Faculty of Medicine

University of Dhaka

Depression, Anxiety and Stress Among the Caregivers of Clubfoot Patients

Mahema Akter

Bachelor of Science in Physiotherapy

DU Roll no: 1383

DU registration no: 10466

Session: 2018-2019

SAIC College of Medical Science and Technology

Department of Physiotherapy

Mirpur-14, Dhaka-1216

Bangladesh

August, 2024

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

“Depression, Anxiety and Stress Among the Caregivers of Clubfoot Patients”

Submitted by **Mahema Akter** for the partial fulfillment of the requirements for the degree of Bachelor of Science in Physiotherapy.

……

Zahid Bin Sultan Nahid

Assistant Professor and Head

Department of Physiotherapy

SCMST, Mirpur-14, Dhaka.

Supervisor

…….

Dr. Mohammad Sohrab Hossain PhD

Professor,

Department of Physiotherapy, BHPI, CRP

Executive Director,

Centre for the Rehabilitation of the Paralysed (CRP)

CRP Savar, Chapain, Saver, Dhaka-1343

……..

Dr. Abul Kasem Mohammad Enamul Haque

Principal

SCMST, Mirpur-14, Dhaka.

DECLERATION

I declare that the work presented here is my own. All sources used have been cited appropriately. I am aware about plagiarism. Any mistakes or inaccuracies are my own. I also decline that for any publication, presentation or dissemination of information of the study, I would be bound to take written consent of my supervisor. In case of dissemination of the finding of this project for future publication, the research supervisor will be highly concerned, it will be duly acknowledged as a graduate thesis and consent will consent taken from the physiotherapy department of Saic College of Medical Science and Technology (SCMST).

Name & Signature: **Date:** August, 2024

Mahema Akter

Bachelor of Science in Physiotherapy

DU Roll no: 1383

Registration no: 10466

Session: 2018-2019

CONTENTS

ACKNOWLEDGEMENT

First of all, I would like to pay my gratitude to **Almighty Allah** who has given me the ability to complete this research project in time with great success. The second acknowledgment must go to my parents who has always inspired me for preparing the project properly. My deepest great-fullness goes to my honorable supervisor **Zahid Bin Sultan Nahid**, Asst. Professor & Head of the Department, SCMST, Dhaka for giving me his valuable time, his keen supervision and excellent guidance without which I could not be able complete this project.

I gratefully acknowledge my respected teacher, **Dr. Abul Kasem Mohammad Enamul Haque,** Principal, SCMST, Dhaka for his guidance. He variously helped me to conduct research properly.

I am also very thankful to **Shahid Afridi**, Lecturer, SCMST, Dhaka; **MD. Furatul Haque** Lecturer, SCMST, Dhaka; **Md. Shahidul Islam,** Assistant Professor & Clinical Head Department of Physiotherapy, SCMST; **Asma Arju**, Lecturer, Department of Physiotherapy, SCMST, Dhaka; **Md. Billal Hossain,** Lecturer, Department of Physiotherapy, SCMST, Dhaka; **Md. Forhad Hosen**, Lecturer, Department of Physiotherapy, SCMST, Dhaka and also all of my respected teachers for helping me in this study.

Especially, I wish to thank admiration **Md. Shariful Islam Khan**, Project Director, Walk For Life, Dhaka and **Shamsunnahar Begum, Director**, Sancred Welfare Foundation, Dhaka for helping me in the collection of my data. I wish to thanks to all respectable Physiotherapy staff working at Walk For Life especially honorable **Sakina Sultana**, Ponseti clinic Manager, Walk For Life, Dhaka.

Finally, I would like to thank all the participants who willingly participated as the study population during the conduction of my study and the entire individual who were directly or indirectly involved with this study.

ACRONYMS

AHA	American Health Association
BMRC	Bangladesh Medical Research Council
C/S	Cesarean Section
CTEV	Congenital Talipes Equinovarus
DASS	The Depression, Anxiety and Stress Scale
EBR	Ethical Review Board
ICTEV	Idiopathic Congenital Talipes Equinovarus
IRB	Institutional Review Board
NVD	Normal Vaginal Delivery
POP	Plaster of Paris
SCMST	SAIC College of Medical Science and Technology
SD	Standard Deviation
SPSS	Statistical Package for the Social Sciences
WHO	World Health Organization

LIST OF TABLE

LIST OF FIGURE

ABSTRACT

Introduction: Clubfoot, a prevalent congenital deformity, impacts children and caregivers globally, causing psychologically, financial and treatment challenges, especially in low-income countries. **Objectives:** The objective of the study was to assess the level of depression, anxiety and stress among the caregivers of clubfoot patients attending different hospital in Dhaka city. **Methodology:** The design was a descriptive type of cross-sectional study. A total of 85 samples were selected conveniently for this study from the Walk For Life, Dhaka. Data was collected by using of questionnaire and the DASS-21 Scale. Descriptive statistic using SPSS software version 22.0 were used for data analysis. **Result:** In this study, the mean age of the caregivers was (2.68 ± 1.115) years. Female were about 98.8% (n = 84) and male were about 1.2% (n = 1). The study showed that out of 85, caregivers had depression 38 (44.7%). Among them 28.9% (n=11) caregivers had mild depression, 28.9% (n=11) caregivers had moderate depression, 15.8% (n=6) caregivers had severe depression and 26.32% (n=10) caregivers had extremely severe depression. Caregivers were concerned anxiety 43 (50.6%). Among them 2.33% (n=1) caregivers had mild anxiety, 37.21% (n=16) caregivers had moderate anxiety, 11.63% (n=5) caregivers had severe anxiety and 48.84% (n=21) caregivers had extremely severe anxiety. Caregivers were concerned stress 24 (28.2%). Among them 20.8% (n=5) caregivers had mild stress, 12.5% (n=3) caregivers had moderate stress, 45.83% (n=11) caregivers was severe stress and 20.8% (n=5) caregivers had extremely severe stress. This study reveals that there is a significant relationship between depression and the educational background of caregivers, anxiety and monthly income and stress with age group of caregiver category, birth weight and mode of delivery. **Conclusion:** This study provides for level of depression, anxiety and stress among the caregivers of clubfoot patients. Here, researchers tried to find out the relation between depression, anxiety and stress with some sociodemographic factors and the result was that there some relations between them, which were supported by some other studies.

Key word: *Depression, Anxiety, Stress, Caregiver, clubfoot patient.*

Word count: 10489

CHAPTER – I INTRODUCTION

1.1 Background:

Clubfoot or congenital talipes equinovarus (CTEV) is the most common orthopedic congenital deformity of the lower limb seen in the tropics (Esan et al. 2017, p. 41). Clubfoot is a common congenital condition with an average prevalence of approximately 1 per 1000 live births, although reports of this rate vary by country worldwide (Rieger and Dobbs 2022, p. 1).

Congenital malformations pose a significant global health challenge, particularly in developing nations and a study indicates that these malformations have a significant impact on the lives of children, affecting approximately 25 million disability-adjusted life years (Malinga et al. 2021, p. 101). Congenital talipes equinovarus (CTEV), commonly referred to as clubfoot, due to which the parents or caregivers are worried in various ways (Mustari et al. 2022, p. 1).

A severe congenital deformity that is very frequent, congenital clubfoot is typically caused by an idiopathic cause. Genetic syndromes and chromosomal abnormalities account for a lesser proportion of instances. Globally, the prevalence of the condition is thought to be 0.5/1000 neonates, with a 2:1 male to female ratio and a higher distribution in poorer nations 80% (Sadler, Gurnett and Dobbs 2019, p. 238).

Approximately 0.6 to 1.5 live births are affected by clubfoot globally, with low and middle-income nations accounting for 80% of cases. 1.4 out of 1000 live newborns in Sweden are expected to develop clubfoot in 2014 by the global clubfoot initiative (Tan et al. 2018, p. 2). The prevalence rates for the Caucasian and Aboriginal populations in are 1.1 and 3.5 per 1000 live births, respectively, in Australia. In India, the prevalence is 0.9 per 1000 live births, compared to 0.76 per 1000 in the Philippines. According to a research that combined data from ten birth defect monitoring (O'Shea et al. 2016, p. 470).

Between 1992 and 2011, there were 549931 births in Tuscany, and 858 occurrences of clubfoot rush were documented. Insulation was present in 78 of the cases (Seravalli et al. 2015, p. 2066). It has been observed that natural circumstances raise the prevalence of stress, anxiety, and depression in cases. Parents and the healthcare system place a high priority on children's health (Ozdemir et al. 2022, p. 1).

Of all the affected children, 40 were first- born and a maturity of these had no significant medical history 94 or any family history of clubfoot 87 (Malagelada et al. 2016, p. 101). The birth of a baby is a major famed event for parents and the parents are originally shocked after first observing the baby's disfigurement and an endured by emotional torture like anxiety, depression and wrathful ness (Esan et al. 2017, p. 43). The process of treating child with clubfoot involves opinion, treatment and follow up which is veritably stressful for the parents (Esan et al. 2017, p. 44).

Clubfoot in newborn is prevalent worldwide has spread. Although it is generally reported to be between 0.4 and 2.0/1000 live births, the average is about 1/1000 live births (Wang et al. 2019, p. 595). Parents and the healthcare system place a high value on the health of their children. Research on congenital disorders has examined the levels of stress, anxiety, and depression in parents of patients with congenital clubfoot both before and after using the Ponseti method of treatment (Walter et al. 2020, p. 2). Research indicates that the kid's illness may have an impact on the health of the parents as well as the development of a positive, productive relationship between the child and his or her caretakers (Seravalli et al. 2014, p. 2066).

The birth of children is a significant event in the lives of the parents. It is a joyful holiday that is observed throughout the southwest part of Nigeria. Parents are often astonished when they first see their child's malformed limb. This is followed by mental anguish marked by mood swings like anxiety, sadness, rage, and dread (Orimoladel et al. 2014, p. 44). A survey regarding parenting stressors, child care responsibilities shared, and marital satisfaction was answered by seventy-two parents (Ki & Joanne 2014, p. 1).

Treatment of clubfoot patients is costly. Weekly transport expenses can constitute a deterrent to treatment adherence, even in cases when the treatment is free, this makes transportation a significant barrier to adherence (Malagelada et al. 2016, p. 101). For clubfoot treatment to keep the affected leg at 60° of abduction and the normal leg at 30° abductions, a Dennis-Brown splint is applied. The first three months, it is worn every day and to sustain the corrective impact, continue to provide nighttime care for at least 16 hours every day until the child turns 4 years old (Ramahenina et al. 2016, p. 481).

In this study, the mothers' depression was assessed over the course of four periods using the SDS (Ramahenina et al. 2016, p. 481). Mothers, kids, and families are negatively impacted by these mental illnesses. Common congenital conditions include Down's syndrome, cardiac malformations, and cleft lip and palate (Brummelte and Galea 2016, p. 153). Verified to cause moms to experience anxiety or depression nevertheless, there hasn't been any information on how CTEV affects mothers' psychological well-being (Vehmeijer et al. 2019, p. 274**).**

Finally, as a result of this study, responsiveness will be improved, and the ability to offer appropriate advice or suggestions, which will be beneficial to clubfoot patients caregiver, will be enhanced. There had been many studies on Clubfoot patient's caregiver on other countries but there is no any research about that in our country. For all of this reason I am interested in this topic.

1.2 Justification:

Clubfoot is a congenital condition that is almost always present at birth. This condition results in children being born with physical abnormalities instead of typical development, significantly affecting their caregivers. Clubfoot can negatively impact the physical health of the affected individual and is often associated with pain and disability, limiting normal life activities. Caregivers of individuals with clubfoot frequently experience psychological challenges, including depression, anxiety, and stress, often due to exposure to various social pressures and the demands of caregiving. This study aims to assess the levels of stress, anxiety, and depression among caregivers of children with clubfoot using the "Depression, Anxiety, and Stress Scale-21 Items (DASS-21)." The findings of this study are expected to improve awareness and responsiveness, enabling caregivers to receive appropriate advice and support, which will ultimately benefit both caregivers and the patients they care for. While studies on the psychological state of caregivers of clubfoot patients have been conducted in other countries, no such research has been undertaken in our country. Therefore, this study seeks to explore the psychological well-being of these caregivers and provide valuable insights into their lives following this challenging experience. The results will also serve as a foundation for future research on this topic, offering crucial information to those interested in further investigating the impact of clubfoot on caregivers.

1.3 Research Question:

- What are the level of depression, anxiety and stress among the caregivers of Clubfoot patients?
- What are the prevalence of depression, anxiety and stress among the caregivers of Clubfoot patients?

1.4 Study Objective:

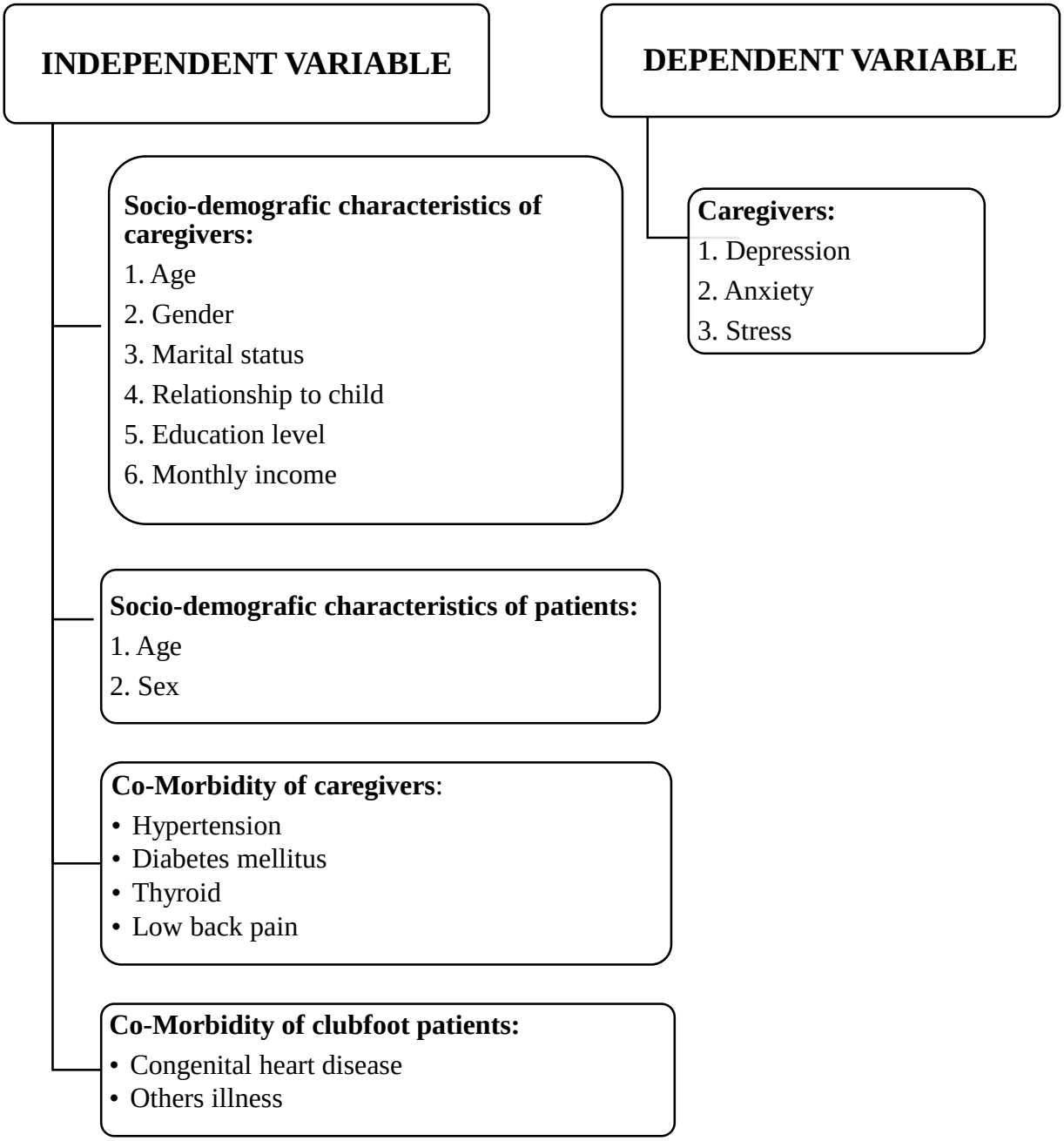
1.4.1 General Objective:

To assess the levels of depression, anxiety and stress among the caregivers of Clubfoot patients attending different hospital in Dhaka city.

1.4.2 Specific Objective:

- To determine the prevalence of depression, anxiety, and stress among caregivers of children with clubfoot.
- To assess the level of depression, anxiety and stress among the caregivers of Clubfoot patient by Depression, Anxiety and Stress Scale (DASS-21)
- To analyze the association between sociodemographic variables with depression, anxiety and stress.
- To describe the sociodemographic variables of the caregivers of children with clubfoot.

1.5 Conceptual Framework:



1.6 Operational Definition:

Clubfoot:

Clubfoot refers to a variety of congenital foot deformities, such as your baby's foot being twisted out of shape or position, that are typically present at birth. The tendons that link the muscles to the bone are abnormally short in clubfoot.

Caregiver:

The caregivers are parents who help and support someone who is incapable of taking care of oneself completely because of age, illness, disability, or other health-related issues. This position may include assistance with everyday tasks like eating, dressing, taking a shower, managing medications, getting around, and providing emotional support.

Depression:

The hallmarks of depression are a persistent sense of melancholy and a lack of interest in or pleasure of once-pleasurable or satisfaction-producing activities. It could also disrupt sleep and appetite.

Anxiety:

Anxiety is a mental state characterized by tense emotions, worried thoughts, and physical symptoms like high blood pressure. Frequent intrusive thoughts or worry are hallmarks of anxiety disorders. They might steer clear of particular circumstances out of concern, Physical manifestations like perspiration, shaking, there may also be confusion or a fast heartbeat. From a different angle, anxiety can also be seen as a powerful motivator for caregivers to engage in a range of activities, including disruptive and deviant ones. Normal caregiver responses to stressful circumstances and to perceived or actual risks (phobias) brought on by uncertainty include anxiety.

Stress:

Stress is characterized by anxiety and mental strain brought on by a difficult situation. Stress is a natural human response that forces us to face challenges and risks in the lives of those who provide care.

CHAPTER – II LITERATURE REVIEW

Congenital talipes equinovarus (CTEV) is complex congenital deformity of foot which is commonly named as club foot (Hargava et al. 2014, p.1). Club foot (CTEV) is the most common deformity characterized by equinus (planterflexion), varus (inversion), cavus (high arch) and adductus (Munambah, Chiwaridzo, & Mapingure 2016, p. 2). It is a structural defect where foot is inwardly rotated and pointed downward, and the fore-foot is pronated toward the heel in which the bones of the foot & ankle are fixed in malposition (Werler et al. 2014, p. 86). Referring to World Health Organization (WHO) definition depression is very frequent mental disorder that includes depressive mood, loss of interest or please, awake the felling of guiltiness, affects the appetite, dream and concentration (Mehmedinovic et al. 2012, p. 819).

Congenital talipes equinovarus (CTEV), also known as clubfoot, stands as the most prevalent musculoskeletal anomaly occurring at birth and is reported to affect approximately 1.2 per 1000 live births (Malagelada et al. 2016, p. 101). Another study reveals varying incidences, between 1 in 1000 births in the Caucasian population and 7 in 1000 births in the Maori population, according to estimations. According to (Smythe et al. 2017, p. 269), epidemiological studies consistently reveal a greater incidence of idiopathic clubfoot among males and in firstborn children. (Turner et al. 2018, p. 37) reported that in North America and Europe, the incidence of idiopathic clubfoot stands at 1 per 1000 live births, with half of these cases being bilateral. It is worth noting that clubfoot tends to manifest bilaterally in 50% of cases and is more commonly observed in males, with a 2 to 1 ratio (Yau and Doyle 2020, p. 100).

The most common congenital musculoskeletal condition requiring extensive orthopedic treatment is congenital talipes equinovarus (CTEV). The Ponseti method has emerged as the widely accepted gold standard for treating clubfoot (Ganesan et al. 2017, p. 1). This approach has proven to be both cost-effective and straightforward to implement. However, its success relies heavily on the active participation and determination of parents as well as the affected child (Grimes et al. 2016, p. 1). Congenital clubfoot can be corrected non-invasively with the Ponseti procedure. Dr. Ignacio Ponseti created it for the first time in the 1950s at the University of Iowa.

Around 2000, Dr. John Herzenberg was a major contributor to its comeback in the USA and Europe, while NHS surgeon Steve Mannion helped it gain traction in Africa. This method has become a standard for treating clubfoot.

It is well known that caregivers experience higher levels of worry, despair and stress when their children suffer from chronic illnesses like clubfoot, asthma, heart disease, kidney disease etc. Exact causes of club foot are poorly understood except genetic factors (Hargava et al. 2013). CTEV can be visualized by USG at 12 weeks of gestation, though its pathogenesis is unknown (Werler et al. 2014, p. 86). Multifactorial causes are responsible for clubfoot and pathogenesis of clubfoot till not clears (Okonski et al. 2017, p. 32).

Depression in caregivers is a serious health issue that significantly affects health when it coexists with a long-term medical condition. Caregiver of clubfoot patients are accompanied by a high incidence of depression and can affect the treatment and prognosis (Berntson, Patel and Stewart 2017, p. 149). In addition to being linked to morbidity and clubfoot disease, depression is a very common risk factor for incidents. In addition to the prompt and effective treatment of underlying disorders, priority should be given to improving the psychological and social functioning of caregivers. Apart from depression, diseases such as anxiety and stress have different effects on caregiver (Kim et al. 2017, p. 47).

Parents and the healthcare system place a high value on the health of their children. Research on congenital disorders has examined the levels of stress, anxiety, and depression in parents of patients with congenital clubfoot both before and after using the Ponseti method of treatment (Walter et al. 2020, p. 2). Research indicates that the kid's illness may have an impact on the health of the parents as well as the development of a positive, productive relationship between the child and his or her caretakers (Seravalli et al. 2014, p. 2066).

Untreated CTEV lead to permanent disability which can create difficulties in walking, playing and perform ADL such as individual-care (Van Wijck, Oomen & van der Heide 2015, p. 2415). Neglected clubfoot causes lack of social integration, long term psychological burden, and financial burden for the family as well as the community (Pulak & Swamy 2012, p. 77).

Numerous studies have demonstrated that the clubfoot diagnosis may (Mahan et al. 2019, p. 500). Because of hunger, pain when walking on hard surfaces, social rejection, and humiliation, clubfoot deformity is linked to fewer possibilities in life. These characteristics are topped off by additional local cultural connotations, making it a disorder that requires effective treatment (Nunn et al. 2018, p. 171).

Parents of children with clubfoot experience worry due to adjusting to an obvious physical deformity, worries about future limits, and fears about potential disabilities. For the past 30 years, the standard course of treatment for correcting clubfoot deformity has been months of casting and manipulation, followed by surgery. (Miller et al. 2011, p. 273). Uk showed that Ponseti treatment was initiated for all infants with a mean of 7.7 casts, and 74 % required percutaneous heel cord tenotomy (Malagelada et al. 2016, p. 104).

In Bangladesh, a domestic clubfoot therapy program is operated in collaboration with the Glencoe Foundation, the Prosthetics Outreach Foundation and Rotary Clubs from various countries. The international non-governmental organization Walk for Life facilitates this program. Within Bangladesh, Walk for Life collaborates with local partners including Zero Clubfoot Chittagong, Lamb Hospital and CRP Bangladesh. (Ford-Powell et al. 2013, p. 42). The main objective of Walk for Life is to guarantee that every child with clubfoot born in Bangladesh has the chance to be treated within the first two years of life using the Ponseti method. Importantly, this treatment is provided free of charge and clinics have been established across the country to ensure that no family has to travel more than 60 kilometers to access a clinic. This initiative aims to make clubfoot treatment accessible and affordable for all (Ford-Powell et al. 2013, p. 40).

Measures of maternal psychological distress included the Edinburgh Postnatal Depression Scale (EPDS), the Spielberger State-Trait Anxiety Inventory (STAI, trait anxiety), and the Perceived Stress Scale (PSS), all of which are psychometrically sound questionnaires (Woolhouse et al. 2014, p. 2). On the same day as their MRI, individuals finished all of the questionnaires. The PSS evaluates how stressful people believe their lives were during the month before (Makropoulos et al. 2014, p. 1818). A PSS score of 15 or greater shows that stress is higher than average, and higher PSS values (range, 0–40) indicate higher stress. The intensity of symptoms of prenatal

depression during the past seven days is measured by the 10-item EPDS test, which has a range of 0 to 30. Its application in the prenatal and postnatal phases has been approved (Verbeek et al. 2019, p. 138).

There have been cases in the past of maternal stress and depression symptoms after learning that a fetus had clubfoot. Eighty-one percent of the pregnant women in the current cohort with clubfoot attended college, and seventy-five percent worked in the professional sector (Golfenshtein et al. 2017, p. 294). While it has been noted that pregnant women from lower socioeconomic backgrounds are more likely to experience psychological discomfort (Accortt et al. 2017, p. 553).

Anxiety and depression was the big part of level of impaired life quality, conditions of physical disability, noncompliance of medical treatment, increasing the usage of health care services and increasing rate of deaths (Sharafkhaneh 2018). The Ponseti therapy method's psychological impacts on the parents were assessed using the DASS-21. In order to examine the consequences on the parents, we took into account the following factors: the parents' educational attainment, the family's financial standing, gender, the child's birth order within the family, and the diagnosis time (prenatal or postnatal) (Ozdemir et al. 2022, p. 1). The DASS-21 is a commonly used, dependable scale for assessing adult symptoms of stress, anxiety, and depression. Numerous clinical research indicate that this scale has a high degree of sensitivity. It might be given by a medical professional or a psychiatrist (Ozdemir et al. 2022, p. 1).

Regarding the distribution of the sociodemographic information of the caregivers assessed, as shown in the case of Brazil the patient's mother (89.8%) and women (93.9%) made up the majority (Javalkar et al. 2016, p. 2). The majority of these caregivers had only completed elementary school (55.1%), were married (69.4%), and were between the ages of 36 and 45 (46.9%). The average family made R 1,804.00 a month and more than half of the study group (67.3%) reported not doing any kind of paid work (In order to care for the patient, 57.6% of caregivers resign from their positions). A third (36.7%) had given more than six years of care to the child or adolescent with chronic kidney disease. The test proved significant for every analyzed factor ((Javalkar et al. 2016, p. 2).

To our knowledge, there's only one study that looks into how an orthopedic physical disfigurement can intrude with the functioning of the cerebral health of mother. Maters of healthy full- term babe were compared to maters who had given birth to a child linked with CTEV during the first three months of the study (Sullivan 2021, p. 634). The detail manages and MSPSS were employed, among other tools. In response to the birth of their child, Women in the CTEV group had severe cases of depression and stress-related symptoms. They also discovered that social support played a defensive part in these maters lives (Shelton et al. 2019, p. 383).

They also emphasized the significance of putting in place hospital unit protocols aimed at parents of infants born with congenital malformations. Our research focuses on how CTEV is treated and how it affects families who have already experienced the traumatic event of receiving a diagnosis at birth (Dong et al. 2023, p. 184). Comparing our results to bracing, only in the initial casting stage do we observe a tendency toward greater impact. It's unclear if this trend results from the treatment's increased demand or from the treatment's after-birth residual effect, as demonstrated by Coppola et al. It is possible that the effects of the casting treatment could be compounded over the first three months following delivery by the diagnosis (Dong et al. 2023, p. 184).

According to a number of 53 studies, putting relaxing techniques into practice Breathing exercises cause the sympathetic tone to generally drop and the parasympathetic output to rise, both of which work to counteract the increased sympathetic activity that occurs when one is stressed. Because of this, clubfoot patient's caregiver will experience less negative feelings such as tension, despair, and anxiety (Li et al. 2020, p. 526).

In the United States, 84 caregivers from 51 households returned completed questionnaires. Six respondents were the only caregivers and single mothers. Of the 45 families that were left, 33 had responses from both male and female caregivers, 11 from the mother alone, and 1 from the father alone (Buatsi et al. 2015, p. 65).

The study's second goal is to characterize a sample of older adults who are caregivers and find correlations between sociodemographic traits, care demands, overload, coping mechanisms, and depression in order to increase the body of knowledge and contributions on this topic in Brazil (Bianchi et al. 2016, p. 1).

When it comes to treating idiopathic clubfoot, the Ponseti technique has emerged as the industry standard. Over the past 20 years, its use has risen globally because to several literary demonstrations of its safety and effectiveness (Sadler, Gurnett and Dobbs 2019, p. 238). In Saudi Arabia, clubfoot is regarded as a public health concern, but 70% of people there are unaware of the existence of the abnormality. Early intervention and effective management of clubfoot may be hampered by a lack of public awareness of the ailment (Malagelada et al. 2016, p. 101).

Among neuropsychiatric predictors, apathy, depression, and anxiety were the top three. There were significant correlations found between caregiver strain, anxiety, and sadness and all 12 neuropsychiatric symptoms in the Neuropsychiatric force. Similarly, a longer duration was linked to more severe cases of caregiver worry. The responsibility of providing care (Li et al. 2020, p. 526). Advanced cases of depression among caregivers were specifically linked to advanced numbers of new caregivers, lower educational attainment, and being the case partner. Longer periods of time spent as the case partner and caregiver were linked to more advanced circumstances of load. Hours/day of minding for the case did not substantially correlate with caregiver strain, anxiety, or sadness (Lou et al. 2015, p. 2668). A depressed mood, lack of interest or pleasure, guilt or low self-esteem, trouble sleeping or eating, low energy and difficulty focusing are all signs of depression, a common mental illness (Evans-Lacko et al. 2017, p. 1560).

Traditionally, depression and caregiver stress/burden are seen to moderate one another and belong to the same category of duress brought on by providing care. Therefore, one would anticipate that individuals with high levels of stress or load and those with depression, and that identifying individuals who are depressed should just require the use of a caregiver burden scale (Perlick et al. 2016, p. 183). Surprisingly, our results imply the opposite. Although the majority of high burden caregivers also had sadness the opposite was not always true. Many of the depressed caregivers in this study did not show signs of excessive load (Oh et al. 2015, p. 202). It’s probable that this group of caregivers’ depression was brought on by factors other than their experience providing care. While caregiver depression may necessitate more intense interventions, caregiver burden can be lessened by programs that enhance the caregiving experience, such as psychoeducation, caregiver training and respite care

can address the caregiver's mood symptoms (Weinbrecht, Rieckmann and Renneberg 2016, p. 1615).

The stress brought on by giving care is linked to the manifestation of stress in caregivers. The Lazarus and Folkman transactional theory of stress serves as the foundation for most models and hypotheses that attempt to explain stress as a result of caring for a relative (Watson, Tatangelo and McCabe 2019, p. e597). These writers contend that the perception of the caregiving situation as unfavorable by the caregiver is what causes stress and other detrimental emotional effects rather than the actual act of providing care (Loh et al. 2017, p. 111).

From the perspective of anxiety prevention, it is helpful to understand the factors that are linked to it in order to enhance the well-being and standard of living of caregivers who are just beginning to provide in-hospital care for elderly, dependent relatives (Ordonez et al. 2016, p. 600). Even though this has been the subject of numerous research in the setting of the home, insufficient evidence has been used to reach any conclusions. Moreover, as we have already mentioned, no research has examined these problems among family caregivers in hospitals (Casado et al. 2014, p. 176). Finding the factors that contribute to anxiety in these caregivers-especially those who are just starting to provide care in a hospital might make it easier to create interventions that are tailored to their needs (Ordonez et al. 2016, p. 600).

After generating 1259 results from the literature hunt, 34 full- textbook publications passed a thorough evaluation in America. An aggregate of 1756 caregivers were included in twelve studies that satisfied the addition criteria. Grounded on the arbitrary- goods model, among caregivers of stroke survivors, in total, there were 21.4 (95% CI 11.6–35.9) anxiety symptoms and 40.2 (95% CI 30.1–51.1) depression symptoms. Significant diversity ware present (Loh et al. 2017, p. 111). To take into consideration the diversity of the frequency, meta- retrogression was used. The significant frequency of depressed symptoms was linked to the womanish coitus of stroke survivors and caregivers, as well as their Caucasian strain. Low frequency of depression was linked to caregivers' connections with their partner and children who have survived strokes (Faronbi et al. 2019, p. 8).

While providing care for their children with CTEV, the parents experienced financial hardships. Their funds are used to pay for transportation to the hospital, and these are also directed to clinic visits. Since they have to prioritize the needs of the child, they stopped working. Even though the Ponseti organization is free, the parents still experience financial hardships. Ponseti care is free, but research indicates that the biggest obstacle to managing their children with clubfoot is still financial strain for the parents (Doris et al. 2021, p. 8).

In South Africa, compared to parents in the UK, parents of children with clubfoot were shown to use a wider variety of coping mechanisms, as assessed using the Brief COPE tool. These approaches included denial, active coping, planning, emotional support, venting, positive reframing, religious coping, acceptance of the sickness and the treatment plan, and instrumental aid. This suggests that parents in South Africa were more actively engaged in various coping mechanisms to manage the challenges associated with clubfoot, as stated in the research by (Malagelada et al. 2016, p. 101).

Regarding parents whose children have congenital talipes equinovarus (CTEV), the majority were found to have mild to moderate levels of anxiety. Importantly, both of the parents exhibited nearly equal levels of anxiety symptoms (Tassadaq, Rafiq and Siddiqi 2016, p. 185). Given these findings, it becomes crucial for treating physicians to provide counseling to parents right from the outset. This counseling should include an explanation of the complexities of the condition, the treatment methodology (including the bracing phase), and the potential difficulties that parents might encounter throughout the treatment journey. By doing so, healthcare providers can help minimize the element of surprise and better equip parents to cope with the significant psychological impact that often develops as a result of this long-term commitment (Ali 2020, p. 90).

CHAPTER – III METHODOLOGY

3.1 Study Design:

It was a descriptive type of cross-sectional study carried out with the objective of assessing the level of depression, anxiety and stress among the caregivers of clubfoot patients.

3.2 Study Area:

The researcher collected data from BIRDEM General Hospital 2 (Mother and Children), Segun Bagicha, Dhaka, Center for the Rehabilitation of the Paralyzed (CRP), Mirpur-14, Dhaka and Trauma Center Bangladesh, Shyamoli, Mirpur Road, Dhaka-1207.

3.3 Study Place:

The present study was conducted at Saic College of Medical Science and Technology (SCMST) at Mirpur in Dhaka city.

3.4 Study Period:

The study period was one year from September 2023 to August 2024.

3.5 Study Population:

The caregivers of clubfoot patients visiting BIRDEM General Hospital, CRP, and Trauma Center in Dhaka constituted the study population for this study.

3.6 Sample Size:

The sample size for the present study was calculated by the following statistical formula.

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

Here,

z (confidence interval) = 1.96 at 5% level of significance.

P (prevalence) = 0.168 (Verma et al. 2024, p. 1)

d (margin of error) = 0.05

And, $q = (1-p)$

$= (1-0.168)$

$= 0.832$

$$n = \frac{(1.96)^2 \times 0.168 \times 0.832}{(0.05)^2}$$

$$= \frac{3.84 \times 0.168 \times 0.832}{0.0025}$$

$$= \frac{0.537}{0.0025}$$

$= 215$

The actual sample size was, $n = 215$

The researcher collected data according to following schedule.

On the day 1, the researcher collected data from 24 caregivers of clubfoot patients at CRP, Mirpur-14.

On the day 2, the researcher collected data from 20 caregiver of clubfoot patients at BIRDEM General Hospital 2 (Mother and Child), Segun Bagicha, Dhaka.

On the day 3, the researcher collected data from 10 caregivers of clubfoot patients at CRP, Mirpur-14.

On the day 4, the researcher collected data from 8 caregiver of clubfoot patients at BIRDEM General Hospital 2 (Mother and Child), Segun Bagicha, Dhaka.

On the day 5, the researcher collected data from 15 caregivers of clubfoot patients at CRP, Mirpur-14.

On the day 6, the researcher collected data from 8 caregivers of clubfoot patients at Trauma Center Bangladesh, Mirpur Road, Dhaka-1207.

So, the researcher collected data form 85 caregivers of patients with clubfoot due to some limitations.

3.7 Sampling Technique:

Convenience sampling technique was used to select caregivers of child with clubfoot from the Walk for Life.

3.8 Eligibility Criteria

3.8.1 Inclusion Criteria:

- The age of caregivers was between 18-50 years for the present study (Esan et al. 2017).
- Caregivers of children diagnosed with congenital talipes equinovarus(CTEV) undergoing Ponseti treatment at the time of the study (Malagelada et al. 2016)
- Both male and female caregivers were included (Walter et al. 2020).

3.8.2 Exclusion Criteria:

- This study excluded those who were medically unstable and mentally retarded.

3.9 Method of Data Collection:

3.9.1 Technique of data collection:

Face to face formal interview technique was used to collect data from the selected caregivers of the patients with clubfoot.

3.9.2 Instrument and Tools of Data Collection:

Instrument of data collection:

A pre-tested structured questionnaire was used as an instrument of data collection. The questionnaire had 4 parts. The first part contain question on socio-demographic characteristics. The second part included questions on clubfoot related information. The third part contained questions on Co-morbidity information. The fourth part included questions DASS-21.

Tools of data collection:

The Depression Anxiety Stress Scales (DASS) is a set of three self-report scales designed to measure the emotional states of depression, anxiety and stress. Symptoms of dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia and inertia are measured by depression scale. Anxiety Scale is used to assess autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. Levels of chronic non-specific arousal, including difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive, and impatient are evaluated by stress scale.

Measurement Tool:

DASS-21

Please read each statement and circle a number 0, 1, 2, or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all

1 Applied to me to some degree, or some of the time

2 Applied to me to a considerable degree or a good part of the time

3 Applied to me very much or most of the time

Table no. 1: DASS 21

1(s)	I found it hard to wind down	0	1	2	3
2(a)	I was aware of dryness of my mouth	0	1	2	3
3(d)	I couldn't seem to experience any positive feeling at all	0	1	2	3
4(a)	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5(d)	I found it difficult to work up the initiative to do things	0	1	2	3
6(s)	I tended to over-react to situations	0	1	2	3
7(a)	I experienced trembling (e.g. in the hands)	0	1	2	3
8(s)	I felt that I was using a lot of nervous energy	0	1	2	3
9(a)	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10(d)	I felt that I had nothing to look forward to	0	1	2	3
11(s)	I found myself getting agitated	0	1	2	3
12(s)	I found it difficult to relax	0	1	2	3
13(d)	I felt down-hearted and blue	0	1	2	3
14(s)	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15(a)	I felt I was close to panic	0	1	2	3
16(d)	I was unable to become enthusiastic about anything	0	1	2	3
17(d)	I felt I wasn't worth much as a person	0	1	2	3
18(s)	I felt that I was rather touchy	0	1	2	3
19(a)	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3
20(a)	I felt scared without any good reason	0	1	2	3
21(d)	I felt that life was meaningless	0	1	2	3

DASS-21 Scoring:

The DASS-21 should not be used to replace a face-to-face clinical interview. If you are experiencing significant emotional difficulties, you should contact your GP for a referral to a qualified professional.

Depression, Anxiety and Stress Scale - 21 Items (DASS-21)

The Depression, Anxiety and Stress Scale - 21 Items (DASS-21) is a set of three self-report scales designed to measure the emotional states of depression, anxiety, and stress. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, and lack of interest/involvement, anhedonia, and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive, and impatient. Scores for depression, anxiety, and stress are calculated by summing the scores for the relevant items.

Interpretation: The scores are interpreted by comparing them to normative data, which categorizes the severity of the symptoms into normal, mild, moderate, severe, or extremely severe.

Applications: The DASS-21 is widely used in both clinical and research settings to assess the severity of depression, anxiety and stress. It helps in screening and identifying individuals who may benefit from further psychological evaluation or intervention. The DASS can also be used to monitor changes in symptoms over time, such as in response to treatment.

Recommended cut-off scores for conventional severity labels (normal, moderate, severe) are as follows:

Table no. 2: Level of DASS 21

	Depression	**Anxiety**	**Stress**
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

Procedure of data collection:

The researcher obtained permission from the authority of selected health and rehabilitation centers situated in different parts of Dhaka city to carry out the study. Then the researcher approached the caregivers present in the centers. The aim and objectives of the study was explained to the participants before data collection. They were given the opportunity to ask questions and then asked to sign the written consent form once they were satisfied. Obtaining written informed consent, the researcher herself started interview with the participants. After completion of the interview, the researchers thanked the respondents.

3.10. Data Editing:

After collection of the data, the questionnaires were checked for any error or inconsistency in the responses. Necessary corrections were done accordingly.

3.11. Data Entry:

Data were coded and entered into the computer. First put the name of variables in the variable view of SPSS and the types, values, decimal, label alignment, and measurement level of data. The next step was to input the data view of SPSS. After

inputting all data researcher checked the inputted data to ensure that all data had been accurately transcribed from the questionnaire sheet to the SPSS data view. Then the raw data was ready for analysis in SPSS.

3.12. Data Analysis:

Data were analyzed with the software named Statistical Package for Social Science (SPSS) version 22.0 and Microsoft Excel 2016. Initially, the data were cleaned by reviewing questionnaires for any missing or unclear information. In SPSS, the variable names were inputted in the variable view, specifying their types (numeric, string), values, decimal places, labels, and measurement levels (nominal, ordinal, ratio). Data were then entered in the data view, ensuring accurate transcription from the questionnaires. Afterward, descriptive statistics such as frequencies, percentages, and means were calculated. Chi-square tests was conducted to explore relationships between independent and dependent variables. The results were then interpreted and presented in tables and charts for clearer understanding.

3.13. Ethical Consideration:

- The research proposal was submitted to the Ethical Review Board (EBR) of SAIC College of Medical Science and Technology (SCMST) and approval was obtained from the Board.
- Bangladesh Medical Research Council (BMRC) and World Health Organization (WHO) guideline also were followed to conduct the study.
- The aims and objectives of the research were explained to every participant before interview and asked for their response. The respondents who gave informed verbal consent included in the study.
- No physical examination or any invasive technique was applied to the participants for the present study. The participant was also informed of his/her right to discontinue at any point of interview.
- The name, address, and personal information of the participants were kept confidential by the investigator.

CHAPTER – IV RESULTS

The objective of the study was to find out the depression, anxiety and stress among the caregivers of clubfoot patients. For the purpose of this research, a total of 85 participants among whom were caregivers of clubfoot. The results of this investigation are summarized in the following paragraphs. The investigator collected the descriptive data and calculated it as percentages which were presented in different bar diagrams, pie charts and tables. Individual results of the socio-demographic information, clubfoot related information, comorbidity and depression, anxiety and stress related information shown here in different tables. Association between socio-demographic information, clubfoot related information, comorbidity and DASS-21 scale are also shown here in different tables.

4.1 Socio-Demographic Information

Table no.3: Frequency distribution of respondent according to sociodemographic variables

Variables	Category	Frequency	Percentage (%)
Age of Caregiver	18-22 years	17	20.0
	23 -25 years	19	22.4
	26 -30 years	23	27.1
	> 30 year	26	30.6
Age of caregivers overall (Mean ±SD) = (2.68 ±1.115)			
Age of Children	1-4 month	19	22.4
	5-11 month	21	24.7
	12-23 month	15	17.6
	>23 month	30	35.3
Age of Children overall (Mean ±SD) = (2.66 ±1.181.)			
Educational status of caregiver	Non formal	1	1.2
	Primary	27	31.8
	Secondary	29	34.1
	Bachelor of degree	28	32.9
Educational status of caregiver overall (Mean ±SD) = (1.99 ±0.838)			
Occupation of caregiver	Homemaker	81	95.3
	Others	4	4.7
Occupation of caregiver overall (Mean ±SD) = (1.09 ±0.426)			
Monthly family income	10000-15000	6	7.1
	16000-30000	34	40
	31000-40000	11	12.9
	>40000	34	40
Monthly family income overall (Mean ±SD) = (2.86 ±1.04)			

The study showed that among the 85 caregivers, maximum caregiver was between the 23-25, 26-30 and >30year age range. It was found that in the age group 18-22 year were 20% (n=17), age group 23-25 year were 22.4% (n=19), age group 26-30 year were 27.1% (n=23), and age group more than 30 years were 30.6% (n=26). The mean and the standard deviation is 2.68 ±1.115. The study showed that among the 85 clubfoot patients, maximum children were between the 5-11 month and >23month age range. It was found that in the age group 1-4 month were 22.4% (n=19), age group 5-11 month were 24.7% (n=21), age group 12-23 month were 17.6% (n=15) and age group more than 23 months were 35.3% (n=30). The mean and the standard deviation is 2.66 ±1.181. This study showed that secondary passed participants were the highest rate, at 34.1% (n=29). Bachelor degree or above passed participants had the second highest rate, which was 32.9% (n=28). Among the primary passed participants, third position was 31.8% (n=27) and 1.2% (n=1) was non-formal. The mean and the standard deviation is 1.99 ±0.838. The study showed that among the caregivers of 85 clubfoot patient, 95.3% (n=81) caregivers were homemaker and 4.7% (n=4) caregiver was others. The mean and the standard deviation is 1.09 ±0.426. The result shows that the monthly income of the parents of CTEV children ranged from 10000 to >40000 Taka. 7.1% (n=6) of parent's monthly income is between 10000-15000 taka, 40% (n=34) of parent's monthly income is between 16000-30000 taka, 12.9% (n=11) of parent's monthly income is between 31000-40000 and 40% (n=34) of parent's monthly income is above 40000 Taka. The mean and the standard deviation is 2.86 ±1.04.

4.1.3 Gender of the children's:

About frequency distribution of the respondents by gender it was reverted that among the 85 participants, boys are about 75.3% (n = 64) and the rest of the participants were girls, which was about 24.7% (n = 21). The mean and the standard deviation was 0.25 ±0.434.

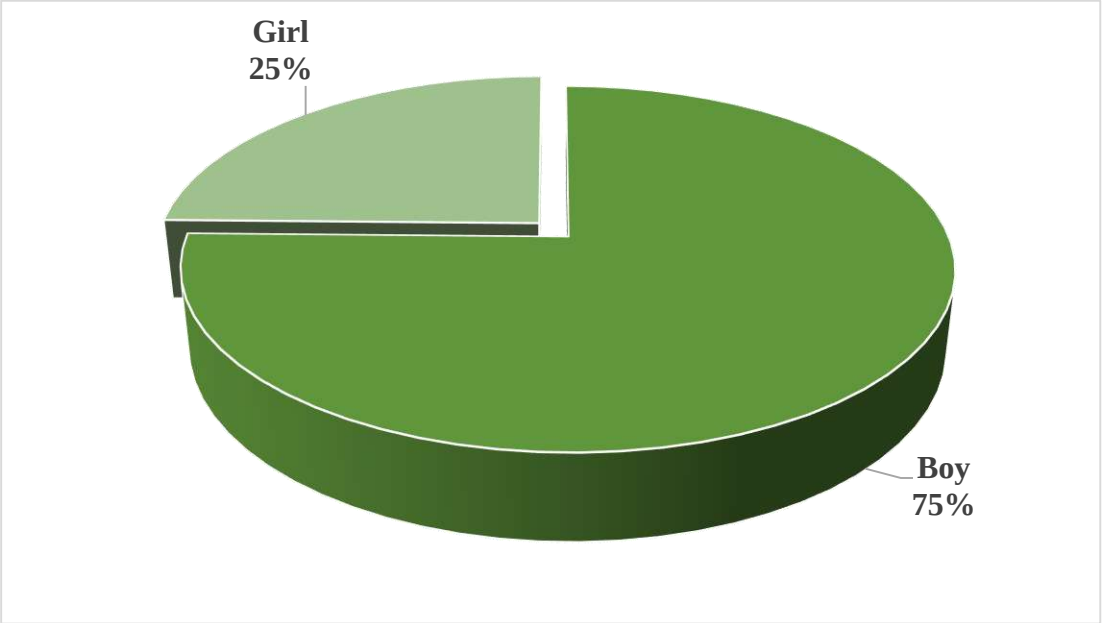


Figure no. 1: Gender of the children's

4.1.4 Gender of the caregiver:

The study showed that among the 85 participants, female was about 98.8% (n = 84) and the rest of the participants were male, which was about 1.2% (n = 1). The mean and the standard deviation is 0.01 ±0.108.

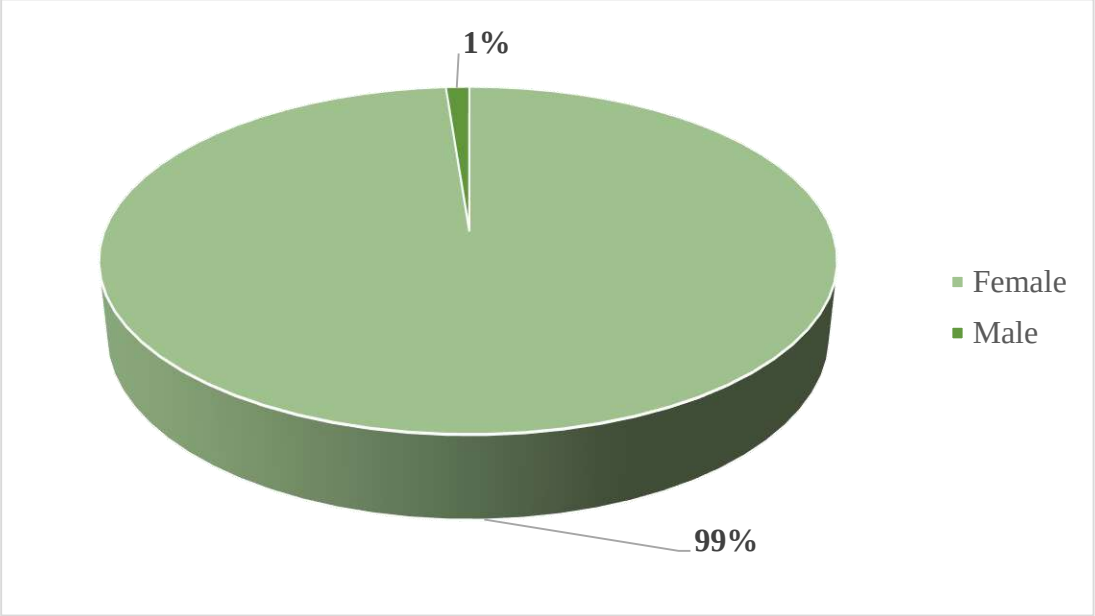


Figure no. 2: Gender of the caregiver

4.1.5 Religion:

The survey showed that among the 85 participants, 96.5% (n=82) were Islam and 3.5% (n=3) were Hindu. The mean and the standard deviation is 0.04 ±0.186.

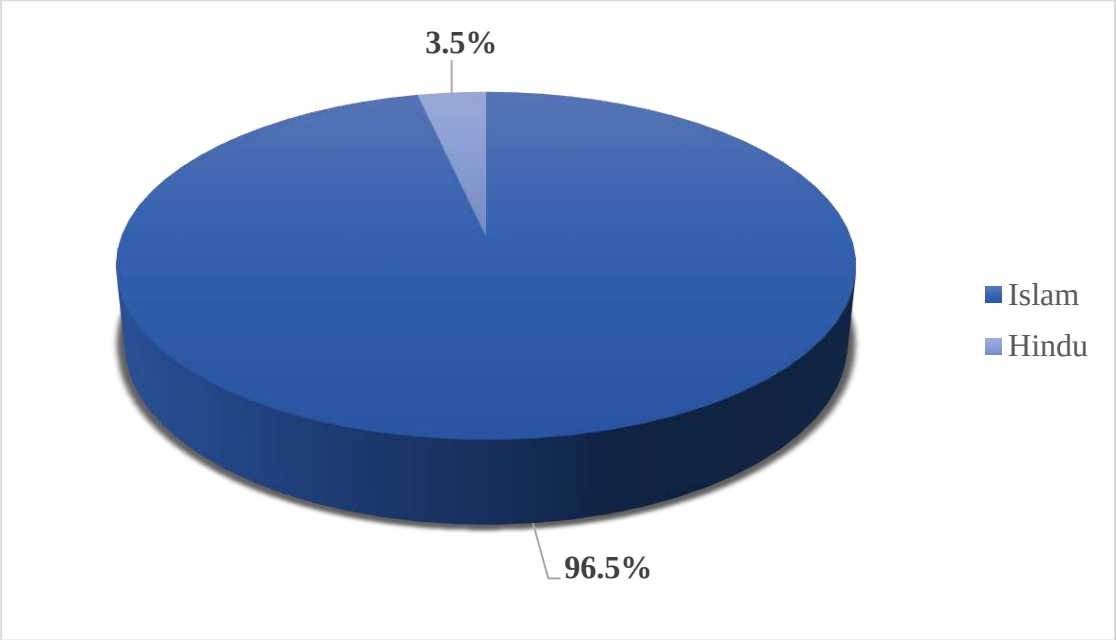


Figure no. 3: Religion

4.1.7 Marital status of caregivers:

The study showed that among the 85 participants, married was about 97.6% (n = 83) and the rest of the participants were male, which was about 2.4% (n = 2). The mean and the standard deviation is 0.02 ±0.152.

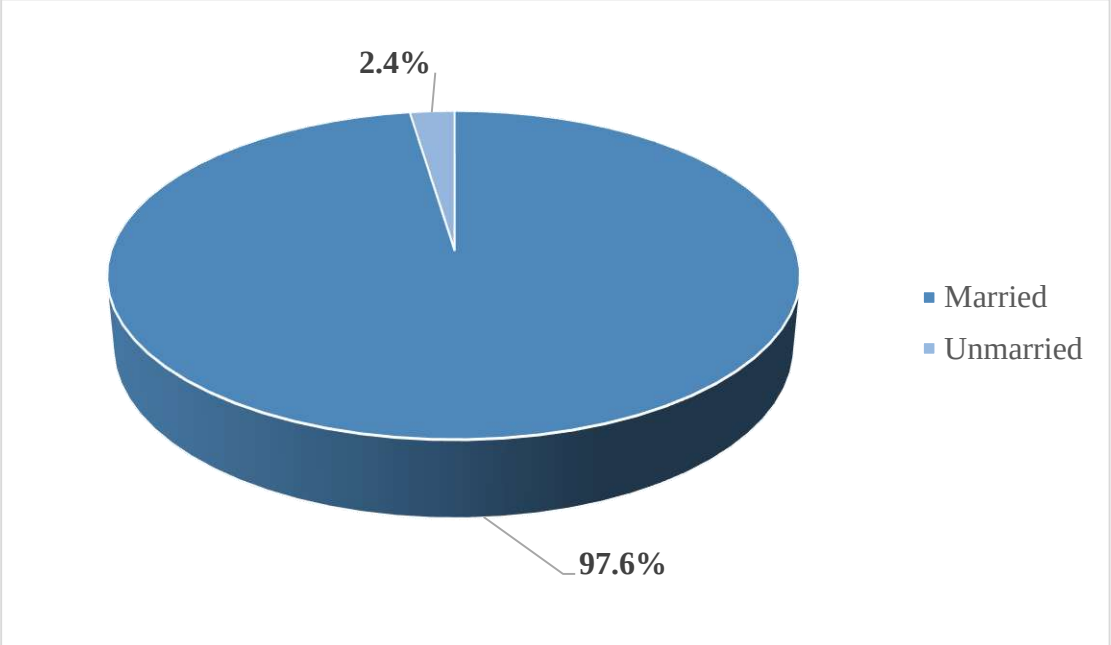


Figure no. 4: Marital status of caregivers

4.1.10 Type of family:

The survey showed that among the 85 participants, 68.2% (n=58) were joint/extended and 31.8% (n=27) were nuclear family. The mean and the standard deviation is 0.32 ±0.468.

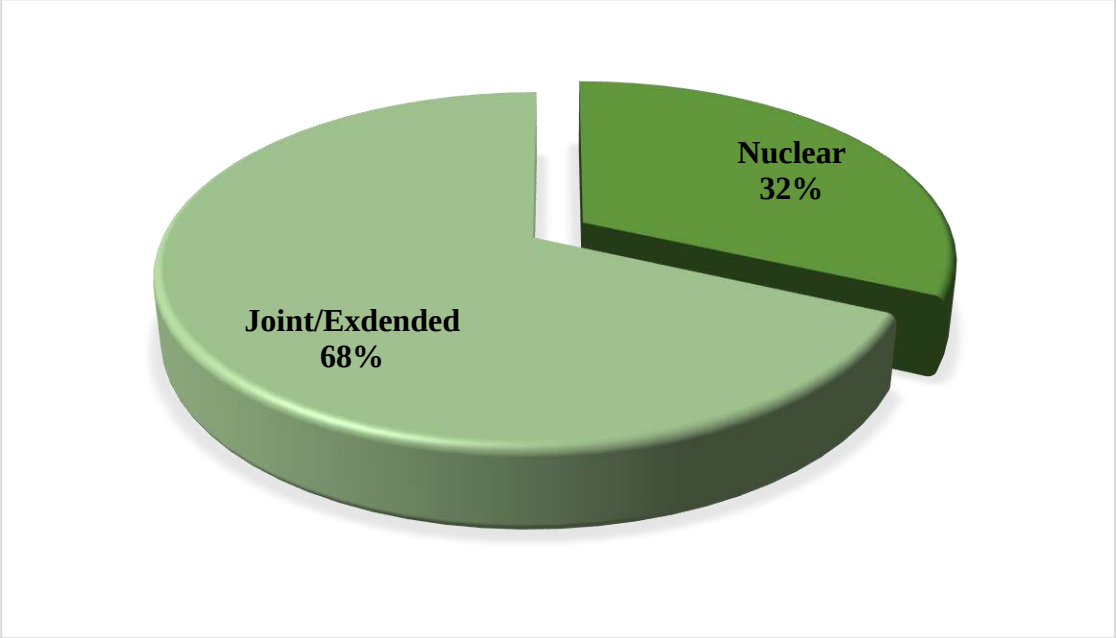


Figure no. 5: Type of family

4.1.11 Residential area:

Regarding frequency distribution of the respondents by among all the participants, it was found that 21.2% (n=18) lived in rural, 75.3% (n=64) lived in urban and 3.5% (n=3) lived in semi-urban area. The result shows that most of the caregivers of clubfoot patients lived in urban areas. The mean and the standard deviation is 0.82 ±0.467.

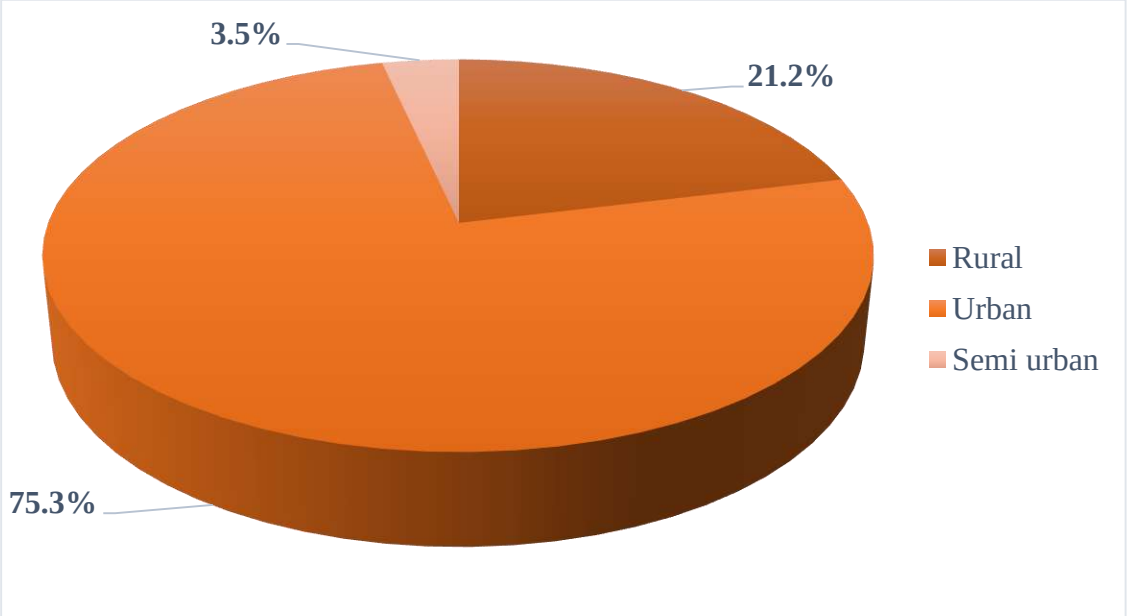


Figure no. 6: Residential area

4.2 Clubfoot Related Information

Table no. 4: Frequency distribution of respondent according to clubfoot related information

Variables	Category	Frequency	Percentage (%)
Birth weight	Low weight	32	37.6
	Normal weight	44	51.8
	Over weight	9	10.6
Birth weight overall (Mean ±SD) = (0.73 ±0.643)			
Mode of delivery	NVD	25	29.4
	C/S	60	70.6
Mode of delivery overall (Mean ±SD) = (0.71 ±0.458)			
Affected side	Right	20	23.5
	Left	14	16.5
	Bilateral	51	60
Affected side overall (Mean ±SD) = (1.36 ±0.843)			
Family history of CTEV	Yes	3	3.5
	No	82	96.5
Family history of CTEV overall (Mean ±SD) = (0.96 ±0.186)			
Phase of ponseti management	Casting phase	20	23.5
	Bracing phase	65	76.5
Phase of ponseti management overall (Mean ±SD) = (0.76 ±0.427)			
Difficulties during treatment	Yes	5	5.9
	No	80	94.1
Difficulties during treatment overall(Mean ±SD) = (0.94 ±0.237)			

The study showed that among the 85 clubfoot patients, the birth weight of newborns ranged from 1 to 4 kg, with a mean birth weight of 2.7294 kg (SD ± 0.643). Of the patients, 37.6% (n=32) were born with low birth weight (less than 2 kg), 51.8% (n=44) were born with normal birth weight (2.1 to 3 kg), and 10.6% (n=9) were born with high birth weight (3.1 to 4 kg). The study also revealed that among the 85 clubfoot patients, 29.4% (n=25) were born through Normal Vaginal Delivery (NVD), and 70.6% (n=60) were born via Cesarean Section (C/S). This indicates that the majority of the patients with clubfoot were delivered via Cesarean Section (C/S). Whose mean and the standard deviation is 0.71 ±0.458. Regarding the frequency distribution of the respondents, more than half of the children (60%, n=51) had bilateral clubfoot, while the remaining children had only one foot affected. The right foot was the most affected, with 23.5% (n=20) of children having their right foot affected, while the left foot was less affected, with 16.5% (n=14) of children having their left foot affected. Where mean and standard deviation is 1.36 ±0.843. This result shows that among all the children 3.5% (n=3) had a past family history of CTEV and 96.5% (n=82) had no past family history of CTEV. The mean and the standard deviation is 0.96 ±0.186. The study revealed that among the 85 clubfoot patients, 23.5% (n=20) children were casting phase of ponseti management and 76.5% (n=65) children were bracing phase of ponseti management. The result indicates that majority of the patients with clubfoot were bracing phase of ponseti management. Where mean and standard deviation is 0.76 ±0.427. The results show that 5.9% (n=5) of the children experienced difficulties during Ponseti management, such as blisters while wearing casts or braces, or other treatment-related issues, while 94.1% (n=80) did not experience any difficulties during treatment. The mean and the standard deviation is 0.94 ±0.237.

4.3 Comorbidity Information

Table no. 5: Frequency distribution of respondent according to co-morbidity information

Variables	Category	Frequency	Percentage (%)
Comorbidity of caregivers	Hypertension	18	21.2
	Diabetes mellitus	4	4.7
	Low back pain	14	16.5
	No illness	49	57.6
Comorbidity of caregivers overall (Mean ±SD) = (2.11 ±1.215)			
Comorbidity of children's	Illness	9	10.6
	No illness	76	89.4
Comorbidity of children's overall (Mean ±SD) = (1.89 ±0.31)			

The study showed that among the 85 caregivers, 21.2% (n=18) caregiver were diagnosed with hypertension, 4.7% (n=4) with diabetes mellitus, 16.5% (n=14) with low back pain and 57.6% (n=49) had no illness. When mean and standard deviation is 2.11 ±1.215. The survey revealed that 10.6% (n=9) children were diagnosed with various comorbidities, while 89.4% (n=76) were born without any comorbidities. The mean and the standard deviation is 1.89 ±0.31.

4.4.1 Depression, anxiety and stress among the caregivers of clubfoot patient

Table no. 6: Frequency distribution of the participants by depression, anxiety and stress

n = 85

Variables	Frequency	
	N	**Percentage (%)**
Depression	38	44.7
Anxiety	43	50.6
Stress	24	28.2

*Multiple responses

The table showed that among the 85 caregivers, 44.7% (n=38) experienced depression, 50.6% (n=43) experienced anxiety and 28.2% (n=24) experienced stress.

4.4.2 Level of depression, anxiety and stress among the caregivers of Clubfoot patients:

Table no. 7: Frequency distribution of the participants by level of depression, anxiety and stress

Variables	Category	Frequency	Percentage (%)
Depression level of the caregivers (n = 38)	Mild	11	28.9
	Moderate	11	28.9
	Severe	6	15.8
	Extreme severe	10	26.32
Anxiety level of the caregivers (n = 43)	Mild	1	2.33
	Moderate	16	37.21
	Severe	5	11.63
	Extreme severe	21	48.84
Stress level of the caregivers (n = 24)	Mild	5	20.8
	Moderate	3	12.5
	Severe	11	45.83
	Extreme severe	5	20.8

The study showed that out of 85, caregivers had depression 38 (44.7%). Among them 28.9% (n=11) caregivers had mild depression, 28.9% (n=11) caregivers had moderate depression, 15.8% (n=6) caregivers had severe depression and 26.32% (n=10) caregivers had extremely severe depression. Caregivers had anxiety 43 (50.6%). Among them 2.33% (n=1) caregivers had mild anxiety, 37.21% (n=16) caregivers had moderate anxiety, 11.63% (n=5) caregivers had severe anxiety and 48.84% (n=21) caregivers had extremely severe anxiety. Caregivers had stress24 (28.2%). Among them 20.8% (n=5) caregivers had mild stress, 12.5% (n=3) caregivers had moderate stress, 45.83% (n=11) caregivers was severe stress and 20.8% (n=5) caregivers had extremely severe stress.

4.5.1 Association between depression and socio-demographic and clubfoot related variables of the caregiver of clubfoot patients:

Table no. 8: Association between depression and socio-demographic and clubfoot related variables of the caregiver of clubfoot patients

Dependent Variable: Depression				
Independent Variable	**Test Name**	**Test Value**	**P-Value**	**Significance**
Age group of caregiver category	Chi-square	13.016	0.368	Not Significance
Gender of caregiver	Chi-square	0.818	0.936	Not Significance
Gender of children	Chi-square	0.667	0.955	Not Significance
Education of caregiver	Chi-square	22.807	0.029	Significance*
Occupation	Chi-square	3.394	0.494	Not Significance
Monthly income	Chi-square	14.817	0.252	Not Significance
Residential area	Chi-square	4.411	0.818	Not Significance
Birth weight	Chi-square	8.675	0.370	Not Significance
Mode of delivery	Chi-square	4.651	0.325	Not Significance

*≤0.05; **≤0.01; ***≤0.001;

At the table showed that, after Correlations between depression and socio demographic and clubfoot related variables among the 85 caregiver of clubfoot patients P-Value of education of caregivers is less than 0.05 which means this are significant with depression. Then we declare that education of caregiver variables is correlated with depression. And the age group of caregiver category, gender of caregiver, gender of children, occupation, monthly income, residential area, birth weight and mode of delivery has P-Value more than 0.05 which are no significant with depression. That's means there has no correlation between the age group of caregiver category, gender of caregiver, gender of children, occupation, monthly income, residential area, birth weight and mode of delivery with depression.

4.5.2 Association between Anxiety and socio-demographic and clubfoot related variables of the caregiver of clubfoot patients:

Table no. 9: Association between anxiety and socio-demographic and clubfoot related variables of the caregiver of clubfoot patients

Dependent Variable: Anxiety				
Independent Variable	**Test Name**	**Test Value**	**P-Value**	**Significance**
Age group of caregiver category	Chi-square	12.106	0.437	Non Significance
Gender of caregiver	Chi-square	1.036	0.904	Non Significance
Gender of children	Chi-square	0.783	0.941	Non Significance
Education of caregiver	Chi-square	18.145	0.111	Non Significance
Occupation	Chi-square	4.297	0.367	Non Significance
Monthly income category	Chi-square	26.594	0.009	Significance**
Residential area	Chi-square	6.420	0.600	Non Significance
Birth weight	Chi-square	22.440	0.130	Non Significance
Mode of delivery	Chi-square	1.629	0.804	Non Significance

*≤0.05; **≤0.01; ***≤0.001;

At the table showed that, after Correlations between anxiety and socio demographic and clubfoot related variables among the 85 caregiver of clubfoot patients P-Value of monthly income category is less than 0.05 which means this are significant with anxiety. Then we declare that monthly income category variables are correlated with anxiety. And the age of caregiver, gender of caregiver, gender of children, education of caregivers, occupation, residential area, birth weight and mode of delivery has P-Value more than 0.05 which are no significant with anxiety. That's means there has no correlation between the age of caregiver, gender of caregiver, gender of children, education of caregivers, occupation, residential area, birth weight and mode of delivery with anxiety.

4.5.3 Association between Stress and socio-demographic and clubfoot related variables of the caregiver of clubfoot patients:

Table no. 10: Association between stress and socio-demographic and clubfoot related variables of the caregiver of clubfoot patients

Dependent Variable: Stress				
Independent Variable	**Test Name**	**Test Value**	**P-Value**	**Significance**
Age group of caregiver category	Chi-square	20.818	0.053	Significance*
Gender of caregiver	Chi-square	0.398	0.983	Not Significance
Gender of children	Chi-square	0.278	0.991	Not Significance
Education of caregiver	Chi-square	17.824	0.121	Not Significance
Occupation	Chi-square	1.651	0.800	Not Significance
Monthly income category	Chi-square	17.439	0.134	Not Significance
Residential area	Chi-square	10.422	0.237	Not Significance
Birth weight	Chi-square	31.239	0.013	Significance**
Mode of delivery	Chi-square	9.231	0.056	Significance*

*≤0.05; ** ≤0.01; ***≤0.001;

At the table showed that, after Correlations between stress and socio demographic and clubfoot related variables among the 85 caregiver of clubfoot patients P-Value of age group of caregiver category, birth weight and mode of delivery is less than 0.05 which means this are significant with stress. Then we declare that age group of caregiver category, birth weight and mode of delivery variables are correlated with stress. And the gender of caregiver, gender of children, education of caregivers, occupation, monthly income category and residential area has P-Value more than 0.05 which are no significant with stress. That's means there has no correlation between the gender of caregiver, gender of children, education of caregivers, occupation, monthly income category and residential area with stress.

CHAPTER-V DISCUSSION

The study's findings show that mental health conditions like stress, worry, and depression are common among those who care for clubfoot patients. Despite being very effective, comparatively non-invasive and regarded as the gold standard by the medical world, medical practitioners must admit that this treatment regimen increases stress for families of CTEV children.

The sample size for this study was 85 caregivers who brought their children of clubfoot and participated in the study. The study showed that among the 85 participants, female was about 98.8% (N = 84) and the rest of the participants were male, which was about 1.2% (N = 1). The mean and the standard deviation is 0.01±0.108. The majority of the respondent parents were female. maximum caregiver was between the 23-25, 26-30 and >30year age range. In the age group 18-22 year were 20% (N=17), age group 23-25 year were 22.4% (N=19), age group 26-30 year were 27.1% (N=23), and age group more than 30 years were 30.6% (N=26). A Frias-Osuna Journal showed that the caregivers average age was 59.2 years, with a standard deviation of 12.9 and a range of 27 to 89 years. The majority (85.1%) were female, and 60.1% were the care recipients' children. (Casado et. al. 2014, p. 7).

Booked on the data from the 85 caregivers of clubfoot patients, where the showed that secondary passed participants were the highest rate, at 34.1% (N=29) had complete secondary education, making it the most common educational level among the participants. Bachelor degree or above followed closely, accosting for 32.9% (N=28). Primary education paneled third, representing 31.8% (N=27) of participants. A small population, 1.2% (N=1) of caregivers had no formal education. These results indicate that most of the parents have completed secondary education. 95.3% (N=81) caregivers were homemaker and 4.7% (N=4) caregivers was others like garments or businessman. Most reported caregiver’s occupation was homemaker (95.3%) (Bianchi et al. 2016, p. 1). A prospective study showed that, 65% had primary school or lower level education (Ozdemir et. al. 2022, p. 1).

In addition, the monthly income of the caregivers of CTEV children ranged from 10000 to >40000taka. 7.1% (n=6) of parent's monthly income is between 10000-15000 taka, 40% (n=34) of parent's monthly income is between 16000-30000 taka, 12.9% (n=11) of parent's monthly income is between 31000-40000 and 40% (n=34) of parent's monthly income is above 40000 taka. On the other hand, an observational study of medicine journals showed that, of those with a household income, 42.5% earned the minimum wage, while 57.5% earned double that amount (Ozdemir et. al. 2022, p. 1).

The study showed that among the 85 clubfoot patients, maximum children were between the 5-11 month and >23month age range. In the age group 1-4 month were 22.4% (n=19), age group 5-11 month were 24.7% (n=21), age group 12-23 month were 17.6% (n=15) and age group more than 23 months were 35.3% (n=30). The child's age ranged from one to more than twenty-three months with a mean and the standard deviation is 2.66 ± 1.181 month and boys are more compared to girls. This was similar in a study that was done in South Africa and UK where it showed that the South Africa the mean age of the children at the time of recruitment was 24.8 months (range 4–63), with the majority being male (68 %) (Malagelada et al. 2016, p. 104). Boys are about 75.3% (n = 64) and the rest of the participants were girls, which was about 24.7% (n = 21). The male to female ratio was 2:3:1. In addition, a majority of these had no past family history of CTEV (97%). It showed that the South Africa Forty percent of the afflicted children were first-borns, and The majority of them had no family history of clubfoot (87%) or significant medical history (94%) (Malagelada et al. 2016, p. 104).

The newborn's typical birth weight varied from 1 to 4 kg at birth of 0.7294 kg (SD ± 0.64343) where 37.6% (n=32) were born with low birth weight (less than 2 kg), 51.8% (n=44) were born with normal birth weight (2.1 to 3 kg) and 10.6% (n=9) were born with over weight (3.1 to 4 kg). The majority of the patients with CTEV were delivered through C/S. It was found that 29.4% (n=25) children were born through Normal Vaginal Delivery (NVD) and 70.6% (n=60) children were born through Cesarean Section (C/S). The result indicates that majority of the patients with clubfoot were delivered through Cesarean Section (C/S). More than half of the children 60% (n=51) had bilateral clubfoot while the rest of the children's only one foot was

affected. The most affected foot was right foot as 23.5% (n=20) children's right foot was affected and less affected foot as it was affected in 16.5% (n=14) children. 10.6% (n=9) children were diagnosed individually and 89.4% (n=76) children were born without any comorbidities. On the other side South Africa showed that Additionally, seven children had separate diagnoses for bilateral curling toes, hypermobility, eczema, exotropia, asthma, hip developmental deformity, and problematic birth. While the remaining 45% had bilateral clubfoot, 55% had unilateral clubfoot (Malagelada et al. 2016, p. 104).

The result shows that 5.9% (n=5) children have difficulties during Ponseti management such as blisters while wearing casts or braces or others journey problem and 94.1% (n=80) children do not have any difficulties during treatment. South Africa showed that the Pirani score at diagnosis was on average 4.59, which improved to 0.14 at the latest follow-up, and 76 % of the cases experienced no difficulties or complications during treatment (Malagelada et al. 2016, p. 104). 21.2% (n=18) caregiver were diagnosed hypertension, 4.7% (n=4) caregiver were diagnosed diabetes mellitus, 16.5% (n=14) caregiver were diagnosed low back pain and 57.6% (n=49) caregiver were without any illness (Malagelada et al. 2016, p. 104).

Among the 85 caregivers, DASS-21 scale shows that 55.3% (n=47) caregivers was normal, 12.9% (n=11) caregivers was mild depression, 12.9% (n=11) caregivers was moderate depression, 7.1% (n=6) caregivers was severe depression and 11.8% (n=10) caregivers was extremely severe depression. 49.4% (n=42) caregivers was normal, 1.2% (n=1) caregivers was mild anxiety, 18.8% (n=16) caregivers was moderate anxiety, 5.9% (n=5) caregivers was severe anxiety and 24.7% (n=21) caregivers was extremely severe anxiety. Among the 85 caregivers, 71.8% (n=61) caregivers was normal, 5.9% (n=5) caregivers was mild stress, 3.5% (n=3) caregivers was moderate stress, 12.9% (n=11) caregivers was severe stress and 5.9% (n=5) caregivers was extremely severe stress. On the other side SciELO Brasil showed that crosscutting descriptive and correlational study. The convenience sample was composed by a hundred and twenty-one senior caregivers (Age=70.5 ± 7.2 years, 73% women). They answered a questionnaire to check the physical and cognitive demands of care, the Zarit Burden Interview (ZBI), the California Inventory of Coping Strategies and the Geriatric Depression Scale (GDS-15) (Bianchi et al. 2016, p. 1).

In this study, P-Value of age, education, birth weight is less than 0.05 which means this are significant with depression. Then we declare that age, education and birth weight variables are correlated with depression. And the gender of caregiver, gender of children, religion, occupation, monthly income, type of family, residential area, method of delivery and affected side has P-Value more than 0.05 which are no significant with depression. That's means there has no correlation between the gender of caregiver, gender of children, religion, occupation, monthly income, type of family, residential area, method of delivery and affected side with depression (Ali 2020, p. 90). On the other side Jinnah Postgraduate Medical center, Karachi, Pakistan favorable 70.4% of patients had psychological effects. The findings demonstrated a strong correlation between outcome and both education and work position. However, there was no discernible correlation with socioeconomic status, gender, age, ethnicity, or length of treatment (Ali 2020, p. 90).

The result shower that, P-Value of monthly income and birth weight is less than 0.05 which means this are significant with anxiety. Then we declare that monthly income and birth weight variables are correlated with anxiety. And the age of caregiver, gender of caregiver, gender of children, religion, education, occupation, type of family, residential area, method of delivery and affected side has P-Value more than 0.05 which are no significant with anxiety. That's means there has no correlation between the age of caregiver, gender of caregiver, gender of children, religion, education, occupation, type of family, residential area, method of delivery and affected side with anxiety. Department of Orthopedic in china, before prenatal diagnosis of congenital talipes equinovarus, the average score of Self-Rating Anxiety Scale was 42.537±10.476 and after prenatal diagnosis of congenital talipes equinovarus, the average score of Self-Rating Anxiety Scale was 54.224 ±13.050 (Dong et al. 2023, p. 184).

In this study, P-Value of age group of caregiver category, monthly income category, birth weight and method of delivery is less than 0.05 which means this are significant with stress. Then we declare that birth weight and method of delivery variables are correlated with stress. And the gender of caregiver, gender of children, religion, education, occupation, type of family, residential area and affected side has P-Value more than 0.05 which are no significant with stress. That's means there has no

correlation between the age of caregiver, gender of caregiver, gender of children, religion, education, occupation, monthly income, type of family, residential area and affected side with stress. Through this study, pertinent data about the experiences of Nigerian parents of children with clubfoot has been available, of whom parental stress and mental discomfort were prevalent at 12.0% and 15.5%, respectively. 67.44 (SD=18.07) was the average score on the parenting stress subscales; 26.71 (SD=8.82) for parental distress; 19.13 (SD=5.91) for parents-child dysfunctional relationship; and 21.60 (SD=7.19) for problematic children. The degree of emotional discomfort was substantially correlated with the patient's age group ($\chi 2$=13.566, p=0.004). There was a significant positive correlation between parental stress and Pearson's correlation (Esan et al. 2017, p. 44).

While caring for the children born with CTEV, the parents faced financial difficulties. Since they require transportation to travel to the hospital, their funds are allocated to clinic appointments. They can no longer be as productive as they once were after having to attend to the requirements of the child with clubfoot. Initially, parents would use this time to work for money and take care of the family. To take care of the CTEV child, they quit their jobs. The Ponseti management is free but it was found that still the parents of children with clubfoot still face financial burden as the most barrier in during their children's management (Doris et al. 2021, p. 8).

The result shows that 5.9% (n=5) children have difficulties during Ponseti management such as blisters while wearing casts or braces or others journey problem and 94.1% (n=80) children do not have any difficulties during treatment. On the other side Uk showed that Ponseti treatment was initiated for all infants with a mean of 7.7 casts, and 74 % required percutaneous heel cord tenotomy (Malagelada et al. 2016, p. 104). (As Robinson recommended; 1983) The caregivers' average age was 59.2 years (range: 27 to 89, standard deviation: 12.9). The majority (85.1%) were female, and 60.1% were the care recipients' children. The caregivers' average CSI score was 6.27, and 46.2% of them reported feeling subjectively burdened. None of the sample's caregivers were enrolled in school or employed for pay. Table 1 provides more details on descriptive data of the factors examined in the study for the entire sample as well as the spouse and child subgroups. The information about potential confounders, cultural influences, and subjective load (Casado et. al. 2014, p. 7).

5.1 Limitations

Every research study inevitably has limitations due to the inherent challenge of achieving 100% accuracy. Only one scale (DASS-21) has been used to measure anxiety, stress and depression among caregivers of clubfoot patient. Different scale and different variables need to study. Only anxiety, stress and depression were observed among caregivers of clubfoot patients, but other issues, such as cognitive behavior and sleep disturbances, were not examined. Which potentially leads to limitations in research techniques and practical aspects. It was unable to extrapolate the findings of this research because the sample size was too small. There is very little research on anxiety, stress, and depression among caregivers of clubfoot patients in Bangladesh, making it difficult to compare our study with others. Since this was the researcher's first survey, it is possible that some errors were overlooked by the supervisor and the respective teacher.

CHAPTER-VI CONCLUSION & RECOMMENDATION

6.1 Conclusion

This conversation centered on the main research findings in light of the study's goals. According to the findings, parents who were managing Congenital Talipes Equinovarus (CTEV) experienced depression. The study revealed characteristics that can serve as obstacles for parents to adhere to clubfoot therapy, even though the CTEV condition had a minor effect on their family and social activities in society.

In this study, the results demonstrated that many parents experienced depression, anxiety and stress with birth weight of children. Caregivers face a lot of depression, anxiety and stress about what will happen to their child's clubfoot disease in the future. In this study, the results demonstrated that many parents experienced financial burdens throughout the Ponseti management process, despite it being a low-cost treatment for CTEV. The researcher found monthly income are significant with anxiety. And get association between birth weight and method of delivery with stress. Travel expenses, particularly for parents coming from rural areas, posed a significant financial strain. This study assesses the degree of stress, anxiety, and depression experienced by those who care for clubfoot patients. Here, researchers tried to find out the relation between depression, anxiety and stress with some sociodemographic factors and the result was that there some relations between them, which were supported by some other studies. Consequently, they could better manage familial, social and personal challenges, even though financial difficulties persisted. The study's findings also suggested that health facilities providing critical services, such as cure and other partners and stakeholders involved in CTEV treatment, should collaborate to extend their services to rural, semi-urban, and urban areas. Developing strategies to offer services closer to the children's residences was recommended. By decentralizing cure services within the community, parents would not have to bear the significant financial costs associated with transportation and other expenses while seeking treatment for their children. A caregiver individuals well-being and daily activities may benefit from this.

6.2 Recommendations

This study set out to evaluate the degree of anxiety, stress and depression among those who provide care for individuals with clubfoot. Despite the study's limitations, the researchers have identified several recommendations to enhance the effectiveness of future research. Researcher has to improve the study's generalizability and it is advisable to employ a random sampling technique instead of Centre based sampling technique, thus enhancing the power of generalization. Future studies should consider conducting research over a more extended period compared to the relatively short duration of this research. In addition, expanding the sample size beyond the 85 participants included in this study is recommended to obtain more precise outcomes applicable to a broader population. The studies should consider conducting research over a more used in different valid instrument. Efforts should be made to measure anxiety, stress and depression as well as cognitive behavior and sleep disturbances among caregivers. The researchers strongly advocate for future investigations to encompass caregivers of clubfoot patients from various regions across Bangladesh, ensuring a broader scope for generalization.

CHAPTER-VII REFERENCES

Ali, P 2020, 'Frequency of Psychosocial Impact on Parents of Children Undergoing Ponseti Treatment for Clubfeet, with Special Reference to Compliance to Foot Abduction Bracing', *EC Orthopaedics,* vol. 11, pp. 90-96.

Accortt, E, E and Wong, M, S 2017, 'It is time for routine screening for perinatal mood and anxiety disorders in obstetrics and gynecology settings', *Obstet Gynecol Surv*, vol. 72, no. 9, pp. 553-568.

Brummelte, S and Galea, L, A 2016, 'Postpartum depression: etiology, treatment and consequences for maternal care', *Horm Behav*, vol. 77, pp. 153–166.

Berntson, J, Patel, J, S and Stewart, J, C 2017, 'Number of recent stressful life events and incident cardiovascular disease: Moderation by lifetime depressive disorder', *journal of psychosomatic research,* vol. 99, pp. 149-154.

Buatsi, E, M, Aston, C, E, Ryan, J, Tao, Y, Palmer, B, W, Kropp, B, P, Klein, J, Wisniewski, A, B and Frimberger, D 2015, 'Mental health and parenting characteristics of caregivers of children with spina bifida', *Journal of pediatric Urology*, vol. 11, no. 2, pp. 65. e1-65. e7.

Bianchi, M, Flesch, L, D, Alves, E, V, D, C, Batistoni, S, S, T and Neri, A, L 2016, 'Zarit Burden Interview Psychometric Indicators Applied in Older People Caregivers of Other Elderly', *Rev. Latino-Am. Enfermagem,* vol. 24, pp. 1-9.

Casado, R, D, P, Cobo, M, D, M, Moral, P, A, P and Osuna, A, F 2014, 'Cultural Correlates of Burden in Primary Caregivers of Older Relatives: A Cross-sectional Study', *Journal of Nursing Scholarship,* vol. 46, no. 3, pp. 1-20.

Dong, W, Shi, N, Wen, C and Zhang, Y 2023, 'An investigation of maternal psychological status of children with congenital talipes equinovarus treated with the Ponseti method', *Journal of childrens Orthopaedics,* vol. 17, no. 2, pp. 184-190.

Doris, K, Lorna, O, Njeri, K & Ndulu, K 2021, 'The Burden of Ponseti management on financial, social and coping mechanism of parents and caregivers of children at Moi Teaching and Referral Hospital', *International Journal of Recent Innovations in Medicine and Clinical Research*, vol. 3, no. 1, pp. 7-20.

Esan, O, Akinsulore, A, Yusuf, MB and Adegbehingbe, OO 2017, 'Assessment of emotional distress and parenting stress among parents of children with clubfoot in south-western Nigeria', *SA Orthopaedic journal*, vol. 16, no. 2, pp. 41-44.

Evans-Lacko S, Aguilar-Gaxiola S, Al-Hamzawi A, Alonso, J, Benjet, C, Bruffaerts, R, Chiu, W, T, Florescu, S, Girolamo, G, D, Gureje, O, Haro, J, M He, Y, Hu, C, Navarro-Mateu, F, Pennell, B, E, Sampson, N, A, Scott, K, M, Tachimori, H, Have, M, T, Viana, M, C, Williams, D, R, Wojtyniak, B, J, Zarkov, Z, Kessler, R, C, Chatterji, S and Thornicroft, G 2017, 'Socio-economic variations in the mental health treatment gap for people with anxiety, mood, and substance use disorders: results from the WHO World Mental Health (WMH) surveys' , *Psychology Medicine*, vol. 48, no. 9, pp. 1560-1571.

Faronbi, J, O, Faronbi, J, G, Ayamolowo, S, J and Olaogun, A, A 2019, 'Caring for the seniors with chronic illness: The lived experience of caregivers of older adults', *Archives of Gerontology and Geriatrics*, vol. 82, pp. 8-14.

Ford-Powell, VA, Barker, S, Khan, M, Evans, AM & Deitz, R 2013, 'The Bangladesh clubfoot project: the first 5000 feet', *Journal of Pediatric Orthopaedics*, vol. 33, no. 4, pp. 40-44.

Ganesan, B, Luximon, A, Al-Jumaily, A, Balasankar, SK & Naik GR 2017, 'Ponseti method in the management of clubfoot under 2 years of age: A systematic review', *PLOS One*, vol. 12, no. 6, pp. 1-18.

Grimes, CE, Holmer, H, Maraka, J, Ayana, B, Hansen, L & Lavy, CBD 2016, 'Cost effectiveness of club-foot treatment in low-income and middle-income countries by the Ponseti method', *BMJ Global Health*, vol. 1, no. 1, pp. 1-5.

Golfenshtein, N, Hanlon, AL, Deatrick, JA and Medoff-Cooper B 2017, 'Parenting stress in parents of infants with congenital heart disease and parents of healthy infants: the first year of life', *Compr Child Adolesc Nurs*, vol. 40, no. 4, pp. 294-314.

Javalkar, K, Rak, E, Phillips, A, Haberman, C, Ferris, M, Van and Tilburg, M 2017, 'Predictors of Caregiver Burden among Mothers of Children with Chronic Conditions', *Children,* vol. 4, no. 5, pp. 2-10.

Ki, Y, W and Joanne, C, C, Y 2014, 'Stress and Marital Satisfaction of Parents with Children with Disabilities in Hong Kong', *Psychology,* vol. 5, no. 5, pp. 1-9.

Loh, A, Z, Tan, J, S, Zhang, M, W and Ho, R, C 2017, 'The Global Prevalence of Anxiety and Depressive Symptoms Among Caregivers of Stroke Survivors', *Journal of American Medical Directors Association*, vol. 18, No. 2, PP. 111-116.

Lou, Q, Liu, S, Huo, R, Y, Liu, M, Liu, S and Ji, Y 2015, 'Comprehensive analysis of patient and caregiver predictors for caregiver burden, anxiety and depression in alzheimers disease', *Journal of clinical nursing,* vol. 24, no. 17-18, pp. 2668-2678.

Li, Q, Guan, X, Wu, P, Wang, X, Zhou, L, Tong, Y, Ren, R, Leung, K.S, Lau, E.H., Wong, J, Y and Xing, X 2020, 'Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia', *New England Journal of Medicine,* vol. 52, no. 3, pp. 526-536.

Malinga, RJ, Madewo, G, Orwotho, N, Pirani, SP, Afodun, AM & Masud, MA 2021, 'A survey on idiopathic congenital talipes equinovarus (ICTEV) managed by the Ponseti technique at Mulago Hospital- Uganda', *Pan African Medical Journal*, vol. 38, no. 397, pp. 1-14.

Mustari, MN, Faruk, M, Bausat, A & Fikry, A 2022, 'Congenital talipes equinovarus: A literature review', *Annals of Medicine and Surgery,* vol. 81, no. 1, pp. 1-5.

Malagelada, F, Mayet, S, Firth, G & Ramachandran, M 2016, 'The impact of the

Ponseti treatment method on parents and caregivers of children with clubfoot: a comparison of two urban populations in Europe and Africa', *Journal of Children's Orthopaedics*, vol. 10, no. 2, pp. 101-107.

Munambah, N, Chiwaridzo, M and Mapingure, T 2016, 'A cross-sectional study investigating impressions and opinions of medical rehabilitation professionals on the effectiveness of the Ponseti method for treatment of clubfoot in Harare, Zimbabwe', *Archives of physiotherapy*, vol. 6, no. 7, pp. 2-9.

Mehmedinovic, S, Sinanovic, O and Ahmetovic, S 2012, 'Depression in parents of children with cerebral palsy in Bosnia and Herzegovina', *ActaMedicaIranica*, vol. 50, no. 12, pp. 819- 821.

Mahan, S, T, Miller, P, E, May, C, J and Kasser, J, R 2019, 'Prospective evaluation of parental anxiety related to newborn foot disorder', *Journal of Children's Orthopaedics*, vol. 13, pp. 500-507.

Makropoulos, A, Gousias, IS, Ledig, C, Aljabar, P, Serag, A, Hajnal, J, V, Edwards, A, D, Counsell, S, J and Rueckert, D 2014, 'Automatic whole brain MRI segmentation of the developing neonatal brain', *IEEE Trans Med Imaging*. vol. 33, no. 9, pp. 1818-1831.

Nunn, T, R, Etsub, M, Tilahun, T, Gardner, R, O, E, Allgar, V, Wainwright, A, M and Lavy, C, B, D 2018, 'Development and validation of a delayed presenting clubfoot score to predict the response to Ponseti casting for children aged 2–10', *Strategies in Trauma and Limb Reconstruction*, vol. 13, pp. 171– 177.

O'Shea, R, M and Sabatini, C, S 2016, 'What is new in idiopathic clubfoot?', *Pediatric Orthopedics*, vol. 9, pp. 470-477.

Ozdemir, M, A, MD, Topak, D, MD, Turgut, C, MD, Telek, M, MD and Doğar, F, MD 2022, 'Evaluation of depression, anxiety, and stress status in parents of patient with congenital clubfoot treated with Ponseti method A prospective study', *Medicine,*

vol. 101, no. 44, pp. 1-5.

Orimoladel, E, A, Adepiti, A, C, Ikuomola, A, A and Ige, O, O 2014, 'Congenital anomalies in a State Specialist Hospital; A Secondary Level of Healthcare', *East and Central African Journal of Surgery*, vol. 19, no. 2, pp. 44-48.

Okonski, P, Misztal-Okonska, P, Okoński, M, Książek, P & Goniewicz, M 2017, 'Comparison of two treatment methods of congenital clubfoot in the orthopaedists opinion', *Polish Journal of Public Health*, vol. 127, no. 1, pp. 32-36.

Oh, J, Won, J, An, Wook, O, K, Seong, O, Jung, A, K, Hyun, S and Seop, L, J 2015, 'Depression and caregiving burden in families of patients with amyotrophic lateral sclerosis', *Journal Korean Acad Nurs*, vol. 45, no. 2, pp. 202–210.

Ordonez, P, F, Osuna, F, A, Y, Rodríguez, R, Y, MD and Casado, P, D, R 2016, 'Coping strategies and anxiety in caregivers of palliative cancer patients', *Europeon journal of cancer care*, vol. 25, no. 4, pp. 600-607.

Perlick, D, A, Berk, L, Kaczynski, R, Gonzalez J, Link, B, Dixon, L, Grier, S and Miklowitz, D, J 2016, 'Caregiver burden as a predictor of depression among family and friends who provide care for persons with bipolar disorder', *Bipolar Disorder an international journal of psychiatry and neurosciences*, vol. 18, no. 2, pp. 183–91.

Paulsen-Miller, M, Dolan, L, A, Stineman, A and Morcuende, J, A 2011, 'Understanding the Educational Needs for Parents of Children with Clubfoot', *Orthopaedic Nursing*, vol. 30, No. 4, pp. 273-274.

Pulak, S and Swamy, M, K, S 2012, 'Treatment of idiopathic clubfoot by ponseti technique of manipulation and serial plaster casting and its critical evaluation', *Ethiopian journal of health sciences*, vol. 22, no. 2, pp. 77-83.

Ramahenina, H, O'connor, R, J and Chamberlain, M, A 2016, 'Problems encountered by parents of infants with clubfoot treated by the Ponseti method in Madagascar: A

study to inform better practice', *Journal of rehabilitation medicine,* vol. 48, no. 5, pp. 481-483.

Rieger, MA and Dobbs, MB 2022, 'Clubfoot', *Clinical Podiatric Medicine Surgeon,* vol. 39, pp. 1-14.

Sadler B, Gurnett, C, A and Dobbs, MB 2019, 'The genetics of isolated and syndromic clubfoot', *Journal Child Orthopaedic,* vol. 13, no. 3, pp. 238–44.

Seravalli, V, Pierini, A, Bianchi, F, Giglio, S, Vellucci, Francesca, L and Cariati, E 2015, 'Prevalence and prenatal ultrasound detection of clubfoot in a non-selected population: an analysis of 549931 births in Tuscany', *Journal of Maternal-Fetal & Neonatal Medicine,* vol. 28, no. 17, pp. 2066-2069.

Smythe, T, Kuper, H, Macleod, D, Foster, A & Lavy, C 2017, 'Birth prevalence of congenital talipes equinovarus in low- and middle-income countries: a systematic review and meta-analysis', *Tropical Medicine & International Health,* vol. 22, no. 3, pp. 269-285.

Sharafkhaneh, A, Yohannes, A, M, Hanania, NA and Kunik, ME 2017, 'Depression and Anxiety in Patients with Chronic Respiratory Diseases', Springer.

Sullivan, A 2021, 'Sex and the office for national statistics: A case study in policy capture', *The Political Quarterly,* vol. 92, no. 4, pp. 634-651.

Shelton, N, Marshall, C, E, Stuchbury, R, Grundy, E, Dennett, A, Tomlinson, J, Williams, O, D, Staff, ONS and Xun, W 2019, 'Cohort Profile: The Office for National Statistics Longitudinal Study (The LS)', *International Journal of Epidemiology,* vol. 48, no. 2, pp. 383–384.

Tassadaq, N, Rafiq, R and Siddiqi, FA 2016, 'Anxiety level of caregiver of congenital talipes equinovarus', *Rawal Medical Journal,* vol. 41, no. 2, pp. 185-187.

Turner, J, Quiney, F, Cashman, J & Lavy, C 2018, 'The effectiveness of sustainable serial casting for clubfoot deformity in a low resource setting', *Malawi Medical Journal*, vol. 30, no. 1, pp. 37-39.

Tan, A, Strauss, V, Y, Protheroe, J and Dunn, K, M 2018, 'Epidemiology of paediatric presentations with musculoskeletal problems in primary care', *BMC Musculoskeletal Disorders*, vol. 19, no. 40, pp. 2-6.

Verbeek, T, Bockting, C, L, H, Beijers, C, Meijer, J, L, van, Pampus, M, G and Burger, H 2019, 'Low socioeconomic status increases effects of negative life events on antenatal anxiety and depression', *Women, Birth.* vol. 32, no. 1, pp. 138-143.

Van Wijck, S, F, M, Oomen, A, M & van der Heide, H, J 2015, 'Feasibility and barriers of treating clubfeet in four countries', *International orthopaedics*, vol. 39, no. 12, pp. 2415-2422.

Vehmeijer, F, O, L, Guxens, M, Duijts, L and Marroun, H, EI 2019, 'Maternal psychological distress during pregnancy and childhood health outcomes: a narrative review', *Journal of developmental origins of health and disease*, vol. 10, no. 3, pp. 274-285.

Verma, V, Afaque, S, F, Gupta, B, Chand, S, Narayandas, D and Agrawal, U 2024, 'Prevalence and Associations of Depression in Parents of Children with Congenital Talipes Equinovarus: A Single-Centre Study', *Cureus*, vol. 16, no. 6, pp. 1-9.

Wang, H, Barisic, I, Loane, M, Addor, M-C, Bailey, L, M, Gatt, M, Klungsoyr, K, Mokoroa, O, Nelen, V, Neville, A, J, O'Mahony, M, Pierini, A, Rissmann, A, Dumoulin, C, V, Walle, H, E, K., De, Wiesel, A, Wisniewska, K, Dolk, H, Khoshnood, B and Garne, E 2019, 'Congenital clubfoot in Europe: A population-based study', *American journal of medical genetics*, vol. 179, no. 4, PP. 595-601.

Walter, C, Sachsenmaier, S, Wünschel, M, Teufel, M and Götze, M 2020, 'Clubfoot treatment with Ponseti method-parental distress during plaster casting', *Journal of Orthopaedic Surgery and Research*, vol. 15, pp. 2-9.

Werler, M, M, Yazdy, M, M, Kasser, J, R, Mahan, S, T, Meyer, R, E, Anderka, M and Mitchell, A, A 2014, 'Medication use in pregnancy in relation to the risk of isolated clubfoot in offspring', *American journal of epidemiology*, vol. 180, no. 1, pp. 86-93.

Woolhouse, H, Mercuri, K, Judd, F and Brown, S, J 2014, 'Antenatal mindfulness intervention to reduce depression, anxiety and stress: a pilot randomised controlled trial of the MindBabyBody program in an Australian tertiary maternity hospital', *BMC Pregnancy Childbirth*, vol. 14, no. 369, pp. 2-16.

Weinbrecht, A, Rieckmann, N and Renneberg, B 2016, 'Acceptance and efficacy of interventions for family caregivers of elderly persons with a mental disorder: a meta-analysis', *International Psychogeriatrics*, vol. 28, no. 10, pp. 1615-1629.

Yau, A and Doyle, SM 2020, 'Clubfoot for the primary care physician: frequently asked questions', *Current Opinion in Pediatrics*, vol. 32, no. 1, pp. 100-106.

APPENDIX: 01

Informed consent

(Please read out to the participation)

Assalamualaikum,

My name is Mahema Akter. I am 4th year student of B.Sc in Physiotherapy program At Saic College of Medical Science and Technology (SCMST). I am conducting this research study that entitled ‘‘**Depression, Anxiety and Stress Among the Caregivers of Clubfoot Patients**’’. I would like to know about Some personal and other related information regarding depression among people who Having Caregiver of Clubfoot Patients at Walk For Life-Clubfoot Treatment Project. You have to answer some questions Which are mention in the attached form. This will take approximately 20-30 minutes. I would like to inform you that this s a purely professional study and will not be used for any other purpose. The researcher is not directly related with this obstetrics area, so your participation in the research will have no impact on your present or future treatment. All information provided by you will be treated as confidential and in the event of any report or publication it will be ensured that the source of information remains anonymous. Your participation in this study is voluntary and you may withdraw yourself at any time during this study without any negative consequences. You also have the right not to answer a particular question that you don’t like or do not want to answer during interview.

If you have any query about the study, you may contact with the investigator Mahema Akter or research supervisor Zahid Bin Sultan Nahid, Asst. Professor & Head of the Department, SCMST, Dhaka

Do you have any questions before I start?

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

Yes ☐ No ☐

Signature of the Participant’s…….……Date……

Signature of the Witness’s…….……Date……

Signature of the Data collector’s……...Date……

অনুমতিপত্র

(অংশগ্রহণের জন্য অনুগ্রহ করে পড়ুন)

আসসালামুয়ালাইকুম,

আমার নাম মাহিমা আক্তার। আমি সাইক কলেজ অব মেডিকেল সায়েন্স এন্ড টেকনোলজি এ ফিজিওথেরাপি কোর্সের ৪র্থ বর্সের একজন ছাত্রী। আমি এই গবেষণা অধ্যয়নটি পরিচালনা করছি যার শিরোনাম **"ক্লাবফুট রোগীর পরিচর্যাকারীর মধ্যে বিষণ্নতা, উদ্বেগ এবং চাপের মাত্রা পরিমাপ"**। আমি ঢাকা বিভাগে ক্লাবফুট রোগীদের যত্ন নেওয়া ব্যক্তিগত তথ্য, অন্যান্য সর্ম্পকিত তথ্য এবং সেই সাথে আর্থসামাজিক প্রভাব এবং মোকাবিলা করার কৌশলসমূহ সর্ম্পকে জানতে চাই। আপনার কাছে আছে কিছু প্রশ্নের উওর দিতে যা সংযুক্ত ফর্মে উল্লেখ করা হয়েছে এক্ষেত্রে প্রায় ৩০ মিনিট সময় লাগবে। আমি আপনাকে জানাতে চাই যে এটি শিক্ষার অর্ন্তভুক্ত একটি গবেষণা এবং অন্য কোন উদ্দেশ্যে ব্যবহার করা হবে না। গবেষক এই প্রসূতি পেডিয়াট্রিক বিভাগের সাথে সরাসরি সর্ম্পকিত নন, তাই গবেষণায় আপনার অংশগ্রহণ আপনার বর্তমান বা ভবিষ্যতের চিকিৎসার উপর কোন প্রভাব ফেলবে না। আপনার দ্বারা প্রদও সমস্ত তথ্য গোপনীয় হিসাবে বিবেচিত হবে এবং কোনও প্রতিবেদন বা প্রকাশের ক্ষেত্রে এটি নিশ্চিত করা হবে যে তথ্যেও উত্স বেনামী থাকবে। এই অধ্যয়ন চলাকালীন যেকোনো সময় কোনো নেতিবাচক পরিণতি ছাড়াই নিজেকে প্রত্যাহার করতে পারেন। আপনি স্বেচ্ছায় অংশগ্রহণ করতে পারেন এবং এই গবেষণা চলাকালীন যেকোনো সময় আপনি নিজেকে প্রত্যাহার করতে পারবেন।

আপনার যদি গবেষণা সর্ম্পকে কোন প্রশ্ন থাকে তবে আপনি তদন্তকারী মাহিমা আক্তার বা গবেষণা সুপারভাইজারের সাথে যোগাযোগ করতে পারেন। জাহিদ বিন সুলতান নাহিদ, সহকারী অধ্যপক ও বিভাগীয় প্রধান, সাইক কলেজ অব মেডিকেল সায়েন্স এন্ড টেকনোলজি, মিরপুর-১৪, ঢাকা-১২১৬।

শুরু করার আগে আপনার কি কোন প্রশ্ন আছে?

আমি কি শুরু করতে পারি?

হ্যাঁ ☐ না ☐

অংশগ্রহণকারীর স্বাক্ষর..... তারিখ.....

তথ্য সংগ্রহকারীর স্বাক্ষর.....তারিখ.....

APPENDIX: 02

Research Questionnaire

'Depression, Anxiety and Stress Among the Caregiver of Clubfoot Patients'

Patient Information

Date of interview:

Patients name:

Patients ID:

Name of participant:

Patients address: Village: Post-Office:

Police-S.: District:

Contact no:

Part-1: Socio-Demographic Information

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

QN	Question	Response
1.1	Age of Caregivers	Completed Year
1.2	Age of Child	Month/ Year
1.3	Gender of the child	0 = Boy 1 = Girl
1.4	Gender of the caregiver	0 = Male 1 = Female
1.5	Religion	0 = Islam 1 = Hindu 2 = Christian 3 = Others

1.6	Educational status of caregivers	0 = No formal education 1 = Primary education 2 = Secondary education 3 = Bachelor degree or above 4 = Others (Please specify)
1.7	Marital status of caregiver	0 = Married 1 = Unmarried 2 = Divorced or separated 3 = Window
1.8	Occupation of caregiver	0 = Farmer 1 = Homemaker 2 = Garments worker 3 = Others
1.9	Monthly family income (in BDT)	
1.10	Type of family	0 = Joint/extended 1 = Nuclear
1.11	Residential area	0 = Rural 1 = Urban 2 = Semi urban

Part-2: Clubfoot related Information

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

QN	Question	Response
2.1	Birth weight	Kg
2.2	Mode of Delivery	0 = NVD 1 = C/S
2.3	Affected Side	0 = Right 1 = Left 2 = Bilateral
2.4	Family history of CTEV	0 = Yes 1 = No
2.5	Phase of Ponseti management	0 = Casting phase 1 = Bracing phase
2.6	Difficulties during treatment	0 = Yes 1 = No

Part-3: Co-morbidity information

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

QN	Question	Response
3.1	Co-morbidity of caregiver	0 = Hypertension 1 = Diabetes mellitus 2 = Low back pain 3 = No illness
3.2	Co-morbidity of child's	0 = Congenital heart disease 1 = Others illness 2 = No illness

Part-4: DASS-21

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all

1 Applied to me to some degree, or some of the time

2 Applied to me to a considerable degree or a good part of time

3 Applied to me very much or most of the time

1	I found it hard to wind down	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I found it difficult to work up the initiative to do things	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I experienced trembling (e.g. in the hands)	0	1	2	3
8	I felt that I was using a lot of nervous energy	0	1	2	3
9	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting agitated	0	1	2	3
12	I found it difficult to relax	0	1	2	3
13	I felt down-hearted and blue	0	1	2	3
14	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15	I felt I was close to panic	0	1	2	3
16	I was unable to become enthusiastic about anything	0	1	2	3

17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life was meaningless	0	1	2	3

The DASS-21 should not be used to replace a face-to-face clinical interview. If you are experiencing significant emotional difficulties, you should contact your GP for a referral to a qualified professional.

Recommended cut-off scores for conventional severity labels (normal, moderate, severe) are as follows:

	Depression	**Anxiety**	**Stress**
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	15-19	26-33
Extremely Severe	28+	20+	34+

গবেষণার প্রশ্নমালা

"ক্লাবফুট রোগীর পরিচর্যাকারীর মধ্যে বিষণ্নতা, উদ্বেগ এবং চাপের মাত্রা পরিমাপ"

রোগীর তথ্যবলি

সাক্ষাৎকারের তারিখঃ

রোগীর নামঃ

রোগীর আইডিঃ

অংশগ্রহনকারীর নামঃ

রোগীর ঠিকানাঃ গ্রামঃ পোষ্ট অফিসঃ

থানাঃ জেলাঃ

যোগাযোগের নম্বরঃ

পার্ট-১ঃ সামাজিক-জনতাত্ত্বিক তথ্য

[সঠিক উত্তর চিহ্নিত করতে টিক (√) ব্যবহার করুন]

প্রশ্ন নম্বর	প্রশ্ন	উত্তর/প্রতিক্রিয়া
১.১	পরিচর্যাকারীর বয়স	পূর্ণ বয়স
১.২	বাচ্চার বয়স	
১.৩	বাচ্চার লিঙ্গ	০ = ছেলে ১ = মেয়ে
১.৪	পরিচর্যাকারীর লিঙ্গ	০ = মহিলা ১ = পুরুষ
১.৫	ধর্ম	০ = ইসলাম ১ = হিন্দু ২ = খ্রিস্টান ৩ = অন্যান্য

১.৬	পরিচর্যাকারীর শিক্ষাগত যোগ্যতা	০ = কোন প্রাতিষ্ঠানিক শিক্ষা নাই। ১ = প্রাইমারী শিক্ষা। ২ = মাধ্যমিক শিক্ষা ৩ = স্নাতক ডিগ্রী বা তার উপরে ৪ = অন্যান্য (নির্দিষ্ট)
১.৭	পরিচর্যাকারীর বৈবাহিক অবস্থা	০ = বিবাহিত ১ = অবিবাহিত ২ = তালাকপ্রাপ্ত বা বিচ্ছিন্ন ৩ = বিধবা
১.৮	পরিচর্যাকারীর পেশা	০ = কৃষক ১ = গৃহিণী ২ = গার্মেন্টস কর্মী ৩ = অন্যান্য
১.৯	পরিবারের মাসিক আয় (টাকা)	……..
১.১০	পারিবারিক ধরন	০ = বর্ধিত পরিবার ১ = একক পরিবার
১.১১	বাসস্থানের ধরন	০ = গ্রামীণ ১ = শহুরে ২ = আধা শহুরে
১.১২	সমাজকল্যাণ ভাতা	০ = প্রতিবন্ধী ভাতা ১ = কোন প্রতিবন্ধী ভাতা নেই

পার্ট-২: ক্লাবফুট সম্পর্কিত তথ্য

[সঠিক উত্তর চিহ্নিত করতে টিক (√) ব্যবহার করুন]

প্রশ্ন নম্বর	প্রশ্ন	উত্তর/প্রতিক্রিয়া
২.১	জন্মের সময় ওজন	.....কেজি
২.২	বাচ্চার জন্মের পদ্ধতি	০ = নরমাল ভেজাইনাল ডেলিভারী ১ = সিজারিয়ান সেকশন
২.৩	আক্রান্ত পাশ	০ = ডান ১ = বাম ২ = উভয়পাশে
২.৪	জন্মগত ট্যালিপস ইকুইনোভারাসের পারিবারিক ইতিহাস	০ = হ্যাঁ ১ = না
২.৫	পনসেটি ব্যবস্থাপনার পর্যায়	০ = কাস্টিং পর্যায় ১ = ব্রেসিং পর্যায়
২.৬	চিকিৎসার সময় অসুবিধা	০ = হ্যাঁ ১ = না

পার্ট-৩: সহ-অসুস্থতার তথ্য

[সঠিক উত্তর চিহ্নিত করতে টিক (√) ব্যবহার করুন]

প্রশ্ন নম্বর	প্রশ্ন	উত্তর/প্রতিক্রিয়া
৩.১	পরিচর্যাকারীর সহ-অসুস্থতা	০ = উচ্চ রক্তচাপ ১ = ডায়াবেটিস ২ = কোমর ব্যথা ৩ = অন্যান্য অসুস্থতা নেই
৩.২	শিশুর সহ-অসুস্থতা	০ = জন্মগত হৃদরোগ ১ = অন্যান্য অসুস্থতা

		২ = অন্যান্য অসুস্থতা নেই

পার্ট-৪: DASS-21

অনুগ্রহ করে প্রতিটি বিবৃতি পড়ুন এবং একটি সংখ্যা ০, ১, ২ বা ৩ বৃত্ত করুন যা নির্দেশ করে যে বিবৃতিটি গত সপ্তাহে আপনার জন্য কতটা প্রযোজ্য। এর কোনো সঠিক অথবা ভুল উত্তর নেই. কোনো বক্তব্যে বেশি সময় ব্যয় করবেন না।

রেটিং স্কেল নিম্নরূপ:

০ আমার জন্য একেবারেই প্রযোজ্য নয়

১ আমার জন্য অল্পমাএায় বা কখনো কখনো প্রযোজ্য

২ আমার জন্য বেশ কিছুমাএায় বা বেশখানিকটা সময়ের জন্য প্রযোজ্য

৩ আমার জন্য খুব বেশী বা বেশীরভাগ সময়ের জন্য প্রযোজ্য

১	কোন উৎকণ্ঠা বা উত্তেজনামূলক কাজের পর আরামদায়ক অবস্থায় ফিরে আসা আমার জন্য কঠিন ছিল।	০	১	২	৩
২	আমি বুঝতে পারতাম যে আমার গলা শুকিয়ে আসছে।	০	১	২	৩
৩	আমি মোটেও ইতিবাচক অনুভূতি অনুভব করতে পারতাম না।	০	১	২	৩
৪	আমি শ্বাসকষ্টের অনুভব করতাম (যেমন অত্যধিক দ্রুত শ্বাস নেওয়া, শারীরিক পরিশ্রমের অনুপস্থিতিতে শ্বাসকষ্ট)	০	১	২	৩
৫	আমার জিনিসগুলি করার উদ্যোগ নিয়ে কাজ করা কঠিন বলে মনে হত।	০	১	২	৩
৬	আমার মধ্যে বিভিন্ন পরিস্থিতিতে অতিরিক্ত প্রতিক্রিয়া করার প্রবনতা ছিল।	০	১	২	৩
৭	আমি কাঁপুনি অনুভব করতাম। (যেমন হাতে)	০	১	২	৩
৮	আমি অনুভব করতাম যে আমি অনেক স্নায়বিক শক্তি ব্যবহার করছি।	০	১	২	৩
৯	আমি এমন পরিস্থিতিতে উদ্বিগ্ন ছিলাম যেখানে আমি আতঙ্কিত হতে পারি এবং নিজেকে বোকা বানিয়ে ফেলতে পারি।	০	১	২	৩
১০	আমার মনে হচ্ছিল, ভবিষ্যতে আমার ভালো কিছুরই আশা নাই।	০	১	২	৩
১১	আমি অনুভব করতাম যে আমি খুব অস্থির হয়ে যাচ্ছি।	০	১	২	৩
১২	আমার আরাম করা কঠিন হত ।	০	১	২	৩
১৩	আমি হতাশ বোধ করতাম।	০	১	২	৩
১৪	আমার কাজে বাধা হয় এমন যে কোন জিনিসই আমার কাছে অসহ্য লাগত।	০	১	২	৩
১৫	আমি অনুভব করতাম যে আমি আতঙ্কগ্রস্ত হচ্ছি।	০	১	২	৩

১৬	আমি কিছুতেই উৎসাহী হতে পারতাম না	০	১	২	৩
১৭	আমি অনুভব করতাম যে আমি একজন ব্যক্তি হিসাবে খুব বেশি মূল্যবান নই	০	১	২	৩
১৮	আমি অনুভব করতাম আমি একটুতেই মনে ব্যাথা পাই।	০	১	২	৩
১৯	শারীরিক পরিশ্রম না করলেও আমি হৃদপিন্ডের কাজ করা বুঝতে পারতাম। (যেমন হৃদস্পন্দন বৃদ্ধির অনুভূতি, হৃদস্পন্দন অনুপস্থিত)	০	১	২	৩
২০	আমি কোন যুক্তিসঙ্গত কারণ ছাড়াই ভয় পেতাম।	০	১	২	৩
২১	জীবনটা অর্থহীন বলে মনে হত।	০	১	২	৩

DASS-21 একটি মুখোমুখি ক্লিনিকাল ইন্টারভিউ প্রতিস্থাপন করতে ব্যবহার করা উচিত নয়। আপনি যদি উল্লেখযোগ্য মানসিক সমস্যার সম্মুখীন হন তবে একজন যোগ্যতাসম্পন্ন পেশাদারের কাছে রেফারেলের জন্য আপনার জেনারেল প্রাকটিশনার এর সাথে যোগাযোগ করা উচিত।

প্রচলিত তীব্রতা লেবেলের জন্য প্রস্তাবিত কাট-অফ স্কোর (স্বাভাবিক, মাঝারি, গুরুতর) নিম্নরূপ:

মাত্রা	**বিষণ্নতা**	**দুশ্চিন্তা**	**মানসিক চাপ**
স্বাভাবিক	০-৯	০-৭	০-১৪
মৃদু	১০-১৩	৮-৯	১৫-১৮
মাঝারি	১৪-২০	১০-১৪	১৯-২৫
গুরুতর	২১-২৭	১৫-১৯	২৬-৩৩
অত্যন্ত গুরুতর	২৮+	২০+	৩৪+

To,

The Executive Director,

Sancred Welfare Foundation,

Shekertek, Mohammadpur, Dhaka

Attention to: The Project Director, Walk For Life-Clubfoot Treatment Project

Subject: Regarding permission to collect data from the Walk For Life-Clubfoot Treatment Project to conduct a research project.

Dear Sir,

Greetings from Saic College of Medical Science & Technology (SCMST)!

For your kind information Saic College of Medical Science and Technology (SCMST) an academic institute has been conducting B.Sc in Physiotherapy program under the Faculty of Medicine, University of Dhaka. This is a four years fulltime course and in final year they have to conduct a thesis project.

Mahema Akter of B.Sc in Physiotherapy, ID No. 1819069; Session: 2018-2019; is one of the students is going to do her research project in the field of Clubfoot. Her research title is "Depression, Anxiety and Stress among the Caregiver of Clubfoot Patients". Supervised by Zahid Bin Sultan Nahid, Asst. Professor & Head of the Department, Saic College of Medical Science and Technology (SCMST). The purpose of this study is to identify the Depression, Anxiety and Stress Among the Caregiver of Clubfoot Patients. She wishes to collect data from renowned clubfoot treatment project of Bangladesh the Walk For Life-Clubfoot Treatment Project all clinics situated in the Dhaka district.

She is doing a cross sectional study. She has already obtained ethical permission from Institutional Review Board (IBR) of our institute. I would like to assure the Walk For Life- Clubfoot Treatment Project, Sancred Welfare Foundation and relevant people will be acknowledge in the research paper.

We would appreciate if you kindly help our student by providing permission for data collection and co-operate her.

Hope you will extend your collaboration for developing the quality of research in the field of physiotherapy and rehabilitation.

Please do not hesitate to ask if you have any quires regarding any issues.

Thank you

Sincerely

30.05.24

Dr. Abul Kasem Mohammad Enamul Haque
Principal,
Saic College of Medical Science and Technology (SCMST)

Dr. Abul Kasem Mohammad Enamul Haque
MBBS, M.Phil(PSM)
Principal
SAIC College of Medial Science and Technology (SCMST)
Mirpur-14, Dhaka.

Approved

Shamsunnahar Begum
Director
Sancred Welfare Foundation

SCMST-BPT/IRB/..09-23/001

To
Mahema Akter
4th Year Student of B.Sc. in Physiotherapy
Session: 2018-2019, Reg No:10466
SAIC College of Medical Science & Technology (SCMST)
Mirpur-14, Dhaka-1216, Bangladesh

Subject: Approval of the thesis proposal **"Depression, Anxiety and Stress Among the Caregiver of Clubfoot Patients"** by ethics committee.

Dear Mahema Akter
Congratulations.
The Institutional Review Board (IRB) of SCMST has reviewed and discussed your application to conduct the above-mentioned dissertation, with yourself, as the principal investigator. The Following documents have been reviewed and approved:

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

The purpose of the study is to determine the Depression, Anxiety and Stress Among the Caregiver of Clubfoot Patients. The study involves face to face interview by using semi-structured questionnaire to explore the Barriers and Challenges Confronted by Caregiver of Clubfoot Patients in Dhaka city that may take 30 to 40 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 09.00 AM on 28th September 2023 at SCMST.

The institutional Ethics committee expects to be informed about the progress of the study, any changes occurring during 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,

09.05.24

Dr. Abul Kasem Mohammad Enamul Haque
Principal, SCMST &Chairman, Institutional Review Board (IRB)
SAIC College of Medical Science & Technology (SCMST)
Mirpur-14, Dhaka-1216, Bangladesh

Date
To
The Chairman,
Institutional Review Board (IRB)
SAIC College of Medical Science & Technology (SCMST)
Mirpur-14, Dhaka-1216.
Subject: **Application for review and ethical approval.**

Dear Sir,

With due respect, I am Mahema Akter, student of 4th year B.Sc. in Physiotherapy Program at SAIC College of Medical Science & Technology (SCMST), affiliated by the University of Dhaka. As per the course curriculum, I have to conduct a research project that entitled "Depression, Anxiety and Stress Among the Caregiver of Clubfoot Patients" under the supervisor Dr. Shahanaz Begum, Vice Principal of SCMST.

The purpose of the study is to determine the Depression, Anxiety and Stress Among the Caregiver of Clubfoot Patients. The study involves face to face interview by using semi-structured questionnaire to explore the Depression, Anxiety and Stress Among the Caregiver of Clubfoot Patients in Dhaka city explore that may take 30 to 40 minutes to fill the questionnaire and there is no likelihood of any harm to the participants. Related information will be collected from the patient's guidebook. Data collectors will receive informed consent from all participants: any data collected will be kept confidential.

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

Sincerely,

Mahema

Mahema Akter
Student of 4th Year B.Sc. in Physiotherapy
Session: 2018-2019, Reg: 10466
SCMST, Mirpur-14, Dhaka-1216, Bangladesh

Gantt Chart

Activities/ months	Sep 23	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 24	Apr 24	May 24	June 24	July 24	Aug 24
Proposal presentation												
Introduction												
Literature review												
Methodology												
Data collection												
Data Analysis												
Result												
1st progress presentation												
Discussion												
Conclusion And Recommendation												
2nd progress presentation												
Communication with supervisor												
Final submission												