

EXTENT OF PROBLEM IN FUNCTIONING DURING PARTICIPATING VOCATIONAL REHABILITATION PROGRAM



By

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Declaration

I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistakes or inaccuracies are my own. I also declare that for any publication, presentation or dissemination of information of the study. Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis presented by me for any other degree or diploma or seminar. No others person's work has been used without due acknowledgement in the main text of the thesis.

The ethical issue of the study has been strictly considered and protected. In case of dissemination of the findings of this project for future publication, it will be duly acknowledged as undergraduate thesis.

Signature: _____ Date: _____

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Abstract

Background: The International Classification of Functioning, Disability and Health (ICF) by the World Health Organization were the foundation for developing WORQ. WORQ is an ICF-based questionnaire to assess and evaluate functioning in vocational rehabilitation setting. The Work Rehabilitation Questionnaire (WORQ) is used to better understand the extent of problems in functioning that people may have due to their health condition(s) and who are undergoing work or VR. In our country perspective, there are no any uses of work rehabilitation questionnaires that measure the extent of problem in functioning during participating vocational rehabilitation program. This study result show the extent of problem in functioning and find the association between the socio-demographic factor and work rehabilitation for persons with disability.

Objective: To measure the level of problem in body function, activities and participation. To find the association between socio-demographic factor and work rehabilitation. To better understand the extent of problems in function that people may have due to their health condition and who are undergoing work or vocational rehabilitation.

Methodology: Researcher has used cross sectional study under Quantitative design for this study to measure the extent of problem in functioning during participating vocational rehabilitation program and measure the association between socio-demographic factors and work rehabilitation. 85 participants selected by using convenient sampling from madhod memorial vocational training institute of Centre for the Rehabilitation of the paralyzed.

Result and Discussion: For the analysis of extent of problem, the main section of WORQ (42 question) were divided into two domain based on ICF core sets for VR: (a) Domain 1: body functions (14 ICF categories); (b) Domain 2: activities & participations (20 ICF categories). Besides the literature was found it on Hand of VR (Selb, M., Finger. M. E. and Esorpizo, R., 2015). The extent of problem in functioning during participating in VR program found is: 0 or no problem found in dressing function and thought function. Mild problem found in energy and drive function, sleep function, temperament & personality function, higher-level cognitive function, hearing function, sensation of pain, Exercise tolerance function, Muscle power function, Seeing function and Protective functions of the skin, Acquiring, Focusing attention, Reading, Making decisions, Undertaking a single task, Carrying out daily routine, Handling stress and other psychological demands, Communicating with receiving nonverbal messages, Conversation, Using communication devices and techniques, Lifting and carrying objects, Fine hand use and Looking after one's health. Moderate Problem found in Vestibular function, Lifting and carrying objects, Walking, Using transportation, Complex interpersonal interactions, Economic self-sufficiency. Sever problem found in Moving around and Driving.

Conclusion: WORQ appears to be a valid, reliable and feasible questionnaire that is easy to administer by health or VR professionals to evaluate work functioning in VR that is based on the ICF. The additional information gained when using the WORQ would contribute to improving interdisciplinary understanding of the patient's situation and therefore support the integrative planning of the return to-work process or engagement in gainful employment.

Key words: *Vocational Rehabilitation, The International Classification of Functioning, Disability and Health, Persons with Disabilities.*

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I would like to thank my senior brothers and sisters who helped me by giving valuable advice and experience. In addition, I am grateful to those people who helped me to translate the Work Rehabilitation Questionnaire from English to Bengali, and also those who corrected the English grammar. Thanks to my entire friend for giving their direct and indirect support. Above all I would like to give special thanks to all the participants for their cooperation of this study.

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List of Acronyms

OT: Occupational Therapy

BHPI: Bangladesh Health Professions Institute

CRP: Centre for the Rehabilitation of the Paralyzed

VR: Vocational Rehabilitation

PWD: Persons with Disabilities

WORQ: Work Rehabilitation of Questionnaire

SCI: Spinal Cord Injury

ICF: The International Classification of Functioning, Disability and Health

WHO: World Health Organizations

NGO: Non-Government Organization

RTW: Returning to Work

IRB: Intuitional Review Board

VAS: Visual Analogue Scale

Chapter 1: Introduction

Bangladesh is one of the most developing countries of the South Asian region. There are many people live in Bangladesh. The current population of **Bangladeshis 166,007,641** as of Monday, April 16, 2018, based on the latest United Nations estimates. The Bangladesh population is equivalent to **2.18%** of the total world population. Bangladesh is ranks number **8** in the list of countries (and dependencies) by population. The population density in Bangladesh is 1278 per Km² (3,310 people per mi²). The total **land** area is 130,170 Km² (50,259 sq. miles). The **36.5 %** of the population is **urban** (60,649,009 people in 2018). The **median age people** in Bangladesh is **26.0years** and the disability rate of Bangladesh is now 10% of total population (Worldmeters, 2018). There are different types of disability seen in Bangladesh. Usually person with disability are often seen as a social burden in our community. So it's needed to establish the PWD's as a partner of development for our country. There are many government and non-government organization worked for disable people. In 2013, Bangladesh government passed a gadget about Persons with Disabilities' Rights and the Protection Act 2013. This Act is in line with the principles of the United Nations Convention on the Rights of Persons with Disabilities (CRPD). The Parliament members and the President of Bangladesh passed the Persons with Disabilities Rights and Protection Act 2013 on 9 October 2013. The Disabled Welfare Act 2001 was revoked with the support of the Charter of the United Nations when Bangladesh activated its new law on disability in 2013. According to the Constitution of Bangladesh, all citizens of the country have the right to enjoy their dignity, fundamental human rights and have social equality. It does not give new rights to persons with disabilities. But the Constitution says that Bangladesh should make sure persons with disabilities have equal rights like everyone else (WDDF., 2013). According to disability right and protection act 2013, the type of disability included: Autism, Physical Disability, Mental illness leading to Disability, Visual Disability, Speech Disability, Intellectual Disability, Hearing Disability, Deaf-blindness, and Cerebral palsy, Multiple Disability, Down syndrome and Other Disability.

PWDs are discriminated in relation to appointment, salary and promotions. 49 % of the respondents surveyed said that PWDs could not get jobs due to their disability and 72 % of the surveyed respondents said that PWDs do not get paid the same wages as non-disabled workers

(Bangladesh Legal Aid & Service Trust BD, 2015). Employees with disabilities commonly face bullying, harassment and misbehavior at work and accessibility in workplaces was cited as an issue. 61% of those surveyed said that workplaces were not accessible for PWDs and 79% said that PWDs do not have the opportunity to work from home using internet, e-communication facilities as an alternative to going to work. Vocational training is one of the most important rights for PWD. Vocational rehabilitation helps to find out work for PWD's according to their interest and type of disability. It will help for Person with disabilities to make them productive and also help to return work as well as other people.

Work is a one of the main source of surviving life in the world. For the different type of disability it hampered our work. Vocational rehabilitation needed to return productive life. Rehabilitation as “a set of measures that assist individuals who experience, or are likely to experience, disability to achieve and maintain optimal functioning in interaction with their environments” (WHO, 2011). Rehabilitation measures target body functions and structures, activities and participation, environmental factors, and personal factors. The vocational training is a movement towards reducing the gap between the normal and the handicapped. Person with disability also need full participation, involvement and co-operation as members of the society. So, the vocational training is an essential for integrating the special people in society and making them productive member of community. It is helpful to enable individuals be not dependent on the society from the early stage of life and makes them beneficial citizens rather than being burden on others.

1.1 Background

The Quality of life in PWD depends, among other thing, on vocational reintegration. The early expectations of person with disability are an important indicator of successful reintegration. Therefore, the periods at the end of the rehabilitation become critical in initiating steps to start vocational rehabilitation (VR). VR is a key process in work disability management to engage or re-engage individuals in work participation and employment form the social context, VR is designed to maximize work participation of persons with disabilities and promote their full participation in the society. However, VR is a complex process as return to work is a complex outcome. To address this complexity, numerous health status measures are used to assess the extent

of problem in functioning during participating VR program associated with disabilities (Ross, J., 2008).

Vocational rehabilitation is a process to overcome the barriers an individual faces when accessing, remaining or returning to work following injury, illness or impairment. This process includes the procedures in place to support the individual and/or employer or others (for example, family and careers) including help to access VR and to practically manage the delivery of VR, and in addition, VR includes the wide range of interventions to help individuals with health condition and/or impairment overcome barriers to work and so return in, return to, or access employment. For Example an assessment of needs, re-training and capacity building, return to work management by employers, reasonable adjustments and control measures, disability awareness, condition management and medical treatment. (A UK framework for vocational rehabilitation. 2004, p.14)

There are three aspects of VR:

- Preparing disadvantaged young people for the world of employment
- Job retention—supporting and maintaining those currently in employment
- Facilitating new work for disadvantaged individuals currently out of employment and unemployed or on ill-health benefits

Vocational Rehabilitation (VR) services are based on individual needs and more widely defined as any goods or services an individual might need to find and keep employment, such as assistive technology devices and services (Elliot & Leung, 2004). Vocational Rehabilitation can take place in a variety of settings, ranging from in-house workshops to supported employment in the community. (Chan et al., 1997). These researchers go on to identify extent of problem in functioning during participating of Vocational Rehabilitation services for persons with disabilities. VR is very impotent for PWD Because of their development.10% of people or 16 million people are in some way to disable. There is few provision for employment or return to work of these 10 % people in our country. It is said that, Disabilities are the burden of society and curse for the development of society. One Study showed 49% of disabled people get no work because of their disability. People with disabilities who are unable to engage in any work because of their disability, needed vocational rehabilitation program for productive life. Currently, there are different types of organizations in Bangladesh for provide vocational rehabilitation of people with disabilities.

Organization who provided Vocational rehabilitation for PWD such as CRP madhod memorial vocational training institute, UCEF, Mirpur-2,BPK (Bangladesh Protibondi Kormoshonsthan) Uttara, Akter Furniture Ltd Shingi, Manikgong, CDD (Center for Disability and Development) Saver, AID (Action in development) Zinaidho, KRR, VARK Savar etc. Various types of vocational training are offered in these organizations such as tailoring, Sewing operating, electronics, garments, Computer training etc. Andalso offers other training facilities depends on organizational aim and client's interest. CRP madhod memorial vocational training institute provided different vocational training Such as Computer, electronics, linking, tailoring, garments, sewing operating, Bee and mushrooms cultivation etc. This institution provides free training for PWD's and also provides food, shelter and health care facilities and also provides job opportunity according to their training.

As a part of rehabilitation program, persons with disability involved in vocational training. It could be all disability or SCI or others. So it could be needed to use a tool for measuring vocational Rehabilitation. During participating in vocational Rehabilitation program, Persons with Disabilities face some problems in functioning. These problems are based on their disabilities including their body function and structure, activities and participation, and also environmental factor. So a questionnaire needed for find out the extent of problems during participating VR program. If this type of questionnaire are available to use than it will be helpful rather than develop. The International Classification of Functioning, Disability and Health (ICF) by the World Health Organization were the foundation for developing WORQ. WORQ is an ICF-based questionnaire to assess and evaluate functioning in vocational rehabilitation setting. The Work Rehabilitation Questionnaire (WORQ) is used to better understand the extent of problems in functioning that people may have due to their health condition(s) and who are undergoing work or VR.

In our country perspective, there are no any uses of work rehabilitation questionnaires that measure the extent of problem in functioning during participating vocational rehabilitation program. This study result show the extent of problem in functioning and find the association between the socio-demographic factor and work rehabilitation for persons with disability.

1.2 Justification:

There are no scientific studies that have found in the similar interest even in this subcontinent as far the investigator searched. This study is significant in Bangladesh. It's the first time to use WORQ for measuring extent of problem in vocational setting. For the better understanding of participants, investigator translated the WORQ (Interviewer administered) to Bengali. WORQ Consist the component of ICF. Therefore, investigator easily gets the research aim and objective by using WORQ. This Study helps to identify extent of problem in functioning during participating vocational rehabilitation program. This study would be potential for investigate the association between socio-demographic factor and work rehabilitation. Study will be helpful for vocational training center for improving their service and helps to support their trainer for physical and mental health. This study also finds out the present situation of the parson with disability and their barrier that affect function. Vocational Rehabilitation (VR) is an essential element of interventions aimed at re-integrating people with work disability into work. In this context, vocational retraining is of special importance. However, the success of vocational retraining, represented by subsequent returning to work (RTW), is only to a limited extent attributable to intervention quality. Apart from methodical influences participant-related as well as context-related attributes are discussed as influencing factors. When investigator find the result, able to give a discussion about extent of problems and how to improve the service in any VR setting for reduce the extent of problem during participation in VR.

1.3 Aim of the Study:

Measure the extent of problem in functioning during participating vocational rehabilitation program in Bangladesh and measure the association between socio-demographic factors and work rehabilitation.

1.4 Objectives of the Study:

- To find out/ figure out/ investigate the level of problem in body function, activities and participation.
- To find the association between socio-demographic factor and work rehabilitation.
- To better understand the extent of problems in function that people may have due to their health condition and who are undergoing work or vocational rehabilitation.

1.5 Operational Definition:

- Vocational training: Vocational training which aims to equip people with knowledge, know-how, skills and/or competences required in particular occupations or more broadly on the labor market.

(Adapted from European Training Foundation, 1997)

- Socio-demographic characteristics include, for example, age, sex, education, migration background and ethnicity, religious affiliation, marital status, household, employment, and income.

Chapter 2: Literature review

2.1 Disability:

Disabilities are an umbrella term, covering impairments, activity limitations, and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations.

Disability is thus not just a health problem. It is a complex phenomenon, reflecting the interaction between features of a person's body and features of the society in which he or she lives. Overcoming the difficulties faced by people with disabilities requires interventions to remove environmental and social barriers.

People with disabilities have the same health needs as non-disabled people – for immunization, cancer screening etc. They also may experience a narrower margin of health, both because of poverty and social exclusion, and also because they may be vulnerable to secondary conditions, such as pressure sores or urinary tract infections. Evidence suggests that people with disabilities face barriers in accessing the health and rehabilitation services they need in many settings. (WHO, 2011).

2.2 The International Classification of Functioning Disability, and Health and the ICF Core Sets for Vocational Rehabilitation

The main goal of vocational rehabilitation (VR), is to enable workers, to keep their jobs or to return to gainful employment after an accident, injury or onset of an unfavorable health condition (Escorpizo et al., 2011). VR, including return-to-work strategies, is an important element in disability management as stated in the International Labour Organization's code of practice on managing disability in the workplace. For most individuals employment ensures adequate economic resources for covering financial needs and full participation in the society. In addition, it provides the basis for the individual's social status, social role and is often crucial to self-confidence and identity. In contrary, being unemployed often leads to the inability to meet financial obligations, causing a negative impact on organizing daily activities and social participation. Depressive symptoms and anxiety, along with adopting unhealthy lifestyle, problems in family- and social-relationships, and increase in suicide rate may be associated with being off work (Rosenthal et al., 2012).

The International Classification of Functioning, Disability and Health (ICF) provides a common reference frame and language to describe, assess and document human functioning in vocational rehabilitation and may therefore provide a suitable base for developing standardized assessment instruments.

The ICF was endorsed by the World Health Assembly in May 2001 as a reference framework and language to describe and measure functioning and disability of individuals whose Body Function, Body Structure, Activities, and Participation may be impaired, limited, or restricted due to a health condition (WHO, 2001). The classification was developed to be used by health professionals, clients, and other stakeholders in the field of health and disability, independent of the setting, culture, and context. The classification contains 1,424 categories. Since its approval by the WHO, several studies have been conducted supporting the use of the ICF in the context of work or vocational rehabilitation. To enhance the usability of the ICF in clinical practice, carefully selected short lists of ICF categories, so-called ICF Core Sets, were developed by the WHO in collaboration with the ICF Research Branch. The included categories are chosen to cover the most influential functioning properties of a health condition or a specific setting. (Selb et al., 2014), the development of ICF Core Sets incorporates a structured set of processes with four preparatory studies: a systematic review of the literature, an expert survey, a cross-sectional study, and qualitative patient focus groups or interviews. The final selection of ICF categories for inclusion

in the ICF Core Set is done in a multistage consensus process involving experts from all WHO regions. In an additional process, a “Generic Set” was developed on a statistical basis. The Generic Set contains a list of seven ICF categories that depicts the core functioning of persons with any health condition and setting (Cieza et al., 2014). In 2010 the ICF Core Set for vocational rehabilitation was developed as the first setting-specific ICF Core Set. Its aim was to provide the users with a list of relevant ICF categories that can be used to describe and document the functioning of individuals who are undergoing vocational rehabilitation. The Core Set for vocational rehabilitation consists of a comprehensive list of 90 and a brief list of 13 ICF categories (Finger et al., 2012). The Brief ICF Core Set for vocational rehabilitation, supplemented by the seven categories of the Generic Set, represents the minimal number of domains that should be evaluated or report on in any field of vocational rehabilitation. The Comprehensive ICF Core Set for vocational rehabilitation, on the other hand, can be seen as a pool of domains from which additional categories can be chosen to construct a list that is adapted to the needs of the specific health-care setting, program, or even to the needs of an individual client (Table 1).

Table 1: Categories of the Brief ICF Core Set for VR and generic Set

ICF code	ICF text	Source of categories	
		Brief set	Generic Set
b130	Energy and drive functions	✓	✓
b152	Emotional function		✓
b164	Higher-level cognitive functions	✓	
b280	Sensation of pain		✓
b455	Exercise tolerance functions	✓	
d155	Acquiring skills	✓	
d230	Carrying out daily routine		✓
d240	Handling stress and other psychological demands	✓	
d450	Walking		✓
d455	Moving around		✓
d720	Complex interpersonal interactions	✓	
d845	Acquiring, keeping and terminating a job	✓	

d850	Remunerative employment	✓	✓
d855	Non-remunerative employment	✓	
e310	Immediate family	✓	
e330	People in position of authority	✓	
e580	Health services, systems and policies	✓	
e590	Labor and employment services, systems and policies	✓	✓

The development of the ICF Core Set for vocational rehabilitation was a first attempt toward the integration of the ICF in clinical vocational rehabilitation practice. However, it was a challenge to use it in daily practice. The categories of the ICF essentially indicate what to assess when evaluating functioning (Stucki et al., 2001). By employing the “WHO ICF qualifiers,” one might also be able to assess the magnitude of a problem in functioning. However, the lack of reliability and sensitivity of the WHO ICF qualifiers and the lack of guidelines on how the ICF categories can be assessed pose a difficulty in interpreting change in the context of intervention. Another challenge when using ICF categories in clinical practice is given by their broad definitions and nonprofessional-specific language. Using the ICF classification requires an extent of training of stakeholders that should not be underestimated. Although more and more professionals rely on the ICF when they design new intervention programs or assessment instruments, the implementation of the ICF remains non-uniform and mostly setting specific (Glassel et al., 2012). To alleviate the use of the ICF in vocational rehabilitation, ICF-based instruments that are easy to administer and interpret by all involved professionals and the clients may therefore lead to improved interdisciplinary communication and common understanding of functioning abilities and problems across vocational rehabilitation settings (Rauch, A., Cieza, A. & Stucki, G., 2012). ICF Core Sets are evidence based short lists of ICF categories, selected to cover the most relevant functioning properties of a health condition or specific health setting. ICF Core Sets were intended to enhance the usability of the ICF in clinical practice.

2.3 ICF-Based Work Rehabilitation questionnaire

After a review of instruments currently used in vocational rehabilitation, Investigator found a WORQ that was designed to capture the functioning domains relevant in vocational rehabilitation

given the diverse health conditions and return-to-work (RTW) settings. The key to an effective measurement instrument design is to know exactly what it should measure. The measure has to be designed and then performed for a predetermined purpose (Krosnick, J. & Presser, S., 2010). The purpose of these instruments that measure as follows:

1. Assesses work functioning in individuals participating in vocational rehabilitation, and it should be based on ICF.
2. Is used and understood in any vocational rehabilitation setting or by any responsible professional and by the clients.
3. Is used independently of any health condition.
4. Can be administered at any time point within the continuum of the return-to work process.

As a consequence of these conditions, the WORQ had to be independent of any specific professional skills or clinical tests. It is a generic instrument to gain a fast and comprehensive overview of the functioning problems that an individual experiences during his or her return-to-work processes. Therefore, WORQ was designed as a questionnaire that is client rated and interviewer administered. The first version of WORQ was developed in three phases:

1. First, the relevant domains to assess functioning in the context of vocational rehabilitation, represented by ICF categories, were identified.
2. Questions to assess the selected ICF categories were worded in English. The scaling for the response options was decided on. The WORQ was cognitively tested.
3. Finally, the WORQ was cross-culturally translated from English to German.

The International Classification of Functioning, Disability and Health (ICF) by the World Health Organization were the foundation for developing WORQ. The Work Rehabilitation Group of the Swiss Paraplegic Research and the ICF Research Branch located in Nottwil, Switzerland first developed the international ICF Core Set for Vocational Rehabilitation in 2010, on which the development of WORQ was based. WORQ was found to be valid, reliable, and feasible in different populations. Further psychometric testing is currently being performed.

WORQ comes in two versions: interviewer-administered and self-reported. WORQ is available in English and German. Translation and cross-cultural adaptation to other major languages are being planned.

2.4 Scaling of the Questionnaire

As response options for Section two of the WORQ, a visual-analogue scale from 0 to 10 (VAS-10) with anchor points of 0 (no problem) and 10 (complete problem) was chosen to rate the functioning questions (Hjermstad et al., 2011). This scale was chosen to obtain scores that could be used to look at changes within subjects and could be displayed easily as functioning profiles by translating them into the ICF qualifiers. It was also important to find a scale that was easy to understand and enabled the clients a free rating of their problems. Although VAS is widely used as a type of response options for multiple item scales, it has to be taken into consideration that the VAS has no true unit of measurement and, accordingly, is ordinal only (Forrest, M. & Anderson, B., 1986). VAS scores should always be analyzed as non-continuous data using statistical methods for ordinal data (Kersten, P. Kucukdeveci, A. & Tennant. A., 2012).

Chapter 3: Methodology

3.1 Study design

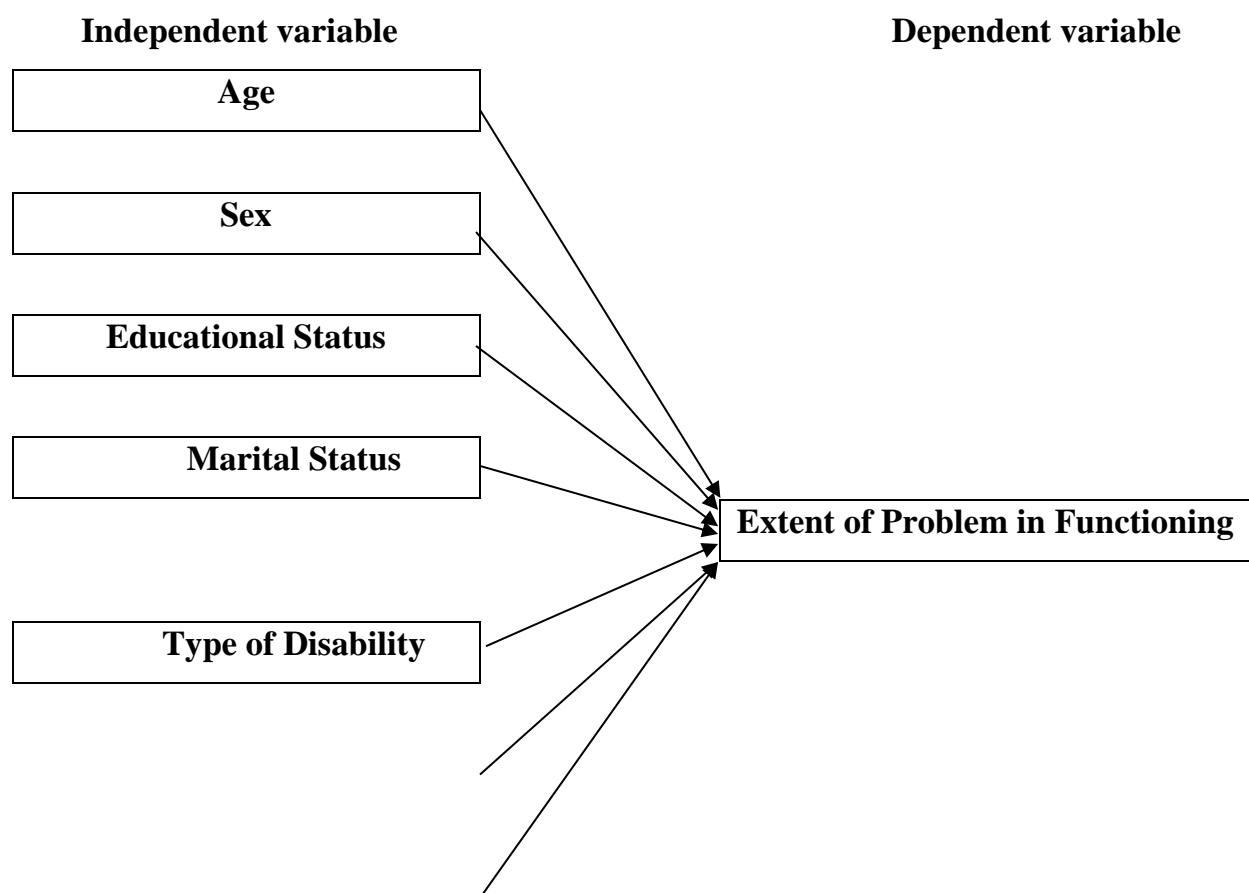
Researcher has used cross sectional study under Quantitative design for this study to measure the extent of problem in functioning during participating vocational rehabilitation program and measure the association between socio-demographic factors and work rehabilitation. Quantitative methods aim to emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon. This Quantitative study is descriptive analysis. The quantitative study has conducted by using face to face interview with a structured question to describe the extent of problem in functioning during participating vocational rehabilitation program lives in their own words by data analyzed. 85 participants selected by using convenient sampling from madhod memorial vocational training institute of Centre for the Rehabilitation of the paralyzed. Researcher

collected the information of participant's opinions because each participant's opinion is unique. Quantitative analysis is a research method that has come into wide use in health studies.

3.2 Study setting

The study conducted in madhod memorial vocational training institute at CRP, which is situated in Saver, about 25 km away from the capital city of Dhaka. CRP is a Non-Government Organization (NGO) that treats and rehabilitates persons with disabilities (PWD) regardless of their socio-economic means and aims to improve the quality of life of PWD in Bangladesh.

3.3 Conceptual framework



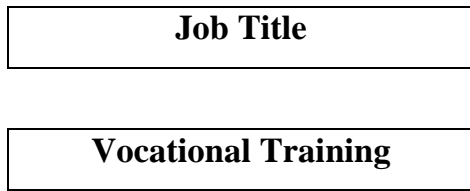


Figure 1: Conceptual Framework

3.4 Participant's selection Procedure

Searching an appropriate number and kind of people who are a part of this study is called —Sampling (Hicks, 1999). Researcher used the convenient sampling because the participants of this study were selected conveniently from the madhod memorial vocational training institute of Centre for the Rehabilitation of the paralyzed (CRP) at saver and it depended on inclusion and exclusion criteria for the participants. And it is conformed that there was no chance of bias.

3.5 Inclusion criteria:

- Participants those has been participating vocational training program.
- Permanent disability,
- Above the age of 18.
- Including wheel chair user.

3.6 Exclusion criteria:

Mental disability.

Under the age of 18.

3.7 Study population and sampling

The equation of sample size for my dissertation calculation is given below:

$$n = \frac{z^2 p (1 - p)}{d^2}$$

=348

Here...

n = sample=??

Z= The standard normal deviation usually set 1.96 which corresponded to 95% confidence level.

P= 0.06 (P= prevalence)

d= Degree of accuracy desired. Usually set 0.05%

According to formula of sample size calculation for a cross sectional study, it would require total 85 subjects and the researcher could manage the 85 subjects as to fulfill the requirement.

Population of this study was selected by Persons who has participating vocational rehabilitation program at CRP. Researcher selected the persons with disability by the used of Nonrandom sampling selection procedure. For this type of study the sample size was 85 selected.

3.8 Data collection method

To measure the extent of problem in functioning during participating vocational rehabilitation program in Bangladesh, data was collected by using structural and developed questionnaire. Face to face interview is more innovate allowing the interviewer to interact directly and develop rapport with the interview (Bailey, 1997, p.96). The researcher was used face-to-face interview with a structured question for data collection. The researcher was used to quantitative methodology and ask pre- set, Specific questions addressing a variety of issues in relation to find out the extent of

problem in functioning. Researcher used WORQ for data collection. It is useful because this questionnaire ensures to take all the information that needed for this study.

3.9 Data collection tools

Structured questionnaire: Work Rehabilitation questionnaire

The WORQ was developed Work Rehabilitation questionnaire which is based on ICF. Permission was gained to use this standard questionnaire to determinate the extent of problem in functioning during participating vocational rehabilitation program. The questionnaire is allowed to identifying extent of problem in a quick and standardized way. It has two version interviewer-administered and self-reported. Researcher used interviewer administered version by translated into Bengali. Bangla translation of work rehabilitation questionnaire helps to participants for their better understanding of each question.

Following instruments was used during data collection period for the purpose of accumulating data from the participants and fulfill the aim and objectives of the study.

- Consent form and Information sheet
- Work Rehabilitation questionnaire
- Paper
- Pen
- Pencil
- Eraser etc.

3.10 Data collection procedure

In the data collection procedure, first the researcher developed Bangla translation of WORQ for collecting data to fulfill the Objectives. It take 25min per interview for take information and documenting. The researcher met with participants to make sure that they were willing to participate in interview. Then the researcher explained the purpose of the research. Before data collection the researcher selected a quiet place where participant feel comfort and able to give adequate attention during interview. Researcher ensured that nobody will be present during interview time at the interview place. During interview trust was very important element for getting the exact answer. Interview conducted through Bangla so the participants can understand easily.

3.11 Data analysis procedure

The researcher selected quantitative analysis to analyze the data. The descriptive analysis was performed to describe the sample. The data was analyzed by using Statistical Package for the Social Sciences (SPSS) windows version 16.0. Descriptive statistics are used to describe the basic features of the data in the study. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data. Chi-square test was also performed to measure the association between two variables. The results were presented with the use of simple percentage (%). The collected data was illustrated with tables and pie charts also bar diagram.

At the beginning of the data analysis, researcher set the data on SPSS. Then analysis the socio-demographics and background information. Then measure the extent of problem in functioning of all participants and also separately SCI patients during participating VR program.

Researcher also performed the Pearson Correlation coefficient(r) test for find out the significant of the study.

3.12 Informed Consent

The researcher used an information sheet and consent form to take the participant's consent for participating in the study. Researcher informed all participants about details of the study by the information sheet which included the aim, objectives, way of collecting data from the participant and the ethical considerations of the study. Researcher gave opportunity of the participant to read the information sheet if person with educated, but in case of the participant who was not educated than researcher read that out to them.

3.13 Ethical considerations

The researcher maintained some ethical considerations like:

- The researcher will gain permission from the ethical committee to conduct the research.
- Researcher taken permission from academic institute, Vocational rehabilitation center for taken data.
- Ethical consideration were ensured by means of an informed consent letter.
- Written consent were gain from the study participant and they had the right to withdraw from the study at any time.

- Confidentiality of personal information was strictly maintained. The information were gathered from the participants anonymously.
- The participants informed before to participatee in the study.
- A written consent form used for permission of each participant for this study.
- The researcher ensured that all participants were informed about their rights and about the aim of this study.
- All rights of the participant reserved and researcher were accountable to the participant to answer any type of study related question.

Chapter 4: Result

Finding of the Study

The following chapter details the finding of the extent of problem in functioning during participating VR program including Socio-demographic characteristics. All data results are rounded to nearest percentage. The Valid response for each question has been used.

Descriptive Analysis of Socio-demographic and background information:

Table 2: Distribution of respondents according Socio-demographic and background information.

Distribution of respondents according to **type of vocational training.**

type of vocational training	N	Percent (%)
Computer	24	28.2
sewing operator	14	16.5
Linking	10	11.8
Tailoring	15	17.6
Electronics	15	17.6
Garments	6	7.1
bee & mashrooms cultivation	1	1.2
Total	85	100.0

Distribution of respondents according to **Physical problem.**

Physical Disability	38	44.7
SCI	24	28.2
Polio	6	7.1
GBS	3	3.5
MND	2	2.4
Amputation	4	4.7
Deaf Blindness	1	1.2
Speech & Hearing Disability	5	5.9
Visual Disability	1	1.2
Multiple Disability	1	1.2
Total	85	100.0

Distribution of respondents according **Age.**

16-20	19	22.4
21-25	37	43.5
26-30	22	25.9
31-35	4	4.7
36-40	2	2.4
46-50	1	1.2
Total	85	100.0

Distribution of respondents according **Sex.**

Male	49	57.6
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Female	36	42.4
Total	85	100.0
Distribution of respondents according marital status.		
Never married	54	63.5
Married	30	35.3
Divorced	1	1.2
Total	85	100.0
Distribution of respondents according last work status.		
Employed	3	3.5
student or training	82	96.5
Total	85	100.0
Distribution of respondents according Educational Status.		
Less than primary school	5	5.9
primary school	6	7.1
Secondary school	41	48.2
college/university	30	35.3
post graduate degree	3	3.5
Total	85	100.0
Distribution of respondents according to current work Status.		
Not working due to health condition	6	7.1
Not working due to ongoing vocational rehabilitation	79	92.9
Total	85	100.0
Distribution of respondents according Vocational rehabilitation program: are you currently.		
Engaging in vocational training	47	55.3
Engaging in programs related to preparation for employment	12	14.1
Looking for a new job or work	26	30.6
Total	85	100.0
Distribution of respondents according to Job title.		
Teacher	4	4.7
Student	51	60.0
Cook	2	2.4
Shopkeeper	6	7.1
Farmer	3	3.5
garments worker	3	3.5
Homemaker	5	5.9
Driver	3	3.5
Businessman	3	3.5
hospital job	1	1.2
Carpenter	2	2.4
electric engineer	2	2.4
Total	85	100.0

Distribution of respondents according to business, industry or service is (or was) **your job in**

Cardbord box manufacturing	2	2.4
retail shoe store	8	9.4
secondary school	7	8.2
dairy farm	4	4.7
Other	64	75.3
Total	85	100.0

Distribution of respondents according to work doing (**Type of work**)

Teaching	3	3.5
Learning	53	62.4
Selling	9	10.6
Managing	9	10.6
Operating	4	4.7
Driving	2	2.4
Linking	2	2.4
Making	3	3.5
Total	85	100.0

Distribution of respondents according **future job plan**

assistant teacher	2	2.4
computer related job	23	27.1
sewing operating	14	16.5
Linking	10	11.8
social worker	1	1.2
Tailoring	14	16.5
electronics related job	14	16.5
garments work	6	7.1
bee and mushroom	1	1.2
Total	85	100.0

Distribution of respondents according to taking **medical or therapeutic treatment**

Yes	29	34.1
No	55	64.7
not applicable	1	1.2
Total	85	100.0

Distribution of respondents according to **current restriction**

Yes	22	25.9
No	62	72.9
not applicable	1	1.2
Total	85	100.0

Distribution of respondents according to receiving **vocational intervention**

vocational training	78	91.8
work place adaptation	7	8.2
Total	85	100.0

Distribution of respondents according to **family support**

Yes	68	80.0
No	17	20.0
Total	85	100.0

Distribution of respondents according to **boss support**

Yes	2	2.4
No	44	51.8
not applicable	39	45.9
Total	85	100.0

Distribution of respondents according to govt. or non-govt. support for find appropriate job.

Yes	8	9.4
No	77	90.6
Total	85	100.0

Distribution of respondents according to **Disability allowance.**

Yes	30	35.3
No	55	64.7
Total	85	100.0

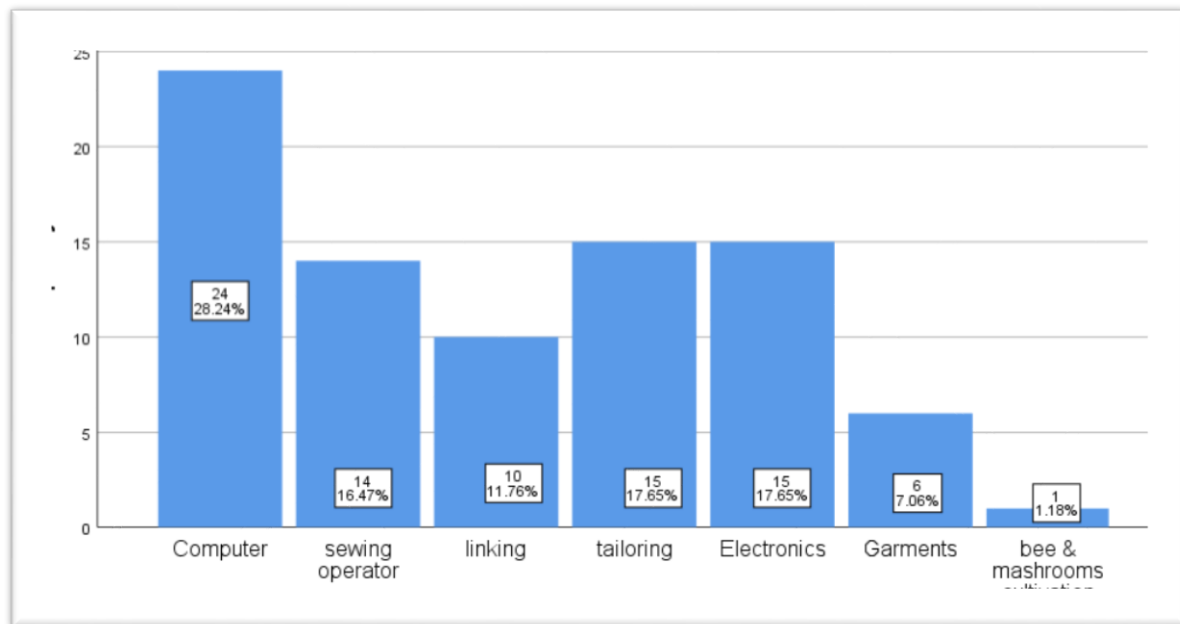


Figure 2: Type of vocational training

In the table 2 and figure 1 most of the participant are taking computer training (28.2%) among 85 participants. The percentage of participants with tailoring and electronics are 17.6% and sewing operating are 16.5%. 11.7% are Linking 7.06% garments and 1% others.

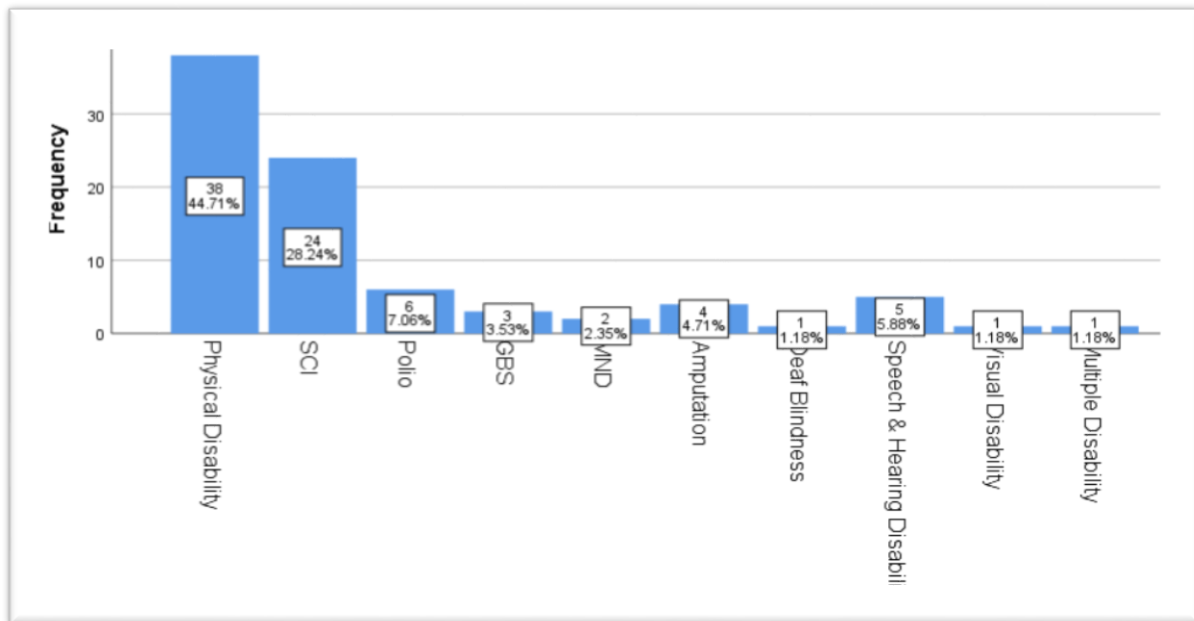


Figure 3: Physical Problem

Table 2 and figure 3 showed that most of the respondents are physical disability (44.71%) among 85 respondents. 28.24% respondents had SCI. 7.06% respondents had Polio. 5.88% respondents had Speech & Hearing Disability, 4.71% respondents had amputee. 3.53% had GBS, 2.35% had MND and 1.18% had visual problem and 1.18% had multiple Disability and 1.18% had deaf-blindness.

Table 2 showed that most of the respondents are 21-25 years old (43.5%) among 85 respondents. 22 respondents had 26-30 years old and percentage had 25.9%. 19 respondents had 16-20 years old and percentage had 22.4%. 4 respondents had 31-35 years old and percentage had 4.7%. 2 respondents had 36-40 years old and percentage had 2.3%. 1 respondents had 46-50 years old and percentage had 1.2%.

In the table 2, most of the participant are male (57.7%) among 85 participants. The percentages of female participants are 42.3% and number of 36 among 85 participants.

In the table, most of the participant are never married (63.5%) and number of 54 among 85 participants. 36 percent are married and number of 30, 1 is divorced and the divorced percentage is 1.2 percent.

82 respondents (96.5%) are student or taking training among 85 participants. 3 respondents (3.5%) are employed of their last work status.

Table 2 showed that most of the respondents had attended secondary education (48.2%) among 85 respondents. 36% respondents had attend college/university education. 7.06% respondents had attend primary school education. 5.9% respondents had attend less than primary school education and 3.5% respondents attend post graduate degree.

Table 2 showed that most of the respondents had not working due to ongoing VR (93%) among 85 participants. 7.2% had not working due to health condition.

Table 2 indicated that 55.3% respondents are involved VR program because for engaging vocational training activities such as in acquiring knowledge and skills for a job, including school training. 30.6% respondents are involved VR program because of looking for a new job or work and 14.1 % are engaging in programs related to preparation for employment.

Table 2 showed that the current job or profession/ last job or professions respondents participate in. 60.0% are student among of 85 participants. 7.1 % are shopkeeper. 5.9% are homemaker. 4.7% are teacher. 3.5% are driver, businessman, farmer, garments worker. 2.4% are cook, carpenter and electronic engineer. 1.2% are hospital job.

Table 2 showed that respondents 2.3% are cardboard box manufacturing, 4.7% are dairy farm, 8.2% are secondary, 9.4% are retail shoe store and most of the respondents are other 75.3% from this feature.

Table 2 showed that most of the respondents are learning (60.5%) among 85 respondents. 10.6% are selling and managing. 4.7% are operating. 3.5% are teaching and making. 2.4% are driving and linking.

Table 2 showed that most of the respondents of participants about their future job plan are computer related job (27.1%) among 85 respondents. 16.5% respondents had sewing operating, tailoring and electronics related job. 11.8% respondents had linking. 7.1% respondents had garments work. 2.4% respondents had assistant teacher and 1.2% respondent had bee & mushroom cultivation.

Table 2, most of the participants are not taking medical or therapeutic treatment (64.7%) among 85 participants. 34.1% are takes medical or therapeutic treatment.

Table 2, most of the participants had current restriction (72.9%) among 85 participants. 25.9% had not any current restriction.

Table 2 showed that 91.8% respondents are receiving vocational intervention for vocational training and 8.2% are receiving vocational intervention for work place adaptation.

Table 2 showed that 80% participants get family support and 20% participants not get family support.

Table 2 showed that 2.3% participants get boss support and 51.8% participants not get boss support .not applicable for 45%.

9.4% participants get f govt. or non-govt. support and 90.6% participants not get govt. or non-govt. support.

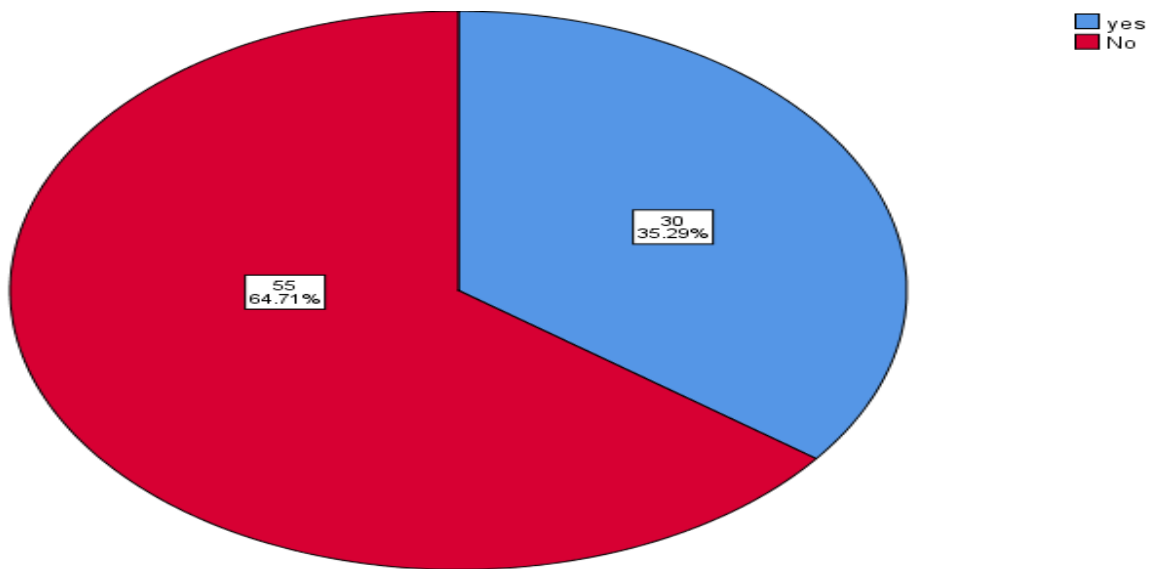


Figure 4: Disability allowance

Table 2 and figure 4 showed that 35.3% participants get disability allowance and 64.7% participants not get disability allowance.

Descriptive analysis of extent of problem in body function

The administered version of WORQ contains total 59 questions. Part 1, Number of 17 question described socio-demographic and background information. Part 2 contains 42 question which measure ICF component body function, activities and participation. WORQ measured 45 ICF categories; 15 categories for body function, 26 category for activities and 4 environmental factors (Finger, M.E., 2012).

In part 2, Number of 18 questions measured 14 ICF categories of body function and number 22 questions that measured 20 ICF categories activities and participations.

Table 3: Overview of WORQ included in ICF categories and extent of problem in body functions.

WORQ items	ICF category being measured	Sum	Mean	S.D
Overall in the past, to extent did you have problems.....not feeling rested or refreshed during the day?	b 130 Energy and drive functions	168.00	1.9765	2.55407
... sleeping, such as falling asleep, waking up frequently during the night or waking up too early in the morning?	b 134 Sleep functions	205.00	2.4118	2.65157
... remembering to do important things?	b 144 Memory functions	106.00	1.2471	1.99944

... your usual daily activities because you felt sad or depressed?	b 152 Emotional functions	231.00	2.7176	2.65299
... your usual daily activities because you felt worried or anxious?	b 152 Emotional functions	298.00	3.5059	3.07301
... being irritable?	b 126 Temperament & personality functions	411.00	4.8353	2.78109
... your temper?	b 126 Temperament & personality functions	225.00	2.6471	2.72862
... your self-confidence?	b 126 Temperament & personality functions	127.00	1.4941	2.01556
... thinking clearly?	b 160 Thought functions	64.00	.7529	1.61765
... analyzing and finding solutions to problems in day to day life?	b 164 Higher-level cognitive functions	149.00	1.7529	1.93899
... hearing?	b 230 Hearing functions	131.00	1.5412	3.04550
... keeping your balance while maintaining a position or during movement?	b 235 Vestibular functions	378.00	4.4471	6.07984
... bodily aches or pains?	b 280 Sensation of pain	296.00	3.4824	3.21682

... general endurance when performing physical activities?	b 455 Exercise tolerance functions	317.00	3.7294	2.24345
muscle strength?	b 730 Muscle power functions	207.00	2.4353	2.66569
... skin problems, such as broken skin, ulcers, bedsores and thinning of skin?	b 810 Protective functions of the skin	107.00	1.2588	2.25279
... seeing and recognizing an object at arm's length?	b 210 Seeing functions	84.00	.9882	2.28606
... seeing and recognizing a person you know across the road (distance of about 20 meters or 66 feet)?	b 210 Seeing functions	100.00	1.1765	2.26871
Total: 18 question	14 ICF category measured	3604.00	42.4000/ 18=2.35	18.56533

Total 18 WORQ items measured the 14 ICF category of body function. Each questions mean for total participants are calculated. Categorized the Visual Analogue Scale (0-10) according to severity of extent problem in functioning, 0 or less than 0 means no problem in functioning, 1 to 3 means mild problem in functioning, 4 to 6 means moderate problem in functioning, 7 to 9 means sever problem in functioning and 10 means complete problem in functioning.

So 0 or no problem found in Thought function.

Mild problem found in energy and drive function, sleep function, memory function, emotional function, temperament & personality function, higher-level cognitive function, hearing function, sensation of pain, exercise tolerance function, muscle power function, seeing function and protective functions of the skin.

Moderate Problem found in vestibular function.

Table 4: Overview of WORQ included in ICF categories and extent of problem in activities and participation.

WORQ items	ICF category being measured	Sum	Mean	S.D
... learning a new task (e.g., learning a new game, learning how to use the computer, learning how to use a tool, etc.)?	d 155 Acquiring skills	195.00	2.2941	2.35950
... focusing attention on a specific task or e.g. filtering out distractions such as noise?	d 160 Focusing attention	224.00	2.6353	2.28268
... reading?	d 166 Reading	162.00	1.9059	3.03010
... making decisions?	d 177 Making decisions	206.00	2.4235	2.52783
... starting and completing a single task such as making your bed or cleaning up your desk or workplace?	d 210 Undertaking a single task	185.00	2.1765	2.30515
... carrying out your daily routine or day to day activities?	d 230 Carrying out daily routine	143.00	1.6824	1.93472
... handling stress, crises, or conflict	d 240 Handling stress and other psychological demands	247.00	2.9059	1.96168

... understanding body gestures, symbols and drawings?	d 315 Communicating with receiving nonverbal messages	125.00	1.4706	1.97356
... starting and maintaining a conversation?	d 350 Conversation	107.00	1.2588	2.48401
... using communication devices such as using a telephone, telecommunication devices, and computers?	d 360 Using communication devices and techniques	94.00	1.1059	2.13265
... lifting and carrying objects weighing up to 5kg?	d 430 Lifting and carrying objects	288.00	3.3882	3.54929
... lifting and carrying objects weighing more than 5kg?	d 430 Lifting and carrying objects	441.00	5.1882	3.57736
... fine hand use such as handling objects, picking up, manipulating and releasing objects using the hand, fingers, and thumb?	d 440 Fine hand use	87.00	1.0235	2.26766
... walking a short distance (less than 1 km)?	d 450 Walking	404.00	4.7529	4.15161
... walking a long distance (more than 1 km)?	d 450 Walking	528.00	6.2118	3.95840
... moving around including crawling, climbing, and running?	d 455 Moving around	605.00	7.1176	4.17878
... using transportation as a passenger ?	d 470 Using transportation	505.00	5.9412	3.97718
... driving a car or any form of transportation?	d 475 Driving	647.00	7.6118	3.57603

... getting dressed?	d 540 Dressing	54.00	.6353	1.68217
... looking after your health such as maintaining a balanced diet, getting enough physical activity and seeing your doctor as needed?	d 570 Looking after one's health	176.00	2.0706	1.88217
... your relationships with people?	d 720 Complex interpersonal interactions	133.00	1.5647	1.84163
... having sufficient money to cover your cost of living?	d 870 Economic self-sufficiency	390.00	4.5882	3.57336
Total 22 question	20 ICF category measured	5946.00	69.9529/ 22 =3.18	24.37012

Total 22 WORQ items measured the 20 ICF categories of activities and participation. Each questions means for total participants are calculated. Categorized the Visual Analogue Scale (0-10) according to severity of extent problem in functioning, 0 or less than 0 means no problem in functioning, 1 to 3 means mild problem in functioning, 4 to 6 means moderate problem in functioning, 7 to 9 means sever problem in functioning and 10 means complete problem in functioning.

So 0 or no problem found in dressing function.

Mild problem found in acquiring skills, focusing attention, reading, making decisions, undertaking a single task, carrying out daily routine, handling stress and other psychological demands, communicating with receiving nonverbal messages, conversation, using communication devices and techniques, lifting and carrying objects, fine hand use, looking after one's health,.

Moderate Problem found in lifting and carrying objects, walking, using transportation, complex interpersonal interactions, economic self-sufficiency.

Sever problem found in moving around and driving function.

Association between Socio-demographic and background information of participant with Work rehabilitation:

Researcher found some important association between socio-demographic and background information with work rehabilitation. The main section of WORQ divided into two domain on the base of ICF categories. Domain 1 content 18 question related to body functions and domain 2 content 22 question that related to activities and participations which described in above.

Table 6: Test for association between socio-demographic and background information of participant with Body functions, activities and participation shown below:

Variables	Domain	Chi-square value	p-value
Physical problem	Domain 2 activities & participations	533.954	.000
Marital status	Domain 1 body functions	124.037	.002
Get away from work	Domain 2 activities & participations	1034.846	.000
Job title	Domain 2 activities & participations	634.095	.000
Job area	Domain 2 activities & participations	231.898	.005
Work doing	Domain 1 body functions	352.180	.005
Work doing	Domain 2 activities & participations	410.324	.000
Medical & therapeutic treatment	Domain 1 body functions	138.910	.000
Medical & therapeutic treatment	Domain 2 activities & participations	146.765	.000
Current medical restriction	Domain 1 body functions	122.639	.002

Current medical restriction	Domain 2 activities & participations	150.806	.000
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There is a strong evidence of association between physical problem with activities and participations (Chi-square=533.954, p=.000). Researcher observed also important association between marital status with body functions (Chi-square=124, p=.002), get away from work with activities and participations (Chi-square=1034.846, p=.000) , Job title with activities and participations (Chi-square=634.095, p=.000), Job area with activities and participations (Chi-square=231.898, p=.005), Work doing with body functions (Chi-square=352.180, p=.005), Work doing with activities and participations (Chi-square=410.324, p=.005) Medical & therapeutic treatment with body function (Chi-square=138.910, p=.000), Medical & therapeutic treatment with activities and participations (Chi-square=146.765, p=.000), Current medical restriction with body functions (Chi-square=122.639, p=.002)Current medical restriction with body functions (Chi-square=150.806, p=.000).

Chapter 5: Discussion & Conclusion

5.1 Discussion

Based on ICF Core sets for VR, an interviewer administered questionnaire, the WORQ, was used to assess functioning during participating in VR program and found the extent of problem in functioning.

WORQ was used to collect relevant background information concerning work Situation, and socio-demographic data in section one. In the main section, WORQ provided information concerning the functioning of individuals in VR in a systemic way. The WORQ was allowed to assessing functioning of individuals in VR independent of health condition, throughout the whole continuum of the return-to-work process in a straightforward way using simple questions and a well-tested rating scale, a visual analogue scale from 0 to 10.

Table 2 shows descriptive analysis of socio-demographic and background information of all the participants expressed as percentage and frequency.

The final study population comprised 85 participants (49 males and 36 females) ranging in age from 18 to 50years. In this study, found 57.6% participants were male and 42.4% participants were female. Most of the participants of this study were physical disability (48.7% without SCI) and 28.2% were SCI. The remaining 23.1% participants were Polio, GBS, MND, Amputation, Deaf blindness, Speech & Hearing, Visual and Multiple disability. The type of vocational training that found at study setting were Computer, sewing operator, Linking, Tailoring, Electronics, Garments, bee & mashrooms cultivation. In this study most of the participant were found that their not married and completed their secondary school education. It also established in the study setting that all participants were not working due to their health condition or ongoing vocational training.

This study also found some important background information for participant. 64.7% participants they're not getting any disability allowance.

For the analysis of extent of problem, the main section of WORQ (42 question) were divided into two domain based on ICF core sets for VR: (a) Domain 1: body functions (14 ICF categories); (b) Domain 2: activities & participations (20 ICF categories). Besides the literature was found it on Hand of VR (Selb. M., Finger. M. E. and Esorpizo. R, 2015). Table 3 and 4 shows descriptive analysis of 42 questions of all the participants expressed as mean. Body functions related 18 questions of the participants were presented in the table. Activities and participation related 22 questions of the participants were presented in the table 4. Extent of the problem in body function of all participants is find out. So the extent of problem in functioning during participating in VR program found is:

0 or no problem found in dressing function and thought function.

Mild problem found in energy and drive function, sleep function, temperament & personality function, higher-level cognitive function, hearing function, sensation of pain, exercise tolerance function, muscle power function, seeing function and protective functions of the skin, acquiring skills, focusing attention, reading, making decisions, undertaking a single task, carrying out daily routine, handling stress and other psychological demands, communicating with receiving nonverbal messages, conversation, using communication devices and techniques, lifting and carrying objects, fine hand use and looking after one's health,.

Moderate Problem found in vestibular function, lifting and carrying objects, walking, using transportation, complex interpersonal interactions, economic self-sufficiency.

Sever problem found in moving around and driving.

This study helps to determine extent of problems during participating VR program. However, it find the extent of problem in each question, some problem of functioning is high rate (7.61) and some problem of functioning is low. So it helps to evaluate the problems of each questions and also serve as a basis of intervention and management planning within the context of return-to-work and sustaining return-to-work.

Result from our study indicated a positive strong association of physical problem marital status, get away from work, job title, job area, work doing, medical & therapeutic treatment, current medical restriction with the domain 1 and 2. Due to the normal distribution of data in the dataset,

in this study association is done by using Pearson Correlation coefficient(r) test. Correlation is significant when the P value is 0.01. Using the Pearson test, significant correlations were noted (Pearson $r=0.604$, $p=.000$; Pearson $r=.934$, $p=.000$).

5.2 Limitation of the study

There are some limitations that should be kept in mind during conducting the study. The limitations are given below;

1. The findings of the study are not applicable for individual participants because the overall result expressed as mean. It shows only the overall extent of problem in function in specific setting who are undergoing VR program.
2. The main limitation of the study was the sample size. Small sample size was the main barrier of the study. The numbers of 85 participants were not enough for the study. This study was done in a short period of time. Researcher should take more time to conduct this study.
3. Interview was conducted in Bangla. Researcher the translate WORQ English into Bangla but cross culturally adapt WORQ to Bangla is not done.
4. There were limited resources and available information about WORQ.

5.3 Conclusion

In conclusion, WORQ appears to be a valid, reliable and feasible questionnaire that is easy to administer by health or VR professionals to evaluate work functioning in VR that is based on the ICF. The additional information gained when using the WORQ would contribute to improving interdisciplinary understanding of the patient's situation and therefore support the integrative planning of the return to-work process or engagement in gainful employment. However, further studies are needed to further examine its use in clinical practice and research, or in other patient populations and settings.

5.4 Recommendation

Our study showed that overall extent of problem in functioning during participating VR program in specific setting. This result give an overview of vocational training who are undergoing VR. Extent of problem is not applicable for individual participants.

Recommendation for further Study:

1. Cross culture adapt of WORQ to Bengali for VR.
2. Extent of problem in functioning after complete VR program in Bangladesh.
3. Management and intervention planning of return to work process: Using WORQ for Vocational Rehabilitation.

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Appendix-1
Approval letter for conducting research

December, 2017
The Chairman
Institutional Review Board (IRB)
Bangladesh Health Professions Institute (BHPI)
CRP-Savar, Dhaka-1343, Bangladesh

Subject: Application for review and ethical approval.

Sir,

With due respect I would like to draw your kind attention that I am a student of 4th year B.Sc. in Occupational Therapy course at Bangladesh Health Professions Institute (BHPI). For the requirement of my course curriculum I have to conduct a research project in this academic. My research title is **Extent of problem in functioning during participating vocational rehabilitation program** that will be supervised by **Md. Julker Nayan** Lecturer in Occupational Therapy, BHPI, CRP. The purpose of the study is to explore the present situation of implementing Occupation based practice among Bangladeshi

Occupational therapists who are working in different clinical settings. Self- developed Questionnaire will be used by face to face & telephone interview. That will take about 10-15 minutes. Related information will be collected from the participant. The study will not be cause of any harm to the participant. Data collectors will receive informed consents from all participants as written or verbal record. Any kind of collected data will be kept confidential.

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

Sincerely yours,

.....
Md. Ariful Islam Arman
Session: 2013-2014
Student ID: 122130134
Student of B.Sc. in Occupational Therapy
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Recommendation from the thesis supervisor:

Md. Julker Nayan
Associate Professor of OT
Jr. Consultant & Head
Department of Occupational Therapy,
BHPI, CRP, Saver, Dhaka.

Permission Letter

05 November 2017
The Head of the Department,
Department of Occupational Therapy
Bangladesh Health Professions Institute (BHPI)
CRP-Chapain, Saver, Dhaka-1343.

Through: Dissertation Supervisor

Subject: Prayer for seeking permission to conduct the research project.

Sir,

I'm Ariful Islam Arman, 4th year student of B.Sc. in Occupational Therapy at Bangladesh Health Professions Institute (BHPI), the academic institute of Centre for the Rehabilitation of the Paralyzed (CRP). For the requirement of my Bachelor Science Degree of Occupational Therapy course under the medical faculty of Dhaka University, I will have to conduct a research project in this academic year which is a part of my academic curriculum. My research title is “**Extent of problem in functioning during participating vocational rehabilitation program**”. And I will try to know the present situation of Occupation based practice in Bangladesh. And I also can make sure that the study will not be cause of any harm to the participant. For this purpose, I need permission from you to continue my research project.

So, I therefore pray and hope that you would be kind enough you give me the permission to continue the research project for my study.

Sincerely yours,

.....

Md. Ariful Islam Arman
4th year B. Sc. in Occupational Therapy
BHPI, CRP-Chapain, Savar, Dhaka- 1343, Bangladesh.

Approved by:	Signature:
Supervisor Md. Julker Nayan Associate Professor of OT Jr. Consultant & Head Department of Occupational Therapy, BHPI, CRP, Saver, Dhaka.	
Head of the Department Sk. Moniruzzaman Department of Occupational Therapy BHPI, CRP-Chapain, Savar, Dhaka-1343	



বাংলাদেশ হেল্থ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই)
Bangladesh Health Professions Institute (BHPI)

(The Academic Institute of CRP)

Ref.

CRP-BHPI/IRB/12/17/163

Date: 13/12/2017

To
Md. Ariful Islam Arman
B.Sc. in Occupational Therapy
Session: 2013-2014, Student ID: 122130134
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of thesis proposal "Extent of problem in functioning during participating vocational rehabilitation program" by ethics committee.

Dear Ariful Islam Arman,

Congratulations!

The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application on 02/10/2017 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	Bengali version of the Questionnaire
3	Information sheet & consent form.

Since the study involves exploring present situation of occupation based practice and data will be collected from the disabled getting training in selected vocational training institutes through interviewer administered "Work Rehabilitation Questionnaire" that takes 10 to 15 minutes and have no likelihood of any harm to the participants, the members of the ethics committee have approved the study to be conducted in the presented form at the meeting held at 9:00 AM on October 08, 2017 at BHPI.

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

Best regards,

Muhammad Millat Hossain

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

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ, ফোন : ৭৭৪৫৪৬৪-৫, ৭৭৪১৪০৪ ফ্যাক্স : ৭৭৪৫০৬৯

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

Appendix-2

Permission letter for Using WORQ

10/28/2017

Gmail - Giving permission about using the work rehabilitation questionnaire.

Gmail

Ariful islam Arman 1993 <arifulislamarmman447292@gmail.com>

Giving permission about using the work rehabilitation questionnaire.

Ariful islam Arman 1993 <arifulislamarmman447292@gmail.com>

Sat, Oct 21, 2017 at 10:16 PM

To: monika.finger@paraplegie.ch

Date: 22/10/2017

Dear Monika Finger,

Subject: Prayer for giving permission about using the work rehabilitation questionnaire.

I beg most respectfully to state that I am a student of B.Sc. in Occupational therapy, 4th year. I am studying at Bangladesh health professions institute. It is an academic institute of CRP (Center for the rehabilitation of paralyzed), Bangladesh. According to our course curriculum, we conduct a research based on Occupational therapy. I want to do an academic research about **Extent of the problem in functioning during participating vocational rehabilitation program in Bangladesh.**

For completing my research I want to use your Work rehabilitation questionnaire which was developed by ICF research branch. In our country perspective, this Work rehabilitation questionnaire is very suitable for measuring the extent of the problem in functioning.

So therefore I pray and hope that you would be kind enough to give permission about using Work rehabilitation questionnaire for my research purpose.

I remain Sir,

Md. Ariful Islam Arman

B.Sc. in Occupational Therapy, 4th year,
Occupational therapy Department,
Bangladesh Health Professions Institute,
Center for the Rehabilitation of the paralyzed,
Chapain, Saver, Dhaka-1343, Bangladesh.

Email: arifulislamarmman447292@gmail.com.

Giving permission about using the work rehabilitation questionnaire.**Finger Monika** <monika.finger@paraplegie.ch>

Mon, Oct 23, 2017 at 12:55 AM

To: Ariful islam Arman 1993 <arifulislamarmarman447292@gmail.com>

Cc: "Reuben Escorpizo (escorpizo.reuben@gmail.com)" <escorpizo.reuben@gmail.com>, Selb Melissa <melissa.selb@paraplegie.ch>

Dear Ariful Islam Arman,

I am delighted to hear about your interest in using WORQ at Bangladesh health professions institute. Feel free to use WORQ in your studies and clinical practice.

Please be aware that we have recently changed the answering scale of part II to a numeric rating scale 0-10. It proved to be much more reliable in the patient self-administered version of WORQ. www.myworq.org. The according publication is in preparation. We recommend that you also use the NRS-version.

Currently I am not aware of any other project in Bangladesh where WORQ has been used and to my knowledge there exists no translation or WORQ to Bengali. Therefore I assume that, as a first step, you will have to translate (cross-culturally adapt) WORQ to Bengali.

Please find attached the protocol (Escorpizo) we recommend in cross-culturally adapting ("translating") the questionnaire and some additional literature you might find interesting. But you are free to choose the method that best suits your situation of course.

Let me know if you have questions or if I can support you. Please keep me and Prof. Reuben Escorpizo posted on developments.

With kind regards

Monika Finger

Post Doc

Schweizer Paraplegiker-Forschung
Guido A. Zäch Strasse 4
6207 Nottwil

Appendix-3
Permission letter data collection

Date: 06/01/18

To

Coordinator,

Modhob Memorial Training Institute,

CRP, Chapain, Saver, Dhaka-1343

Subject: Regarding permission for data collection for B.Sc. thesis at training institute.

Sir,

With due respect, I am Ariful Islam 4th year B.Sc. in Occupational therapy student of Bangladesh Health Professions Institute (BHPI) an academic institute of CRP, under Faculty of Medicine of University of Dhaka. As a part of occupational therapy course curriculum, I have to conduct a thesis entitled, **Extent of problem in functioning during participating vocational rehabilitation program**. Under the thesis supervisor, **Md. Julker Nayan**, Assistant Professor, Occupational Therapy Department. The purpose of the study is to explore the extent of functioning during participation vocational training program. Data will be collected from the participant who are taking vocational training program. Work Rehabilitation Questionnaire (Bangla Version) tool will be used for collecting data. Following this indepth interview will be conducted with person with disability at their convenient time. It will require 10-15 minute for data collection. Data will be collected for about one month. Data collectors will receive informed consent from all participants as written or verbal record. Any data collected will be kept confidential.

Therefore, I look forward to your cooperation by giving permission for data collection at your reputed institute. Please don't hesitate to ask me if you have queries regarding any issues.

Sincerely Yours,

Md. Ariful Islam Arman .

Md. Ariful Islam Arman

Session: 2013-2014

Student ID: 122130134

Student of B.Sc. in Occupational Therapy

BHPI, CRP, Saver, Dhaka-1343

*From 10th January 2018
he can collect data.
RHH
228*

Recommendation from the thesis supervisor:

[Signature]
03.01.18

Md. Julker Nayan

Assistant Professor

Dept. of Occupational Therapy,

Bangladesh Health Professions Institute (BHPI)

CRP, Chapain-1343, Saver, Dhaka

Appendix-4
Informed Consent for Participants (English)

This research is part of Occupational Therapy course and the name of the researcher is Md. Ariful Islam Arman. He is a student of 4th year B.Sc. in Occupational Therapy in Bangladesh Health Professions Institute (BHPI), the academic institute of Centre for the Rehabilitation of the Paralyzed (CRP). The study was entitled as **“Extent of problem in functioning during participating vocational rehabilitation program.** The purpose of the study is to explore the present situation of Occupation Based Practice in Bangladesh. In this study I am a participant and I have been clearly informed about the purpose and aim of the study. I will have the right to refuse in taking part any time at any stage of the study. I will not be bound to answer to anybody. This study has no connection with me and there will be no impact on my treatment at present and in future.

I am also informed that, all the information collected from the interview will be only used for study purpose and would be kept safety and confidentiality will be maintained. My name and address will not be published anywhere. Only the researcher and supervisor will be eligible to access in the information for his publication of the research result. I have been informed about the above-mentioned information and I am willing to participate in the study with giving consent.

Signature/Finger print of the Participant:	Date:
Signature of the Researcher:	Date:
Signature/Finger print of the witness:	Date:

Appendix-5
Informed Consent for Participants (Bangla)
সম্মতিপত্র

এই গবেষণাটি অকুপেশনাল থেরাপির কোর্সের একটি অংশ এবং গবেষণাকারীর নাম মো: আরিফুল ইসলাম আরমান। সে পক্ষাঘাত পুনর্বাসন কেন্দ্র (সি আর পি) এর অধীনস্থ বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউটের অকুপেশনাল থেরাপি বিভাগ এর ৪র্থ বর্ষের ছাত্র। এই গবেষণাটির শিরোনাম অংশগ্রহনমূলক বৃত্তিমূলক পূর্ণবাসন কর্মসূচীর সময় কার্যকারী সমস্যা।

এই গবেষণাতে আমি একজন অংশগ্রহনকারী এবং পরিষ্কারভাবে এই গবেষণার উদ্দেশ্য সম্পর্কে অবগত। আমার যে কোন সময়ে এই গবেষণা থেকে নিজেকে প্রত্যাহার করার অধিকার আছে। এজন্য আমি প্রশ্নের উত্তর প্রদান করার জন্য কোনো দায়বদ্ধ না। এই গবেষণাটির সাথে আমার কোন সম্পৃক্ততা নেই। এই গবেষণাটি বর্তমানে এবং ভবিষ্যতে আমার চিকিৎসার ক্ষেত্রে কোন রকম প্রভাব ফেলবে না।

আমি আরও অবগত আছি যে, এই কথোপকথন থেকে নেওয়া সমস্ত তথ্যাবলি নিরাপদে এবং গোপনীয়তার সাথে শুধু মাত্র গবেষণার কাজেই ব্যবহার করা হবে। আমার নাম এবং ঠিকানা কোথাও প্রকাশ হবে না। শুধুমাত্র গবেষণাকারীর এবং তার গবেষণার সমন্বয়কারীর সাথে এই গবেষণার পদ্ধতি সম্পর্কে অথবা যে কোন প্রশ্নের উত্তর জানার জন্য কথাবলতে পারবে।

আমি উপরোক্ত তথ্যগুলো ভালোভাবে জেনে নিজ ইচ্ছায় এই গবেষণায় অংশগ্রহন করছি।

অংশগ্রহনকারীর স্বাক্ষর/টিপসই	তারিখ:
অংশগ্রহনকারীর স্বাক্ষর	তারিখ:
সাক্ষ্যপ্রধানকারীর স্বাক্ষর/ টিপসই	তারিখ:

