Level of Resilience of Amputation Patient: A Cross Sectional Study

By

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Statement of Authorship

Expect where is made in the text of the thesis, this thesis contains no materials published elsewhere or extracted in whole or in part from a thesis presented by me for any other degree or diploma or seminar.

No other person's work has been used without due acknowledgement in the main text of the thesis.

This thesis has not been submitted for the aware of any other degree or diploma in any other tertiary institution.

The ethical issues of the study have been strictly considered and protected. In case of dissemination the finding of this project for future publication, research supervisor will highly concern and it will be duly acknowledged as an undergraduate thesis.

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Dedication

I want to dedicate my work to Almighty Allah who keeps me well and on right trace and helps me to keep patience during the work period. I dedicate my thesis to my parents, husband and all my family members for their endless love, support and encouragement throughout my pursuit for education. I hope this achievement will fulfill the dream they envisioned for me.

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List of Abbreviations

BHPI	Bangladesh Health Professions Institute
CRP	Centre for the Rehabilitation of the Paralysed
CD-RISC	Connor Davidson Resilience Scale
CRPS	Complex Regional Pain Syndrome
OT	Occupational Therapy
PTSD	Post Traumatic Stress Disorder
P&O	Prosthetics and Orthotics
SPSS	Statistical Package for Social Science
TTA	Trans -Tibial Amputation
USA	United State of America

Abstract

Background: Amputation of the limbs has been reported to a significantly stressful event for an individual. Adjusting to life after an amputation can be challenging, but many people enjoy a good quality of life once they have managed to adapt. Whereas, resilience gives people the emotional strength to cope with trauma and adversity. Resilience is the ability to adjust to difficult situations. It indicates that when stress, adversity or trauma strikes, we still experience anger, grief and pain, but we're able to keep functioning both physically and psychologically. If we lack resilience, we might dwell on problems, become overwhelmed or turn to unhealthy coping mechanisms. This study focused on level of resilience of amputation patient to investigate that how their level of resilience.

Aim: The aim of the study is to explore how the level of resilience of amputation patient.

Methodology: The study design was cross sectional. Data was collected from the amputation patient who come to Centre for the Rehabilitation of the Paralyzed (CRP), Savar, Dhaka. A field test was accomplished before starting the data collection with 3 participants. 70 participants recruited through non-random sampling (convenience sampling) by a structure questionnaire Connor Davidson Resilience Scale 25 (CD-RISC-25) with face-to-face interview. Data was analyzed by using Statistical Package for Social Science (SPSS), version 26.

Result: Among 70 participants 88.6% was male and 11.4% was female and between them most of the participant's was lower limb amputee about 91.4% and 4.3% upper limb amputee. Most of the participants about 47.1% age range were 18-29 years,

among them 24.3% participants were unemployed and 18.6% participants were student. About 24.3% monthly income was 1-10 thousand. Concerning resilience scale score most of the participants seemed to lower level of resilience. Among the participants, 55.7% participants resilience score ranged from 0-73 this indicates that they are in lowest quartile. It apprise that most of the participants are less resilient as they are in lowest quartile.

Conclusion: This study contributes to the current body of knowledge about resilience. The findings of the study suggest that the amputation patient resilience level is lowest which is indicate that they are least resilient.

Key words: Amputation, Resilience

CHAPTER I: INTRODUCTION

1.1 Background

Amputation receives little attention in countries with low survival rates, making it difficult to estimate the global prevalence of amputation. Vascular amputations account for approximately 54% of limb losses in developed countries, and trauma amputations account for 45% (Aleccia et al., 2010).

Amputation, losing a limb can be a devastating experience that affects every aspect of a person`s life. An estimated 16 million people of persons with disabilities live in Bangladesh, representing 10% of the country's population. After a traumatic amputation, memories of the event can cause a person to experience PTSD and other similar mental conditions (Mandell Boisclair, 2021).

In developed countries, an estimated 664,000 people were severely amputated and more than 900,000 were mildly amputated in 2005 (Ziegler et al., 2008). Lower extremity amputations are much more common than upper extremity amputations and are most commonly the result of disease followed by trauma (Van Houtum et al., 2012) A study in Bangladesh showed that a total of 332 respondents aged 5 to 76 (mean37.5±SD13.8) participated in the study, with the majority being male (87.7%). 30.7% of study participants lost their job after amputation, and their monthly income decreased significantly from US$119.9 (±421.5) to US$45.8 (±63.1) ($p<0.01$) (MH AL Imam, 2022).

An amputation can effects someone's ability to take part in the same hobbies, leisure activities, or social interests that they would have otherwise enjoyed. Negative thoughts and emotions are common after an amputation (Mandell Boisclair, 2021). Furthermore, resilience is defined as the ability to recover, overcome adversity, adapt and maintain good mental health (Aburn et al., 2016; Earvolino- Ramirez, 2007; Garcia-Dia et al., 2013). Specifically, resilience as the ability of individuals, families and groups to thrive functioning, adapting and coping despite psychological, sociological, cultural and/or physical adversity" (Scoloveno, 2016, p.3).

Resilience gives people the emotional strength to cope with trauma and adversity. Resilient people use their resources, strengths, and abilities to overcome challenges and setbacks (Katie Hurley, LCSW, 2022).

May 2022, a study published in the International Journal of Environmental Research and Public Health, people with resilience, coping skills, and emotional intelligence scored higher overall than those with low resilience and high life satisfaction. Suggest that they are likely to be in good general health.

February 2022, a study in Psychology, Health & Medicine, which surveyed 1032 college students, found that emotional resilience was associated with reduced stress and overall positive well-being during the early stages of the COVID-19 pandemic shown to be associated with improvement.

Resilience, the way people positively deal with adversity, may be associated with these positive outcomes (Marlies I Bodde et.al., 2014). Resilience, the process of successfully adapting to adversity, should be further investigated in general rehabilitation medicine research.

Improving patient resilience in inpatient and outpatient rehabilitation clinics may be an additional therapeutic modality in rehabilitation care (Marlies I Bodde et al., 2014).

This is true in individual's who've had an emergency amputation because of that they don't have time to mentally prepare for the effects of surgery. Adjusting to life after an amputation can be challenging, but many people enjoy a good quality of life once they have managed to adapt (Mandell Boisclair, 2021).

I will want to do research about the level of resilience of amputation patient. I want to know that how is the level of resilience of amputation patient. Because adjusting to life after an amputation can be challenging, while some of the challenges faced by amputees stem from the initial traumatic injury, other issues emerge gradually as people live with their disabilities. Amputee does not have to be alone during the adjustment or transition process. These individuals may recover more slowly from setbacks and experience more emotional distress as a result (Sunrise Medical, USA, LLC, September 2022). Resilience gives people the psychological strength to cope with stress and adversity. Good stress management skills also help greater resilience. People who have strong support and emotional resources at hand often come out of trauma with greater resilience (Kendra Cherry, March 30, 2022).

1.2 Justification of the study

The aim of the study is to explore how is the level of resilience of amputation patient who come to CRP, Dhaka Bangladesh. The purpose of the research is to obtain information about the individual level of capacity to thrive in current state through resilience.

The loss of a limb due to trauma is usually equated with the loss of a spouse, the loss of ones sense of wholeness, symbolic castration, and even death. This can cause severe psychological distress to patients and reduce their quality of life. They have to adapt to changing lifestyle choices. The volume of amputation in Bangladesh is flourishing each day. After an amputation, a person faces many common difficulties that affect all aspects of life. Occupational therapy is an important support for post-amputation clients. The Occupational Therapist`s role is to work with clients to maximize their level of independence in their daily activities. We accomplish this by assessing our clients' daily lives to identify goals, routines and activities that they wish to maintain, protect or work on (Georgia Spiliotopoulou, 2011).

In P & O department there is no Occupational therapist, but Occupational therapy is an important source of support for clients following amputations. By conducting this study, we will be working with amputation patient to explore their individual level of capacity to thrive in current state that will lead health professionals to understanding of the realities of post amputation life. Because after amputation they faces many problems and challenges may experience more psychological distress when they live with the community. This may create an opportunity for Occupational Therapist to work with amputation patient.

The life of an amputee will be as unique as they are, and we can help by providing some of the skills needed to lead fulfilling lives. Such as: teaching new techniques and strategies to carry out activities such as dressing and washing, providing advice on small aids to help with common challenges such as zips, putting on socks, using a keyor preparing meals and drinks, providing advice on large items of equipment such as wheelchairs or comfy seating, suggesting home modifications such as stair lifts, bathroom adaptations, ramps or kitchen alterations, providing advice on vehicles and adapted driving options, facilitating returning to work or hobbies.

Putting together fatigue management programs, supporting community access such as the use of buses or trains, and using community facilities such as supermarkets and cinemas, building confidence and self-esteem (The OT Practice, 2022).

By participating in the study, study population will have the opportunity to contribute to the advancement of science. If they are struggling to cope with challenges, we can encourage them not to be afraid to talk to their healthcare provider or a mental health professional. Even resilient people need help and part of being resilient knows when to ask for support and assistance.

There is limited knowledge available regarding resilience; we have just a few studies to rely on. Through this study we will be able to increase the knowledge about resilience and that will help to conduct further research related to resilience in Bangladesh that will help to the development of science and society in general.

1.3 Operational definition

1.3.1 Amputation

Amputation is a major health burden for families, societies and health services. Traumatic amputation is a devastating injury, an irreversible act that is sudden and emotionally devastating to the victim (Sagar et al., 2016). Amputation is traumatic both as an operation itself and as a result. It is seen as an attack on the integrity of the body and can cause or exacerbate various disharmony in addition to physical suffering that compromises the health of the patient (Roșca et al., 2021).

1.3.2 Resilience

Ability to recover in difficult times, including: physical stress is called resilience (Stewart & Yuen, 2011). Resilience is defined as the process of successfully adapting to adversity and trauma tragedies, threats and even sources of significant stress etc. Family and relationship problems, serious health problems, work- related and financial burden" (Marlies I Bodde, 2013).

1.4 Study Question, Aim, Objectives

Study Question

How is the level of resilience of amputation patient?

Aim

To explore the level of resilience of amputation patient.

Objectives

- To identify the socio-demographic characteristics of amputation patient
- To determine the socio-economic characteristics of amputation patient
- To find out the overall level of resilience of amputation patient

CHAPTER II: LITERATURE REVIEW

2.1 Amputation

Solga Jova et al., (2015) reported that amputation of a limb is reported to be a highly tragic event for individuals. A review of study at India said that among amputees, the prevalence of psychiatric disorders ranges from 32% to 84%, rates of depression range from 10.4% to 63%, and rates of PTSD range from 3.3% to 56.3%. Although studies have reported that anxiety and depressive symptoms improve over time, surgical care providers should work with psychiatrists and psychologists to support and manage mental disorders (Horgan & MacLauchlan, 2004). Amputees may be at risk of developing depressive disorders due to multiple factors, including feelings of loss, self-stigma, and difficulty coping with dysfunction. Disconnections are caused by accidents or explosions and can cause symptoms of PTSD (Horgan & MacLauchlan, 2004).

A study in Denmark (2019) found that participants currently not facing amputation of leg. They had different thoughts on leg amputation like fear, hope, and worry. These ideas were shared others to a very limited extent. Multiple participants did not share any of their thought so experiences with others because of the basic belief that legs cutting is taboo and you don't do it and not speak with a medical professional or relationship (Kragh Nielsen et al., 2021).

Another study in Bangladesh, 2017 reported that limb loss is one of the most physically and psychologically devastating events in existence. (Bosker et al., 2008). When disfigured, people become less mobile and risk losing their independence (Gitter et al., 2005).

Amputations continued espite advances in medicine and surgery. It is a big problem all over the world, especially for the elderly. It has been estimated 664,000 people in the industrialized world have suffered severe amputation. In 2005 mild amputations in over 900,000 countries (Ziegler et al., 2008).

"Mild" limb loss is defined as amputation of: hand or numbers. Lower limb amputations are much more common than upper limb amputations and most commonly as a result of illness and subsequent trauma (Van Houtum et al., 2012). Limb amputations that occur as a result of various illnesses or trauma. It is associated with significant morbidity, mortality, and disability not amputation. Losing a limb can lead to disability, unemployment and large insurance pay outs, declining payments and quality of life (Spichler et al., 2010). People with physical disabilities generally have low self-esteem because of their body image (Ndje Ndje Mireille, 2019). Amputation can be severely disabling to the patient. They become mentally unstable and their quality of life deteriorates for emotional reasons. Trauma can lead to low self-esteem and depression negatively affect a person's lifestyle (Anamika et al., 2016). In theory, self-esteem equals success/aspiration. It represents our goals, values and what we believe impossibility. Our performance is low and our beliefs, possibilities, goals and values are high and we see ourselves as failures and therefore low self-esteem. This is a scenario of most amputees because of their physical image and difficulties they face which include lack of mobility, unemployment that cannot be practically achieve (Ndje Ndje Mireille, 2019).

2.2 Resilience

A study in Romania (2014) reported that, Resilience is a dynamic process for human growth and adapting to life's various adversities. Recognizing resilience and conceptualization has changed overtime (Pop, 2014). A quantitative study in China (2020) revealed that, 1743 undergraduate students psychological resilience and positive coping styles and their average psychological score was 70.4, average score for positive coping style was 24.72. Research found that women and medical students are more common than men and non-medical students to resort a positive coping style. Improved psychological resilience is associated with improved positive coping style. Results suggest that psycho-education and health promotion programs are aiming for enhancing psychological resilience in undergraduates to help foster positive coping styles (Wu et al., 2020). Masten AS, (2001) reported that resilience the operation of the “basic human adaptation system”.

Resilience was more general than extra-ordinary processes which invested a supreme view point on human development and adaptation. The author claimed that all individuals have mechanism necessary for positive results (Pop, 2014). A study in Bristol, (2022) with mixed methods research design reported that, resilience is not an innate personality trait. Rather a product of the individual and the external support system that surrounds the individual interaction with them. These external systems manifested at different levels proximity to an individual comes from close family and friends extensive support network in communities, communities and schools. Often acted as a protective factor, but could also be a risk factor of young people (Jack Nicholls, 2022).

The American Psychological Association defines resilience as “the process and outcome of successfully adapting to difficult or challenging life experiences, particularly through mental, emotional, and behavioral flexibility and adaptation to external and internal demands” (Fullerton et al., 2021).

A study in Washington (2016) suggests that people with chronic physical disabilities the higher your level of resilience, the higher your satisfaction with your role in life and the higher your quality of life. Improved resilience during injury may protect against future depression and predict better social functioning (Alschuler et al., 2016). Another study in USA (2007) reported that resilience is a collection of personal characteristics that simplify how individuals adapt to adverse life events (Haglund et al., 2007). A study published in USA (2007) stated that resilience is the positive process of adaptation after disruption, need, or adversity (Norris et al., 2007). Another study in USA (1993) resilience describes “the ability to adapt well, function positively, or be competent despite being in high-risk conditions, chronic pain, or prolonged or severe trauma” (Egeland et al., 1993).

2.3 Impact of resilience

A study of ‘Korea published in BMC Nursing (2022) reported that nurse’s perceptions and experiences of resilience: Meta synthesis research. The purpose of this study is to understand nurse resilience by synthesizing qualitative research results on nurses' experiences with resilience. The study found that nurses overcome adversity and build professionalism to become better nurses by developing personal strategies. Self- examination can help you improve your inner strength and grow further (Kim & Chang, 2022).

The International Journal of Mental Health Nursing (2020) published a study on workplace stress and resilience in Australian nurses. A comprehensive Synthetic Review. They reported that Australian nurses experienced moderate to high levels of stress, and multiple personal characteristics and organizational environmental resources were used as a form of resilience to cope with work place adversity (Badu et al., 2020). A study on the resilience of healthcare workers in challenging environments was published in Aberdeen, British Journal of General Practice (2016). They reported that a model of resilience has been proposed by medical experts. This is consistent with existing literature, but adds the notion that personal traits are synergistic with workplace traits and social networks. These promote adaptability and enable individual health professionals to cope with the adversities that are part of the everyday experience of those working in challenging health care environments (Jones,2016). In Sheffield, the British Journal of General Practice (2018) published a study on the professional resilience of GPs working in socio-economically disadvantaged sectors. A qualitative study in primary care found that professional resilience is more than personal power. Policies to promote professional resilience, particularly in socio-economically disadvantaged sectors, should emphasize the importance of flexibility, adaptability, team work and the integration of work and personal values need to recognize (Eley et al., 2018). Another study in Australia (2007) on the personal resilience as a strategy for surviving and thriving in the face of workplace adversity a review study reported that resilience is a person's ability to positively adapt to adversity. It can also be applied to build personal strengths in nurses through strategies such as: build positive and nurturing professional relationships.

Maintain positivity; cultivate emotional insight; achieve balance and spirituality in life; and become more reflexive (Jackson et al., 2007). Their results suggest that nurses can actively participate in developing and strengthening their own resilience to reduce vulnerability to adversity in the workplaceand improve the overall health care environment. They recommend including resilience building in nursing education and promoting professional support through mentoring programs outside the nurse's immediate work setting (Jackson et al., 2007).

2.4 Resilience and amputation

A qualitative study at USA (2022) reported that, after semi-structured interviews, participants were identified as resilient or less resilient based on CD-RISC scores. As there is no consensus on the CD-RISC cut point for TTA patients, they used the general population cut point score (<82 points) to identify participants as less resilient (Miller et al., 2020). A study in Washington (2015) presented that, Resilience is a key factor in rehabilitation outcomes for people with TTA and other chronic physical disabilities (Silverman et al., 2015). Another study in US (2008) stated that one undesirable life event where resilience is particularly importantis TTA. The traumatic and vascular etiologies of TTA account for the majority of lower extremity amputees and result in chronic disability (Ziegler-Graham et al., 2008). A study in Netherlands (2013) this study was to analyze resilience and post consequences of post amputation (CRPS-I symptoms, quality of life, psychological load and participation in everyday life), and analyze how resilience is related to these outcome variables in amputation patients because of CRPS-I.

They found that, patients with CRPS-I amputees had higher resilience, a higher quality of life, and lessemotional distress (Bodde et al., 2013). A quantitative cross-sectional study in Goias (Brazil) (2018) presented the lower limb amputation individuals profile of resilience and they found that moderate resilience and this indicates that amputees have positive coping skills, but a training program should be implemented to increase autonomy and determination (Paz et al., 2018).

2.5 Level of resilience

A study conducted in USA (2018) among college students about resilience level. The aim of the current study is to investigate how young adults use their resources and examine factors that enhance resilience, as opposed to factors that hinder resilience and their results suggest that young adults in Alabama and Tennessee are highly resilient and have personal, developmental, and situational factors that support their lives (Sadguna Anasuri, Ph.D., CFLE, 2018). A study in Netherlands (2015) presented a critical review about levels of resilience this paper focuses on three levels of resilience; individually, community, and nationally. The paper presents an outstanding limitation of the concept of resilience and the most important approaches to them resilience research. They explain limited knowledge concerning the connection among the above three levels of resilience and the importance of the connection between them and as a possible conclusion this paper presents a theoretical model of the connection between the three level of resilience and the ability to withstand harsh events (Shaul Kimhi, 2015).

2.5.1 Individual resilience

Most studies relate to individual resilience. Security and anxiety is subjectively evaluated by those who experience them in a subjective manner. Resilience should be considered private property (Tremblay et al., 2006). Bonanno defined individual resilience as an individual's ability to maintain a stable level of functioning after trauma as an event and “a course that works well over time” (Egeland et al., 1993). Some tools use for measure individual resilience. For example, Antonovsky Coherence as a tool for measuring individual resilience (Kelner, 1988). Mr. Koba announces hardness tester (The Hardy Personality, 2013). Connor and Davidson developed the CD-RISC (Connor & Davidson, 2003). When discussing personal resilience, it is important to keep in mind that there are significant differences in individual resilience. How individuals react and respond to environmental stressors at risk (Rutter, 2006). Based on the review of the literatureon personal resilience, they can conclude that this is true for most people that they areresilient and have a high capacity to cope with potentially traumatic events (Egeland et al., 1993).

2.5.2 Community resilience

Community resilience manifested in a society's ability to adapt in new and innovative ways to a changing or hostile environment method. Community resilience is more than the sum of resilient individuals and could be guaranteed by a strong sense of community (Norris et al., 2007). It expresses the interaction between individuals and their communities, and relates to an individual's ability to receive help from that person. Community resilience is related to both objective and subjective factors.

On the other hand, it directs provides physical needs such as water and food and provides physical protection. Above on the one hand, it reflects personal attitudes, perceptions and feelings towards one's community such as perceived threats, community availability of her resources, social cohesion, and trust in leadership (Cohen & Janicki-Deverts, 2009). Like individual resilience, community resilience a major predictor of coping with potential traumatic experiences (Kimhi et al., 2012). Overall, community resilience is an important resource in managing large-scale disasters and large-scale trauma interventions (Norris & Stevens, 2007).

2.5.3 National Resilience

Several studies have identified and explored resilience as a broader social phenomenon, it in terms of national resilience or social resilience (Cacioppo et al., 2011). The concept of national resilience is breadth, addressing sustainability and social strength issues in several different areas (Obrist et al., 2010). National resilience is perhaps the most elusive concept of resilience. On the one hand, because the resilience of society needs to be expressed in its values and values institutions are alive and well, while national resilience also appears in society and ability to deal with changing and sometimes hostile environments by changing and re-adapting innovative methods (Friedland et al., 2005). Both community and national resilience related to trust in large and small social reference groups that are supposed to provide members with a sense of security, belonging, and social identity (Kimhi & Eshel, 2009). National resilience is thought to involve four main social factors such as: Patriotism, Optimism, Sociability Integration and trust in political and public institutions (Ben-Dor et al., 2002).

CHAPTER III: METHODOLOGY

This point outlines the method of the study designed by the student researcher to check out “the level of resilience of amputation patient”. To fulfill the aim of the study of theresearcher, methodology is the trail way to reach.

3.1 Study design

Quantitative studies are well suited for conducting the research.Quantitative research designs are used because they aim to find out how many peoplethink, act and feel in a particular way. Quantitative research designs involve large sample sizes and focus on a set of responses (DJS Research, 2022).

Approach

A cross- sectional approach is used because data are systematically collected from defined populations and researchers select samples from the population of interest specific time points (Lauren Thomas, May 8, 2022). A cross-sectional study is an analysis of the current situation, conducted at specific points in time over a short period of time (Levin, 2006). Cross-sectional studies help identify outcomes and exposures of study participants simultaneously (Indian J Dermatol, 2016). This type of study describes traits that are present but not present in the community and identify the cause and effect relationships between different variables. (Kendra Cherry, 2022).

3.2 Study setting and period

3.2.1 Data collection setting

Data was collected from the CRP. Most of the population of the study comes from P&O department of the CRP, Prosthetics and Orthotics School ofCRP, football team of amputation patient at CRP, BHPI students of CRP. Data will be collected from the amputation patient, CRP, Savar.

CRP's journey began in 1979 in order to meet the desperate needs of people with disabilities. CRP uses a Holistic Approach of Rehabilitation and Community Re-integration Process. Over time, CRP has become recognized as an internationally renowned organization that serves and rehabilitates people with disabilities. The prosthetic and orthotic department, CRP, Savar began in 2002 with the technical and financial support of the International Committee of the Red Cross with modern instruments and materials. The philosophy of this department has always been and remains to achieve the best outcome for our clients, aiming for the best possible comfort, the best possible function and the best possible lifestyle. Clients experience at the department will be welcoming, supportive and in a relaxed professional environment. All treatment plans at the P&O department are evidence based and clients are offered the latest technology. Each client will be listened to and encouraged to be actively involved in their own treatment plan.

3.2.2 Study period

The period of the study was from April 2022 to February 2023.

3.2.3 Data collection time

The period of data collection was from October 2022 to November 2022

3.3 Study participants

3.3.1 Study population

The population refers to all potential subjects for the study. (Thompson CB et al, 1995) This study population refers to all amputation patient who come to take services from CRP, Savar, Dhaka.

3.3.2 Inclusion and Exclusion criteria

Inclusion criteria

- All kind of amputation patient ≥18 years
- Duration of amputation ≥1 month

Exclusion criteria

- People with congenital limb loss

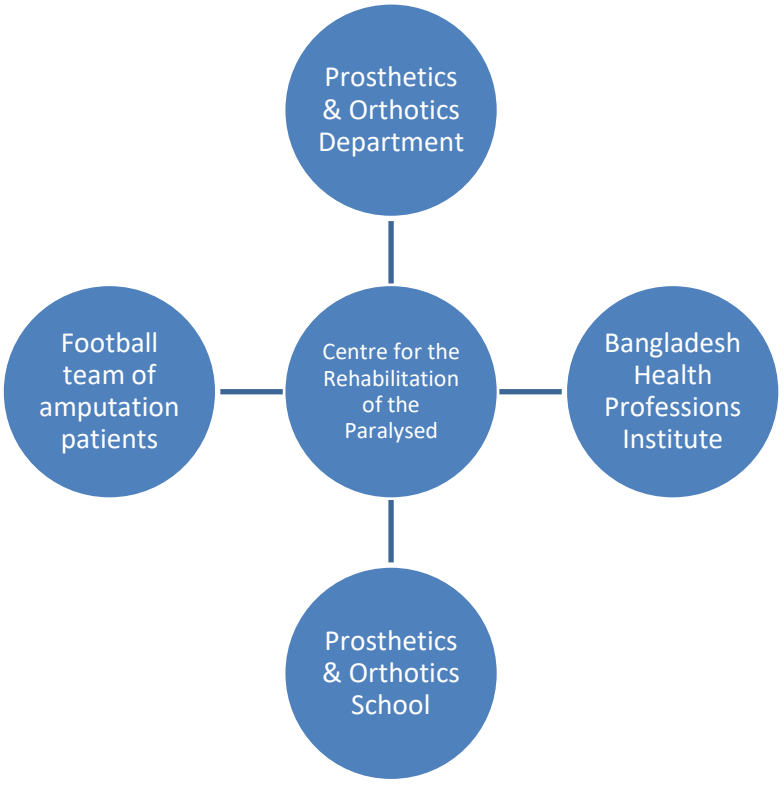
3.3.3 Sampling techniques

Non-random sampling (convenience sampling) will be used in this study based on inclusion criteria because this sampling involves non-random selection based on convenience or other criteria, allowing to easily collect data. Samples are selected on the basis of the researcher's subjective judgment (Shona McCombes, 2022). Convenience sampling is a non-probability sampling method where units are selected for inclusion in the sample because they are the easiest for the researcher to access. This can be due to geographical proximity, availability at a given time, or willingness to participate in the research. Sometimes called accidental sampling. Convenience sampling is a type of non- random sampling (Kassiani Nikolopoulou, 2022).

3.3.4 Participant recruitment process

Participant will be recruiting through direct recruitment of participant unknown to the researcher with the help of informed consent and written consent has been taken from the participants as they have interviewed face-to-face from CRP, Savar, Dhaka.

Figure 1: *Overview of participant recruitment process about the place where data was collected from the participants*



3.4 Ethical considerations

Consent from IRB

Ethical clearance will be taken from the Institutional Ethical Review Board of BHPI, by the way of department of Occupational Therapy. For collecting data, we have to applying for the permission from the P&O department of CRP. After getting their permission, data has been collected from required area.

Consent from the participants or informed consent

A written statement will be provided to the study population to informing them about the aim and significance of the study and if the participant agrees to participate in the study, then consent form will be given to them and also explain them.

Right of refusal to participate or withdraw

If they want to withdraw their data, they will do that. They were free to refuse the data any time and weather to participate or not.

Confidentiality

Confidentiality will be maintained about the study population information. Their information was not disclosed to anyone except the supervisor and it was mentioned on the information sheet. Only the researcher and the supervisor will be eligible to access in the information to publish the research result.

Unequal relationship

The researcher didn't have any unequal relationship with the participants because data will be collected from the unknown person at the P&O department, CRP, Savar because of that there is no unequal relationship between us.

Risk and beneficence

They will not face any risk by participating in the study but some may become little emotional. By participating in the study, they will not directly receive any momentary benefit, but this information will be useful in the advancement of science.

3.5 Data Collection Methods

3.5.1 Data collection instrument

The CD-RISC was developed by Kathryn M. Connor and Jonathan R.T. Davidson as a means of assessing resilience. The CD- RISC is based on Connor and Davidson's operational definition of resilience, which is the ability to "thrive in the face of adversity" (Leslie Riopel, 2022). Since it's development in 2003, the CD-RISC has been tested in several contexts with a variety of populations and has been modified into different versions. Their interest in resilience arose from long experience treating men and women with PTSD (CDRISC, 2003).

The CD-RISC consists of 25 items, which are evaluated on a five-point Likert scale ranging from 0-4: Not true at all (0), Rarely true (1), Sometimes true (2), Often true (3), and True nearly all of the time (4) - these ratings result in a number between 0–100, and higher scores indicate higher resilience. This 25-item questionnaire scale of Connor Davidson is accessed in Bengala form by signing his terms and conditions and agreement with permission through e-mail from the author. The scale is attached in the appendix.

3.5.2 Field Test of CD-RISC 25

The researcher accomplished the field test before starting the data collection with the participants.

The CD-RISC is a test that measures resilience or how wellone is equipped to bounce back after stressful events, tragedy, or trauma. The CD-RISC-25 is a self-administered scale containing 25 items that exhibit good psychometric properties.

The researcher using the scales Bengal form that was collected from the author of the scale (Leslie Riopel, 2022). The researcher completed field test of three different people with the help of informed consent and written consent that has been taken from the participants as they have interviewed face-to-face from different aspect of CRP, Savar, Dhaka.

3.5.3 Data Collection Process

Data will be collected through contacted with the head of the P&ODepartment, CRP, Savar, Dhaka. All the patients who meet inclusion criteria have been selected for the survey. After taking their written consent the researcher collected data using a structured questionnaire and face-to-face conversation with the study population from CRP, Savar, Dhaka.

3.6 Data management and analysis

All statistical analyses conducted using IBM SPSS version 26 (IBM Corporation, Chiago, IL, USA). Descriptive statistics included measures of central tendency for continuous variables and frequency and proportion for categorical variables. SPSS is used by various kinds of researchers for complex statistical data analysis. The SPSS software package was created for the management and statistical analysis of social science data.

Data were managed through data entry and analysis were performed by using the SPSS version 26 and Microsoft excel spreadsheet. To organize the data presentation, SPSS and Microsoft Office Word were used. All data were inputted within the variables of SPSS. The SPSS was used to calculate all statistical data. Data was analyzed through descriptive statistics and it was showed by using tables, figures and bar chart.

3.7 Quality control and quality assurance

The processes of quality control can include detecting, reducing, and correcting any problems within a lab. Quality control can also help to make sure that the results of an experiment or method are consistent. Quality control is known as quality assurance or quality management (Enago Academy, 2022). During data collection and analysis, the researcher does not try to influence the result of her own worth or perspectives. The researcher was followed by the supervisor in every step during the study period. And the field test was completed by interviewing 3 people.

CHAPTER IV: RESULT

This study included Amputation patients who were coming at CRP for various purposes. According to the inclusion criteria I was collected 70 data at the CRP. This section describes the researchers found whenanalyzed the data. It's primary purpose is to use the data collected to answer the research question. This section reports the findings of the study based upon the information gathered as a result of the methodology. The following tables categorize the socio-demographic, socio-economic characteristics, and overall level of resilience of amputation patient.

Table 1 *Socio-demographic characteristics of the participants*

Variable	**Frequency (N), Percentage (%)**
Site of amputation	
Upper limb	3 (4.3)
Lower limb	64 (91.4)
Both upper and lower limb	2 (2.9)
Both lower limb	1 (1.4)
Sex of participants	
Male	62 (88.6)
Female	8 (11.4)
Age of participants	
18-35	33 (47.1)
36-53	27 (38.6)
54-71	10 (14.3)
Marital status	
Married	46 (65.7)
Unmarried	23 (32.9)
Divorce	1 (1.4)

This table (Table 1) stands out different demographic characteristics among 70 participants including site of amputation, sex, age, marital status. About 4.3% (n=3) were upper limb amputee, 91.4% (n=64) were lower limb amputee, 2.9% (n=2) were both upper and lower limb amputee, 1.4% (n=1) were both lower limb amputee. Lower limb amputee was more than other site of amputation. Both lower limb amputee was lower than other site of amputation in this study. About 88.6% (n=62) were male, 11.4% (n=8) were female. Most of the participants were male more than female in this study. About 47.1% (n=33) age range 18-35, 38.6% (n=27) age range 36-53, and about 14.3% (n=10) age range 54-71. In this study most amputation occur in age that ranged from 18-35. About 65.7% (n=46) respondents were married, 32.9% (n=23) were unmarried and 1.4% (n=1) was getting divorce.

Table 2 *Socio-economic characteristics of the participants*

Variable	Frequency (N), Percentage (%)
Educational status	
Uneducated	10 (14.3)
Primary	10 (14.3)
Secondary	22 (31.4)
Higher secondary	7 (10.0)
Hons	13 (18.6)
Masters	6 (8.6)
Hafez	2 (2.9)
Occupation after amputation	
Unemployed	17 (24.3)
Business	12 (17.1)
Service holder	11 (15.7)
Driving	4 (5.7)
Farmer	2 (2.9)
Student	13 (18.6)
Shop keeper	4 (5.7)
Housewife	4 (5.7)
NGO	1 (1.4)
Teacher	1 (1.4)
Freelancing	1 (1.4)
Monthly income	
None	33 (47.1)
1-10 thousand	17 (24.3)
11-20 thousand	13 (18.6)
21-30 thousand	6 (8.6)
41-50 thousand	1 (1.4)
Neighborhood deprivation	
Yes	8(11.4)
No	62 (88.6)
Sense of community belongings	
Good	63 (90.0)
Approximate	4 (5.7)
Bad	3 (4.3)

Through this table (Table 2) I will show the socio-economic characteristics of amputation patients among 70 participants including educational status, occupation, monthly income, neighborhood deprivation, sense of community belongings.

About 14.3% (n=10) were uneducated, 14.3% (n=10) were completed Primary education, 31.4% (n=22) were completed and ongoing secondary school, 10.0% (n=7) were completed and ongoing Higher Secondary School, 18.6% (n=13) were completed and ongoing Hons, 8.6% (n=6) were completed Master's Degree and about 2.9% (n=2) were ongoing Hafez. Most of the participant's educational status were in secondary school and very little participant's educational status were in Hafez. About 24.3% (n=17) were unemployed, 17.1% (n=12) were businessmen, 15.7% (n= 11) were service holder, 5.7% (n=4) were driver (Auto rickshaw), 2.9% (n=2) were farmer, 18.6% (n=13) were student, 5.7% (n=4) were shopkeeper, 5.7% (n=4) were housewife, 1.4% (n=1) were work at NGO, 1.4% (n=1) were teacher, 1.4% (n=1) were freelancer. Most of the participants were unemployed after amputation which is the negatory findings of the study and this also indicates that participants were depart from occupation because of amputation. About 47.1% (n=33) were no monthly income, 24.3% (n=17) were 1-10 thousand, 18.6% (n=13) were 11-20 thousand, 8.6% (n=6) were 21-30 thousand, 1.4% (n=1) were 41-50 thousand. Most of the participants were no income source after amputation. About 11.4% (n=8) were suffer from neighborhood deprivation and about 88.6% (n=62) were does not suffer from neighborhood deprivation. Most of the participants were no neighborhood deprivation which is the supreme findings of the study, this indicates that the view and feelings of an amputation patients about their neighborhood are good.

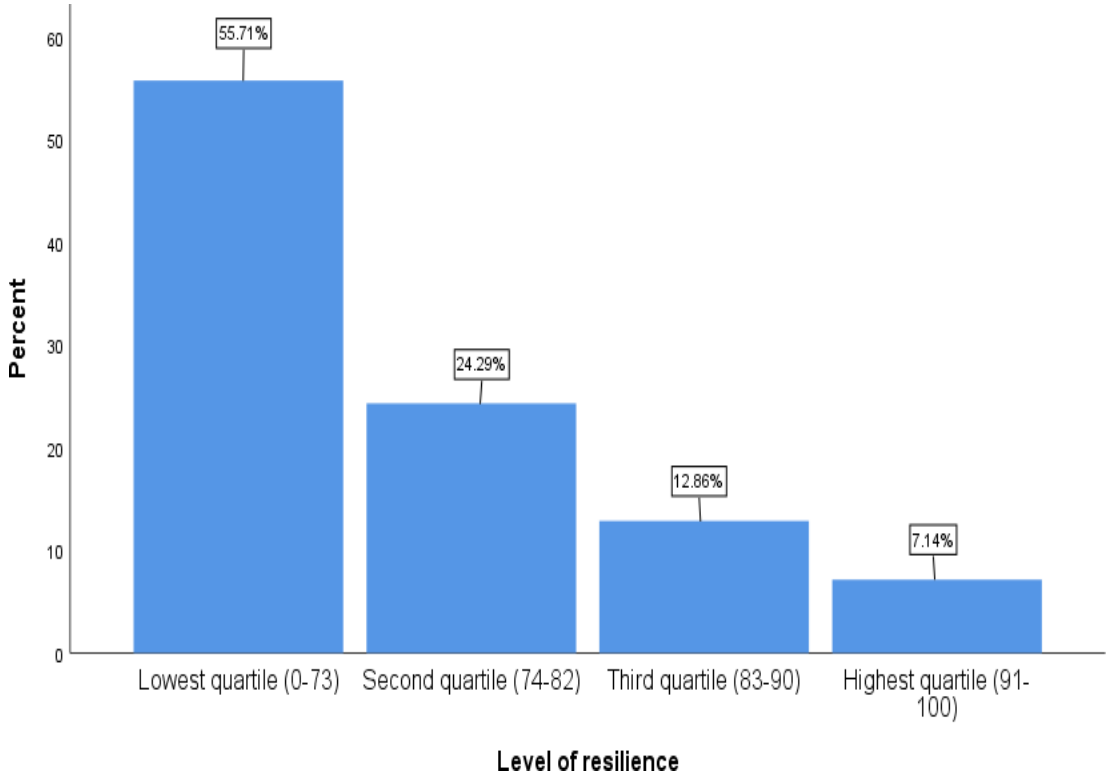
About 90.0% (n=63) of the participants sense of community belongings were good, about 5.7% (n=4) of the participants sense of community belongings were approximate and about 4.3% (n=3) of the participants sense of community belongings were bad. Most of the participants having a strong sense of community belonging, this indicates a feeling that community members matter to one another and the group.

Table 3 *Frequency and percentage of participants regarding their level of resilience in each aspect statements of CD-RISC-25*

Aspects	No	Statements	Responses of participants in each aspect *N* (%)				
			Not true	Rarely	Sometimes	Often	All the time
Hardiness	5	Past successes give me confidence in dealing with new challenges and difficulties	20 (28.6)	10 (14.3)	10 (14.3)	9 (12.9)	21 (30.0)
	10	I give my best effort no matter what the outcome may be	1 (1.4)	2 (2.9)	2 (2.9)	6 (8.6)	59 (84.3)
	11	I belief I can achieve my goals even if there are obstacles	6 (8.6)	5 (7.1)	6 (8.6)	17 (24.3)	36 (51.4)
	12	Even when things look hopeless, I don't give up	10 (14.3)	3 (4.3)	5 (7.1)	12 (17.1)	40 (57.1)
	22	I feel in control of my life	26 (37.1)	6 (8.6)	9 (12.9)	9 (12.9)	20 (28.6)
	23	I like challenges	27 (38.6)	5 (7.1)	8 (11.4)	12 (17.1)	18 (25.7)
	24	I work to attain my goals no matter what roadblocks I encounter along the way	4 (5.7)	8 (11.4)	8 (11.4)	14 (20.0)	36 (51.4)
Coping	2	I have at least one close and secure relationship that helps me when I am stressed	10 (14.3)	4 (5.7)	5 (7.1)	9 (12.9)	42 (60.0)
	7	Having to cope with stress can make me stronger	12 (17.1)	10 (14.3)	5 (7.1)	16 (22.9)	27 (38.6)
	13	During times of crisis/stress I know where to turn for help	10 (14.3)	5 (7.1)	5 (7.1)	11 (15.7)	39 (55.7)
	15	I prefer to take the lead in solving problems rather than letting others make all the decisions	15 (21.4)	3 (4.3)	7 (10.0)	15 (21.4)	30 (42.9)
	18	I can make unpopular or difficult decisions that affect other people if it is necessary	25 (35.7)	7 (10.0)	9 (12.9)	11 (15.7)	18 (25.7)
Adaptability	1	I am able to adapt when changes occur	2 (2.9)	5 (7.1)	12 (17.1)	20 (28.6)	31(44.3)
	4	I can deal with whatever comes my way	9 (12.9)	8 (11.4)	18 (25.7)	11 (15.7)	24 (34.3)
	8	I tend to bounce back after illness, injury or other hardship	9 (12.9)	8 (11.4)	6 (8.6)	3 (4.3)	44 (62.9)
Meaningfulness	3	Where there are no clear solutions to my problems, sometimes fate or God can help	4 (5.7)	1 (1.4)	1 (1.4)	6 (8.6)	58 (82.9)
	9	Good or bad I believe that most things happen for a reason	15 (21.4)	2 (2.9)	5 (7.1)	10 (14.3)	38 (54.3)
	20	In dealing with life's problem, sometimes you have to act on a hunch without knowing why	26 (37.1)	8 (11.4)	11 (15.7)	14 (20.0)	11 (15.7)
	21	I have a strong sense of purpose in life	12 (17.1)	4 (5.7)	5 (7.1)	8 (11.4)	41 (58. 6)
Optimism	6	I try to see the humorous side of things when I am faced with problems	16 (22.9)	8 (11.4)	11 (15.7)	13 (18.6)	22 (31.4)
	16	I am not easily discouraged by failure	15 (21.4)	3 (4.3)	7 (10.0)	10 (14.3)	35 (50.0)
Regulation of emotion and cognition	14	Under pressure I stay focused and think clearly	6 (8.6)	6 (8.6)	9 (12.9)	11 (15.7)	38 (54.3)
	19	I am able to handle unpleasant or painful feelings like sadness, fear and anger	10 (14.3)	3(4.3)	8 (11.4)	12 (17.1)	37 (52.9)
Self-efficacy	17	I think of myself as a strong person when dealing with life's challenges and difficulties	12 (17.1)	6 (8.6)	8 (11.4)	14 (20.0)	30 (42.9)
	25	I take pride in my achievements	8 (11.4)	2 (2.9)	4 (5.7)	8(11.4)	48 (68.6)

This table (Table 3) shows the resilience status among the participants. There are 7 aspect of resilience and every aspect of resilience have seven, five, three, four, and two items. The scale has (0-4) score from not true at all to true nearly all the time. This table (Table 3) mentioned each item percentages with not true at all, rarely true, sometimes true, often true, true nearly all the time. The hardiness aspect of resilience shows highest percentage 59 (84.3%) which is true nearly all the time and the lowest percentage 1 (1.4%) shows in not true at all. Coping aspect of resilience shows highest percentage 42 (60.0%) which is mentioned in true nearly all the time and the lowest percentage 3 (4.3%). The lowest percentage are mentioned in rarely true. Adaptability aspect of resilience shows highest percentage 44 (62.9%). The highest percentage are mentioned in true nearly all the time. The lowest percentage 2 (2.9%) are mentioned in not true at all. Meaningfulness or purpose aspect of resilience shows highest percentage 58 (82.9%) in true nearly all the time. The lowest percentage 1 (1.4%) are mentioned in rarely true, sometimes true. Optimism aspect of resilience shows highest percentage 35 (50.0%) in true nearly all the time and the lowest percentage 3 (4.3%) are mentioned in rarely true. Regulation and emotion aspect of resilience shows highest percentage 38 (54.3%) in true nearly all the time and the lowest percentage 3 (4.3%) are mentioned in rarely true. Self-efficacy aspect of resilience shows highest percentage 48 (68.6%). This percentage are mentioned in true nearly all the time. The lowest percentage 2 (2.9%) are mentioned in rarely true. Overall highest percentage amid all aspect of resilience the highest percentage are showed in hardiness aspect of resilience about 59 (84.3%) and the lowest percentage are showed in meaningfulness aspect of resilience about 1 (1.4%).

Figure 2 *Overall level of resilience of amputation patients based on CD-RISC-25 item questionnaire*



This figure (Figure 2) shows a bar chart about overall the level of resilience of amputation patient's percentage among 70 participants. Most of the participant seemed to lower level of resilience and very little participants seemed to highest level of resilience. It is apparent from this figure that the level of resilience of amputation patient is very lower. Among 70 participants, about 55.7% (n=39) were in lowest quartile (0-73), 24.3% (n=17) were in second quartile (74-82), 12.9% (n=9) were in third quartile and about 7.1% (n=5) were in highest quartile. The negatory findings of the study are most of the participant level of resilience is downcast. This indicates that, maintaining emotional stability, health and well-being, problem solving skills, strong inner self of amputation patients was lower.

CHAPTER V: DISCUSSION

This study conducted with amputation patient. In this study, 70 participants were recruited conveniently from CRP. The purpose of the study was to identify the level of resilience of amputation patient. On the other hand, socio- demographic and socio-economic characteristics of amputation patients also showed through this study. This study is a cross-sectional, quantitative study and was used CD-RISC-25 questionnaire. Data was collected face-to-face from the participants.

Considered a public health problem, amputation can affect physical, emotional, personal and social situation of individuals thus decrease their freedom and making them attendant on others (Ali S et al., 2017). Furthermore, amputation brings concomitant functional changes impairment of ability and activities of daily living hence the quality of life (Knezevic et al., 2015). With regard to quality-of-life resilience is the complex structure and subject matter of culture, genetic and environmental influences (Xu & Ou, 2014). Resilience is seen as a dynamic process, resilience examines individual and family abilities or even communities sharing positive information one or more inconsistent healthy behaviors situation (Rutte et al., 2006).

In this study among 70 participants about 4.3% (n=3) were upper limb amputee, 91.4% (n=64) were lower limb amputee. Male 88.6% (n=80) were more than female 11.4% (n=8). In this study most amputation occur in age that range from 18-35 showed in (Table 1). A study in Netherlands represented that resilience in patients with amputation because of CRPS type 1.

The study participants were 26, among them 23 women and 3 men, median age 44, 20 patient lower limb amputee and 6 participants were upper limb amputee (Bodde et al., 2013).

A mixed method study in USA is designed to analysis of resilience of people with unilateral TTA, there were 18 participants (15 were men, 3 women). Age at least 45 years old (Miller et al., 2020). A quantitative cross- sectionalstudy in Goias (Brazil) presented that profile of resilience in individuals with lower limb amputation.

There were 53 participants, average age 51.4 years most of the participants were adult (22-64) and 66% (n=35) males 34% (n=18) female (Paz et al., 2018). One quantitative study in Kisangani to describe the overview of epidemiological and etiological amputation in Kisangani Democratic Republic of Congo. There were 62 participants among them 74.2 % (n=46) men, 25.8% (n=16) were female. Most of the participants 30.7% (n=19) age group were 57-75. 88.7% (n=55) were lower limb amputee, 11.3% (n=7) were upper limb amputee (Talona et al., 2016).

In this study most of the participants educational status was good among 70 participants 31.4% (n=22) were in secondary level, 18.6% (n= 13) were in hons/B.Sc. level. Most of the participants were unemployed after amputation. Among them 24.3% (n=17) were unemployed and most common occupation after amputation is student 18.6% (n=13), business 17.1% (n=12), service holder 15.7 % (n=11). Most of the participants monthly income was 1- 10 thousand about 24.3 % (n=17) and about 47.1% (n=33) were no income source. Among 70 participants only 11.4% (n=8) faces neighborhood deprivation and 90.0% (n=63) sense of community belongings were good showed in Table 2.

One quantitative study in Kisangani to describe the overview of epidemiological and etiological amputation in Kisangani Democratic Republic of Congo. There were 62 participants among them most of the participants 51.6% (n=32) were unemployed, 6.4% (n=4) were students (Talona et al., 2016). A quantitative cross-sectional study in Goias (Brazil) presented that profile of resilience in individuals with lower limb amputation. There were 53 participants, among them 15.1% (n=8) were no income, 73.6% (n=39) were in class E. 50.9% (n= 27) were in Incomplete Elementary School and 17% (n=9) were complete high school (Paz et al., 2018).

In this study, the researcher found that, among 70 participants 55.7% (n=39) were in lowest quartile (0-73), 24.3% (n=17) were second quartile (74-82), 12.9% (n=9) were in third quartile (83-90) and 7.1% (n=5) were in highest quartile (91-100) showed in (Figure 2). It's mean that most of the participants in lowest quartile they are less resilient.

A quantitative cross sectional study in Goias (Brazil) presented that profile of resilience in individuals with lower limb amputation presented that among 53 participants 26.4% (n=14) were in low resilience (Score below 125) , 62.2% (n=33) were in moderate resilience (Score between 125 to 145) and 11.3% (n=6) were in high resilience (Score above 145) (Paz et al., 2018) A mixed method study at USA (2022) about qualitative analysis of resilience characteristics of people with unilateral TTA, in this study 18 participants recruited and they were identified as resilient or less resilient based on CD-RISC scores. As there is no consensus on the CD-RISC cut point for TTA patients, they used the general population cut point score (<82points) to identify participants as less resilient (Miller et al., 2020).

CHAPTER VI: CONCLUSION

6.1 Strength of the Study

The study was about the level of resilience of amputation patient to explore how the level of resilience of amputation patient to obtain information about the individual level of capacity to thrive in current state through resilience.

- In this study to find the level of resilience through using Connor Davidson Resilience Scale 25 (CD-RISC 25), which was a developed questionnaire. Many researchers used this scale as an instrument of the study.
- Data analysis has been done through using SPSS.
- Data was collected from the participants face-to-face.
- The participant's respondent rate was satisfactory.
- The student researcher could access the scale easily with Bangla form and the author respondent rate was satisfactory.

6.2 Limitations of the Study

In the study there were some limitations. These limitations student researcher faced to during the project. Limitations are:

- The major limitation of the study was there was no relevant literature or articles about level of resilience of amputation patient. So, the relevant literature was not accessible for conducting this study.

- And the second major limitation of the study was it was only 70 participants, because the investigator selected the participants only who have been taken services from the CRP, Savar. Because of lack of enough time for data collection the student researcher could not collect more data.
- The participants were taken from selected hospital which not generalizable for country perspective.
- The researcher found all the articles outside of Bangladesh. There is no resilience related literature of amputation in Bangladesh. For that reason, it was difficult to present any information in the context of Bangladesh and also no significant statistics result was included in this study in the basis of Bangladeshi culture.
- The researchers collected data conveniently and does not test the validity.

6.3 Recommendations

The researcher has some recommendations. The recommendations are:

- Further research should be conducted with a large number of participants on this study design. If the researcher conducts the study with large sample, then itwill be easy to generalize the result.
- Further research participants should be taken from different hospitals, organizations to generalizable for country perspective.
- Further research should be conducted about the characteristics of resilience of amputation patient in Bangladesh perspectives.

- Further research should be conducted to find out difference between the level of resilience among male and female amputation patient in Bangladesh perspectives.
- Further research should be conducted to identify the association among age and the level of resilience.
- Further research should be conducted to find out difference between the level of resilience among employed and unemployed amputees in Bangladesh perspectives.
- Further research should be conducted to find out difference between the level of resilience among congenital limb loss person and amputation patient in Bangladesh.

6.4 Conclusion

This study contributes to the current body of knowledge about resilience. These study findings provided information about the level of resilience of amputation patient. Level of resilience is important for the individuals with amputation that it may help to simplify and predict the aspect of resilience of amputation patient. The findings of the study suggest that in Bangladesh perspectives the amputation patient resilience level is lowest which is indicate that they are least resilient. Resilient mean able to be happy, successful again after something difficult or bad has happened.

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APPENDICES

Appendix 1: Ethical Approval

1.1 Application for IRB Approval

Application for IRB Approval

Date: 31.08.2022

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 B.Sc. in Occupational Therapy student Bangladesh Health Professions Institute (BHPI),Centre for the Rehabilitation of the Paralyzed (CRP). I would like to conduct a research titled, "the level of resilience of amputation patient" with myself, as the principal investigator and SK. Moniruzzaman, Associate Professor & Head, Department of Occupational Therapy, BHPI, CRP as my thesis supervisor. The purpose of the study is to explore the individual level of capacity to thrive in current state.

Connor-Davidson Resilience Scale 25 (CD-RISC-25) will be used in the study that will take about 15 to 20 minutes. Other related information will be collected from the study population. Data collectors will receive informed consents from all study population. Any kind of collecting data will be kept confidential.

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

Sincerely yours,

Mithila

Tasmim Jahan Mithila
4th Year B.Sc. in Occupational Therapy
Session: 2017-2018, Student ID: 122170286
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Recommendation from the thesis supervisor:

31/08/2022

SK. Moniruzzaman
Associate Professor & Head, Department of Occupational Therapy
BHPI, CRP, Savar, Dhaka- 1343, Bangladesh

1.2 Approval of the Thesis Proposal

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

BANGLADESH HEALTH PROFESSIONS INSTITUTE

Ref:

CRP/BHPI/IRB/09/22/648

Date:

28th September, 2022

Tasmim Jahan Mithila
4th Year, B.Sc. in Occupational therapy
Session: 2017-2018, Student ID: 122170286
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

Subject: Approval of the thesis proposal "The level of resilience of amputation patient" by ethics committee.

Dear Tasmim Jahan Mithila,
Congratulations.
The Institutional Review Board (IRB) of BHPI has reviewed and discussed your application to conduct the above-mentioned dissertation, with yourself, as the principal investigator and SK. Moniruzzaman, Associate Professor & Head, Department of Occupational Therapy as thesis supervisor. The Following documents have been reviewed and approved:

Sr. No.	Name of the Documents
1	Thesis Proposal
2	Questionnaire
3	Information sheet & consent form.

The purpose of the study is to explore the individual level of capacity to thrive in current state. The study involves use of a Connor-Davidson Resilience Scale 25 item questionnaire that may take 15 to 20 minutes to fill in the questionnaire and there is no likelihood of any harm to the participants. The members of the Ethics committee have approved the study to be conducted in the presented form at the meeting held at 8.30 AM on 27th August, 2022. at BHPI (32nd 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
Associate Professor, Dept. of Rehabilitation Science
Member Secretary, Institutional Review Board (IRB)
BHPI, CRP, Savar, Dhaka-1343, Bangladesh

সিআরপি-চাপাইন, সাভার, ঢাকা-১৩৪৩, বাংলাদেশ। ফোন: +৮৮ ০২ ২২৪৪৪৫৪৬৪-৫, +৮৮ ০২ ২২৪৪৪১৪০৪, মোবাইল: +৮৮ ০১৭৩০ ০৫৯৬৪৭
CRP-Chapain, Savar, Dhaka-1343, Bangladesh. Tel: +88 02 224445464-5, +88 02 224441404, Mobile: +88 01730059647
E-mail : principal-bhpi@crp-bangladesh.org, Web: bhpi.edu.bd

Appendix 2: Permission letter for collecting data

Date: 12.10.2022

Head of the Department

Prosthetics and Orthotics Department

Centre for the Rehabilitation of the Paralysed (CRP)

Chapain, Savar, Dhaka-1343, Bangladesh

Subject: Prayer for seeking permission to data collection for the research project.

Sir,

With due respect I beg to bring the followings facts to your kind notice for the sympathetic consideration. I am Tasmim Jahan Mithila, 4th year student of B.Sc. in Occupational Therapy department of 2017-2018 sessions, at Bangladesh Health Professions Institute (BHPI), the academic institute of Centre for the Rehabilitation of the Paralysed (CRP). As I am student of 4th year, I have to do a research for my academic purpose. My research title is "the level of resilience of amputation patient". The aim of the research is to explore the individual level of capacity to thrive in current state. Researcher will collect data and additional information from Prosthetics and Orthotics Department.

So, I therefore, pray and hope that you would be kind enough to grant my prayer and oblige me to give me the permission of data collection for the research project.

Sincerely,
Mithila
Tasmim Jahan Mithila

4th year Student, B.Sc. in Occupational Therapy

Session: 2017-2018

Bangladesh Health Professions Institute (BHPI)

Centre for the Rehabilitation of the Paralysed (CRP)

Chapain, Savar, Dhaka-1343, Bangladesh

Forwarded for your kind consideration & permission for data collection.

Sk. Monirul Islam
Associate Professor & Head
Dept. of Occupational Therapy
BHPI, CRP, Savar, Dhaka-1343

She may collect the data from PO department.

SHOHANOOL NEAZ IMRAN
Head of the Department
Prosthetics and Orthotics Department
CRP Savar Dhaka

Appendix 3: Permission letter for using CD-RISC-25 item Questionnaire

CD-RISC © Request to Use the Scale

Please complete each item clearly and email this form to Jonathan Davidson at mail@cd-risc.com.

With the information given, it will be possible to quote a use fee and prepare a user agreement.

Name of Principal Investigator/ Project Director/Clinician	Tasmim Jahan Mithila
Department/Organization	Occupational Therapy Department, Bangladesh Health Professions Institute, Centre for the Rehabilitation of the Paralyzed
Street Address and City	Savar- Chapain, Dhaka
State/Province Zip/Postal code	1343
Country	Bangladesh
Telephone	01721881278
Email address	tasmimjahanmithila@gmail.com

1. Organization Type: *Check box next to the category that best describes the type or primary purpose of your organization*.

☐ Medical group/Clinical Practice
☐Hospital

- ✓ Academic Center

☐ Private Foundation
☐ Insurance Company/Health Plan
☐ Government Agency
☐ Consulting Firm
☐ Pharmaceutical Company
☐ Other: _____

2. Please briefly describe the activity in which the CD-RISC is to be used (indicate purpose, objectives, design, key sample characteristics, source of any funding):

Purpose of the study: to explore the individual level of capacity to thrive in current state

Objectives:

General objectives: To explore the individual level of capacity to thrive in current state

Specific objectives:

- To identify the ability to spring back
- To identify the sense of control over life events
- To identify the bounce back ability
- To identify the adaptability

3. Estimated/hoped for number of people who will complete the scale (Note: A number is required):

   80 – 100

4. Total number of times the RISC will be given to each person:

   25-30 minutes

5. Duration of study/activity utilizing the scale:
   < 1 year___ 1 year___ 2 years___ 3 years__ 4+ years___

   Duration of study: 3-4 months

6. Method of assessment (e.g., face-to-face, mail survey or internet. If electronic/internet, please describe procedure in detail, including how survey will be distributed, storage of data, use of password protection/link to survey and protection of scale security from unauthorized use):

   Methods of assessment: Face-to-face, By phone

7. Other measurement tools include: **No**

8. Indicate if you are a student: **I am a 4th year student**

9. Indicate if preference for the RISC-25, RISC-10 or RISC-2: **RISC-25**

10. Please specify which languages you need (including English if required): **Bangla**

Dear Tasmim:

Thank you for your interest in the Connor-Davidson Resilience Scale (CD-RISC). We are pleased to grant permission for use of the CD-RISC-25 in the project you have described under the following terms of agreement:

1. You agree (i) not to use the CD-RISC for any commercial purpose unless permission has been granted, or (ii) in research or other work performed for a third party, or (iii) provide the scale to a third party without permission. If other colleagues or off-site collaborators are involved with your project, their use of the scale is restricted to the project described, and the signatory of this agreement is responsible for ensuring that all other parties adhere to the terms of this agreement.
2. You may use the CD-RISC in written form, by telephone, or in secure electronic format whereby the scale is protected from copying, downloading, alteration, repeated use, unauthorized distribution or search engine indexing. In all use of the CD-RISC, including electronic versions, the full copyright and terms of use statement must appear with the scale. The scale should neither be distributed as an email attachment, nor appear on social media, nor in any form where it is accessible to the public and should be removed from electronic and other sites once the activity or project has been completed. The RISC can only be made accessible in electronic form after subjects have logged in through a link, password or unique personal identifier.
3. Further information on the CD-RISC can be found at the www.cd-risc.com website. The scale's content may not be modified, although in some circumstances the formatting may be adapted with permission of either Dr. Connor or Dr. Davidson. If you wish to create a non-English language translation or culturally modified version of the CD-RISC, please let us know and we will provide details of the standard procedures.
4. Three forms of the scale exist: the original 25 item version and two shorter versions of 10 and 2 items respectively. When using the CD-RISC 25, CD-RISC 10 or CD-RISC 2, whether in English or other language, please include the full copyright statement and use restrictions as it appears on the scale.
5. The scale is provided at no cost for this project.
6. Complete and return this form via email to mail@cd-risc.com.
7. In any publication or report resulting from use of the CD-RISC, you do not publish or partially reproduce items from the CD-RISC without first securing permission from the authors.

If you agree to the terms of this agreement, please email a signed copy to the above email address. Upon receipt of the signed agreement, we will email a copy of the scale.

For questions regarding use of the CD-RISC, please contact Jonathan Davidson at mail@cd-risc.com. We wish you well in pursuing your goals.

Sincerely yours,
Jonathan R. T. Davidson, M.D.
Agreed to by:

_____ 08.26.2022
Signature (printed) Date

The level of resilience of amputee patient

_____
Title

Bangladesh Health Professions Institute (BHPI), Centre for the Rehabilitation of the Paralyzed (CRP), Savar

_____
Organization

Appendix 4: Information Sheet, Consent Form and Withdrawal Form [English]

4.1 Information sheet

This is to inform that Tasmim Jahan Mithila, Student of 4th year, B.Sc. in Occupational Therapy of 2017-2018 session, Bangladesh Health Professions Institute (BHPI), the academic institute of CRP, is doing research which is a part of course curriculum. So, the researcher would like to invite you participating in this study titled **"The level of resilience of amputation patient"**. A study on amputation patient who come to Centre for the Rehabilitation of the Paralysed (CRP), Savar, Dhaka.

Your participation in the study is voluntary. You can withdraw your participation anytime. There is no facility to get any pay by this participation. The study will never be any harm to you but this information will be useful in the advancement of science and your valuable participation is likely to help us to find out how is the level of resilience of amputation patient.

Confidentiality of all records will be highly maintained. The gathered information from you will not be disclosed anywhere except this study and the study will certainly never reveal the name of participants.

If you have any query regarding the study, please feel free to ask to the contact information stated below:

Tasmim Jahan Mithila

4th year, B.Sc. in Occupational Therapy

Department of Occupational Therapy

Session: 2017-2018

Bangladesh Health Professions Institute (BHPI)

Centre for the Rehabilitation of the Paralysed (CRP)

Chapain, Savar, Dhaka-1343

4.2 Consent form

This research is part of Occupational Therapy course and the name of the researcher is Tasmim Jahan Mithila. He is a student of 4th year, B.Sc. in Occupational Therapy of 2017-2018 session in Bangladesh Health Professions Institute (BHPI), the academic institute of Centre for the Rehabilitation of the Paralysed (CRP) which is affiliated to University of Dhaka. The study was entitled as **"The level of resilience of amputation patient"**. A study on amputation patient who come to Centre for the Rehabilitation of the Paralysed (CRP), Savar, Dhaka and the aim of study is to exploring the level of resilience of amputation patient.

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. For this reason, I will not be bound to answer to anybody.

I am also informed that, all the information collected from the questionnaire 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 to publish 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:

4.3 Withdrawal form

Can you withdraw from this study

You can cancel any information collected for this research project at any time. After the cancellation, whether the data can be used or not should be mentioned in the participants withdrawal form.

Participants Name: .....

Reason of withdraw:

.....

.....

.....

.....

Whether the use of previous data will be allowed ?

Yes/ No

Participant signature: …….....
Date: …….....

Appendix 5: Information Sheet, Consent Form and Withdrawal Form [Bangla]

5.1 Information sheet

তথ্যপত্র

আমি তাসমীম জাহান মিথিলা, বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউট (সিআরপির শিক্ষা প্রতিষ্ঠান) অনুপেশনাল থেরাপি বিভাগ এ ৪র্থ বর্ষে অধ্যয়নরত, সেশন- ২০১৭-২০১৮। আমার প্রাতিষ্ঠানিক কার্যের অংশ হিসেবে চলন্ত শিক্ষাবর্ষে আমাকে একটি গবেষণামূলক কাজ করতে হবে। তাই গবেষক আপনাকে এই গবেষণায় অংশগ্রহনের জন্য আমন্ত্রণ জানাতে চান যার শিরোনাম "অঙ্গচ্ছেদ রোগীর স্থিতিস্থাপকতার মাত্রা"। এটি পক্ষাঘাতগ্রস্থদের পূনর্বাসন কেন্দ্র (সিআরপি), সাভার, ঢাকায় আসা অঙ্গচ্ছেদ রোগীর উপর একটি গবেষণা।

এই গবেষণায় আপনার অংশগ্রহণ সম্পূর্ণরূপে সেচ্ছায় আপনি যেকোনো সময় গবেষণায় আপনার অংশগ্রহণ করা থেকে বিরত থাকতে পারবেন। এই গবেষণায় অংশগ্রহণে গবেষক আপনাকে কোনভাবে আর্থিক সাহায্য প্রদানে অপারগ। এই অংশগ্রহণ কখনোই আপনার জন্য ক্ষতির কারণ হয়ে দাঁড়াবেনা, কিন্তু এই তথ্যটি বিজ্ঞানের অগ্রগতিতে উপযোগী হবে এবং আপনার মূল্যবান অংশগ্রহণ আমাদের অঙ্গ বিচ্ছেদ রোগীর স্থিতিস্থাপকতার মাত্রা কেমন তা খুঁজে বের করতে সাহায্য করবে।

আপনার কাছ থেকে প্রাপ্ত তথ্য সমূহের সর্বোচ্চ গোপনীয়তা রক্ষা করা হবে। গবেষণা ব্যতীত এগুলো অন্যথায় প্রকাশিত করা হবে না এবং গবেষণার কোথাও অংশগ্রহণকারীর নাম প্রকাশ করা হবে না।

গবেষণা সম্পর্কিত যে কোনো ধরনের প্রশ্নের জন্য নিম্নোল্লিখিত ব্যক্তির সাথে যোগাযোগ করার জন্য অনুরোধ করা যাচ্ছেঃ

তাসমীম জাহান মিথিলা
৪র্থ বর্ষ, বি.এসসি, ইন অকুপেশনাল থেরাপি
অকুপেশনাল থেরাপি বিভাগ
সেশনঃ ২০১৭-২০১৮
বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউট (বিটএইচপিআই)
পক্ষাঘাতগ্রস্থদের পূণর্বাসন কেন্দ্র (সিআরপি), চাপাইন, সাভার, ঢাকা-১৩৪৩।

5.2 Consent form

সম্মতি পত্র

এই গবেষণাটি অকুপেশনাল থেরাপি কোর্সের অংশ এবং গবেষকের নাম তাসমীম জাহান মিথিলা। তিনি বি.এসসি ৪র্থ বর্ষের ছাত্রী, সেশন ২০১৭-২০১৮। অকুপেশনাল থেরাপি, বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই), একাডেমিক ইনস্টিটিউট অফ পক্ষঘাতগ্রস্থদের পূণর্বাসন কেন্দ্র (সিআরপি) যা ঢাকা বিশ্ববিদ্যালযের অধিভুক্ত। গবেষণাটির শিরোনাম ছিল "অঙ্গচ্ছেদ রোগীর স্থিতিস্থাপকতার মাত্রা"। এটি পক্ষঘাতগ্রস্থদের পূণর্বাসন কেন্দ্র (সিআরপি), সাভার, ঢাকায় আসা অঙ্গচ্ছেদ রোগীর স্থিতিস্থাপকতার মাত্রা অন্বেষণ করা।

এই গবেষণায় আমি..... একজন অংশগ্রহণকারী এবং আমি পরিষ্কারভাবে এই গবেষণার উদ্দেশ্য সম্পর্কে অবগত আছি। আমার যেকোনো সময় এই গবেষণা থেকে নিজেকে সরিয়ে আনার অধিকার আছে। এজন্য আমি প্রশ্নের উত্তর প্রদান করার জন্য কারোর কাছে দায়বদ্ধ না।

আমাকে আরও জানানো হয়েছে যে, প্রশ্নাবলী থেকে সংগৃহীত সমস্ত তথ্য শুধুমাত্র গবেষণার উদ্দেশ্যে ব্যবহার করা হবে এবং নিরাপত্তা ও গোপনীয়তা বজায় রাখা হবে। আমার নাম ঠিকানা কোথায় প্রকাশ করা হবে না। শুধুমাত্র গবেষক এবং তার সমন্বয়কারী গবেষণার ফলাফল প্রকাশ করার জন্য তথ্য করার জন্য যোগ্য হবেন। আমাকে উপরে উল্লিখিত তথ্য সম্পর্কে অবহিত করা হয়েছে এবং আমি সম্মতি দিয়ে গবেষণায় অংশগ্রহণ করতে ইচ্ছুক।

অংশগ্রহণকারীর স্বাক্ষর / টিপসই :	তারিখ :
গবেষণাকারীর স্বাক্ষরঃ	তারিখ :

5.3 Withdrawal form

প্রত্যাহার পত্র

আপনি এই গবেষণা থেকে প্রত্যাহার করতে পারেন:

আপনি যেকোনো সময় এই গবেষণা প্রকল্পের জন্য সংগৃহীত তথ্য বাতিল করতে পারেন। বাতিল করার পরে, তথ্য সমূহ কি ব্যবহার করা যাবে কি যাবেনা তার অনুমতি অংশগ্রহণকারীর প্রত্যাহার পএে উল্লেখ করা থাকবে ।

অংশগ্রহণকারীর নাম : .....

প্রত্যাহারের কারণ : .....

.....

.....

.....

.....

পূর্ববর্তী তথ্য ব্যবহারের অনুমতি থাকবে কিনা ?

হ্যাঁ / না

অংশগ্রহণকারীর স্বাক্ষর : .....

তারিখ : .....

Appendix 6: Data collection tools [English]

6.1 Socio-demographic questionnaire

Participant Name :

Sex : Male/ Female

Age :..... .....Years

Marital status : Married/ Unmarried

Duration of amputation : …….Month , ……..Year, ...Day

Site of amputation : Upper limb/Lower limb/ Both / Others.....

Religion : Muslim/ Hindu/ Christian/ Buddhist/ Others…….

6.2 Socio-economic questionnaire

Educational level : Illiterate/ P.S.C/ J.S.C/ S.S.C/ H.S.C/ B.Sc. / Higher/Others.....

Occupation :

Monthly income :

Current employment status :

Neighborhood deprivation :

Employment status :

Sense of community belonging :

Address :

Number of family member : ..... person

House type : Muddy / Tin shade / Building / Apartment / Others……..

Appendix 7: Data collection tools [Bangla]

7.1 Socio-demographic questionnaire

জনসংখ্যাতাত্ত্বিক প্রশ্নাবলি

অংশগ্রহণকারীর নাম :

অংশগ্রহণকারীর লিঙ্গ : পুরুষ / মহিলা

অংশগ্রহণকারীর বয়স : ..... বছর

অংশগ্রহণকারীর বৈবাহিক অবস্থা : বিবাহিত / অবিবাহিত

অঙ্গচ্ছেদের সময়কাল : ..... বছর ..... মাস ..... দিন

অঙ্গচ্ছেদের স্থান : হাত /পা / উভয়/ অন্যান্য .....

ধর্ম : মুসলিম / হিন্দু/ খ্রিস্টান / বৌদ্ধ / অন্যান্য .....

7.2 Socio-economic questionnaire

আর্থ-সামাজিক প্রশ্নাবলি

শিক্ষাগত যোগ্যতা : অশিক্ষিত/ প্রাথমিক/ মাধ্যমিক/ উচ্চমাধ্যমিক/ স্নাতক/ স্নাতকত্তর/ অন্যান্য.....

পেশা :

মাসিক আয় :

বর্তমান আয়ের উৎস :

প্রতিবেশী বঞ্চনা :

কর্মসংস্থানের অবস্থা :

সম্প্রদায়ভুক্ত অনুভূতি :

ঠিকানা :

পরিবারের সদস্য সংখ্যা :

বাড়ির ধরন : মাটির ঘর/ টিনের ঘর/ দালান / এ্যাপার্টমেন্ট/ অন্যান্য.....

Appendix 8: Questionnaire of CD-RISC-25 [English and Bangla]

Connor Davidson Resilience Scale 25

Connor-Davidson Resilience Scale 25 (CD-RISC-25) ©

*For each item, please mark an "x" in the box below that best indicates how much you agree with the following statements as they apply to you over the last **month** If a particular situation has not occurred recently, answer according to how you think you would have felt*

		not true at all (0)	rarely true (1)	sometimes true (2)	often true (3)	true nearly all the time (4)
1.	I am able to adapt when changes occur.	☐	☐	☐	☐	☐
2.	I have at least one close and secure relationship that helps me when I am stressed.	☐	☐	☐	☐	☐
3.	When there are no clear solutions to my problems, sometimes fate or God can help.	☐	☐	☐	☐	☐
4.	I can deal with whatever comes my way.	☐	☐	☐	☐	☐
5.	Past successes give me confidence in dealing with new challenges and difficulties.	☐	☐	☐	☐	☐
6.	I try to see the humorous side of things when I am faced with problems.	☐	☐	☐	☐	☐
7.	Having to cope with stress can make me stronger.	☐	☐	☐	☐	☐
8.	I tend to bounce back after illness, injury, or other hardships.	☐	☐	☐	☐	☐
9.	Good or bad, I believe that most things happen for a reason.	☐	☐	☐	☐	☐
10.	I give my best effort no matter what the outcome may be.	☐	☐	☐	☐	☐
11.	I believe I can achieve my goals, even if there are obstacles.	☐	☐	☐	☐	☐
12.	Even when things look hopeless, I don't give up.	☐	☐	☐	☐	☐
13.	During times of stress/crisis, I know where to turn for help.	☐	☐	☐	☐	☐
14.	Under pressure, I stay focused and think clearly.	☐	☐	☐	☐	☐
15.	I prefer to take the lead in solving problems rather than letting others make all the decisions.	☐	☐	☐	☐	☐
16.	I am not easily discouraged by failure.	☐	☐	☐	☐	☐
17.	I think of myself as a strong person when dealing with life's challenges and difficulties.	☐	☐	☐	☐	☐
18.	I can make unpopular or difficult decisions that affect other people, if it is necessary.	☐	☐	☐	☐	☐
19.	I am able to handle unpleasant or painful feelings like sadness, fear, and anger.	☐	☐	☐	☐	☐
20.	In dealing with life's problems, sometimes you have to act on a hunch without knowing why.	☐	☐	☐	☐	☐
21.	I have a strong sense of purpose in life.	☐	☐	☐	☐	☐
22.	I feel in control of my life.	☐	☐	☐	☐	☐
23.	I like challenges.	☐	☐	☐	☐	☐
24.	I work to attain my goals no matter what roadblocks I encounter along the way.	☐	☐	☐	☐	☐
25.	I take pride in my achievements.	☐	☐	☐	☐	☐

Add up your score for each column 0 + ____ + ____ + ____ + ____

Add each of the column totals to obtain CD-RISC score = _____

01-01-20

কোনোর-ডেভিডসনের স্থিতিস্থাপকতা (Resilience) স্কেল ২৫ (CD-RISC-25) ©

সাক্ষর ☐ পরিচয় ☐ তারিখ ☐ পরিদর্শন ☐ বয়স ☐

নিচের প্রতিটি বাক্যের/পদের পাশে অনুগ্রহ করে "X" চিহ্ন দিন যা বোঝাবে এই বাক্য গুলি আপনার জীবনে গত এক মাসে কিভাবে জড়িত ছিল এবং আপনি এই বাক্য গুলির সাথে কতটুকু একমত। যদি কোন ঘটনা সম্প্রতি না ঘটে তাহলে আপনি (যদি আপনার সাথে ঘটত) এই ঘটনা গুলিকে কেমন আনুভব করতেন। সেই অনুসারে উত্তর দিন।

	একদমই সত্য নহে	খুব কমই সত্য	মাঝে মাঝে সত্য	প্রায়ই সত্য	প্রায় সবসময় সত্য
১. আমি পরিবর্তনের সাথে সামাল/মানিয়ে নিতে সক্ষম পারি।	☐	☐	☐	☐	☐
২. আমার অন্তত: একটি ঘনিষ্ঠ এবং নিরাপদ সম্পর্ক আছে যেটি আমাকে সাহায্য করে যখন আমি চাপে থাকি।	☐	☐	☐	☐	☐
৩. যখন আমার সমস্যাগুলির সুস্পষ্ট সমাধান না পাই, মাঝেমাঝে ভাগ্য বা ঈশ্বর আমাকে সাহায্য করতে পারে।	☐	☐	☐	☐	☐
৪. আমার পথে আসা যেকোন বিষয়ের সাথে আমি মোকাবিলা করতে পারি।	☐	☐	☐	☐	☐
৫. অতীতের সফলতাগুলি আমাকে নতুন কোন চ্যালেঞ্জ বা সমস্যা গুলির সাথে মোকাবিলা করতে (আত্ম)প্রত্যয়/বিশ্বাস প্রদান করে।	☐	☐	☐	☐	☐
৬. আমি যখন কোন সমস্যায় পড়ি তখন বিষয়গুলির মজার/রসিকতাপূর্ণ দিক গুলি দেখার চেষ্টা করি।	☐	☐	☐	☐	☐
৭. চাপের সাথে মোকাবিলার মাধ্যমে নিজেকে শক্তিশালী করতে পারি।	☐	☐	☐	☐	☐
৮. অসুস্থতা, আঘাত বা অন্যান্য কঠিন সময়ের পর আমি স্বাভাবিক জীবনে ফিরে আসার প্রবনতা দেখাই।	☐	☐	☐	☐	☐
৯. ভালো অথবা মন্দ, আমি বিশ্বাস করি অধিকাংশ বিষয়গুলি কোন একটি কারনে ঘটে।	☐	☐	☐	☐	☐
১০. আমি আমার সাধ্যমত প্রচেষ্টা করি, ফলাফল যা-ই হোক না কেন।	☐	☐	☐	☐	☐
১১. আমি বিশ্বাস করি বাধা বিপত্তি থাকা সত্তেও আমি আমার লক্ষ্য বা উদ্দেশ্য অর্জন করতে সক্ষম পারি।	☐	☐	☐	☐	☐
১২. এমনকি যখন মনে হয় বিষয় গুলি নিরাশাজনক, আমি আশা ত্যাগ করি না।	☐	☐	☐	☐	☐
১৩. আমি জানি চাপ/ সংকট- এর সময় কোথায় সাহায্য পাওয়া যাবে।	☐	☐	☐	☐	☐
১৪. চাপের মধ্যে থেকে, আমি লক্ষ্যে অবিচল থাকি এবং সুস্পষ্ট ভাবে চিন্তা করি।	☐	☐	☐	☐	☐
১৫. অন্যদের কে সকল সিদ্ধান্ত নিতে দেওয়ার চেয়ে সমস্যা সমাধানে নিজে নেতৃত্ব নেওয়াকে আমি প্রাধান্য দিই।	☐	☐	☐	☐	☐
১৬. আমি ব্যার্থতার দ্বারা সহজে নিরুৎসাহিত হই না।	☐	☐	☐	☐	☐

১৭. আমি নিজেকে একজন শক্তিশালী ব্যাক্তি হিসাবে চিন্তা করি, যখন জীবনের বিভিন্ন চ্যালেঞ্জ এবং সমস্যার সাথে মোকাবিলা করি।	☐	☐	☐	☐	☐
১৮. প্রয়োজন হলে আমি অ-জনপ্রিয় অথবা কঠিন সিদ্ধান্ত নিতে পারি যা অন্যদেরকে প্রভাবিত করে।	☐	☐	☐	☐	☐
১৯. আমি জীবনে অপ্রীতিকর অথবা দুঃখজনক অনুভূতি যেমন- বিষন্নতা, ভয়, রাগ- গুলিকে সামাল দিতে সক্ষম।	☐	☐	☐	☐	☐
২০. জীবনে বিভিন্ন সমস্যার সাথে মোকাবিলা করার সময় মাঝেমাঝে তোমাকে কোন কারন না জেনে অনুমান নির্ভর সিদ্ধান্তের ভিত্তিতে কাজ করতে হয়।	☐	☐	☐	☐	☐
২১. জীবনের উদ্দেশ্য সম্পর্কে আমার দৃঢ় ধারনা আছে।	☐	☐	☐	☐	☐
২২. আমি আমার জীবনকে নিয়ন্ত্রিত বলে মনে করি।	☐	☐	☐	☐	☐
২৩. আমি চ্যালেঞ্জ পছন্দ করি।	☐	☐	☐	☐	☐
২৪. পথে যাই বাধা বিপত্তির সম্মুখীন হয় না কেন, আমি আমার লক্ষ্য/ উদ্দেশ্য অর্জনে কাজ করি।	☐	☐	☐	☐	☐
২৫. আমি আমার সাফল্য/কৃতিত্বে গর্ববোধ করি।	☐	☐	☐	☐	☐

[অভিক্ষাটি বাংলাই আনুবাদ করেছেন ডঃ সন্তোশি হালদার, সহকারি অধ্যাপিকা, কলিকাতা বিশ্ববিদ্যালয়, কলিকাতা-২৭ এবং সাহানোওয়াজ সেখ, সহকারি অধ্যাপক, বিধাননগর কলেজ, কলিকাতা-৬৪]

Appendix 9: Supervision conduct sheet

Bangladesh Health Professions Institute
Department of Occupational Therapy
4th Year B. Sc in Occupational Therapy
OT 401 Research Project

Thesis Supervisor- Student Contact; face to face or electronic and guidance record

Title of thesis: The level of resilience of amputation patient in Bangladesh.

Name of student: Tasmim Jahan Mithila

Name and designation of thesis supervisor: SK. Moniruzzaman, Associate Professor and Head, Department of Occupational Therapy

Appointment No	Date	Place	Topic of discussion	Duration (Minutes/ Hours)	Comments of student	Student's signature	Thesis supervisor signature
1	20.08.22	BHPI, Office building	Introduction and Research title, aim, objectives	2 hours 30 minutes		Mithila	
2	22.08.22	BHPI, Office building	Resilience related scale discussion	50 minutes		Mithila	
3	24.08.22	Library building	Discuss about the format of email for seeking permission for using scale 1 hour 20 minutes			Mithila	

4	25.08.22	Library building	Feedback of Research proposal presentation	45 minutes		Mithila	
5	25.08.22	BHPI, Office building	CD-RISC 25 Scale related term, condition and agreement related information	35 minutes		Mithila	
6	28.08.22	Library building	Research Scale Discussion	1 hour 15 minutes		Mithila	
7	31.08.22	BHPI, Office building	IRB Approval and Research Scale Discussion	45 minutes		Mithila	
8	03.09.22	Library building	Research Proposal Submit	1 hour		Mithila	
9	11.09.22	Library building	Research proposal get back and direction for next step	1 hour 30 minutes		Mithila	
10	17.09.22	Library building	Feedback on coment form, withdrawal from and information sheet	30 minutes		Mithila	
11	22.09.22	Library building	Bangla all form discussion	45 minutes		Mithila	
12	11.10.22	Library building	Research proposal feedback	1 hour 20 minutes		Mithila	
13	15.10.22	BHPI building	Field test related sharing and discussion	30 minutes		Mithila	
14	18.10.22	Library building	Discussion about data collection	30 minutes		Mithila	

No	Date	Place	Topic of discussion	Duration (Minutes/ Hours)	Comments of student	Student's Signature	Thesis supervisor signature
15	17.11.22	BHPI building	Participant's and withdrawal form related discussion	0 minutes		Mithila	
16	2.12.22	Library building	Guideline for ongoing Reseach project work	1 hour 30 minutes		Mithila	
17	12.12.22	Library building	Introductions, background, literature review and research problem discussion	2 hour 30 minutes		Mithila	
18	13.12.22	Library building	Home work submission and discussion about sample size	30 minutes		Mithila	
19	17.12.22	〃	Research project feedback checking	45 minutes		Mithila	
20	20.12.22	〃	Introduction, literature review, methodology submission	15 minutes		Mithila	
21	27.12.22	〃	Data entry discussion and writing related feedback	1 hour 30 minutes		Mithila	
22	31.12.22	〃	Data entry in SPSS checking	1 hour 30 minutes		Mithila	
23	02.01.23	〃	Data entry related problem sharing & discussion	45 minutes		Mithila	
24	07.01.23	〃	Analysis related discussion & result submission	40 minutes		Mithila	

25	09.01.23	Library	Scale related problem discussion	45 minutes		Mithila	
26	14.01.23	SCI In-patient unit	Analysis related problem discussion	1 hour 30 minutes		Mithila	
27	15.01.23	SCI In-patient unit	Analysis related problem discussion	1 hour 30 minutes		Mithila	
28	16.01.23	Library building	Research 1st draft submission	30 minutes		Mithila	
29	09.02.23	BHPI building	Feedback of research 1st draft	2 hour 30 minutes		Mithila	
30	11.02.23	Library building	Resubmission of 1st draft and problem sharing	30 minutes		Mithila	
31	26.02.23	Library building	Resubmission of thesis and get feedback	45 minutes		Mithila	
32	04.03.23	Library building	Research related work guideline for exam vaccation	45 minutes		Mithila	
33	08.04.23	Library building	Research project work guideline and suggestion for defense preparation	45 minutes		Mithila	
34	07.05.23	Library building	Thesis presentation guideline	1 hour 30 minutes		Mithila	

35	09.05.23	BHPI building	Full thesis checking, formating and problem discussion	2 hour 30 minutes		Mithila	
36	10.05.23	BHPI building	Feedback, discussion and checking	2 hour 45 minutes		Mithila	
37	15.05.23	BHPI building	Defense presentation feedback	2 hour		Mithila	
38							
39							
40							

Note:

1. Appointment number will cover at least a total of 40 hours; applicable only for face-to-face contact with the supervisors.
2. Students will require submitting this completed record during submission your final thesis.