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“SOCIOECONOMIC IMPACT ON THE PARENTS OF CONGENITAL TALIPES EQUINOVARUS (CTEV) CHILDREN ALONG WITH THEIR COPING STRATEGIES DURING PONSETI MANAGEMENT AT CRP”

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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

“SOCIOECONOMIC IMPACT ON THE PARENTS OF CONGENITAL TALIPES EQUINOVARUS (CTEV) CHILDREN ALONG WITH THEIR COPING STRATEGIES DURING PONSETI MANAGEMENT AT CRP”

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Declaration

I declare that the work presented here is my own. All sources used have been cited appropriately. Any mistakes or inaccuracies are my own. I also declare that same any publication, presentation or dissemination of information of the study. I would bind to take consent from the department of Physiotherapy of Bangladesh Health Profession Institute (BHPI).

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Acronyms

AHA	American Health Association
BHPI	Bangladesh Health Profession Institute
BMRC	Bangladesh Medical Research Council
C/S	Cesarean Section
CRP	Centre for the Rehabilitation of the Paralysed
CTEV	Congenital Talipes Equinovarus
ICTEV	Idiopathic Congenital Talipes Equinovarus
IOFS	Impact-on-Family Scale
IRB	Institutional Review Board
LMIC	Low and Middle-Income Countries
NVD	Normal Vaginal Delivery
POP	Plaster of Paris
SPSS	Statistical Package for the Social Sciences
WHO	World Health Organization

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Abstract

Purpose: To find out the socioeconomic impact on the parents of Congenital Talipes Equinovarus (CTEV) children along with their coping strategies during Ponseti management at CRP. **Objectives:** The goal of this study was to determine the sociodemographic factors and economic factors affecting parents of children with CTEV undergoing Ponseti management as well as the coping strategies factors affecting parents of children with CTEV undergoing Ponseti management. **Methodology:** The study design was cross-sectional. A total of 164 samples were selected conveniently for this study from the Centre for the Rehabilitation of the Paralyzed (CRP), Paediatric unit (outdoor), Savar, Dhaka. Data was collected by using of questionnaire and socioeconomic impact and coping strategies were assessed by the Impact-on-Family Scale and Brief-COPE questionnaire. The study was conducted by using quantitative descriptive analysis through using SPSS software 25.0 version. **Results:** Among 164 parents of CTEV children, 12.2% (n=20) of parents strongly agreed and 57.9% (n=95) of parents agreed that Ponseti management causes a financial burden on them. On the contrary, 28% (n=46) of parents disagreed and 1.8% (n=3) of parents strongly disagreed that Ponseti management causes a financial burden on them. The most used coping strategy is that of religion followed by acceptance, emotional support, informational support and positive reframing which are categorized as being in the approach of coping. While the least used coping strategy is humor followed by substance use, behavioral disengagement and self-blame. This indicates that approach coping is the most used coping strategy than avoidant coping of the parents of CTEV children. **Conclusion:** In Bangladesh, most of the parents were experiencing financial burdens during Ponseti management though it is a low-cost treatment for CTEV. As most of the parents of CTEV children come from rural areas, travel expenses have a negative impact on them. The education level of CTEV children's parents and social and cultural aspects regarding CTEV children can influence the coping strategies of the parents of CTEV children.

Key words: *Socioeconomic impact, Coping Strategies, CTEV children*

1.1 Background

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). Among these malformations, Congenital Talipes Equinovarus (CTEV) stands out as the most prevalent musculoskeletal deformity present at birth, with a documented incidence rate of 1.2 cases per 1000 live births and notably a majority of these cases occur in countries with limited healthcare infrastructure (Owen, Capper and Lavy 2015). Untreated CTEV can have severe consequences, including lifelong disabilities, the inability to walk, social isolation and the experience of social stigma, as emphasized in a study by Nogueira et al. (2011).

Congenital talipes equinovarus (CTEV), commonly referred to as clubfoot, represents a developmental lower limb disorder characterized by a specific deformity pattern involving the foot. In CTEV, the foot becomes fixed in a position of adduction, supination and varus. This means that the bones in the foot, including the calcaneus, navicular and cuboid, undergo a rotation towards the medial side relative to the axis of the talus (Mustari et al. 2022).

According to Meena et al. (2014), this is a complex deformity that presents significant challenges in correction. It encompasses four distinct components: equinus (restricted ankle movement), hindfoot varus (inward tilt of the rearfoot), forefoot adductus (inward turning of the front part of the foot) and mid-foot cavus (a high arch). These deformities have both cosmetic and functional implications and they are accompanied by pathoanatomical changes. These changes involve the underdevelopment of skin and underlying tissues, as well as musculoskeletal structures such as muscles, tendons, bones and ligaments. Additionally, there are alterations in the neurovascular bundle located on the posterior and medial sides, resulting in a hypoplastic and smaller foot compared to a normal one (Meena et al. 2014).

The onset of CTEV occurs during the second trimester of pregnancy. Despite ongoing research, the precise cause of CTEV remains unidentified and it is not attributed to embryonic malformation, as indicated by Manisha and Priyanka (2017).

CTEV is believed to result from a complex interplay of genetic and environmental factors. There is evidence to suggest that the pathophysiology of CTEV is influenced by abnormalities in the development of various aspects, including joints, bones, vasculature, innervation, muscles and connective tissues. It is possible that a disturbance in the embryonic medial foot rotation process serves as a common link among these developmental characteristics. Furthermore, it's important to note that clubfoot can sometimes be associated with conditions like myelodysplasia, arthrogyriposis or other congenital abnormalities. However, more frequently, it presents as an isolated idiopathic birth defect (Mustari et al. 2022).

According to Malinga et al. (2021), each year 150,000 to 200,000 babies are born with Idiopathic Congenital Talipes Equinovarus (ICTEV) globally, with approximately 80% of these cases occurring in the developing world where access to adequate medical care is limited. When examining the published data spanning the past 55 years for clubfoot in Low and Middle-Income Countries (LMIC), the reported birth prevalence falls within the range of 0.5 to 2.0 cases/1000 live births. This results in an estimated occurrence of 7-43 cases of clubfoot/ye/million population, with the exact number depending primarily on the birth rate, as highlighted in the study by Smythe et al. (2017). According to research, approximately 80% of all children with clubfoot are located in low or middle-income countries (Gupta et al. 2008).

The compiled data reveals that the birth prevalence of clubfoot is relatively consistent across several regions including Africa (1.11), South-East Asia (1.21), India (1.19) and the Eastern Mediterranean region (1.19). In Low and Middle-Income Countries (LMICs) within the Americas region, the pooled estimate registers at 1.74, while Turkey, categorized under the Europe region, exhibits a slightly higher prevalence at 2.03. Conversely, the West Pacific region (excluding China) reports a lower birth prevalence of clubfoot, with a pooled estimate of 0.94. The lowest recorded birth prevalence is observed in China, standing at 0.51 (Smythe et al. 2017).

Bangladesh, a densely populated nation of 160 million people, faces a significant socioeconomic challenge with approximately one-third of its population living below the poverty line. With an annual birth rate of approximately 3.2 million and an estimated incidence of 1 case per 900 live births, the country encounters roughly 5,000 new cases of ICTEV each year (Ford-Powell et al. 2013).

Multiple treatment approaches are available for CTEV, but presently, the widely accepted and considered the best practice is the Ponseti method. Surgical intervention is only considered for cases where complete correction cannot be achieved (Jowett, Morcuende and Ramachandran 2011). However, since 1996, the non-surgical Ponseti correction method has gained increasing popularity and has proven highly effective, achieving successful outcomes in over 90% of patients, as demonstrated by the findings of Herzenberg, Radler and Bor (2002).

Dr. Ignacio Ponseti pioneered a technique for correcting clubfoot, which known as Ponseti management, based on manipulation and casting. This method is grounded in the principles of kinematics and the pathoanatomy of the deformity, effectively realigning the foot in affected children without the need for extensive and major surgical procedures. The Ponseti method boasts a remarkable success rate, reaching as high as 92-100% globally and it has led to a significant decline in the need for surgery, decreasing by 7% annually following its peak in 2000-2001. To achieve favorable functional outcomes, only a small fraction, approximately 10% of cases, require surgical intervention beyond a tenotomy, as highlighted in the research conducted by Malhotra et al. (2018).

The primary objective of treatment is to promptly and completely correct all four foot deformities, resulting in a functional foot that is devoid of pain, maintains a normal walking posture, exhibits good mobility, remains free of calluses and does not require to wear modified shoes (Giesberts et al. 2017).

The Ponseti treatment protocol comprises two key phases: the casting phase and the bracing phase. During the casting phase, which spans about 3 months on average, the foot is reshaped through weekly cast adjustments to attain a normal position. The subsequent bracing phase entails full-time brace usage for the initial 3 months following the casting cycle. For children who initiate brace wear at an older age, nighttime brace usage is recommended until they reach 4 years of age or for 1 year following the achievement of full correction. Throughout the bracing phase, regular follow-up appointments are essential. These appointments serve to monitor the child's feet for any potential recurrence of the deformity, make necessary adjustments to the brace to accommodate the child's growth, ensure proper ongoing treatment and overcome the difficulties during Ponseti management (Chueire et al. 2016).

Parents of children who receive a diagnosis of CTEV experience heightened stress during pregnancy or at the time of birth (Coppola et al. 2012). Additionally, they must learn how to accept and overcome the emotional process of dealing with the deformity in the early stages of their child's life (neonatal period). This journey involves consistent hospital visits in the initial weeks post-birth for casting procedures and the daily management of an intensive bracing regimen. This bracing routine continues until the child reaches at least 3 or 4 years of age (Malagelada et al. 2016).

Mothers of infants with bilateral CTEV encounter greater challenges in coping when compared to those with infants having unilateral CTEV. This observation suggests an inverse relationship between the severity of the deformity and the coping abilities of the mother. Additionally, mothers who possess prior knowledge or experience with clubfoot are more adept at handling the diagnosis in contrast to mothers who are unfamiliar with it (Coppola et al. 2012).

Congenital Talipes Equinovarus (CTEV) and its associated treatment regimen have notable effects on the child's social environment and family life. Although it is not a life-threatening foot disorder, it significantly impacts the well-being of children, caregivers and family members (Pietrucin-Materek et al. 2011). To mitigate these effects and enhance family function, it is essential to consider the perspective of parents and implement suitable interventions, as emphasized in the study by Malagelada et al. (2016). Furthermore, untreated clubfoot constitutes a multifaceted burden encompassing social, psychological and physical aspects for both the patient, his/her family and society at large. It stands as the foremost cause of physical disability among all congenital musculoskeletal defects (Nogueira et al. 2011).

1.2 Rationale

Congenital Talipes Equinovarus (CTEV) is a congenital condition that affects the positioning and alignment of a child's foot or feet at birth. In CTEV, the affected foot is often turned inwards and pointed downwards. This condition is also commonly referred to as clubfoot. It is a musculoskeletal deformity that can vary in severity and typically requires medical treatment to correct. Early diagnosis and appropriate treatment are essential to help the affected child achieve normal foot function and mobility. Various treatment options exist for CTEV but the current accepted gold standard is the Ponseti method which involves casting and bracing. Surgical intervention may also be required in some cases. Despite being very successful, medical professionals need to acknowledge that this treatment regime causes increased stress for the parents of children with CTEV.

Though Ponseti management is much more cost-effective than other treatment options this treatment has a huge impact on the economic status of the family due to the lengthy treatment regime, the cost of multiple visits, the cost of frequent appointments and the cost of any necessary orthopedic devices. Parents have a responsibility to take care of their children and meet their societal roles. These roles are affected when they get children with deformities. The parent's lives are impacted by the added responsibility of bringing their children to the hospital and taking additional care of them at home. CTEV treatment often requires a significant time commitment from parents as they need to attend frequent appointments. This can be exhausting and can affect their daily routines and work schedules. Additionally, the stress and demands of caring for a child with CTEV can sometimes strain relationships between parents or with other family members. Furthermore, parents often find it challenging to actively participate in social activities, which can result in feelings of social isolation. As a result, most children drop out from follow-up and eventually relapse occurs. These may negatively impact the best possible outcomes of the Ponseti treatment regime for their children. Hence it is important to assess the impact of Ponseti treatment on the socioeconomic status of the parents of children with CTEV and what type of strategies they follow in response to these impacts.

1.3 Research Question

What are the socioeconomic impact on the parents of Congenital Talipes Equinovarus (CTEV) children along with their coping strategies during Ponseti management at CRP?

1.4 Aim of the study

The aim of the study was to find out the socioeconomic impact on the parents of Congenital Talipes Equinovarus (CTEV) children along with their coping strategies during Ponseti management at CRP.

1.5 Objectives

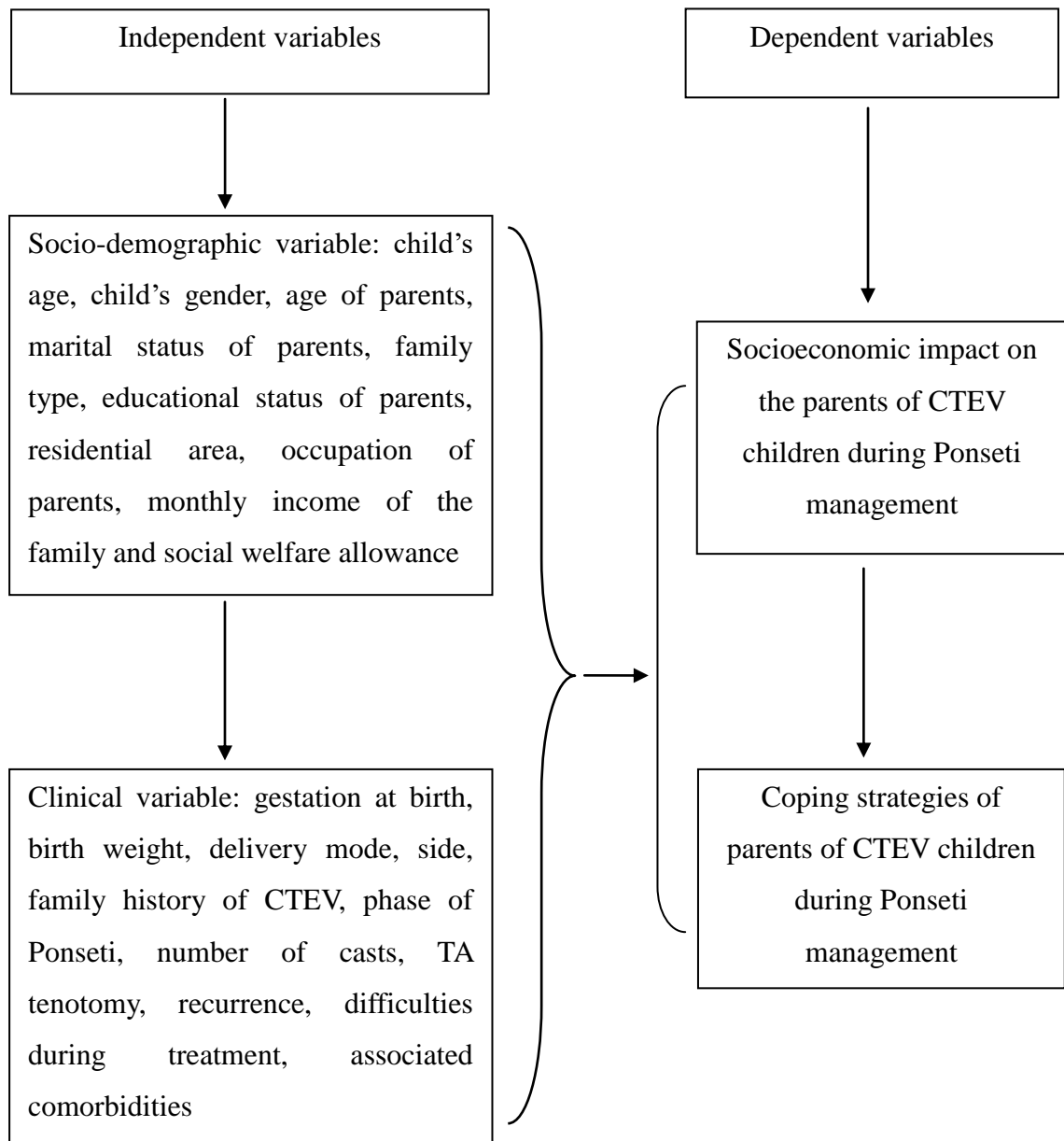
1.5.1 General Objective

To find out the socioeconomic impact on the parents of Congenital Talipes Equinovarus (CTEV) children along with their coping strategies during Ponseti management at CRP.

1.5.2 Specific Objectives

1. To identify the sociodemographic information of parents of children with CTEV undergoing Ponseti management.
2. To ascertain the medical information of children with CTEV undergoing Ponseti management.
3. To determine the socioeconomic impact on the parents of children with CTEV undergoing Ponseti management.
4. To assess the coping strategies of the parents of children with CTEV undergoing Ponseti management.
5. To explore the association in between sociodemographic profile, Impact-on-Family scale (IOFS) domain and Brief-COPE scale domain.
6. To find out the association in between Impact-on-Family scale (IOFS) domain and Brief-COPE scale domain.

1.6 Conceptual framework



1.7 Operational Definition

Congenital malformations

Congenital malformations are physical abnormalities or structural defects that are present at birth. These conditions can affect various parts of the body and may result from genetic factors, environmental influences or a combination of both.

CTEV

Congenital talipes equinovarus (CTEV) is a deformity of the lower limb characterized by smaller calf muscles and adduction of the forefoot, Cavus (increased longitudinal arch), Varus of the heel (heel turned in) and Equinus of the foot (foot in plantar flexion).

Deformity

A deformity refers to a structural or physical abnormality that deviates from the expected or typical anatomical structure of a body part, organ or the entire body typically resulting from injury, medical conditions, genetic factors or developmental issues. Deformities may lead to functional limitations, discomfort or alterations in physical appearance.

TA tenotomy

A tenotomy is a surgical procedure where a tendon is deliberately cut or divided to improve joint movement and function. This is typically done when a tight or shortened tendon is causing physical limitations or deformities.

Recurrence

Recurrence refers to the reappearance or return of a disease, condition, symptom or medical issue after a period of remission, treatment or improvement. It signifies that the problem has resurfaced or reoccurred, often requiring further medical attention or management.

Ponseti management

The Ponseti method is an innovative, conservative and complete treatment for correcting clubfoot deformity. It is a complete treatment method that is 97% successful in correcting the clubfoot deformity without major surgery which was common practice.

Socioeconomic impact

Socioeconomic impact refers to the effect or influence that a particular event, policy, program or condition has on the social and economic well-being of individuals, communities or society as a whole. It assesses how these factors can change people's lives, financial situations and overall quality of life.

Coping strategies

Coping strategies refer to a person's perception of mental and physical health that is related to the ways he or she evaluates and copes with the stresses of living. Coping strategies are the methods and techniques individuals use to deal with and manage stress, challenges or difficult situations in their lives. These strategies help people adapt and maintain their emotional and mental well-being when faced with adversity or stressors.

CTEV is distinguished by four distinct deformities affecting the foot. These include rigid equinus of the foot (foot is in plantar flexion), cavus of the mid foot (increased longitudinal arch of foot), varus of the hind foot (heel turned in) and adductus of the forefoot at the mid tarsal joints (fore foot in adduction) (Mocuende 2006). Various sociodemographic factors have shown a moderate association with CTEV, encompassing marital status, education and prenatal care. Notably, the risk of CTEV decreases as the level of maternal education rises. Mothers who have attained at least a high school education are at a lower risk of having a child born with CTEV (Parker et al. 2009).

The risk of CTEV is notably higher in males, indicating a strong association with male sex. Among other significant infant factors linked to an elevated risk of CTEV are premature birth, low birth weight and a breech presentation. When considering maternal risk factors, parity plays a moderately important role, with multiparous mothers experiencing a reduced risk of CTEV. Additionally, young maternal age, specifically those under 23, is weakly associated with an increased risk compared to older maternal age, which falls within the range of 23 to 35 (Parker et al. 2009).

The cause of CTEV remains unexplained but genetics appear to play a role, as indicated by ethnic differences in incidence, family inheritance patterns and a 32.5 percent concordance rate among identical twins. The deformity is more common in boys, with a male-to-female ratio of 2:1. Additionally, affected women are more likely to transmit the condition to their offspring and have relatives with CTEV compared to men. For instance, if there is a family history of CTEV, the adjusted odds ratio for a baby to be born with clubfoot is 6.52. If the mother smoked cigarettes during early pregnancy, the adjusted odds ratio for the child having CTEV is 1.34. When there is both a family history of clubfoot and maternal smoking during early pregnancy, the adjusted odds ratio increases substantially to 20.35 for the child having CTEV. A plausible explanation for CTEV development is a multifactorial and polygenic origin, involving multiple genes contributing to an increased susceptibility to CTEV development, possibly in combination with specific environmental factors (Gibbons and Gray 2013).

Various scientific researchers have proposed different explanations for the causes of CTEV deformity. According to some, CTEV deformity is attributed to malformed bones, muscle abnormalities, joint irregularities, vascular lesions and abnormalities in ligaments and tendons. On the other hand, an alternative perspective suggests that congenital CTEV arises when external forces improperly position the foot or feet during fetal development. Additionally, neurogenic disorders including issues related to neuromuscular balance or genetic variations are also considered as potential contributors to CTEV deformity (Matuszewski et al. 2012).

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). Another study reveals varying incidences, with estimates ranging from 1 in 1000 births among Caucasian populations to 7 in 1000 births in Maori populations. According to Smythe et al. (2017), epidemiological studies consistently reveal a greater incidence of idiopathic clubfoot among males and in firstborn children. Turner et al. (2018) 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).

Typically, there are a few specific statistics commonly cited for the incidence of clubfoot at birth. These figures include a reported rate of 0.39 cases per 1000 births in Chinese populations, 1.1 cases per 1000 births in Caucasian populations and a significantly higher rate of 6.8 cases per 1000 births in Polynesian populations. It is also important to note that in low and middle-income countries, clubfoot affects roughly 80% of children born annually (Smythe et al. 2017). In Belgium, the documented incidence of clubfoot is 1.6 cases per 1000 live births, based on the study conducted by Patron et al. (2010). Bangladesh, with a total population of 160 million, sees an estimated 4,373 children born with clubfoot each year. In contrast, India, a country with a vast population of approximately 1.2 billion, reports an estimated 30,000 children born with clubfoot annually (Ford-Powell et al. 2013).

Clubfoot deformity exhibits a strong association with maternal diabetes. Specifically, the risk of clubfoot is significantly higher for mothers with pregestational diabetes

compared to those with gestational diabetes, with the latter showing a more modest increase in risk, as demonstrated by Parker et al. (2009). In a separate study by Staheli (2009), it was found that in families where one parent has clubfoot, there is a 3-4% chance of their children being affected. However, when both parents are affected by clubfoot, the likelihood of their children also being affected substantially increases to 30%. Furthermore, clubfoot may co-occur with other musculoskeletal disorders. For instance, it can present alongside conditions such as arthrogryposis, myelodysplasia and myelomeningocele (Hart et al. 2005). A study by Hernigou et al. (2017) also supports the notion that clubfoot deformities can be associated with a variety of conditions, including myelomeningocele, arthrogryposis, cerebral palsy and poliomyelitis.

Congenital talipes equinovarus (CTEV) is the most prevalent congenital musculoskeletal disorder that requires comprehensive orthopedic treatment. The Ponseti method has emerged as the widely accepted gold standard for treating clubfoot (Ganesan et al. 2017). 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). The Ponseti method is a non-invasive technique for correcting congenital clubfoot. It was initially developed by Dr. Ignacio V. Ponseti at the University of Iowa in the 1950s. Dr. John Herzenberg played a significant role in its resurgence in the USA and Europe around 2000, while in Africa, NHS surgeon Steve Mannion contributed to its adoption. This method has become a standard for treating clubfoot. The primary challenge in achieving successful results with the Ponseti method is not in correcting the initial deformity but in preventing relapse (Zionts & Dietz 2010).

The Ponseti method involves a step-by-step process of gently manipulating the foot into the correct position. This is achieved through a series of casts applied over time. Typically, the procedure includes a percutaneous tenotomy of the Achilles tendon followed by an extended follow-up program that utilizes foot abduction braces. Initially designed for early correction in uncomplicated idiopathic cases, the Ponseti method has now evolved to be suitable for more complex non-idiopathic cases and for patients who present with clubfoot at or even beyond the age of 2 years (Lourenco and Morcuende 2007).

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. This program is facilitated by the global non-governmental organization Walk for Life. Within Bangladesh, Walk for Life collaborates with local partners including Zero Clubfoot Chittagong, Lamb Hospital and CRP Bangladesh. The overarching goal of Walk for Life is to ensure that every child born in Bangladesh with clubfoot has the opportunity to receive treatment using the Ponseti approach within the first two years of life. 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).

The Ponseti method for managing CTEV involves two distinct phases: the corrective phase and the maintenance phase. During the corrective phase, the foot is carefully manipulated and then it is encased in Plaster of Paris (POP) casts. These casts serve the dual purpose of maintaining the corrective stretch achieved through the foot manipulation while also providing the necessary time for the soft tissues to adapt and for the proper alignment of the foot bones to be gradually corrected. This correction is accomplished sequentially, addressing issues such as cavus (high arch), adductus (inward positioning) and varus (inward tilting) around the talus bone (Smythe et al. 2016).

Prior to casting, it is recommended to perform a brief and gentle manipulation of the foot. This step is crucial for extending the foot's structures and gaining a sense of its flexibility and the potential correction achievable with the cast. Serial casting involves the use of knee-length casts, as brief leg casts cannot effectively maintain abduction and tend to slip off. The initial cast restricts foot pronation significantly. Subsequent casts involve a simple abduction maneuver with counter pressure applied to the talus area. This stabilizes the talus, preventing its rotation within the ankle joint, while the rest of the foot is positioned below it. Importantly, avoid any manipulation of the calcaneus, as this could impede its free movement beneath the talus. This free movement is necessary for the calcaneus to swing from below the talus, facilitating abduction, eversion and dorsiflexion. Active dorsiflexion should not be attempted until the subtalar joint is fully corrected, which typically occurs after the tenotomy procedure (Radler 2013).

Typically, to correct the remaining equinus (foot-down position), a percutaneous tenotomy of the Achilles tendon is required. Afterward, the foot is placed in a cast for a period of 3 weeks to aid in the healing process. The maintenance phase involves a bracing regimen aimed at preventing the recurrence of clubfoot. During the initial 3 months, a foot abduction brace is worn for 23 hours a day, followed by nighttime use for a duration of five years. However, if clubfoot correction has been fully achieved through manipulation, serial casting, and possibly a heel cord tenotomy, then only a foot abductor brace is necessary. It's important to note that any brace that adheres to Ponseti's recommendations regarding shoe rotation and bar length will effectively maintain the corrected position of the clubfoot, provided that the feet are held in the prescribed abducted and dorsiflexed positions and the appropriate bracing schedule is followed. The specific bracing protocol should be tailored to each individual patient based on their age, the relapse rate associated with that age and when the initial correction was achieved (Alves 2019).

Following the achievement of complete correction, a custom-made brace was provided, featuring open-toe high-top shoes affixed to the ends of a bar. The brace was specifically set to maintain 70° of external rotation on the affected side and 40° of external rotation on the unaffected side. The bar was bent at a 10° angle with the convex side away from the child, ensuring that the feet remained in dorsiflexion. The sizing for the splint was determined before the tenotomy procedure, allowing for immediate application following the removal of the cast. Initially, it was recommended that the brace be worn full-time for the first three months. After this period, the regimen was adjusted to 12 hours at night and 2 to 4 hours during the day, totaling 14 to 16 hours within a 24-hour period. This continued until the child reached the age of 3 to 4 years. Additionally, CTEV shoes were provided to aid in walking during the daytime. Parents were given instructions to perform foot exercises at home and regular follow-up appointments were scheduled. During these follow-ups, which occurred monthly for the first three months and every two months for the subsequent six months, the corrected foot was thoroughly examined. Any signs of recurrence were assessed and guidance regarding exercises and the bracing protocol was reinforced (Khazi et al. 2019).

Chronic conditions in children, such as asthma, heart disease, and renal disease, are known to result in heightened levels of anxiety, depression and stress among parents. This procedure necessitates that parents remain committed to attending clinic follow-up appointments and providing continuous support to their children throughout the treatment process. It is a comprehensive procedure that has an impact on various aspects of the parent's lives, including their financial, personal, social and family status, all while their child undergoes treatment. Furthermore, this treatment journey underscores the importance of parents receiving substantial support, both from the hospital and the broader community. Simultaneously, parents must develop effective coping mechanisms to navigate the challenges associated with this procedure (Malagelada et al. 2016).

Interestingly, only one study, conducted by Coppola et al. (2012), has reported preliminary findings regarding the negative impact of a congenital talipes equinovarus (CTEV) diagnosis on the psychological well-being of mothers. Recognizing the potential psychological strain on parents, it is crucial to assess the perspective of parents dealing with CTEV in order to minimize the overall impact of the condition. This assessment can inform the implementation of appropriate interventions aimed at optimizing family functioning, as emphasized by Malagelada et al. (2016).

Previous evidence, as highlighted by Skari et al. (2006), indicates that mothers tend to report experiencing more psychological stress than fathers in various situations. However, it is worth noting that there is limited research in the field regarding how an orthopaedic physical malformation can impact a mother's psychological well-being. A recently published study by Coppola et al. (2016) is noteworthy as it delves into this subject matter. The study involved questioning mothers within the first 3 months after giving birth to a child diagnosed with congenital talipes equinovarus (CTEV), comparing them to mothers of healthy full-term babies. The study employed various assessment tools, including the Brief COPE and MSPSS. The findings revealed that mothers in the CTEV group reported experiencing more stress-related and depressive symptoms following the birth of their child. The study also identified a protective role for social support in mitigating these psychological challenges (Coppola et al. 2012).

Both stages of the Ponseti treatment, including serial casting and bracing, appear to have a similar impact on families, although there is a slight trend suggesting that the initial casting stage may have a somewhat higher impact. Notably, the populations studied in this context exhibited significant variations in their perceived social support and the utilization of coping strategies. Specifically, these factors were found to be more pronounced in South Africa (SA) compared to the United Kingdom (UK). The results of the study provided objective evidence of the impact of Ponseti treatment on parents and caregivers of children affected with clubfoot. Despite the treatment's high success rates, relatively non-invasive nature and widespread acceptance as the gold standard within the medical community, it's essential for medical professionals to recognize that this treatment regimen can lead to heightened stress levels for the families involved (Malagelada et al. 2016).

Socio-economic factors have been identified as significant barriers to accessing healthcare services in many resource-poor settings. Despite the availability of effective treatment interventions and a high cure rate, the overall treatment outcomes in numerous parts of Africa remain suboptimal due to the influence of poor socio-economic conditions and inadequate health-seeking behaviors (Meremikwu 2009). El Sharkawy, Newton and Hartley's (2006) in their research observed that impoverished socio-economic circumstances within families affected parent's utilization of medical services for their ill children at healthcare facilities. This often led them to opt for less expensive services, such as religious or traditional treatments, as alternatives.

Another study, conducted by Johnson et al. (2017), identified several common barriers to accessing clubfoot treatment, including financial constraints, limitations in transportation methods, challenges related to the care of casts and braces, insufficient resources and a lack of knowledge and skill among affected families. These barriers collectively contribute to difficulties in accessing appropriate care for clubfoot (Johnson et al. 2017). In a study conducted in Madagascar by Ramahenina, O'Connor and Chamberlain (2016), it was discovered that nine mothers expressed feelings of shame regarding their children's clubfoot condition. These mothers went so far as to hide their child's foot. Additionally, eight mothers reported being blamed for having done something wrong during their pregnancy, which they believed resulted in their children's condition, leading to a sense of punishment for their children (Ramahenina, O'Connor and Chamberlain 2016).

Many parents involved in the study lacked the necessary knowledge and skills to properly care for casts and braces, essential components of clubfoot treatment. These braces need to be consistently worn for a specific period, while the casts require frequent monitoring and maintenance to ensure the effectiveness of the treatment (Johnson et al. 2017). Furthermore, the study revealed that some parents experienced isolation due to their child's clubfoot condition. To avoid potential rejection, some parents felt compelled to conceal their child's condition from others. In certain cases, parents were advised to seek traditional healing methods for their children's treatment (Ramahenina, O'connor and Chamberlain 2016).

Some parents may perceive themselves as somehow flawed or deficient when they give birth to a child with clubfoot. This perception can contribute to emotional challenges for parents facing such a situation (Johnson et al. 2017). In a separate study conducted in Madagascar by Ramahenina, O'Connor and Chamberlain (2016), it was observed that some parents faced significant practical challenges. For instance, certain parents had to halt the education of their other children to provide care for the child with clubfoot. Additionally, some parents made the difficult decision to leave their jobs out of fear that they might be denied permission to take their children for clubfoot treatment. These real-life challenges underscore the complex and multifaceted impact of clubfoot on families and parents (Ramahenina, O'connor and Chamberlain 2016).

In South Africa, parents of children with clubfoot were found to employ a broader range of coping strategies compared to those in the United Kingdom, as assessed using the Brief COPE tool. These strategies encompassed active coping, denial, instrumental support, venting, planning, emotional support, positive reframing, religious coping and acceptance of the condition and the treatment regimen. This suggests that parents in South Africa were more actively engaged in various coping mechanisms to manage the challenges associated with clubfoot, as reported in the study by Malagelada et al. (2016).

Similarly, in the research conducted by Ramahenina, O'Connor and Chamberlain (2016), it was noted that all mothers in their study identified a stressful period during the Ponseti management of clubfoot. Some parents in Madagascar expressed feelings of distress and unhappiness due to their child's clubfoot condition. They experienced

guilt and a sense of rejection, which ultimately led to feelings of despair. These findings highlight the emotional toll that clubfoot can have on parents and caregivers in different cultural and geographic contexts (Ramahenina, O'connor and Chamberlain 2016).

In the case of parents of children with 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). 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).

3.1 Study Design

It was a cross-sectional descriptive study, where structured questionnaires were used and interviews with the parents of Congenital Talipes Equinovarus (CTEV) children were conducted. The objectives were easily determined using this study design. The data were gathered in one shot or over a short period of time.

3.2 Study Site

The data were gathered at the CRP Paediatric unit in Savar, Dhaka by the researcher. At this unit children with CTEV were treated. This study was conducted on the parents of children with CTEV undergoing Ponseti management at the Centre for the Rehabilitation of the Paralyzed (CRP), Savar, Dhaka. The parents showed no difficulty in providing information to the researcher.

3.3 Study Population

A population is the total group of people on which a study is conducted. It is the group in which the researcher is interested and with whom the researcher wishes to generalize the findings of the study. The study's sample population were chosen from the parents of CTEV children undergoing Ponseti management at CRP from 16-05-2023 to 16-07-2023.

3.4 Sampling Technique

Centre based sampling technique was used for this study. The researchers chose participants from the CRP because they were readily available. The samples were chosen using a set of inclusion and exclusion criteria.

3.5 Sample Size

When the sample frame is finite,

The equation of finite population correction in the case of a cross-sectional study is:

$$n = \frac{Z^2 pq}{d^2}$$
$$= \frac{(1.96)^2 \times 0.121 \times 0.879}{(0.05)^2}$$
$$= 164$$

Here, Z (confidence interval) = 1.96

P (prevalence) = 0.121 (Smythe et al. 2017)

d (margin of error) = 0.05

And, q = (1-p)

= (1-0.121)

= 0.879

The actual sample size was, n = 164

3.6 Inclusion Criteria

Patients will be enrolled if they meet the following criteria:

1. Parents of children with a clinical diagnosis of CTEV (unilateral or bilateral) aged under 5.5 years (Malagelada et al. 2016).
2. Parents of CTEV children undergoing Ponseti treatment at the time of the study.
3. Parents who gave consent to participate in the study and were able to fill the questionnaire.
4. Both mother and father were included.

3.7 Exclusion Criteria

1. Children with relapse of CTEV who require further surgery (apart from percutaneous heel cord tenotomy) (Malagelada et al. 2016).
2. Children who were treated with other methods of management of CTEV.
3. Parents who were unwilling to give consent to take part in the study.
4. Caregivers and other relatives were excluded.

3.8 Data Collection

The study aim, objectives and study procedures were explained to participants before data were collected using a questionnaire. They were given the opportunity to ask questions and then asked to sign the written consent form once they were satisfied. The researcher completed the Impact-on-Family Scale and Brief COPE Scale along with the sociodemographic data and medical information of the child after they signed the consent form. Data were collected from 16-05-2023 to 16-07-2023. For data collection, researchers went to the outdoor of CRP, Savar, Dhaka and approached each parent of the CTEV children after Ponseti treatment. In some cases, the person being evaluated was unable to complete the questionnaire (e, g, due to lack of formal education etc.). In these cases, the form could be completed by someone who knew the person being assessed, as long as the person being assessed was present when the form was completed.

3.9 Data Collection Tools

The study required a Bengali Consent Form and Questionnaire, as well as other materials such as a pen, pencil, eraser, clip board, white paper and note book. Demographic data were gathered based on a literature review and the study objectives. Parents were asked about their age, gender, marital status, family type, educational level, monthly family income, child's medical history etc.

Impact-on-Family Scale (IOFS)

This scale is a 24-item quality-of-life instrument that evaluates the impact that a child's illness has on family function. The revised version includes 24 items with responses to each of these on a four-point scale (from strongly agree to strongly disagree). An overall score ranges from 15 to 60. This scale has 4 domains that is financial, familial/social, personal strain and mastery. Internal consistency (Cronbach's) for overall impact and for each domain ranges from 0.60 to 0.88.

Brief-COPE Scale

This is a questionnaire that assesses the range of coping strategies in stressful situations. The treatment involving either casting or boots and bars was referred as the stressful event. It is formed by 28 items grouped into 14 subscales. Response options range from 1 (I haven't been doing this at all) to 4 (I've been doing this a lot). There is no "overall score" on this measure and instead each subscale has a score ranging from 2 to 8 showing which coping strategies have been used against the stressful situation. This scale has 3 domains that is problem-focused coping, emotion-focused coping and avoidant coping.

3.10 Data Analysis

Data were entered into an Excel spreadsheet and the Statistical Package for Social Science (SPSS) software version 25. SPSS software was also used to analyze the data. The demographic factors such as the child's age, gender, parent's age, parent's occupation, parent's marital status, parent's occupation level and so on were analyzed and discussed using the Demographic questionnaire. The financial burden, familial/social strains, personal strains and mastery over the condition that affect the family of CTEV children were also discussed using the Impact-on-family scale questionnaire. There are 24 questions in this questionnaire. The overall impact on family is graded on a scale of 1-4 (strongly agree-strongly disagree). The domains were rated 1,2,3 and 4 on a scale of 1 to 4. BREEF COPING was also discussed in this study, which has 3 domains. This survey produced cross-sectional data as a result. A great deal of data

were gathered as a result of this survey. Chi-Square analysis was used to determine the relationship between the various variables.

Chi-Square (χ^2) test

Chi-square (χ^2) test is the most popular discrete data hypothesis testing method. It is a non-parametric test of statistical significance for bivariate tabular analysis with a contingency table. In this study Chi-square (χ^2) test was done to measure the associations between two variables. It was used to test the statistical significance of results reported in bivariate tables. Chi-square is the sum of the squared differences between observed (O) and the expected (E) data divided by expected (E) data in all possible categories.

3.11 Informed Consent

All participants were given written consent prior to completing the questionnaire (appendix). The researcher explained to the participants his or her role in the study, as well as the study's goal and objective. The researcher received a written consent from each participant. As a result, the participants said they were aware of the consent process and that their participation was completely voluntary. The participants were told that their personal informations would be kept private. The researchers assured the participants that taking part in the study would not harm them. According to the explanation, while the study may not provide immediate benefits to the participants, it may provide benefits in the future for cases similar to theirs. Participants had the option to withdraw their consent and stop participating at any time, with no impact on their current or future care at CRP's Paediatric unit (outdoor). Data from this study were coded anonymously to ensure confidentiality and no personal information was included in any publication containing the study's findings.

3.12 Ethical Consideration

The proposal was approved by the Institutional Review Board (IRB) and the Bangladesh Health Profession Institute (BHPI). The research followed guidelines set forth by the World Health Organization (WHO) and the Bangladesh Medical Research Council (BMRC). Participants gave their written or verbal consent before any data was collected. The participants in the study had signed consent form and the purpose of the study and the consent form had been explained to them verbally throughout the research. Their jobs were not harmed as a result of the research. They were told that their participation in the study was completely voluntary and that they had the right to withdraw or stop at any time. They were also assured that their personal informations would be kept private. The participant should be assured that his or her name and address will not be used. The participants were also told that the study's findings would not harm them.

3.13 Rigor of the Study

The study was carried out in a meticulous manner. The research was carried out in a systematic and orderly manner. It was ensured that participants were not influenced by their previous experiences during the data collection. Whether they had a negative or positive impression, the answer was accepted. There were no leading questions asked and no significant questions were avoided. To ensure that there were no errors, the supervisor double-checked the participant's informations. The informations were kept completely confidential. In the result section, displaying any personal interpretation had no effect on the outcome. Every section of the study was double- and triple-checked by the research supervisor.

The objective of the study was to find out the socioeconomic impact on the parents of Congenital Talipes Equinovarus (CTEV) children along with their coping strategies during Ponseti management at CRP. Purposive sampling was done to select samples. A total of 164 data were collected from the Paediatric unit (outdoor) of CRP, Savar, Dhaka. 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 profile, child's medical history, IOFS domain and coping domain are also shown here in different tables. Association between socio-demographic profile, child's medical history, socioeconomic impact and coping strategies are also shown here in different tables.

4.1 Socio-demographic Information

4.1.1 Age Groups of CTEV Children

A total of 164 CTEV children were randomly selected among them 4.3% (n=7) children were under 1 month, 50.6% (n=83) children were 1-12 months, 25% (n=41) were 13-24 months, 11.6% (n=19) children were 25-36 months, 4.9% (n=8) children were 37-48 months and 3.6% (n=6) children were 49-59 months. The percentage of age groups is shown below as a bar graph. The age of the child ranged from 18 days to 58 months old with a mean age of 15.23 months.

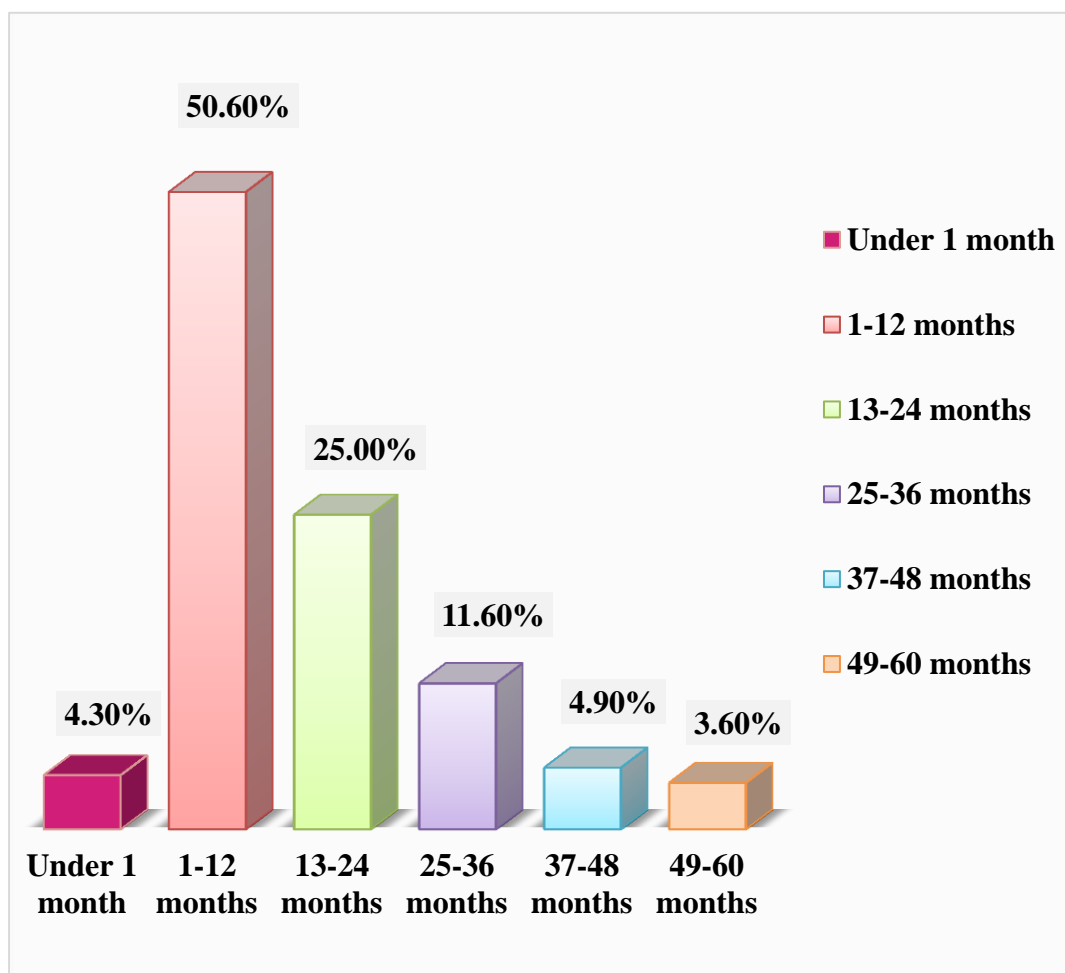


Figure - 4.1.1: Age groups of CTEV children

4.1.2 Gender of CTEV Children

Among all the children n=115 (70.1%) were male and n=49 (29.9%) were female. The result shows that males were more affected than females and giving a male-to-female ratio of 2.3:1.

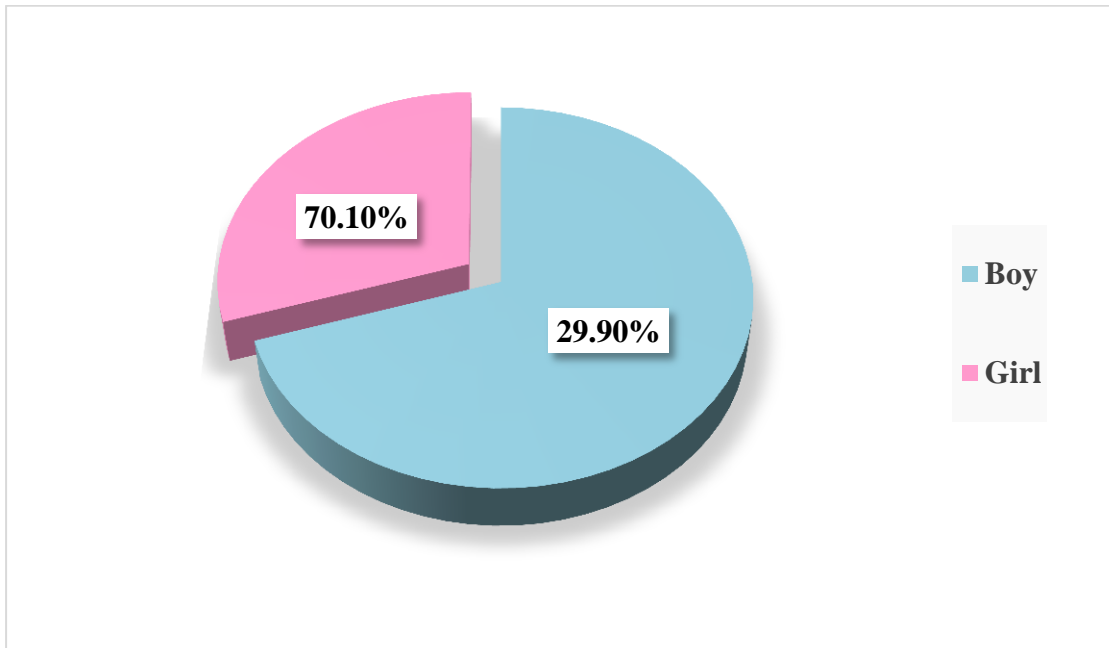


Figure - 4.1.2: Gender of CTEV children

4.1.3 Respondent Parent

Among 164 participants, 18.3% (n=30) participants were fathers and 81.7% (n=134) participants were mother. The majority of the respondent parent were mothers.

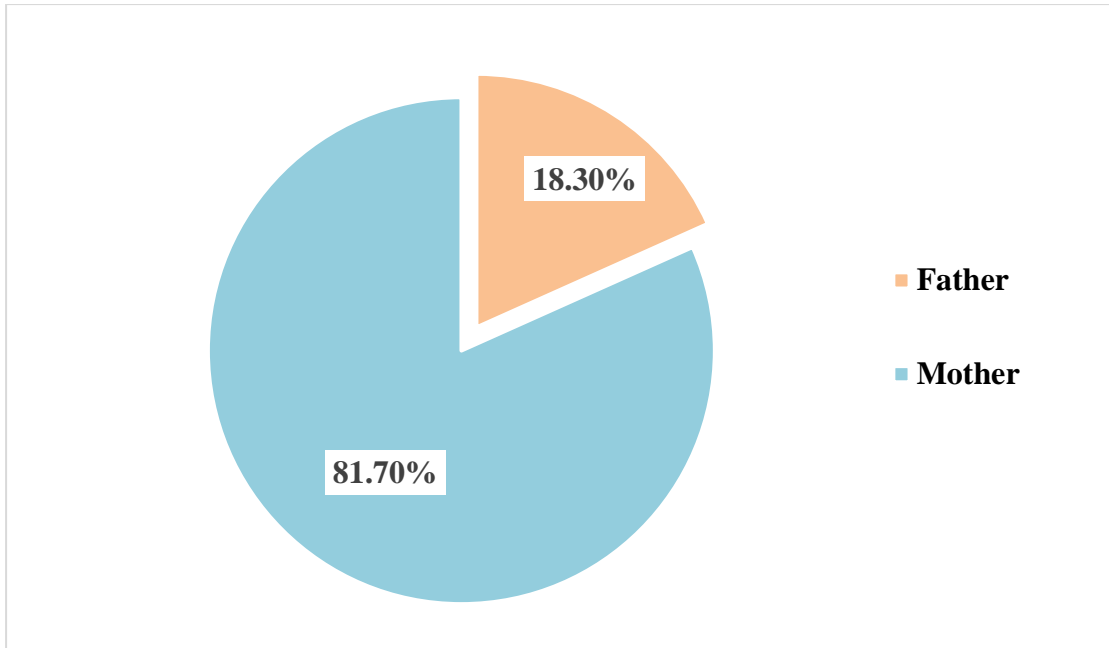


Figure - 4.1.3: Respondent parent

4.1.4 Parent's Age of CTEV Children

The age of fathers (n=30) ranged from 21 to 52 years with a mean age of 33.18 years. Most of them were between 31-40 years of age. On the other hand, the age of mothers (n=134) ranged from 18 to 48 years with a mean age of 26.40 years and most of them were between 21-30 years of age.

Table - 4.1.4: Parent's age of CTEV children

Parent's age	Mean	Standard deviation
Father's age	33.18	± 6.636
Mother's age	26.40	± 5.674

4.1.5 Marital Status of Parents

Among the parents of 164 CTEV children, 98.80% (n=162) parents were married, 0.6% (n=1) mother was divorced or separated and 0.6% (n=1) mother was a widow.

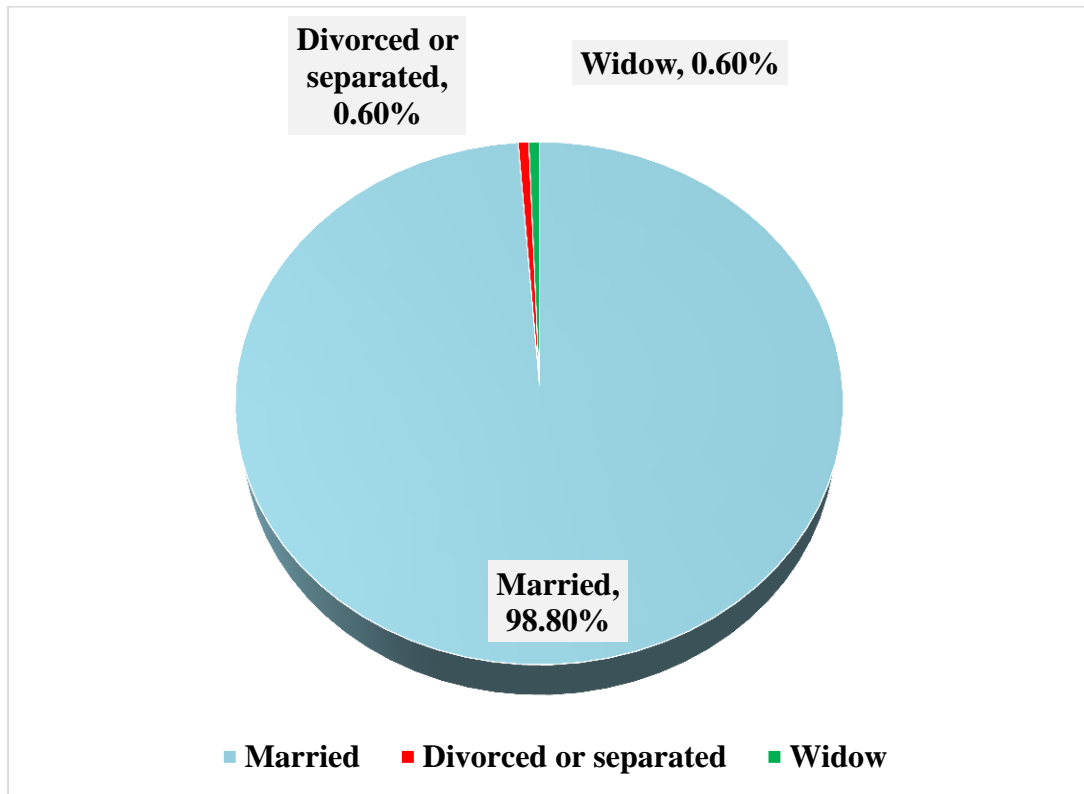


Figure - 4.1.5: Marital status of parents

4.1.6 Family Type of the Participants

The result shows that among 164 parents of CTEV children, n=152 (92.7%) were both parents, n=1 (0.6%) was mother alone, n=6 (3.7%) were mother with other adults and n=5 (3%) participants were from other family type.

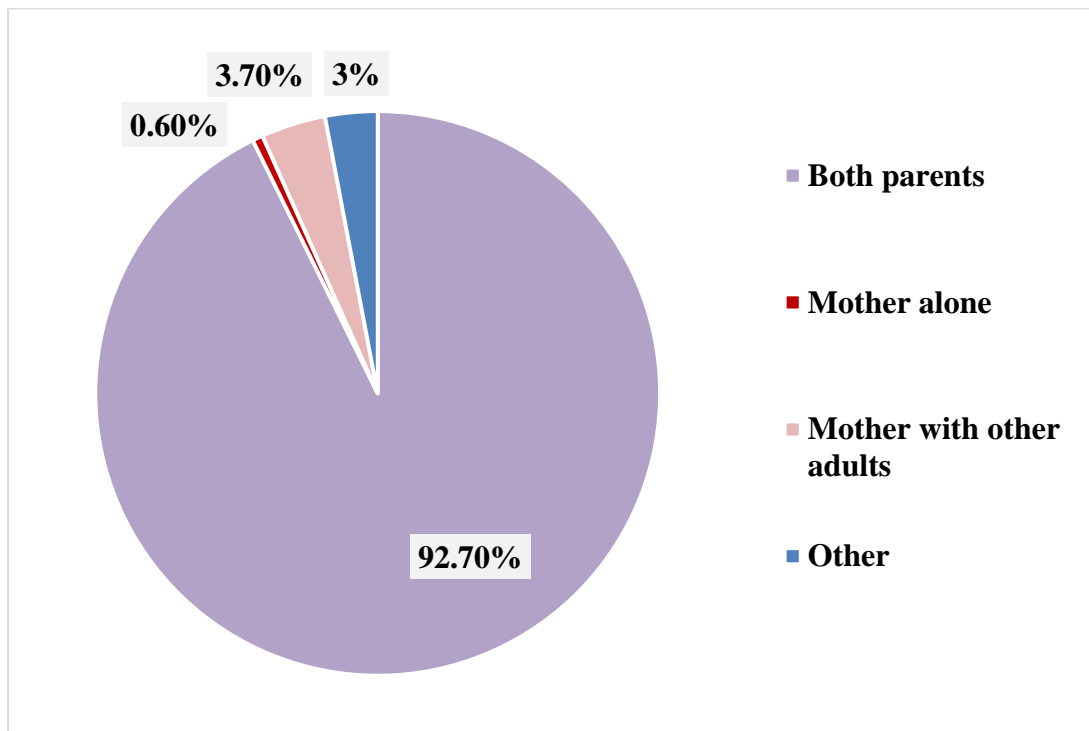


Figure - 4.1.6: Family type of the participants

4.1.7 Residential Area of the Participants

Among all of the participants (n=164), it was found that n=89 (54.3%) parents lived in rural, n=19 (11.6%) parents lived in urban and n=56 (34.1%) parents lived in semi-urban areas. The result shows that most of the parents of CTEV children lived in rural areas.

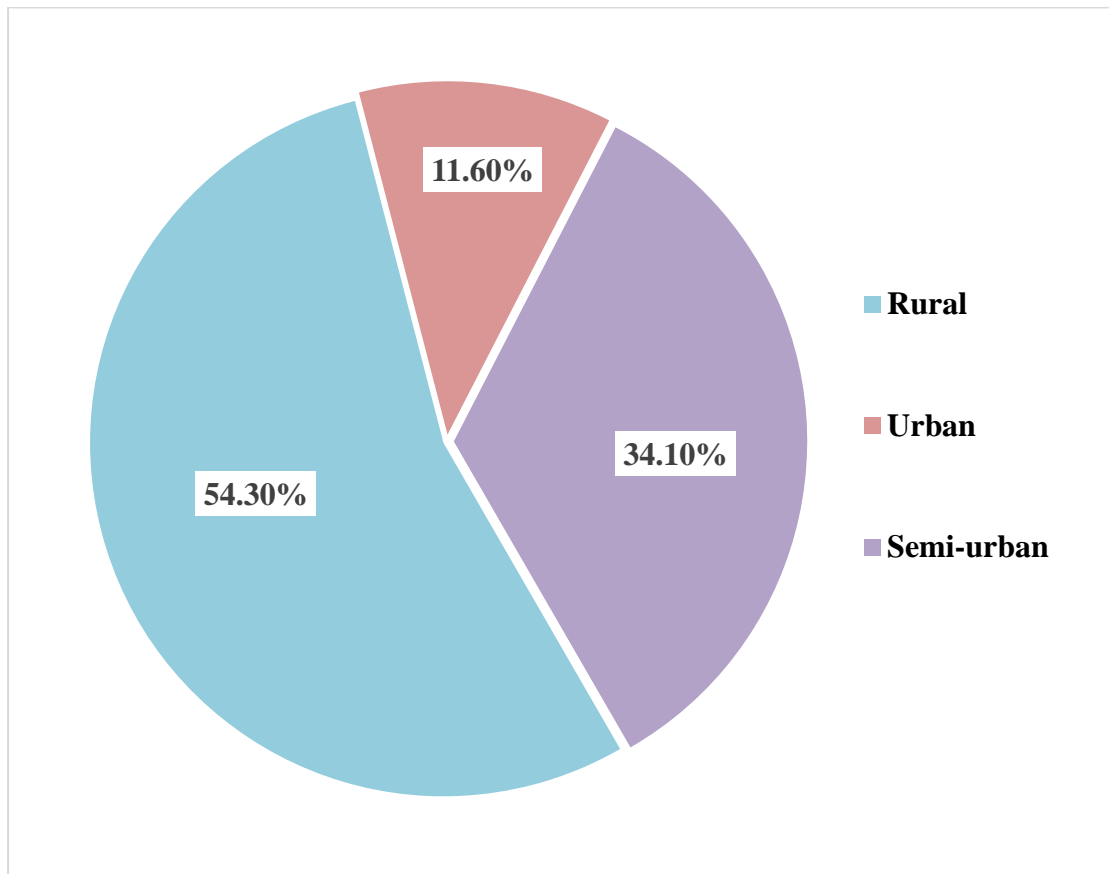


Figure - 4.1.7: Residential area of the participants

4.1.8 Educational Status of Parents

Out of the 164 parents of CTEV children, education status showed that 0.60% (n=1) parents have no formal education, 38.40% (n=63) parents completed primary education, 43.30% (n=71) parents completed secondary education, 16.50% (n=27) parents completed Bachelor degree or above and 1.20% (n=2) parents received other education such as Madrasah education.

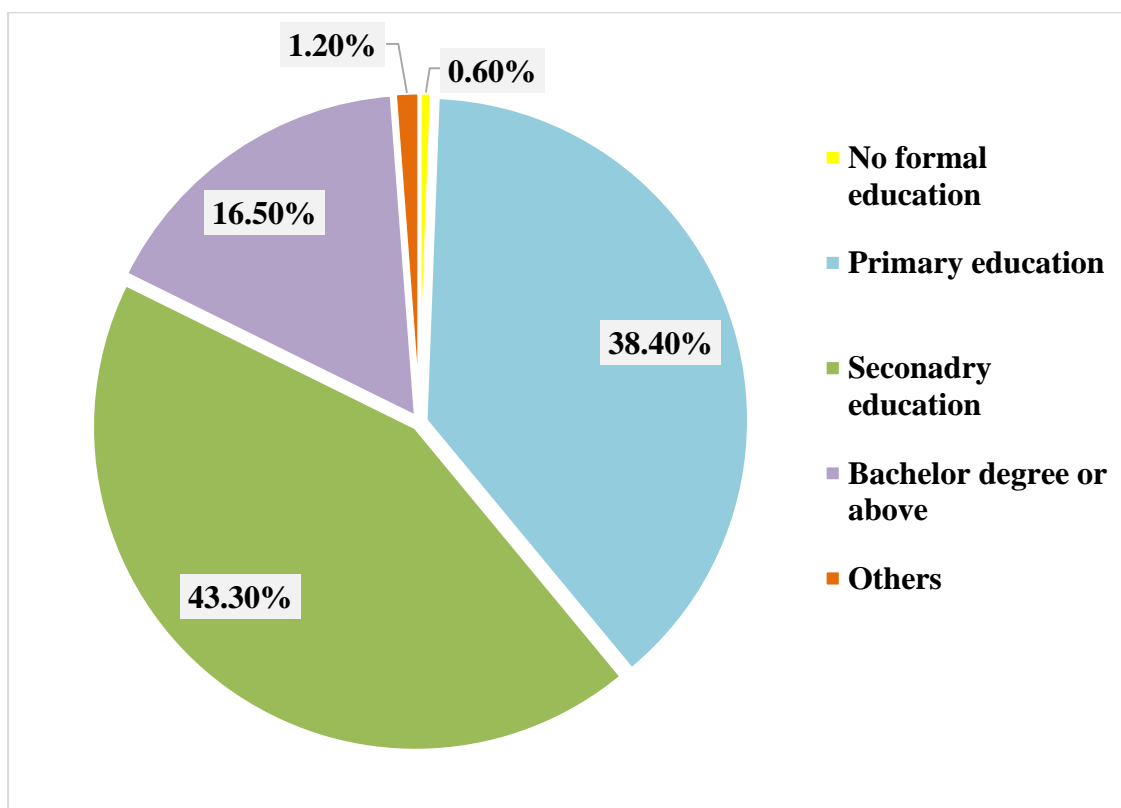


Figure - 4.1.8: Educational status of parents

4.1.9 Employment Status of Parents

Among 164 parents of CTEV children, 94.60% (n=155) were one working parents and 5.40% (n=9) were both working parents. None of the parents were unemployed.

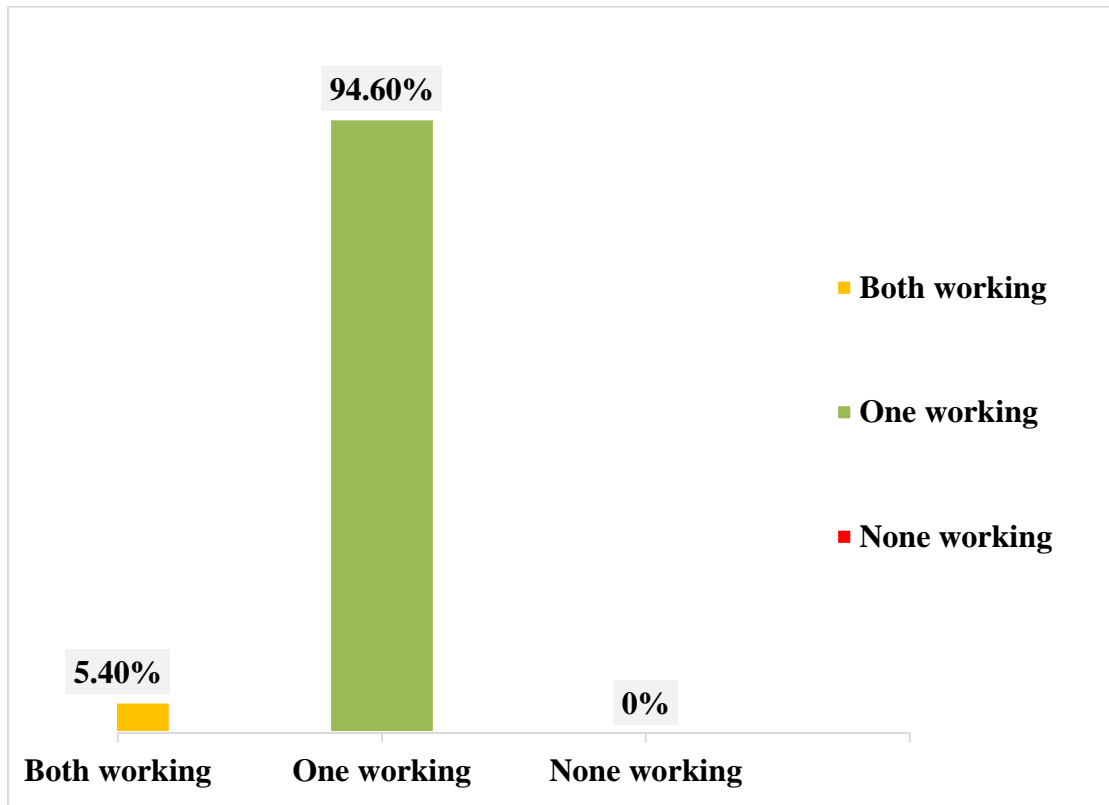


Figure - 4.1.9: Employment status of parents

4.1.10 Occupation of Parents

Out of 164 CTEV children's parents, 73.78% (n=121) parents were housewives, 6.09% (n=10) parents were businessmen, 5.49% (n=9) parents were service holders, 4.27% (n=7) parents were garments/factory workers, 3.05% (n=5) parents were teachers, 3.05% (n=5) parents were day laborers, 1.83% (n=3) parents were rickshaw pullers, 1.22% (n=2) parents were farmers and 1.22% (n=2) parents were from different type of professions especially expatriate workers.

Table - 4.1.10: Occupation of Parents

Occupation	Number (n)	Percentage (%)
Housewife	121	73.78%
Businessman	10	6.09%
Service holder	9	5.49%
Garments/Factory worker	7	4.27%
Teacher	5	3.05%
Day laborer	5	3.05%
Rickshaw puller	3	1.83%
Farmer	2	1.22%
Other	2	1.22%

4.1.11 Monthly Income of the Family

The result shows that the monthly income of the parents of CTEV children ranged from 5000-200000 taka. 55.60% (n=99) of parent's monthly income is under 20000 taka (low income), 35.95% (n=59) of parent's monthly income is between 21000-51000 taka (medium income) and 8.45% (n=12) of parent's monthly income is above 51000 taka (high income).

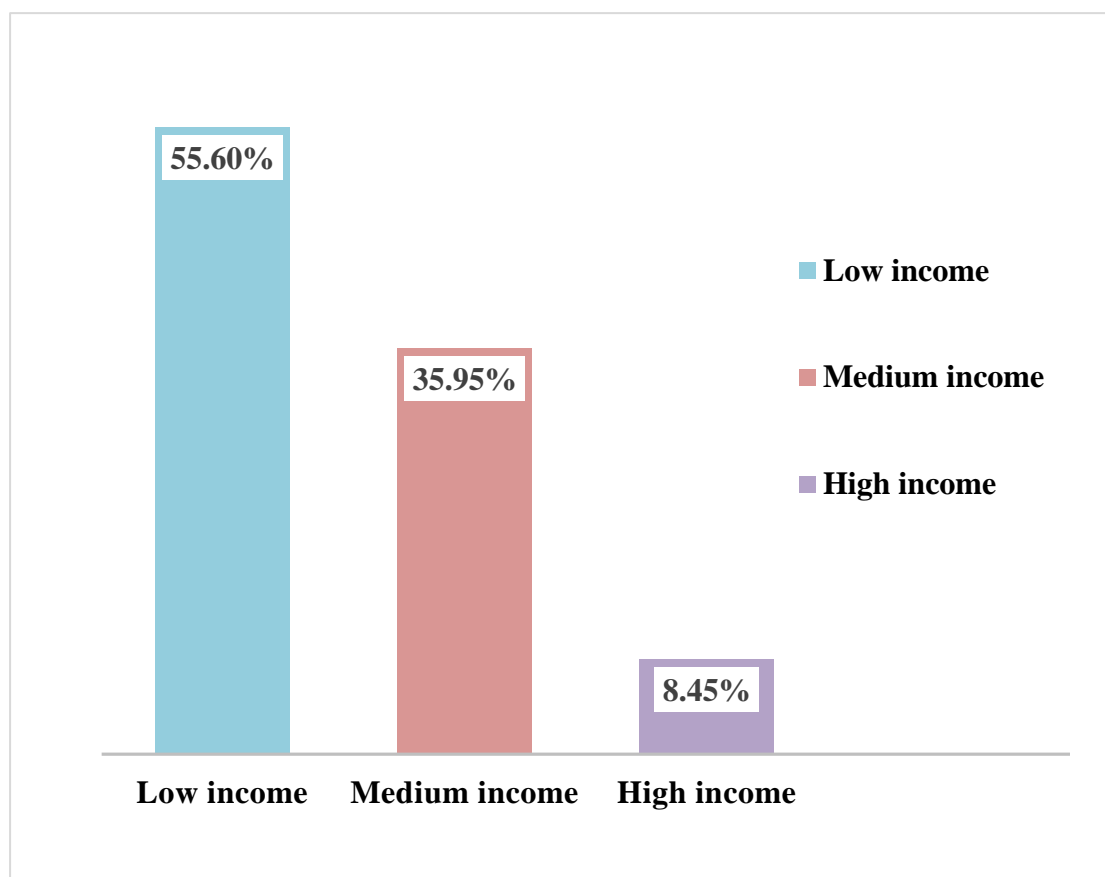


Figure - 4.1.11: Monthly income of the family

4.1.12 Social Welfare Allowance for CTEV Children

Among 164 CTEV children, 99.40% (n= 163) of children didn't have any disability allowance whereas only 0.60% (n=1) of children had disability allowance. This indicates that about all of the children were deprived of disability allowance facilities.

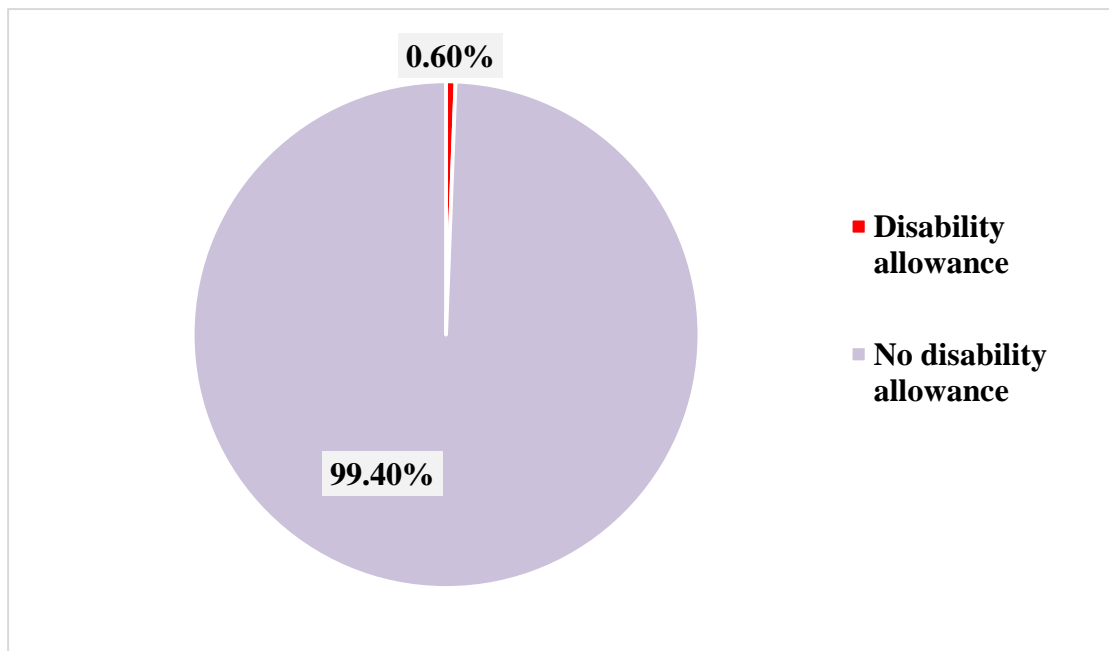


Figure - 4.1.12: Social welfare allowance for CTEV children

4.2 Medical Information of Child

4.2.1 Gestation at Birth

Gestation age ranged from 18 to 41 weeks with median gestation age of 36 weeks where 94 (57.3%) children were premature (born before gestation 37 weeks) and 70 (42.60%) children were mature at birth.

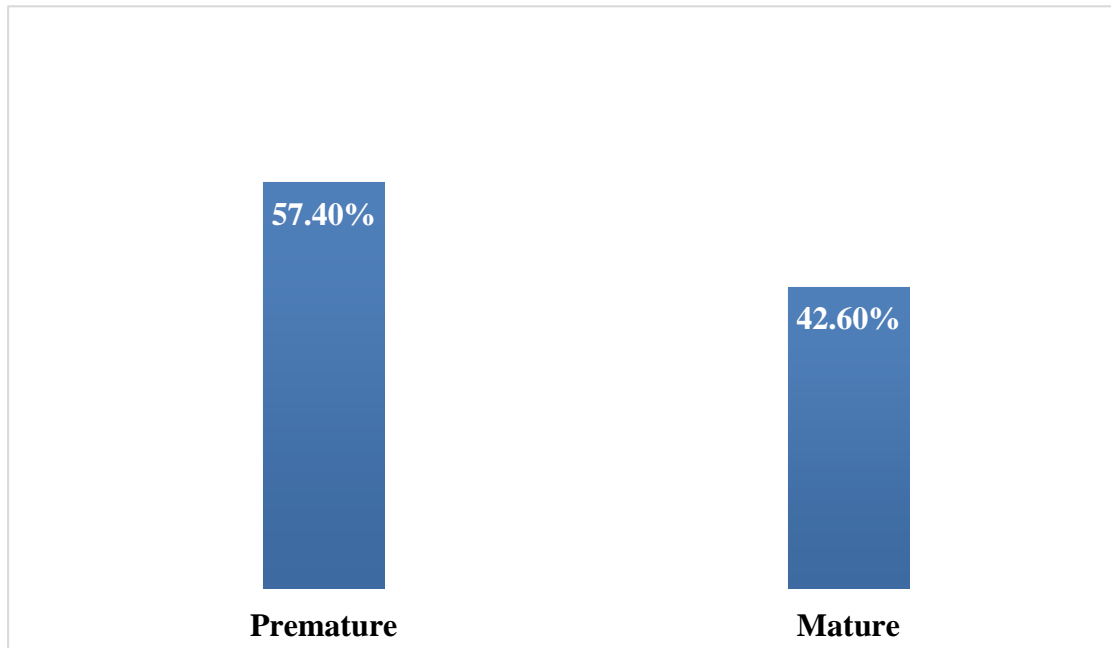


Figure - 4.2.1: Gestation at birth

4.2.2 Birth weight

At birth, the weight of newborns ranged from 1 kg to 4.5 kg with mean birth weight of 2.777 kg (SD 0.6268) where n=70 (42.80%) were born with low birth weight (less than 2.5 kg), n=91 (55.40%) were born with normal birth weight and n=3 (1.80%) were born with overweight.

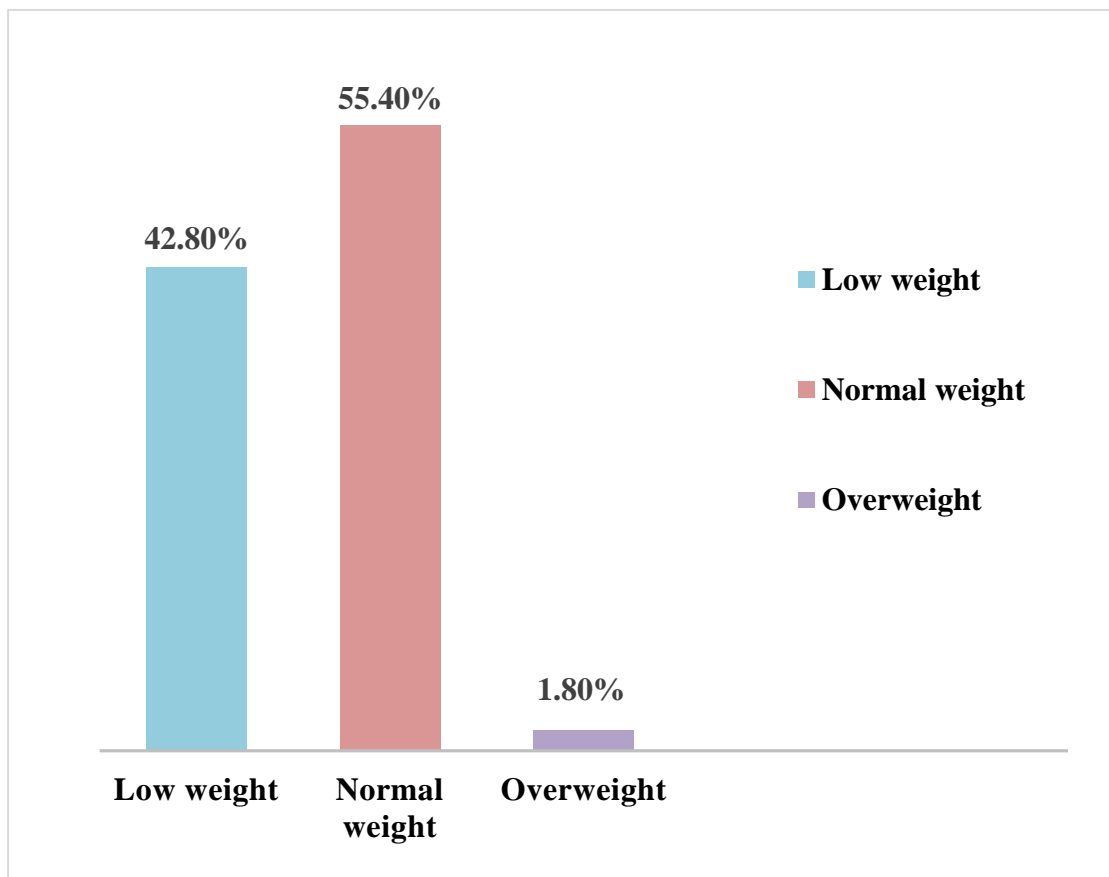


Figure - 4.2.2: Birth weight

4.2.3 Delivery Mode

Out of 164 CTEV children, 31.1% (n=51) children were born through Normal Vaginal Delivery (NVD) and 68.9% (n=113) children were born through Cesarean section (C/S). The result indicates that majority of the patient with CTEV were delivered through C/S.

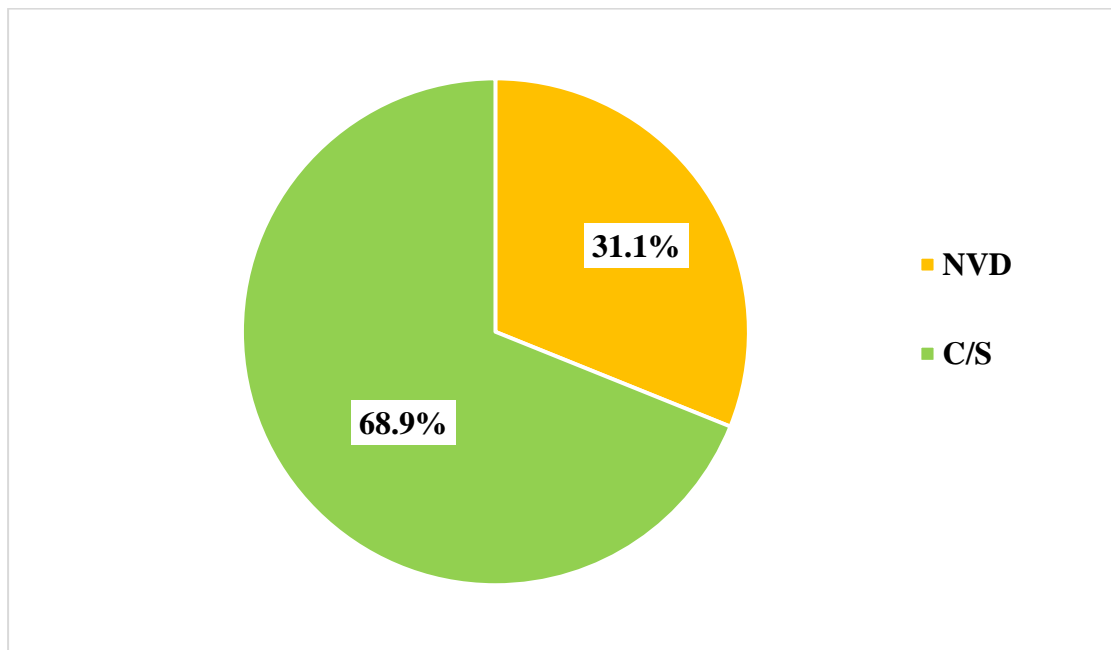


Figure - 4.2.3: Delivery mode

4.2.4 Affected limb

More than half of the children (n=92, 56%) had bilateral clubfoot while the rest of the children's only one foot was affected. The most affected foot was right foot as 26% (n=42) children's right foot was affected and less affected foot was left foot as it was affected in 18% (n=30) children.

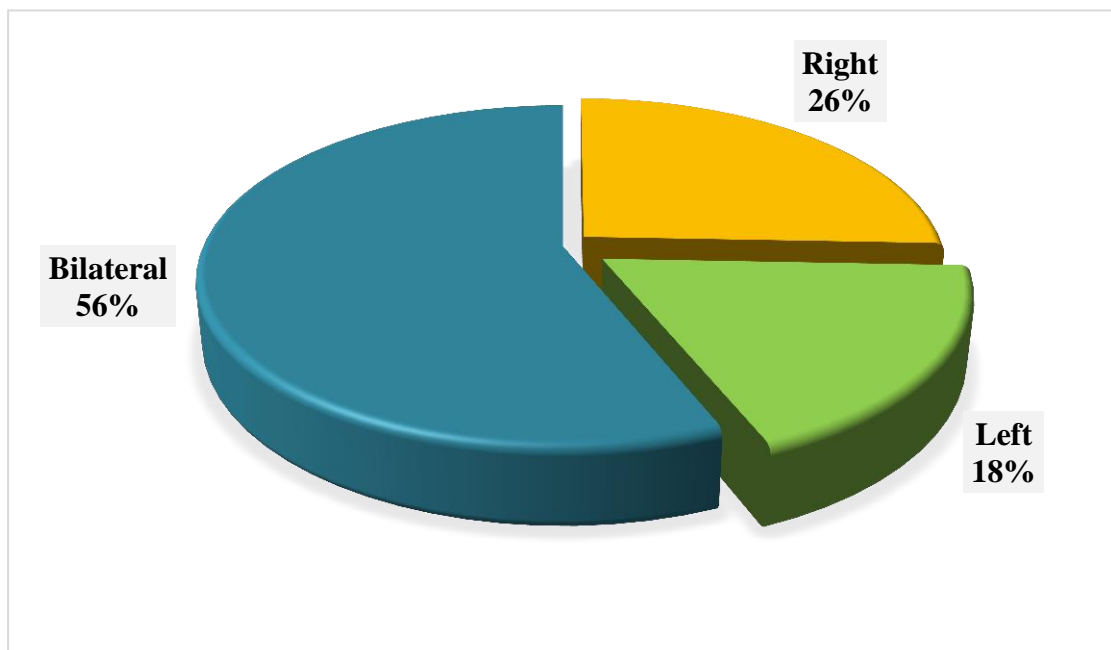


Figure - 4.2.4: Affected limb

4.2.5 Family History of CTEV

The result shows that among all the children 5.5% (n=9) had a past family history of CTEV and 94.5% (n=155) had no past family history of CTEV.

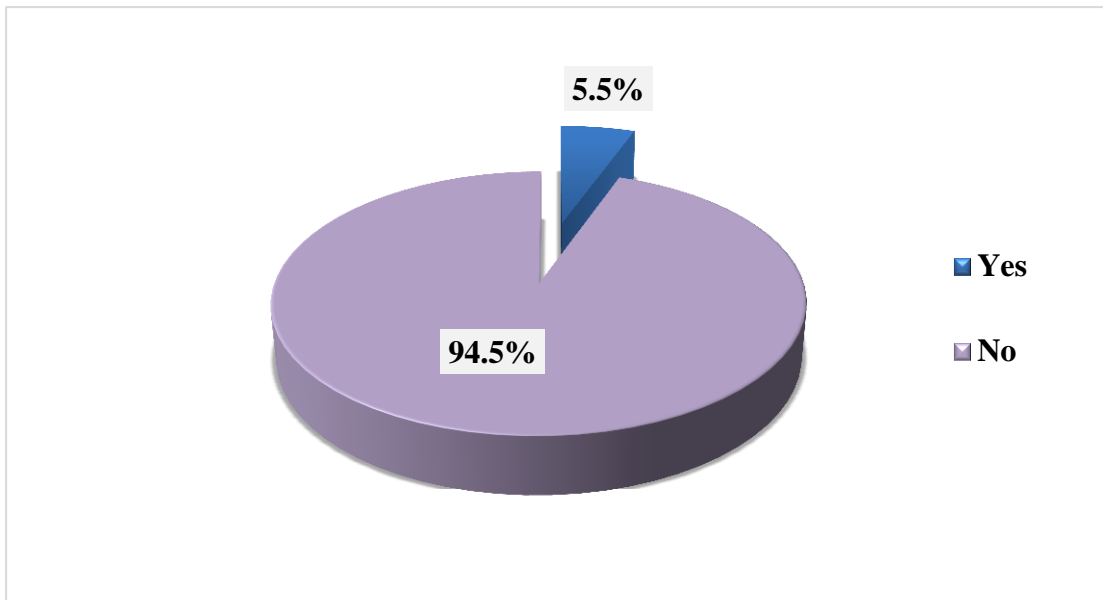


Figure - 4.2.5: Family history of CTEV

4.2.6 TA Tenotomy

Among 164 CTEV children, TA tenotomy was done for 11% (n=18) of children while for 89% (n=146) of children, it was not done.

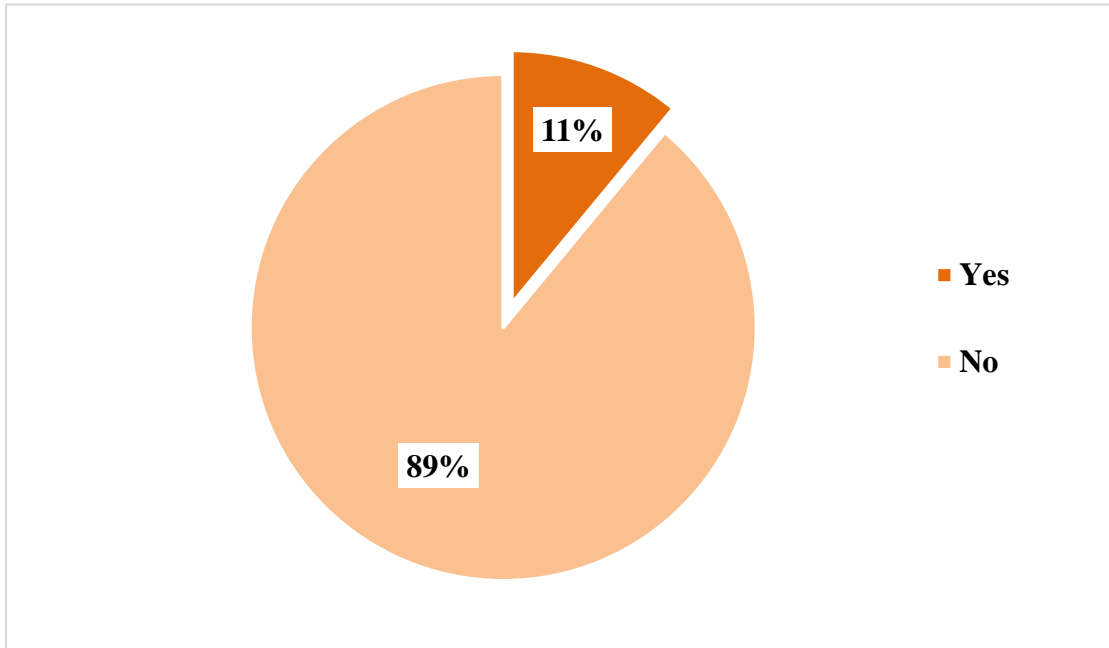


Figure - 4.2.6: TA Tenotomy

4.2.7 Recurrence of CTEV

Among 164 CTEV children, 13.4% (n=22) children had recurrence of CTEV after treatment while 86.6% (n=142) children had not recurrence history.

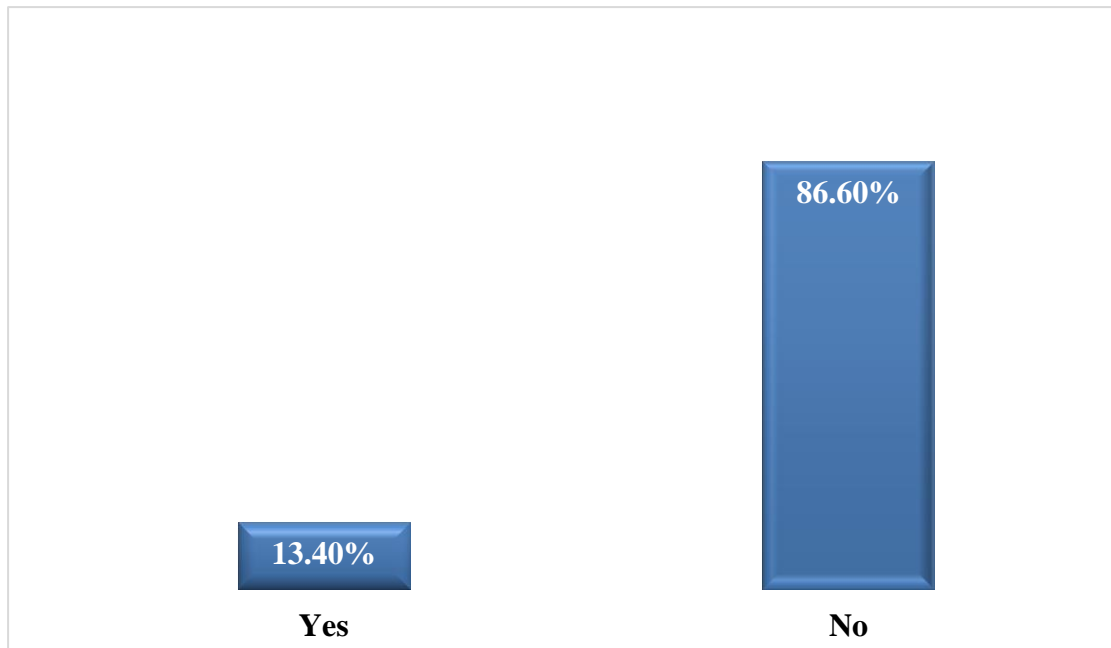


Figure - 4.2.7: Recurrence of CTEV

4.2.8 Difficulties During Treatment

The result shows that 7.9% (n=13) children have difficulties during Ponseti management such as blisters while wearing casts or braces and 92.1% (n=151) children do not have any difficulties during treatment.

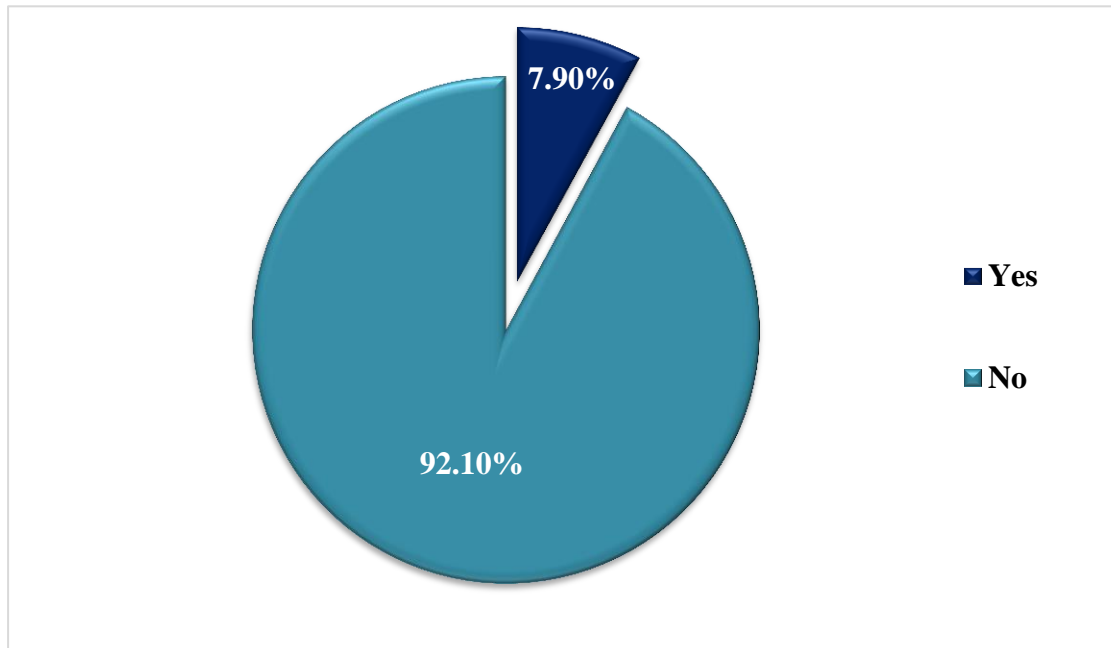


Figure - 4.2.8: Difficulties during treatment

4.2.9 Associated Comorbidities

13 (7.9%) children were also diagnosed individually with cerebral palsy (CP), spina bifida, arthrogryposis multiplex congenita (AMC), atrial septal defect, asthma etc. 151 (92.1%) children were born without any associated comorbidities.

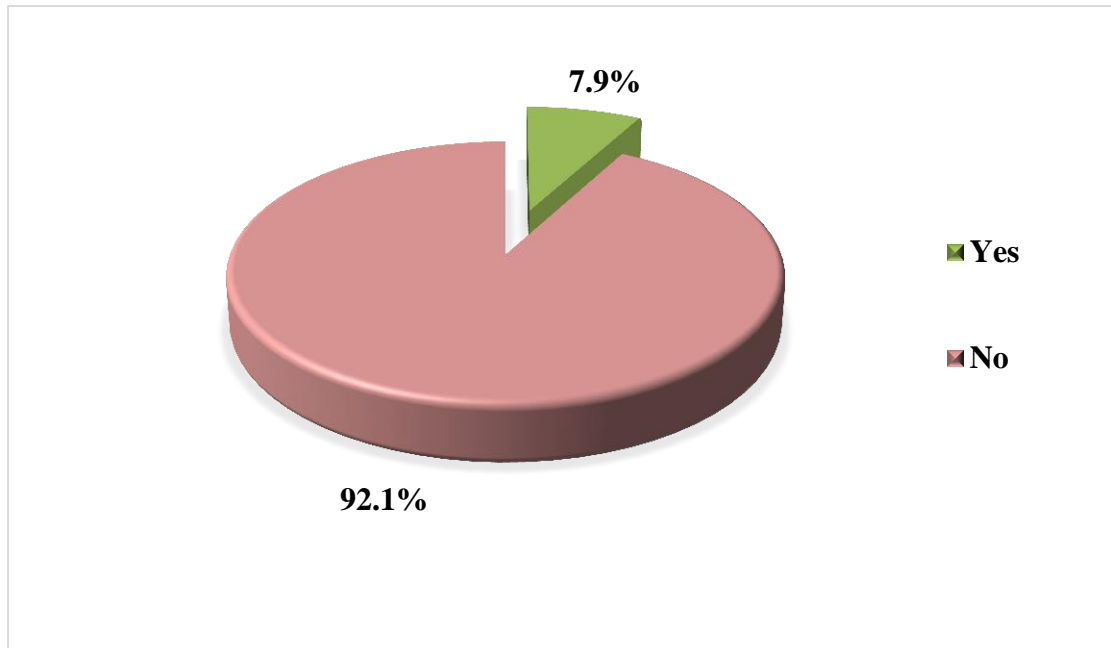


Figure - 4.2.9: Associated comorbidities

4.3 Impact-on-Family Scale (IOFS) Analysis

The Impact-on-Family Scale is a 24-item scale that yields a total score and 4 subscores that measure the impact on various components of family life: the financial situation, social interaction within and outside the home, subjective distress felt by the parent and a positive sense of mastery which may emerge from coping with the stress.

Table - 4.3.1: Impact-on-Family Scale Descriptive Statistics

Domain	Minimum	Maximum	Mean	Standard deviation
Financial	4	14	7.83	± 2.411
Familial/ Social	9	29	19.57	± 4.284
Personal strain	7	21	12.98	± 2.343
Mastery	5	15	8.91	± 1.865
Total score	25	79	49.29	± 10.903

Above table - 4.3.1 shows that the total score of the scale ranged from 25-79. The mean \pm SD of the financial domain is 7.83 \pm 2.411. The mean \pm SD of the familial/ social domain is 19.57 \pm 4.284. The mean \pm SD of the personal strain domain is 12.98 \pm 2.343. The mean \pm SD of the mastery domain is 8.91 \pm 1.865. The mean \pm SD of an overall impact on the family is 49.29 \pm 10.903.

Table - 4.3.2: Financial Domain Descriptive Statistics

Financial Burden

Category	Number (n)	Percentage (%)
Strongly agree (1-4)	20	12.2%
Agree (5-8)	95	57.9%
Disagree (9-12)	46	28%
Strongly disagree (13-16)	3	1.8%

Above table - 4.3.2 shows that 12.2% (n=20) of parents are strongly agreed and 57.9% (n=95) of parents agreed that ponseti management causes a financial burden on them. On the contrary, 28% (n=46) of parents disagreed and 1.8% (n=3) of parents strongly disagreed that ponseti management causes a financial burden on them. These results indicate that the majority of parents (57.9%) agreed that ponseti management causes a financial burden on them.

Table - 4.3.3: Familial/ Social Domain Descriptive Statistics

Familial/ Social Impact

Category	Number (n)	Percentage (%)
Strongly agree (1-9)	1	0.6%
Agree (10-18)	77	47%
Disagree (19-27)	84	51.1%
Strongly disagree (28-36)	2	1.2%

Above table - 4.3.3 shows that 0.6% (n=1) of parents are strongly agreed and 47% (n=77) of parents agreed that ponseti management causes familial or social distress to them. On the other hand, 51.1% (n=84) of parents disagreed and 1.2% (n=2) of parents strongly disagreed that ponseti management causes familial or social distress to them. These results indicate that the majority of parents (51.1%) disagreed that ponseti management causes familial or social distress to them.

Table - 4.3.4: Personal Strain Domain Descriptive Statistics

Personal Strain

Category	Number (n)	Percentage (%)
Strongly agree (1-6)	0	0%
Agree (7-12)	65	39.6%
Disagree (13-18)	96	58.5%
Strongly disagree (19-24)	3	1.8%

Above table - 4.3.4 shows that none of the parents are strongly agreed and 39.6% (n=65) of parents agreed that ponseti management causes personal strain to them. Furthermore, 58.5% (n=96) of parents disagreed and 1.8% (n=3) of parents strongly disagreed that ponseti management causes personal strain to them. These results indicate that the majority of parents (58.5%) disagreed that ponseti management causes personal strain to them.

Table - 4.3.5: Mastery Domain Descriptive Statistics

Mastery

Category	Number (n)	Percentage (%)
Strongly agree (1-5)	3	1.8%
Agree (6-10)	144	87.8%
Disagree (11-15)	17	10.3%
Strongly disagree (16-20)	0	0%

Above table - 4.3.5 shows that 1.8% (n=3) of parents are strongly agreed and 87.8% (n=144) of parents agreed that ponseti management causes a positive sense of mastery for them. Moreover, 10.3% (n=17) of parents disagreed and none of the parents strongly disagreed that ponseti management causes a positive sense of mastery for them. These results indicate that the majority of parents (87.8%) agreed that ponseti management causes a positive sense of mastery for them.

4.4 Brief-COPE Scale Analysis

Table - 4.4.1: Brief-COPE Scale Descriptive Statistics

Coping Domain	Casting Phase (n=40)		Bracing Phase (n=124)	
	Mean	Std. deviation	Mean	Std. deviation
Problem-focused coping	26.43	±4.254	23.96	±5.254
Emotion-focused coping	30.35	±4.185	28.36	±4.191
Avoidant coping	14.07	±3.819	12.85	±3.942

Brief-COPE scale has three domains that is problem-focused coping (active coping, planning, positive reframing, use of informational support), emotion-focused coping (emotional support, venting, humour, acceptance, self-blame, religion) and avoidant coping (self-distraction, substance use, denial, behavioural disengagement). Above table - 4.4.1 shows that the mean±SD of problem focused domain is 26.43±4.254, emotion focused domain is 30.35±4.185 and avoidant coping is 14.07±3.819 for casting phase. On the other hand, for bracing phase the mean±SD of problem focused domain is 23.96±5.254, emotion focused domain is 28.36±4.191 and avoidant coping is 14.07±3.942 for casting phase.

Table - 4.4.2: Subscales of coping strategies

Subscales	Mean	Standard deviation
Religion	7.21	± 1.603
Acceptance	6.57	± 1.457
Positive reframing	6.32	± 1.562
Active coping	5.81	± 1.664
Planning	6.04	± 1.437
Emotional support	6.45	± 1.794
Use of informational support	6.38	± 1.611
Denial	4.25	± 1.955
Self-distraction	4.41	± 1.925
Venting	3.87	± 1.010
Self-blame	2.73	± 1.265
Behavioral disengagement	2.37	± 0.914
Humor	2.02	± 0.234
Substance use	2.12	± 0.653

Above table - 4.4.2 shows that the mean \pm SD of religion is 7.21 \pm 1.603. The mean \pm SD of acceptance is 6.57 \pm 1.457. The mean \pm SD of positive reframing is 6.32 \pm 1.562. The mean \pm SD of active coping is 5.81 \pm 1.664. The mean \pm SD of planning is 6.04 \pm 1.437. The mean \pm SD of emotional support is 6.45 \pm 1.794. The mean \pm SD of use of informational support is 6.38 \pm 1.611. The mean \pm SD of denial is 4.25 \pm 1.955. The mean \pm SD of self-distraction is 4.41 \pm 1.925. The mean \pm SD of venting is 3.87 \pm 1.010. The mean \pm SD of self-blame is 2.73 \pm 0.914. The mean \pm SD of behavioral disengagement is 2.37 \pm 0.914. The mean \pm SD of humor is 2.02 \pm 0.234. The mean \pm SD of substance use is 2.12 \pm 0.653.

4.5.1 Association in between socio-demographic profile, Impact-on-Family scale (IOFS) domain and Brief-COPE scale domain:

Association	Chi-Square (χ^2) value	P value
Child age vs financial domain	0.321	0.571
Child age vs familial/social domain	0.020	0.889
Child age vs personal strain domain	3.945	0.047*
Child age vs mastery domain	1.795	0.180
Child age vs problem-focused coping	0.430	0.512
Child age vs emotion-focused coping	1.683	0.195
Child age vs avoidant coping	4.206	0.040*
Educational status of parents vs financial domain	2.928	0.087
Educational status of parents vs familial/social domain	0.004	0.952
Educational status of parents vs personal strain domain	0.410	0.522
Educational status of parents vs mastery domain	2.192	0.139
Educational status of parents vs problem-focused coping	5.306	0.021*
Educational status of parents vs emotion-focused coping	3.878	0.049*

Educational status of parents vs avoidant coping	4.262	0.039*
Occupation of parents vs financial domain	14.592	0.000***
Occupation of parents vs familial/social domain	3.876	0.049*
Occupation of parents vs personal strain domain	3.484	0.062
Occupation of parents vs mastery domain	0.192	0.661
Occupation of parents vs problem-focused coping	1.841	0.175
Occupation of parents vs emotion-focused coping	0.067	0.795
Occupation of parents vs avoidant coping	0.030	0.862
Monthly income of the family vs financial domain	37.733	0.000***
Monthly income of the family vs familial/social domain	13.249	0.000***
Monthly income of the family vs personal strain domain	12.989	0.000***
Monthly income of the family vs mastery domain	1.735	0.188
Monthly income of the family vs problem-focused coping	0.387	0.534

Monthly income of the family vs emotion-focused coping	0.103	0.748
Monthly income of the family vs avoidant coping	1.294	0.255

Above table - 4.5.1 shows that the association was found between the age of the child and personal strain where p value is 0.047 ($P < 0.05$) and χ^2 value is 3.945 which was statistically significant. Association was also found between the age of the child avoidant coping strategies where p value is 0.040 ($P < 0.05$) and χ^2 value is 4.206 which was statistically significant. In addition, an association was found between educational qualification of the parents and problem-focused coping strategies where p value is 0.021 ($P < 0.05$) and χ^2 value is 5.306 which was statistically significant. Association was also found between educational qualification of the parents and emotion-focused coping strategies where p value is 0.049 ($P < 0.05$) and χ^2 value is 3.878 which was statistically significant. Association was also found between educational qualification of the parents and avoidant coping strategies where p value is 0.039 ($P < 0.05$) and χ^2 value is 4.262 which was statistically significant. Association was also found between occupation of the parents and financial impact where p value is 0.000 ($P < 0.001$) and χ^2 value is 14.592 which was extremely significant. Occupation of parents are also associated with familial/social impact where p value is 0.049 ($P < 0.05$) and χ^2 value is 3.876 which was statistically significant. Association was also found between monthly income of the family and financial impact where p value is 0.000 ($P < 0.001$) and χ^2 value is 37.733 which was extremely significant. Association was also found between monthly income of the family and familial/social impact where p value is 0.000 ($P < 0.001$) and χ^2 value is 13.249 which was extremely significant. Association was also found between monthly income of the family and personal strain where p value is 0.000 ($P < 0.001$) and χ^2 value is 12.989 which was extremely significant.

4.5.2 Association in between Impact-on-Family scale (IOFS) domain and Brief-COPE scale domain:

Association	Chi-Square (x²) value	P value
Financial domain vs problem-focused coping	0.497	0.481
Financial domain vs emotion-focused coping	0.549	0.459
Financial domain vs avoidant coping	7.186	0.007**
Familial/social domain vs problem-focused coping	0.001	0.975
Familial/social domain vs emotion-focused coping	0.293	0.588
Familial/social domain vs avoidant coping	7.467	0.006**
Personal strain domain vs problem-focused coping	0.448	0.503
Personal strain domain vs emotion-focused coping	1.725	0.189
Personal strain domain vs avoidant coping	2.959	0.085
Mastery domain vs problem-focused coping	70.678	0.000***
Mastery domain vs emotion-focused coping	77.589	0.000***
Mastery domain vs avoidant coping	51.407	0.000***

Above table - 4.5.2 shows that the association was found between financial impact and avoidant coping strategies where p value is 0.007 ($P < 0.01$) and χ^2 value is 7.186 which was highly significant. Association was also found between familial/social impact with avoidant coping strategies where p value is 0.006 ($P < 0.01$) and χ^2 value is 4.467 which was highly significant. Moreover, an association was found between parent's mastery and problem-focused coping strategies where p value is 0.000 ($P < 0.001$) and χ^2 value is 70.678 which was extremely significant. Association was also found between parent's mastery and emotion-focused coping strategies where p value is 0.000 ($P < 0.001$) and χ^2 value is 77.589 which was extremely significant. An association was found between parent's mastery and avoidant coping strategies where p value is 0.000 ($P < 0.001$) and χ^2 value is 51.407 which was extremely significant. No statistically significant association was found between side of involvement with socioeconomic impact as well as coping strategies of parents.

The outcomes of this study demonstrated the socioeconomic impact on the parents of Congenital Talipes Equinovarus (CTEV) children along with their coping strategies. 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 164 parents who brought their children to the facility for Ponseti management and participated in the study. Among 164 participants, 18.3% (n=30) participants were fathers and 81.7% (n=134) participants were mother. The majority of the respondent parents were mother. The age of fathers ranged from 21 to 52 years with a mean age of 33.18 years. Most of them were between 31-40 years of age. On the other hand, the age of mothers ranged from 18 to 48 years with a mean age of 26.40 years and most of them were between 21-30 years of age.

About most of the parents (98.80%) were married, 0.6% parent (mother) was divorced or separated and 0.6% parent (mother) was a widow. 92.7% were both parents, 0.6% were mother alone, 3.7% were mother with other adults and 3% participants were from other family type. The result shows that most of the parents of CTEV children lived in rural areas. It was found that n=89 (54.3%) parents lived in rural, n=19 (11.6%) parents lived in urban and n=56 (34.1%) parents lived in semi-urban areas.

Out of the 164 parents of CTEV children, education status showed that 0.60% (n=1) parents have no formal education, 38.40% (n=63) parents completed primary education, 43.30% (n=71) parents completed secondary education, 16.50% (n=27) parents completed Bachelor degree or above and 1.20% (n=2) parents received other education such as Madrasah education. These results indicate that most of the parents have completed secondary education. 94.60% (n=155) of parents were one-working and 5.40% (n=9) of parents were both-working. None of the parents were unemployed. Most reported father's occupation was businessman (24.40%) followed by service holder (18.90%) and garments or factory worker (10.40%). On the other hand, most reported mother's occupation was housewife (94.60%).

In addition, the monthly income of the parents of CTEV children ranged from 5000-200000 taka. 55.60% (n=99) of parent's monthly income is under 20000 taka (low income), 35.95% (n=59) of parent's monthly income is between 21000-51000 taka (medium income) and 8.45% (n=12) of parent's monthly income is above 51000 taka (high income).

The age of the child ranged from 18 days to 58 months old with a mean age of 15.23 months and males were more (70.1%) compared to females (29.9%). The male-to-female ratio was 2.3:1. In addition, a majority of these had no past family history of CTEV (94.5%). Gestation age ranged from 18 to 41 weeks with median gestation age of 36 weeks where n=94 (57.3%) children were premature (born before gestation 37 weeks) and n=70 (42.60%) children were mature at birth. At birth, the weight of newborns ranged from 1 kg to 4.5 kg with mean birth weight of 2.777 kg (SD 0.6268) where n=70 (42.80%) were born with low birth weight (less than 2.5 kg), n=91 (55.40%) were born with normal birth weight and n=3 (1.80%) were born with overweight. The majority of the patients with CTEV were delivered through C/S (68.9%). More than half of the children (n=92, 56%) had bilateral clubfoot while rest of the children's only one foot was affected. Most affected foot was right foot as 26% (n=42) children's right foot was affected and less affected foot was left foot as it was affected in 18% (n=30) children. 13 (7.9%) children were also diagnosed individually with cerebral palsy (CP), spina bifida, arthrogryposis multiplex congenita (AMC), atrial septal defect, asthma etc.

Ponseti treatment was initiated for all infants with a mean of 3.99 casts and 11% required percutaneous heel cord tenotomy. Among 164 CTEV children, 13.4% (n=22) children had a recurrence of CTEV after treatment while 86.6% (n=142) children had not recurrence history. The result shows that 7.9% (n=13) children have difficulties during Ponseti management such as blisters while wearing casts or braces and 92.1% (n=151) children do not have any difficulties during treatment.

The females dominating the clinic can be compared to a similar study that was done at Centre for the Rehabilitation of the Paralysed (CRP) on barriers experienced by caregivers to access treatment of clubfoot patients of having consisted of 66.7% of mothers and 16.7% of fathers (Amitav 2017). The dominance of females can be attributed to the fact that the women have a gender role of caring for their children and

keeping appointments. This can be attributed also to women in society being increasingly educated which has led to change in gender roles (Amitav 2017).

The parents experienced financial burdens while taking care of the children born with CTEV. Their finances get directed to clinic visits because they need transport to reach the hospital. The time that they would use initially to cater for family needs and work for money, once they have to cater for the needs of the child with clubfoot then they cannot be as productive as before. They left their work so as to care for the CTEV child. 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).

The result of this study shows that 12.2% (n=20) of parents are strongly agreed and 57.9% (n=95) of parents agreed that ponseti management causes a financial burden on them. On the contrary, 28% (n=46) of parents disagreed and 1.8% (n=3) of parents strongly disagreed that ponseti management causes a financial burden on them. These results indicate that the majority of parents (57.9%) agreed that ponseti management causes a financial burden on them. Moreover, 0.6% (n=1) of parents are strongly agreed and 47% (n=77) of parents agreed that ponseti management causes familial or social distress to them. On the other hand, 51.1% (n=84) of parents disagreed and 1.2% (n=2) of parents strongly disagreed that ponseti management causes familial or social distress to them. These results indicate that the majority of parents (51.1%) disagreed that ponseti management causes familial or social distress to them.

In this study, none of the parents are strongly agreed and 39.6% (n=65) of parents agreed that ponseti management causes personal strain to them. Furthermore, 58.5% (n=96) of parents disagreed and 1.8% (n=3) of parents strongly disagreed that ponseti management causes personal strain to them. These results indicate that the majority of parents (58.5%) disagreed that ponseti management causes personal strain to them.

Furthermore, 1.8% (n=3) of parents are strongly agreed and 87.8% (n=144) of parents agreed that ponseti management causes a positive sense of mastery for them. Moreover, 10.3% (n=17) of parents disagreed and none of the parents strongly disagreed that ponseti management causes a positive sense of mastery for them. These

results indicate that the majority of parents (87.8%) agreed that ponseti management causes a positive sense of mastery for them.

According to Doris et al. (2021), the financial burden was the most cited impact of childhood illness on the family with a mean score of 77.5% followed by mastery/coping with 75.3%. On the contrary impact on siblings was the least cited at 49.5% followed by personal strains (Doris et al. 2021).

The total score of the Impact-on-family scale ranged from 25-79. The mean \pm SD of the financial domain is 7.83 \pm 2.411. The mean \pm SD of the familial/ social domain is 19.57 \pm 4.284. The mean \pm SD of the personal strain domain is 12.98 \pm 2.343. The mean \pm SD of the mastery domain is 8.91 \pm 1.865. The mean \pm SD of an overall impact on the family is 49.29 \pm 10.903. These results indicate that the majority of parents (57.9%) agreed that ponseti management causes a financial burden on them and 51.1% of parents disagreed that ponseti management causes familial or social distress to them. Also, 58.5% of parents disagreed that ponseti management causes personal strain to them. Moreover, the majority of parents 87.8% agreed that ponseti management causes a positive sense of mastery for them.

The result of the Brief-COPE scale shows that the mean \pm SD of religion is 7.21 \pm 1.603. The mean \pm SD of acceptance is 6.57 \pm 1.457. The mean \pm SD of positive reframing is 6.32 \pm 1.562. The mean \pm SD of active coping is 5.81 \pm 1.664. The mean \pm SD of planning is 6.04 \pm 1.437. The mean \pm SD of emotional support is 6.45 \pm 1.794. The mean \pm SD of use of informational support is 6.38 \pm 1.611. The mean \pm SD of denial is 4.25 \pm 1.955. The mean \pm SD of self-distraction is 4.41 \pm 1.925. The mean \pm SD of venting is 3.87 \pm 1.010. The mean \pm SD of self-blame is 2.73 \pm 0.914. The mean \pm SD of behavioral disengagement is 2.37 \pm 0.914. The mean \pm SD of humor is 2.02 \pm 0.234. The mean \pm SD of substance use is 2.12 \pm 0.653.

The most used coping strategy is that of religion followed by acceptance, emotional support, informational support and positive reframing which are categorized as being in the approach coping. While the least used coping strategy is humor followed by substance use, behavioral disengagement and self-blame. This indicates that approach coping is the most used coping strategy than avoidant coping of the parents of CTEV children.

This was similar in a study that was done in South Africa and UK where it showed that the South African parents perceived a higher support socially. They employed more coping strategies which can be attributed to the cultural and social practices in the South African region. The research showed that the South African felt more comfortable seeking help from the facilities when they felt encouraged by their friends and family. This can be compared to the current research where more people felt that they got support from their families and friends (Malagelada et al. 2016).

From table – 4.5.1 it is observed that there is a statistically significant relationship between a child's age and personal strain, with a p-value of 0.047 ($P < 0.05$) and a Chi-square (χ^2) value of 3.945. Similarly, an association exists between a child's age and the use of avoidant coping strategies, with a p-value of 0.040 ($P < 0.05$) and χ^2 value of 4.206, which is statistically significant. Furthermore, there is a significant link between the educational qualifications of parents and the adoption of problem-focused coping strategies, as indicated by a p-value of 0.021 ($P < 0.05$) and χ^2 value of 5.306. Additionally, the educational qualifications of parents are associated with emotion-focused coping strategies, with a p-value of 0.049 ($P < 0.05$) and χ^2 value of 3.878, showing statistical significance. A similar pattern is observed with avoidant coping strategies, where the educational qualifications of parents are linked, with a p-value of 0.039 ($P < 0.05$) and χ^2 value of 4.262, signifying statistical significance. Occupation of the parents exhibits an extremely significant association with financial impact, as the p-value is 0.000 ($P < 0.001$) and χ^2 value is 14.592. Additionally, parent's occupation is associated with familial and social impact, with a p-value of 0.049 ($P < 0.05$) and χ^2 value of 3.876, indicating statistical significance. Monthly family income displays an extremely significant association ($P < 0.001$) with financial impact (p-value = 0.000, $\chi^2 = 37.733$), familial and social impact (p-value = 0.000, $\chi^2 = 13.249$) and personal strain (p-value = 0.000, $\chi^2 = 12.989$).

From table – 4.5.2 there is a notable link between financial impact and the utilization of avoidant coping strategies, with a highly significant p-value of 0.007 ($P < 0.01$) and χ^2 value of 7.186. Similarly, there is a significant association between familial and social impact and the use of avoidant coping strategies, as indicated by a p-value of

0.006 ($P < 0.01$) and χ^2 value of 4.467, signifying high significance. Furthermore, a remarkable association was found between the level of parent's mastery and their adoption of problem-focused coping strategies, with an extremely significant p-value of 0.000 ($P < 0.001$) and χ^2 value of 70.678. Additionally, parent's mastery is associated with emotion-focused coping strategies, with an extremely significant p-value of 0.000 ($P < 0.001$) and χ^2 value of 77.589, indicating a very strong statistical significance. Moreover, there is a significant relationship between parent's mastery and the use of avoidant coping strategies, with an extremely significant p-value of 0.000 ($P < 0.001$) and χ^2 value of 51.407, suggesting a highly significant association.

In this study, the results show that most of the parents were experiencing financial burdens during Ponseti management though it is a low-cost treatment for CTEV. As most of the parents of CTEV children come from rural areas, travel expenses put a negative impact on them. The education level of CTEV children's parents and social and cultural aspects regarding CTEV children can influence the coping strategies of the parents of CTEV children. Family support that is provided by the closest person in the family affects the perception of the parent and their behavior while making decisions on children undergoing Ponseti management. It is likely that when the parents get support from the people close to them, they get relieved from burden of domestic responsibility and they would also receive financial assistance from them helping them afford necessary costs and comply with the treatment regimen. Thus, they can overcome the familial/ social strains and personal strains on them although they still faced financial challenges.

5.1 Limitations

Every research study inevitably has limitations due to the inherent challenge of achieving 100% accuracy. In the case of this particular study, several limitations and barriers should be taken into account when interpreting its results. The study collected samples exclusively from CRP at Savar, resulting in a small sample size which hinders generalizing the findings to all parents of children with CTEV in Bangladesh. The use of Centre based sampling technique may not accurately represent the broader population being studied. Few studies have explored the socioeconomic impact of Ponseti management leading to a lack of substantial evidence to support the study's results within the context of Bangladesh. The research had a restricted timeframe which potentially leading to limitations in research techniques and practical aspects. The research project was done by an undergraduate student and it was first research project for her. So, the researcher had limited experience with techniques and strategies in terms of the practical aspects of research. As it was the first survey of the researcher so might be there were some mistakes that overlooked by the supervisor and the honorable teacher.

6.1 Conclusion

This discussion focused on the major findings of the research in relation to the study's objectives. The results indicated that parents encountered financial challenges during the management of Congenital Talipes Equinovarus (CTEV). While the CTEV condition had a slight impact on their family and social activities in society, the study provided insights into factors that could act as barriers for parents to comply with Ponseti management at the Centre for the Rehabilitation of the Paralyzed (CRP). 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. Travel expenses, particularly for parents coming from rural areas, posed a significant financial strain. The education level of CTEV children's parents, as well as social and cultural factors related to CTEV, influenced the coping strategies employed by parents of CTEV children. Family support, provided by close relatives, played a crucial role in shaping the perceptions and decision-making behavior of parents with children undergoing Ponseti management. When parents received support from their immediate family members, it alleviated domestic responsibilities and often included financial assistance, enabling them to meet the necessary costs and adhere to the treatment regimen. 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.

6.2 Recommendations

The objective of this study was to assess the socioeconomic impact on parents of children with Congenital Talipes Equinovarus (CTEV) and examine their coping strategies during Ponseti management at CRP. 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 study. In addition, expanding the sample size beyond the 164 participants included in this study is recommended to obtain more precise outcomes applicable to a broader population. Given that this study exclusively drew participants from a single hospital in Savar, the researchers strongly advocate for future investigations to encompass parents of CTEV children from various regions across Bangladesh, ensuring a broader scope for generalization.

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APPENDIX

English Consent Form

(Please read out to the participants)

Greeting!

My name is Eshrat Jahan Eshaba. I am a 4th year student of B.Sc. in Physiotherapy program at Bangladesh Health Professions Institute (BHPI). For my study purpose I am conducting a study on the parents of CTEV children and my study title is “Socioeconomic Impact on the Parents of Congenital Talipes Equinovarus (CTEV) Children along with their Coping Strategies during Ponseti Management at CRP”. I would like to know about some personal information, other related information, as well as socioeconomic impact and coping strategies regarding this study. This will take approximately 30 minutes. This is an academic study and will not be used for any other purpose. Your participation in the research will have no impact on your present or future treatment in Paediatric unit. Researcher will maintain confidentiality of all procedures. Your data will never be used without your permission. Your participation in this study is voluntary and you may withdraw yourself at any time during this study.

If you have any query about the study or your right as a participant, you may contact with me (01911516174) or my supervisor Prof. Md. Obaidul Haque, Vice Principal, BHPI (01712054026).

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

Yes

No

Signature of the Participant:

Date:

Signature of the Interviewer:

Date:

অনুমতি পত্র

(অংশগ্রহণকারীকে পড়ে শোনাতে হবে)

শুভেচ্ছা!

আমার নাম ইশরাত জাহান ইশাবা। আমি বাংলাদেশ হেলথ প্রফেশন্স ইনস্টিটিউট (বিএইচপিআই) এ ফিজিওথেরাপি কোর্সের ৪র্থ বর্ষের একজন ছাত্রী। আমার অধ্যয়নের অংশ হিসেবে আমি কনজেনিটাল ট্যালিপাস ইকুইনোভেরাস (CTEV) শিশুদের পিতামাতার উপর একটি গবেষণা পরিচালনা করছি এবং আমার গবেষণার শিরোনাম হল " সি. আর. পি. তে পনসেটি ম্যানেজমেন্ট চলাকালীন সময় কনজেনিটাল ট্যালিপাস ইকুইনোভেরাস (CTEV) শিশুদের পিতামাতার উপর আর্থসামাজিক প্রভাব এবং তাদের মোকাবিলা করার কৌশলসমূহ "। আমি এই গবেষণা সম্পর্কিত কিছু ব্যক্তিগত তথ্য, অন্যান্য সম্পর্কিত তথ্য, সেই সাথে আর্থসামাজিক প্রভাব এবং মোকাবিলা করার কৌশলসমূহ সম্পর্কে জানতে চাই। এক্ষেত্রে প্রায় ৩০ মিনিট সময় লাগবে। এটি শিক্ষার অন্তর্ভুক্ত একটি গবেষণা এবং অন্য কোন উদ্দেশ্যে ব্যবহার করা হবে না। এই গবেষণায় আপনার অংশগ্রহণ পেডিয়াট্রিক ইউনিটে আপনার বর্তমান বা ভবিষ্যৎ চিকিৎসার উপর কোন প্রভাব ফেলবে না। গবেষক গবেষণা চলাকালীন প্রতিটি ধাপে গোপনীয়তা বজায় রাখবেন। আপনার তথ্য আপনার অনুমতি ছাড়া ব্যবহার করা হবে না। এই গবেষণায় আপনি স্বেচ্ছায় অংশগ্রহণ করতে পারেন এবং এই গবেষণা চলাকালীন যেকোনো সময় আপনি নিজে থেকে প্রত্যাহার করতে পারবেন।

আপনি একজন অংশগ্রহণকারী হিসেবে গবেষণা সম্পর্কে যদি কোন প্রশ্ন থাকে, তাহলে আপনি আমার সাথে (০১৯১১৫১৬১৭৪) বা আমার সুপারভাইজার অধ্যাপক মোঃ ওবায়দুল হক, উপাধ্যক্ষ, বিএইচপিআই এর সাথে (০১৭১২০৫৪০২৬) যোগাযোগ করতে পারেন।

আমি আপনার অনুমতি নিয়ে এই সাক্ষাৎকার শুরু করতে পারি?

হ্যাঁ

না

অংশগ্রহণকারীর সাক্ষরঃ

তারিখঃ

সাক্ষাৎকারীর সাক্ষরঃ

তারিখঃ

Research Questionnaire

Socioeconomic Impact on the Parents of Congenital Talipes Equinovarus (CTEV) Children along with Their Coping Strategies during Ponseti Management at CRP

Date of interview:

Patient's name:

Patient's ID:

Name of participant:

Patient's address: Village:

P.O:

P.S:

District:

Contact no:

Part-1: Socio-Demographic Information

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

QN	Question	Response
1.1	Child's age	Months
1.2	Child's gender	1=Boy 2=Girl
1.3	Respondent parent	1=Father 2=Mother
1.4	Age of parents	Mother= Year Father= Year
1.5	Marital status of parents	1=Married 2=Divorced or separated 3=Widow

1.6	Family type	1=Both parents 2=Mother alone 3=Mother with other adults 4=Other
1.7	Educational status of parents	1=No formal education 2=Primary education 3=Secondary education 4=Bachelor degree or above 5=Others (Please specify)
1.8	Residential area	1=Rural 2=Urban 3=Semi urban
1.9	Employment status of parents	1=Employed 2=Unemployed
1.10	Occupation of parents	1=Farmer 2=Day laborer 3=Rickshaw puller 4=Garments/ Factory worker 5=Driver 6=Service holder 7=Businessman 8=Teacher 9=Housewife 10=Other
1.11	Monthly income of the family (in BDT)	
1.12	Social welfare allowance	1=Disability allowance 2=No disability allowance

Part-2: Medical Information of Child

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

QN	Question	Response
2.1	Gestation at birth	Weeks
2.2	Birth weight	Kg
2.3	Delivery mode	1=NVD 2=C/S
2.4	Side	1=Right 2=Left 2=Bilateral
2.5	Family history of CTEV	1=Yes 2=None
2.6	Phase of Ponseti management	1=Casting phase 2=Bracing phase
2.7	Number of casts	
2.8	TA tenotomy	1=Yes 2=No
2.9	Recurrence	1=Yes 2=No
2.10	Difficulties during treatment	1=Yes 2=No
2.11	Associated comorbidities	

Part-3: Impact-on-Family Scale

[Please read each question, assess your feelings and tick (√) the number on the scale that gives you the best answer for you for each question]

QN	Question	1= Strongly agree	2= Agree	3= Disagree	4= Strongly disagree
3.1	My child's illness is causing financial problems for our family.	1	2	3	4
3.2	Time is lost from work because of hospital appointments for my child.	1	2	3	4
3.3	I am cutting down the hours I work to care for my child.	1	2	3	4
3.4	Additional income is needed in order to cover my child's medical expenses.	1	2	3	4
3.5	Our family gives up things because of my child's illness.	1	2	3	4
3.6	People in the neighborhood treat us specially because of my child's illness.	1	2	3	4
3.7	We see family and friends less because of my child's illness.	1	2	3	4
3.8	I don't have much time left over for other family members after caring for my child.	1	2	3	4
3.9	We have little desire to go out because of my child's illness.	1	2	3	4
3.10	Because of my child's illness, we are unable to travel or go away.	1	2	3	4

3.11	Sometimes we have to change plans about going out at the last minute because of my child's illness.	1	2	3	4
3.12	Sometimes I wonder whether my child should be treated "specially" or the same as a normal child.	1	2	3	4
3.13	I think about not having more children because of my child's illness.	1	2	3	4
3.14	Nobody understands the burden I carry.	1	2	3	4
3.15	Traveling to the hospital is a strain on me.	1	2	3	4
3.16	Sometimes I feel like we live on a roller coaster: in crisis when my child is acutely ill, OK when things are stable.	1	2	3	4
3.17	It is hard to find a reliable person to take care of my child.	1	2	3	4
3.18	I live from day to day and don't plan for the future.	1	2	3	4
3.19	Fatigue is a problem for me because of my child's illness.	1	2	3	4
3.20	Learning to manage my child's illness has made me feel better about myself.	1	2	3	4
3.21	Because of what we have shared we are a closer family.	1	2	3	4
3.22	My partner and I discuss my child's problems together.	1	2	3	4
3.23	We try to treat my child as if he/she were a normal child.	1	2	3	4
3.24	My relatives have been understanding and helpful with my child.	1	2	3	4

Part-4: Brief-COPE Scale

[Please read each question, assess your feelings and tick (√) the number on the scale that gives you the best answer for you for each question]

QN	Question	1=I haven't been doing this at all	2=A little bit	3=A medium amount	4=I've been doing this a lot
4.1	I've been turning to work or other activities to take my mind off things.	1	2	3	4
4.2	I've been concentrating my efforts on doing something about the situation I'm in.	1	2	3	4
4.3	I've been saying to myself "this isn't real".	1	2	3	4
4.4	I've been using alcohol or other drugs to make myself feel better.	1	2	3	4
4.5	I've been getting emotional support from others.	1	2	3	4
4.6	I've been giving up trying to deal with it.	1	2	3	4
4.7	I've been taking action to try to make the situation better.	1	2	3	4
4.8	I've been refusing to believe that it has happened.	1	2	3	4
4.9	I've been saying things to let my unpleasant feelings escape.	1	2	3	4
4.10	I've been getting help and advice from other people.	1	2	3	4
4.11	I've been using alcohol or other drugs to help me get through it.	1	2	3	4
4.12	I've been trying to see it in a different light, to make it seem more positive.	1	2	3	4

4.13	I've been criticizing myself.	1	2	3	4
4.14	I've been trying to come up with a strategy about what to do.	1	2	3	4
4.15	I've been getting comfort and understanding from someone.	1	2	3	4
4.16	I've been giving up the attempt to cope.	1	2	3	4
4.17	I've been looking for something good in what is happening.	1	2	3	4
4.18	I've been making jokes about it.	1	2	3	4
4.19	I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	1	2	3	4
4.20	I've been accepting the reality of the fact that it has happened.	1	2	3	4
4.21	I've been expressing my negative feelings.	1	2	3	4
4.22	I've been trying to find comfort in my religion or spiritual beliefs.	1	2	3	4
4.23	I've been trying to get advice or help from other people about what to do.	1	2	3	4
4.24	I've been learning to live with it.	1	2	3	4
4.25	I've been thinking hard about what steps to take.	1	2	3	4
4.26	I've been blaming myself for things that happened.	1	2	3	4
4.27	I've been praying or meditating.	1	2	3	4
4.28	I've been making fun of the situation.	1	2	3	4

গবেষণার প্রশ্নমালা

সি. আর. পি. তে পনসেটি ম্যানেজমেন্ট চলাকালীন সময় কনজেনিটাল ট্যালিপাস ইকুইনোভেরাস (CTEV) শিশুদের পিতামাতার উপর আর্থসামাজিক প্রভাব এবং তাদের মোকাবিলা করার কৌশলসমূহ

সাক্ষাৎকারের তারিখ:

রোগীর নাম:

রোগীর আইডি:

অংশগ্রহণকারীর নাম:

রোগীর ঠিকানা: গ্রাম:

পোস্ট অফিস:

থানা:

জেলা:

যোগাযোগের নম্বর:

অংশ - ১: রোগীর আর্থ-সামাজিক তথ্যবলি

[সঠিক উত্তরের পাশে টিকচিহ্ন (√) প্রদান করুন।]

প্রশ্ন নম্বর	প্রশ্ন	উত্তর/ প্রতিক্রিয়া
১.১	সন্তানের বয়স	মাস
১.২	সন্তানের লিঙ্গ	১=ছেলে ২=মেয়ে
১.৩	উত্তরদাতা অভিভাবক	১=বাবা ২=মা
১.৪	পিতামাতার বয়স	বাবা= বছর মা= বছর
১.৫	পিতামাতার বৈবাহিক অবস্থা	১=বিবাহিত ২=তালাকপ্রাপ্ত বা বিচ্ছিন্ন ৩=বিধবা

১.৬	পারিবারের ধরন	১=বাবা-মা উভয়ই ২=শুধু মা ৩=অন্যান্য প্রাপ্তবয়স্কদের সাথে মা ৪=অন্যান্য
১.৭	পিতামাতার শিক্ষাগত যোগ্যতা	১=শিক্ষাগত যোগ্যতা নাই ২=অক্ষর জ্ঞান সম্পূর্ণ ৩=মাধ্যমিক পাশ ৪=স্নাতক পাশ অথবা এর থেকে বেশি ৫=অন্যান্য (নির্দিষ্ট করুন)
১.৮	বসবাসের স্থান	১=গ্রাম ২=শহর ৩=উপ-শহর
১.৯	পিতামাতার কর্মসংস্থানের অবস্থা	১=কর্মজীবী ২=বেকার
১.১০	পিতামাতার পেশা	১=কৃষক ২=দিনমজুর ৩=রিজা চালক ৪=গার্মেন্টস / কারখানার শ্রমিক ৫=ড্রাইভার ৬=চাকুরিজীবী ৭=ব্যবসায়ী ৮=শিক্ষক ৯=গৃহিণী ১০=অন্যান্য
১.১১	পরিবারের মাসিক আয় (টাকা)	
১.১২	সমাজকল্যাণ ভাতা	১=প্রতিবন্ধী ভাতা ২=প্রতিবন্ধী ভাতা নেই

অংশ - ২: বাচ্চার চিকিৎসা বিষয়ক তথ্য

[সঠিক উত্তরের পাশে টিকচিহ্ন (√) প্রদান করুন]

প্রশ্ন নম্বর	প্রশ্ন	উত্তর/ প্রতিক্রিয়া
২.১	জন্মের সময় গর্ভাবস্থা	সপ্তাহ
২.২	জন্মের সময় ওজন	কে. জি.
২.৩	বাচ্চার জন্মের পদ্ধতি	১=নরমাল ভেজাইনাল ডেলিভারি ২=সিজারিয়ান সেকশন
২.৪	পাশ	১=ডান ২=বাম ৩=উভয়পাশে
২.৫	পরিবারে CTEV এর ইতিহাস	১=আছে ২=নেই
২.৬	পনসেটি মেনেজমেন্ট এর ফেজ	১=কাসটিং ফেজ ২=ব্রেসিং ফেজ
২.৭	কাস্ট এর সংখ্যা	
২.৮	টিএ টেনোটমি	১=হ্যাঁ ২=না
২.৯	পুনরাবৃত্তি	১=হ্যাঁ ২=না
২.১০	চিকিৎসার সময় অসুবিধা	১=হ্যাঁ ২=না
২.১১	সম্পর্কযুক্ত কোমরবিডিটিস	

অংশ - ৩: ইমপ্যাক্ট-অন-ফ্যামিলি স্কেল

[অনুগ্রহ করে প্রতিটি প্রশ্ন পড়ুন, আপনার অনুভূতিগুলি মূল্যায়ন করুন এবং এই স্কেলটিতে এমন নম্বরটি টিকচিহ্ন (✓) দেন যা প্রতিটি প্রশ্নের জন্য আপনার সেরা উত্তর দেয়।]

প্রশ্ন নম্বর	প্রশ্ন	উত্তর			
		১=দৃঢ়ভাবে একমত	২=একমত	৩=অসম্মত	৪=দৃঢ়ভাবে অসম্মত
৩.১	আমার সন্তানের অসুস্থতা আমাদের পরিবারের জন্য আর্থিক সমস্যা সৃষ্টি করেছে	১	২	৩	৪
৩.২	আমার সন্তানের জন্য হাসপাতালের অ্যাপয়েন্টমেন্টের কারণে কাজ থেকে সময় নষ্ট হয়	১	২	৩	৪
৩.৩	আমি আমার সন্তানের যত্ন নেওয়ার জন্য কাজ করার সময় কমিয়ে দিচ্ছি	১	২	৩	৪
৩.৪	আমার সন্তানের চিকিৎসার ব্যয় বহন করার জন্য অতিরিক্ত আয়ের প্রয়োজন	১	২	৩	৪
৩.৫	আমার সন্তানের অসুস্থতার কারণে আমাদের পরিবার অনেক কিছু ছেড়ে দেয়	১	২	৩	৪
৩.৬	আমার সন্তানের অসুস্থতার কারণে আশেপাশের লোকেরা আমাদের সাথে বিশেষভাবে আচরণ করে	১	২	৩	৪
৩.৭	আমার সন্তানের অসুস্থতার কারণে আমরা পরিবার এবং বন্ধুদের সাথে কম দেখা করি	১	২	৩	৪
৩.৮	আমার সন্তানের যত্ন নেওয়ার পরে পরিবারের অন্যান্য সদস্যদের জন্য আমার কাছে বেশি সময় থাকে না	১	২	৩	৪
৩.৯	আমার সন্তানের অসুস্থতার কারণে আমাদের বাইরে যাওয়ার ইচ্ছা কম	১	২	৩	৪
৩.১০	আমার সন্তানের অসুস্থতার কারণে, আমরা ভ্রমণ করতে বা দূরে যেতে পারছি না	১	২	৩	৪
৩.১১	আমার সন্তানের অসুস্থতার কারণে কখনও কখনও আমাদের শেষ মুহূর্তে বাইরে যাওয়ার পরিকল্পনা পরিবর্তন করতে হয়	১	২	৩	৪

৩.১২	আমি মাঝে মাঝে ভাবি যে আমার সন্তানের সাথে "বিশেষভাবে" আচরণ করা উচিত নাকি একটি সাধারণ শিশুর মতো	১	২	৩	৪
৩.১৩	আমার সন্তানের অসুস্থতার কারণে আমি আরও সন্তান না নেওয়ার কথা ভাবি	১	২	৩	৪
৩.১৪	আমি যে পরিমাণ বোঝা বহন করি তা কেউ বোঝে না	১	২	৩	৪
৩.১৫	হাসপাতালে যাতায়াত আমার জন্য একটি চাপ	১	২	৩	৪
৩.১৬	কখনও কখনও আমার মনে হয় যে আমরা একটি রোলার কোস্টারে বাস করি: সংকটে যখন আমার সন্তান তীব্রভাবে অসুস্থ হয়, যখন জিনিসগুলি স্থিতিশীল থাকে তখন ঠিক আছে	১	২	৩	৪
৩.১৭	আমার সন্তানের যত্ন নেওয়ার জন্য একজন নির্ভরযোগ্য ব্যক্তি খুঁজে পাওয়া কঠিন	১	২	৩	৪
৩.১৮	আমি দিনের পর দিন এভাবেই বেঁচে আছি এবং ভবিষ্যতের জন্য পরিকল্পনা করি না	১	২	৩	৪
৩.১৯	আমার সন্তানের অসুস্থতার কারণে ক্লান্তি আমার জন্য একটি সমস্যা	১	২	৩	৪
৩.২০	আমার সন্তানের অসুস্থতা নিয়ন্ত্রণ করতে শেখা আমাকে নিজের সম্পর্কে ভাল বোধ করায়	১	২	৩	৪
৩.২১	আমরা যেসব কিছুই সম্মুখীন হয়েছি তার কারণে আমাদের পরিবারের সবার সম্পর্ক ঘনিষ্ঠ ঘটেছে	১	২	৩	৪
৩.২২	আমার সঙ্গী এবং আমি একসাথে আমার সন্তানের সমস্যা নিয়ে আলোচনা করি	১	২	৩	৪
৩.২৩	আমরা আমার সন্তানের সাথে এমন আচরণ করার চেষ্টা করি যেন সে একজন সাধারণ শিশু	১	২	৩	৪
৩.২৪	আমার আত্মীয়রা আমার সন্তানের সাথে সহানুভূতিশীল এবং সহায়ক আছে	১	২	৩	৪

অংশ - ৪: রিফ-কোপ স্কেল

[অনুগ্রহ করে প্রতিটি প্রশ্ন পড়ুন, আপনার অনুভূতিগুলি মূল্যায়ন করুন এবং এই স্কেলটিতে এমন
নম্বরটি টিকচিহ্ন (✓) দেন যা প্রতিটি প্রশ্নের জন্য আপনার সেরা উত্তর দেয়]

প্রশ্ন নম্বর	প্রশ্ন	উত্তর			
		১=আমি এটা কখনই করি নাই	২=কিছুটা	৩=স্বল্প পরিমাণ	৪=আমি এটা অনেক করেছি
৪.১	আমি মনের চিন্তা ভুলে থাকার জন্য কাজ বা অন্য ক্রিয়াকলাপে বেস্ত থাকছি	১	২	৩	৪
৪.২	আমি বর্তমান পরিস্থিতিতে কিছু করার জন্য মনোনিবেশ করছি	১	২	৩	৪
৪.৩	আমি নিজেকে বুঝানোর চেষ্টা করছি যা হচ্ছে তা সত্যি নয়	১	২	৩	৪
৪.৪	আমি নিজেকে ভালো রাখার জন্য মদ বা মাদক দ্রব্য ব্যবহার করছি	১	২	৩	৪
৪.৫	আমি অন্যের কাছে থেকে মানসিক সমর্থন পেয়ে আসছি	১	২	৩	৪
৪.৬	আমি এটি মোকাবেলা করার চেষ্টা ছেড়ে দিচ্ছি	১	২	৩	৪
৪.৭	আমি পরিস্থিতি আরো ভালো করার জন্য পদক্ষেপ নিচ্ছি	১	২	৩	৪
৪.৮	আমি বিশ্বাস করতে চাচ্ছি না যে মারাত্মক কিছু ঘটেছে	১	২	৩	৪
৪.৯	আমি বলছিলাম যে ঘটনাগুলো আমার অপ্রীতিকর অনুভূতিগুলো এড়াতে দেয়	১	২	৩	৪
৪.১০	আমি অন্য লোকের কাছে থেকে সাহায্য এবং পরামর্শ পেয়ে চলছি	১	২	৩	৪
৪.১১	এটি থেকে মুক্তি পেতে আমি মদ বা অন্যান্য মাদক দ্রব্য ব্যবহার করছি	১	২	৩	৪
৪.১২	আমি এই চাপ আরও ইতিবাচক বলে মনে করার জন্য এই পরিস্থিতিকে ভিন্নভাবে দেখার চেষ্টা করছি	১	২	৩	৪
৪.১৩	আমি নিজের সমালোচনা করছি	১	২	৩	৪
৪.১৪	আমি আমার করণীয় সম্পর্কে কৌশলে এগিয়ে যাওয়ার চেষ্টা করছি	১	২	৩	৪

৪.১৫	আমি অন্য মানুষের কাছে থেকে সান্ত্বনা এবং বোধগম্যতা পাচ্ছি	১	২	৩	৪
৪.১৬	আমি নিজেকে মানিয়ে নিতে ছেড়ে দিয়েছি	১	২	৩	৪
৪.১৭	আমি যা ঘটেছে তার মধ্যে ভালো কিছু খুজছি	১	২	৩	৪
৪.১৮	আমি এটি নিয়ে রসিকতা করছি	১	২	৩	৪
৪.১৯	আমি এ সম্পর্কে কম চিন্তা করার জন্য অন্য কাজ করে যাচ্ছি। যেমন মুভিতে যাওয়া, টিভি দেখা, পড়া, ঘুমানো বা কেনাকাটা করা	১	২	৩	৪
৪.২০	আমি বাস্তবতা মেনে নিয়েছি যে এটা ঘটেছে	১	২	৩	৪
৪.২১	আমি আমার নেতিবাচক অনুভূতি প্রকাশ করছি	১	২	৩	৪
৪.২২	আমি আমার ধর্ম বা আধ্যাত্মিক বিশ্বাসের মাধ্যমে সান্ত্বনা খুজে পাওয়ার চেষ্টা করছি	১	২	৩	৪
৪.২৩	আমি আমার করণীয় সম্পর্কে অন্যান্য লোকের কাছে থেকে পরামর্শ বা সহায়তা নেওয়ার চেষ্টা করছি	১	২	৩	৪
৪.২৪	আমি এই পরিস্থিতির সাথে বাঁচতে শিখছি	১	২	৩	৪
৪.২৫	আমি যে পদক্ষেপ গ্রহণ করি তা নিয়ে কঠোরভাবে চিন্তা করি	১	২	৩	৪
৪.২৬	আমি যা ঘটেছে তার জন্য নিজেকে দোষারোপ করছি	১	২	৩	৪
৪.২৭	আমি প্রার্থনা বা ধ্যান করছি	১	২	৩	৪
৪.২৮	আমি বর্তমান পরিস্থিতি নিয়ে মজা করছি	১	২	৩	৪

Date: 3 April, 2023

To

Head

Department of Physiotherapy

Centre for the Rehabilitation of the Paralysed (CRP)

Through: Head, Department of Physiotherapy, BHPI

Subject: Prayer for seeking permission to collect data for conducting a research project.

Sir,

With due respect and humble submission to state that I am Eshrat Jahan Eshaba, student of 4th year B. Sc. in Physiotherapy at Bangladesh Health Professions Institute (BHPI). The Ethical Committee has approved my research project entitled: **"Socioeconomic Impact on the Parents of Congenital Talipes Equinovarus (CTEV) Children along with their Coping Strategies during Ponseti Management at CRP"** under the supervision of Professor Md. Obaidul Haque, Vice Principal, Bangladesh Health Professions Institute (BHPI), CRP, Savar, Dhaka-1343. Conducting this research project is a partial fulfilment of the requirement for the degree of B.Sc. in Physiotherapy. I want to collect data for my research project from the Department of Physiotherapy at CRP. So, I need your kind permission for data collection at Paediatric Unit of CRP at Savar, Dhaka. I would like to assure that anything of the study will not be harmful for the participants.

I, therefore pray and hope that your honor would be kind enough to grant my application and give me permission for data collection and oblige thereby.

Sincerely

Eshrat Jahan Eshaba

Eshrat Jahan Eshaba

4th year B.Sc. in Physiotherapy

Class Roll: 24

Session: 2017-18

Bangladesh Health Professions Institute (BHPI)

(An academic institution of CRP)

Chapain, CRP, Savar, Dhaka-1343

Recommendation
9/03/23
Prof. Md. Obaidul Haque
Vice-Principal
BHPI, CRP, Savar, Dhaka.

Approved
Recommended from the
depart. Shofiq
08.04.2023

Dr. Mohammad Anwar Hossain, PhD
Senior Consultant & Head
Physiotherapy Department
Associate Professor, BHPI
CRP Savar Dhaka-1343

Md. Shofiqul Islam
Associate Professor & Head
Department of Physiotherapy
Bangladesh Health Professions Institute (BHPI)
CRP, Chapain, Savar, Dhaka-1343



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

Ref:

CRP/BHPI/IRB/03/2023/705

Date:

13/03/2023

To
Eshrat Jahan Eshaba
4th Year B.Sc. in Physiotherapy
Session: 2017-2018, Reg.no: 8645
BHPI, CRP, Savar, Dhaka- 1343, Bangladesh

Subject: Approval of the dissertation proposal “Socioeconomic Impact on the Parents of Congenital Talipes Equinovarus (CTEV) Children along with their Coping Strategies during Ponseti Management at CRP” by ethics committee.

Dear
Eshrat Jahan Eshaba,
Congratulations.

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

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

The purpose of the study is to find out the socioeconomic impact on the parents of congenital talipes equinovarus (ctev) children along with their coping strategies during ponseti management at CRP. Should there any interpretation, type, spelling, grammatical mistakes in the title, it is the responsibilities of the investigator. The study involves face-to-face interview by using semi-structured questionnaire to explore the socioeconomic impact of Ponseti management for the children with CTEV with their coping strategies at CRP-Savar, Dhaka in Bangladesh. Since the study involves questionnaire that takes maximum 20- 30 minutes and have no likelihood of any harm to the participants. The members of the Ethics committee approved the study to be conducted in the presented form at the meeting held at 09:00 AM on January 9, 2023 at BHPI (34th IRB Meeting).

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

Best regards,

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