neck pain, may have a negative general expectation about physical therapy and anticipate a poor clinical outcome. An interaction with the physical therapist, during which education is provided to reduce pain-related fear, may result in a more optimistic expectation for improvement, with the potential for improved clinical outcomes due to a positive general expectation.

The paired sample t test revealed that on average, expectation scores in the post test were 1.75 points less, 95% CI [1.47, 2.02] than the pre test scores. The difference was statistically significant, $t(100)=12.542$, $P<0.001$, two tailed, and large, $d=1.54$

So, reject the null hypothesis.

There is difference between pre and post test mean expectations regarding pain and function.

To test the hypotheses that the pre-test Oswestry Neck Pain Disability Index (Before treatment) ($M=3.89$, $SD=1.06$) and post-test Oswestry Neck Pain Disability Index (After treatment) ($M=2.14$, $SD=1.20$), a dependent sample t-test is performed. Prior to conducting the analyses the assumption of normally distributed difference scores was examined. The assumption was considered satisfied, as the skew and kurtosis levels were estimated at -1.29 and 1.77, respectively, which is less than the maximum allowable values for a t-test (i.e., skew <2.0 and kurtosis <9.0 ; (posten, 1984). It will also be noted that the correlation between the two conditions was estimated at $r=.76$, $p<0.001$, suggesting that the dependent sample t-test is appropriate in this case.

In this study, the result showed The difference was not statistically significant, $t(98)=-0.567$, $P<0.001$, two tailed, and small, $d=-0.137$

So, failed to reject null hypothesis.

There is no difference between males and females in expectations about rehabilitation outcome.

To assess the size and direction of the linear relationship between the scores of patient expectations of physiotherapy treatment against neck pain and patient based functional outcomes after several physiotherapy sessions, a bivariate Pearson's product-moment correlation

coefficient(r) was calculated. The bivariate correlation between these two variables was positive and strong, $r(100)=0.249, P<0.05$ (two tailed)

Prior to calculating r , the assumptions of normality, linearity and homoscedasticity were assessed and found to be supported. Specifically, a visual inspection of the normal Q-Q and detrended Q-Q plots for each variable confirmed that both are normally distributed. Similarly, visual inspection of the scatterplot of before and after expectations about physiotherapy treatment confirmed that the relationship between these variables was linear and heteroscedastic.

Conclusion:

In summary, patients with neck pain had high general expectations for physical therapy. Most patients specifically expected manual therapy and exercise to be beneficial treatments for neck pain. Patients with low general expectations for pain relief had worse outcomes at 6 months than patients who expected complete pain relief.

This study suggests that expectations regarding pain and function change during or shortly after a PMR consultation. Approximately one quarter of patients attending their first PMR consultation change their expectations in a more positive direction after the consultation, while 10% of patients change their expectations in a negative direction. Hence, expectations can be influenced by a single specialist consultation. Among clinical prognostic factors, only sick leave was found to influence the changes in expectations. Overall, there is a lack of comparable literature, and more information will be required to more fully understand the potential clinical value of expectations.

Recommendations:

The aim of the study was to find out the efficacy of neural tissue mobilization among the patients with chronic mechanical radiating neck pain. However, the study had some limitations. Some steps were identified that might be taken for the better accomplishment for further study. The main recommendations would be as follow:

- ❖ Investigator use only 32 participants as the sample of this study, in future the sample size would be more.
- ❖ Population can be taken gender specific in future study.
- ❖ A comparative study can be done between nerve mobilization and other single manual therapy technique.
- ❖ Further study can be done on effects on nerve mobilization in lower limb radiculopathy.
- ❖ In future treatment session would be increased for better improvement.
- ❖ In future studies should use more homogenous study designs, populations and pathologies.

- ❖ In future research study, matching will be done to avoid confounding variable.

Limitations:

A limitation to consider in this analysis is that all participants were willing to participate in a randomized trial of interventions for neck pain. Patients who are not participants in a randomized trial may have had very different beliefs and expectations about specific interventions. In addition, we did not perform a detailed interview with participants to determine the extent to which participants were using somatic/regional judgments, for example, manipulation of the neck would provide benefit but manipulation of the thoracic spine would not. Prior work in placebo studies suggests a somatic specificity to pain-relief responses based on participant expectations for relief in one body part but not another. Consequently, there might have been participants who were expecting to have interventions applied to their neck. However, recent work by Puentedura et al collected very similar data on expectations regarding manipulation and neck pain. These authors found the expectation that “manipulation will help this episode of pain” to be part of a cluster of findings suggestive of favorable prognosis when the patient received cervical spine manipulation. Potentially, the combination of these findings suggests that patients may not differentiate the cervical and upper thoracic spine when considering expectations of benefit.

Additionally, there were a relatively small number of participants who did not believe in manipulation but received the intervention. However, the study was powered enough to find significant effects related to the matched variable. Another limitation of the present study is that therapist expectations or beliefs toward the interventions were not collected in the primary study.

It was limited by the fact daily activities of the subject were not monitored which could have influenced

The samples were collected only from the CRP at Savar and the sample size was small, so the result of the study could not be generalized to the whole population of Spinal Cord Injury in Bangladesh. There was little evidence to support the result of this project in the context to Bangladesh. A convenience sampling was used that was not reflecting the wider population under study. The research project was done by an undergraduate student and it was first research

project for her. So the researcher had limited experience with techniques and strategies in terms of the practical aspects of research. As it was the first survey of the researcher so might be there were some mistakes that overlooked by the supervisor and the honorable teacher.

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VERBAL CONSENT FORM**(Please read out to the participant)**

Assalamualaikum/Namasker, my name is Apurbo Roy, I am conducting a study for partial fulfillment of Master's of Rehabilitation Science degree, titled on **“Expectation of physiotherapy treatment in acute and chronic neck pain patient about pain relieves and competence improvements.”** from Bangladesh Health Professions Institute (BHPI) under medicine faculty of University of Dhaka. I would like to know some personal and other related information about your problem. You are modestly requested to answer some questions that are mentioned in this form. This will take approximately 20-30 minutes. I need to meet you three times to collect entire information.

The aims of the present study were to compare patient expectations regarding pain and functional improvement before and after physiotherapy treatment and to assess patient characteristics, that could perhaps predict changes in expectations. If the study can be completed successfully, it will provide us important information about patient's expectations before and after physiotherapy treatment. and it will be helpful to pain relieves and improve functional activities.

I would like to inform you that this is a purely academic study and obtained information won't be used for any other purpose. All information provided by you will be kept confidential and also the source of information will remain anonymous. Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences or hesitation. You also have the right not to answer a particular question that you don't like or want to answer during interview.

Do you have any questions before I start?

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

YES NO

Signature of the participantDate.....

Signature of the researcherDate.....

Section-1: Socio-demographic information

Code Number:	Date:
1.Participants Name	
2.Age	1. 21-30 years 2. 31-40 years 3. 41-50 years 4. 51-60 years 5. 61-70 years 6. 71-80 years
3.Sex	1.Male 2.Female
4.Occupation	1.Service holder 2.Banker 3.Teacher 4.Doctor 5.Farmer 6.Housewife 7.Day laborer 8.Businessman 9.Student 10.Retired
5.Uses of pain killer	1. yes 2. No
6.Marital status	1. Married 2. Single
7.Religion	1. Islum 4. Buddhism 2. Hinduism 3. Christian

Section-2: Neck disability index questionnaire

Section 1: pain intensity	<p>0=I have no pain at the moment 1=The pain is very mild at the moment 2=The pain is moderate at the moment 3=The pain is fairly severe at the moment 4=The pain is very severe at the moment 5=The pain is the worst imaginable at the moment</p>
Section 2: Personal Care (Washing, Dressing, etc.)	<p>0=I can look after myself normally without causing extra pain 1=I can look after myself normally but it causes extra pain 2=It is painful to look after myself and I am slow and careful 3=I need some help but can manage most of my personal care 4=I need help every day in most aspects of self care 5=I do not get dressed, I wash with difficulty and stay in bed</p>
Section 3: Lifting	<p>0=I can lift heavy weights without extra pain 1=I can lift heavy weights but it gives extra pain 2=Pain prevents me lifting heavy weights off the floor, but I can manage if they are conveniently placed, for example on a table 3=Pain prevents me from lifting heavy weights but I can manage light to medium weights if they are conveniently positioned 4=I can only lift very light weights 5=I cannot lift or carry anything</p>
Section 4: Reading	<p>0=I can read as much as I want to with no pain in my neck 1=I can read as much as I want to with slight pain in my neck 2=I can read as much as I want with moderate pain in my neck 3=I can't read as much as I want because of moderate pain in my neck 4=I can hardly read at all because of severe pain in my neck 5=I cannot read at all</p>
Section 5: Headaches	<p>0=I have no headaches at all 1=I have slight headaches, which come infrequently 2=I have moderate headaches, which come</p>

	<p>infrequently 3=I have moderate headaches, which come frequently 4=I have severe headaches, which come frequently 5=I have headaches almost all the time</p>
Section 6: Concentration	<p>0=I can concentrate fully when I want to with no difficulty 1= I can concentrate fully when I want to with slight difficulty 2=I have a fair degree of difficulty in concentrating when I want to 3=I have a lot of difficulty in concentrating when I want to 4=I have a great deal of difficulty in concentrating when I want to 5=I cannot concentrate at all</p>
Section 7: Work	<p>0=I can do as much work as I want to 1=I can only do my usual work, but no more 2=I can do most of my usual work, but no more 3=I cannot do my usual work 4= I can hardly do any work at all 5=I can't do any work at all</p>
Section 8: Driving	<p>0=I can drive my car without any neck pain 1=I can drive my car as long as I want with slight pain in my neck 2=I can drive my car as long as I want with moderate pain in my neck 3=I can't drive my car as long as I want because of moderate pain in my neck 4= I can hardly drive at all because of severe pain in my neck 5=I can't drive my car at all</p>
Section 9: Sleeping	<p>0=I have no trouble sleeping 1=My sleep is slightly disturbed (less than 1 hr sleepless) 2=My sleep is mildly disturbed (1-2 hrs sleepless) 3=My sleep is moderately disturbed (2-3 hrs sleepless) 4=My sleep is greatly disturbed (3-5 hrs sleepless) 5=My sleep is completely disturbed (5-7 hrs sleepless)</p>

Section 10: Recreation	<p>0=I am able to engage in all my recreation activities with no neck pain at all</p> <p>1=I am able to engage in all my recreation activities, with some pain in my neck</p> <p>2=I am able to engage in most, but not all of my usual recreation activities because of pain in my neck</p> <p>3=I am able to engage in a few of my usual recreation activities because of pain in my neck</p> <p>4=I can hardly do any recreation activities because of pain in my neck</p> <p>5=I can't do any recreation activities at all</p>

Total score = SUM (points for all 10 findings)

Disability in percent = (total score) / 50 * 100

Interpretation:

- Minimum score: 0 with a minimum disability of 0%
- Maximum score: 50 with maximal disability of 100%

Disability	Comment
Minimal(0-20%)	The patient can cope with most living activities. Usually no treatment is indicated apart from advice on lifting sitting and exercise.
Moderate(21 – 40%)	The patient experiences more pain and difficulty with sitting lifting and standing. Travel and social life are more difficult and they may be disabled from work. The patient can usually be managed by Conservative means.
Severe(41 – 60%)	Pain remains the main problem in this group but activities of daily living are affected. These patients require a detailed investigation.
Crippled(61 – 80%)	Pain impinges on all aspects of the patient's life. Positive intervention is required.
Bed bound(81-100%)	Need to exclude exaggeration or malingering.

Questions	Responses
Oswestry Neck Pain Disability Index(Before treatment)	Score:

Section-3: Patient expectations (before Therapist appointment)

Patient Neck Outcome Expectations (PNOE)

1. Compared with now, I think my Neck problem overall next month will be:

- Much worse Worse A little worse The same Better Much better

2. Compared with now, I expect my Neck pain next month will be:

- Much worse Worse A little worse The same Better Much better

3. Compared with now, I expect my ability to use and move my Neck next month will be:

- Much worse Worse A little worse The same Better Much better

(11-NRS)

Describe your Neck problems as they are now:

Pain at rest:

(No pain) 0 1 2 3 4 5 6 7 8 9 10 (Worst pain)

Pain during activity: (All activities, including daily activities and exercise)

(No pain) 0 1 2 3 4 5 6 7 8 9 10 (Worst pain)

Ability to use as well as move your Neck:

(No movement possible) 0 1 2 3 4 5 6 7 8 9 10 (No movement restriction)

Section-4: The Hopkins Symptom Checklist-10

Listed below are some symptoms or problems that people sometimes have. Please read each one carefully and decide how much including today:

Questions	Responses
1. Suddenly scared for no reason	1. Not at all 2. A little 3. Quite a bit 4. Extremely
2. Feeling fearful	1. Not at all 2. A little 3. Quite a bit 4. Extremely
3. Faintness, dizziness or weakness	1. Not at all 2. A little 3. Quite a bit 4. Extremely
4. Feeling tense or keyed up	1. Not at all 2. A little 3. Quite a bit 4. Extremely

5. Blaming yourself for things	1.Not at all 2.A little 3.Quite a bit 4.Extremely
6. Difficulties in falling asleep or staying asleep	1.Not at all 2.A little 3.Quite a bit 4.Extremely
7. Feeling blue	1.Not at all 2.A little 3.Quite a bit 4.Extremely
8. Feelings of worthlessness	1.Not at all 2.A little 3.Quite a bit 4.Extremely
9. Feeling everything is an effort	1.Not at all 2.A little 3.Quite a bit 4.Extremely
10. Feeling hopeless about the future.	1.Not at all 2.A little 3.Quite a bit 4.Extremely

Interpretation:

An average score ≥ 1.85 is considered a valid cut-off value for prediction of mental distress.

Section-1: After five session treatment (Therapist appointment) Patient expectations

Patient Neck Outcome Expectations (PNOE)

1. Compared with now, I think my Neck problem overall next month will be:

Much worse Worse A little worse The same Better Much better

2. Compared with now, I expect my Neck pain next month will be:

Much worse Worse A little worse the same Better Much better

3. Compared with now, I expect my ability to use and move my Neck next month will be:

Much worse Worse A little worse The same Better Much better

Section-1: After ten session treatment (Therapist appointment) the present condition about pain and fuctional activities:

Section-2: Neck disability index questionnaire

<p>Section 1: pain intensity</p>	<p>0=I have no pain at the moment 1=The pain is very mild at the moment 2=The pain is moderate at the moment 3=The pain is fairly severe at the moment 4=The pain is very severe at the moment 5=The pain is the worst imaginable at the moment</p>
<p>Section 2: Personal Care (Washing, Dressing, etc.)</p>	<p>0=I can look after myself normally without causing extra pain 1=I can look after myself normally but it causes extra pain 2=It is painful to look after myself and I am slow and careful 3=I need some help but can manage most of my personal care 4=I need help every day in most aspects of self care 5=I do not get dressed, I wash with difficulty and stay in bed</p>
<p>Section 3: Lifting</p>	<p>0=I can lift heavy weights without extra pain 1=I can lift heavy weights but it gives extra pain 2=Pain prevents me lifting heavy weights off the floor, but I can manage if they are conveniently placed, for example on a table 3=Pain prevents me from lifting heavy weights but I can manage light to medium weights if they are conveniently positioned 4=I can only lift very light weights 5=I cannot lift or carry anything</p>
<p>Section 4: Reading</p>	<p>0=I can read as much as I want to with no pain in my neck 1=I can read as much as I want to with slight pain in my neck</p>

	<p>2=I can read as much as I want with moderate pain in my neck</p> <p>3=I can't read as much as I want because of moderate pain in my neck</p> <p>4=I can hardly read at all because of severe pain in my neck</p> <p>5=I cannot read at all</p>
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	<p>slight pain in my neck</p> <p>2=I can drive my car as long as I want with moderate pain in my neck</p> <p>3=I can't drive my car as long as I want because of moderate pain in my neck</p> <p>4= I can hardly drive at all because of severe pain in my neck</p> <p>5=I can't drive my car at all</p>
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Bed bound(81-100%)	Need to exclude exaggeration or malingering.

Questions	Responses
Oswestry Neck Pain Disability Index(Before treatment)	Score:

(11-NRS)

Describe your Neck problems as they are now:

Pain at rest:

(No pain) 0 1 2 3 4 5 6 7 8 9 10 (Worst pain)

Pain during activity: (All activities,including daily activities and exercise)

(No pain) 0 1 2 3 4 5 6 7 8 9 10 (Worst pain)

Ability to use as well as move your Neck:

(No movement possible) 0 1 2 3 4 5 6 7 8 9 10 (No movement restriction)

To,
The Institutional Review Board (IRB),
Bangladesh Health Professions Institute (BHPI)
CRP-Savar, Dhaka-I 343, Bangladesh.

Subject: Application for Review and Ethical Approval.

Sir,

With due respect, I am Apurbo Roy, student of M.Sc. in Rehabilitation Science program at Bangladesh Health Professions Institute (BHPI) - an academic institute of CRP under Faculty of Medicine, University of Dhaka. I have to conduct a thesis entitled, "**Expectation of physiotherapy treatment in acute and chronic neck pain patient about pain relieves and competence improvements**" under the guidance of Prof. Dr. Md. Mahmudul Haque, Professor community Medicine (Rtd), NIPSOM, Moakhali, Dhaka-1212.

The study involves use of questionnaire that may take 20 min to collect the data. Consent will be taken prior to the interview. The confidentiality will be maintain and they can withdraw themselves at any time according to their desire. Related information will be collected from the patients guide book. Any data collected will be kept confidential.

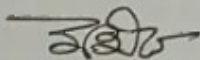
Therefore, I look forward to having your kind approval for the thesis proposal and to start data Collection. I also assure you that I will maintain all the requirements for the study.

Sincerely yours



Apurbo Roy
Roll No.02
Student of M.Sc in Rehabilitation Science (MRS)
BHPI, CRP, Savar, Dhaka-I343, Bangladesh

Recommendation from the thesis Supervisor



Prof. Dr. Md. Mahmudul Haque
Professor community Medicine(Rtd)
NIPSOM, Moakhali, Dhaka-1212.

Date: 14.09.19

To
Head of the Physiotherapy Department
Centre for the Rehabilitation of the Paralysed (CRP)
Savar, Dhaka-1343

Subject: Application for permission to collect data for conduct a research study.

Sir,

I respectfully to state that I am Apurbo Roy, Clinical Physiotherapist of Paediatric Department. I am going to conduct a research title "Expectation of pain and functioning in patients with acute and chronic neck pain at CRP" over September 2019 to December 2019. For this reason I need to permission for collect data from musculoskeletal unit CRP at Savar, Dhaka. Two students of BHPI assist me to collect the data because I will busy to my duty.

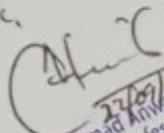
Therefore, I pray and hope that would you kind enough to grant my application and give me the permission for collecting data from musculoskeletal unit.

Yours faithfully



Apurbo Roy
Clinical Physiotherapist
Paediatric unit
CRP, Savar, Dhaka-1343

Approved
Please contact with Sabirul Bari
Senior PT, CRP on counter part of
data collection process.


24/09/19
Mohammad Anwar Hossain
Associate Professor & Head
Physiotherapy Dept., CRP
CRP-Chapain, Savar, Dhaka

To
 Apurbo Roy
 5th Batch M.Sc. in Rehabilitation Science
 Session: 2018-19, Student ID: 181180104
 BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal “**Expectation of Physiotherapy treatment in acute and chronic neck pain patient about pain relieves and competence improvements**” by ethics committee.

Dear Apurbo Roy,
 Congratulations.

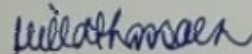
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above-mentioned dissertation, with yourself, as the Principal Investigator. The Following documents have been reviewed and approved:

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

The purpose of the study is to determine the expectation of physiotherapy treatment in acute and chronic neck pain patient about pain relieves and competence improvements. The study involves taking personal details and health related details by having face to face interview, measuring activity level by Oswestry Neck Pain Disability Index, measuring mental distress by Hopkins Symptom Checklist-10 and taking information about expectation before and after physiotherapy treatment which may take 15-20minutes. There is no likelihood of any harm to the participants. The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 09.00 AM on 18th February 2019 at BHPI (20th IRB Meeting).

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

Best regards,



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