EFFECTIVENESS OF POSITIVE PSYCHOTHERAPY ON MENTAL WELLBEING, SENSE OF COHERENCE, SOCIAL SUPPORT AND DIFFICULTIES AMONG CAREGIVERS OF CEREBRAL PALSY CHILDREN

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DECLARATION

I, Ms. Saima Waqar, Registration No. Reg. 60-FSS/PHDPSY/F-18 student of PhD in the subject of Psychology, session 2018-2024, hereby declare that the matter printed in the thesis titled: Effectiveness Of Positive Psychotherapy On Mental Wellbeing, Sense Of Coherence, Social Support And Difficulties Among Caregivers Of Cerebral Palsy Children, is my own work and has not been printed, published and submitted as research work, thesis or publication in any form in any University, Research Institution in Pakistan or abroad.

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Certified that the research work contained in this thesis titled: Effectiveness of Positive Psychotherapy on Mental Wellbeing, Sense of Coherence, Social Support and Difficulties among Caregivers of Cerebral Palsy Children, has been carried out and completed by Ms. Saima Waqar, Registration No. Reg. 60-FSS/PHDPSY/F-18 under my supervision.

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Dedication

To

My Parents, Husband & Children

"Whose Affection, Love, encouragement and Prays of day and night makeme able to get such success and honour. Who have always teach me to trust in Allah, believe in hard work and teach me that so much could be done with little".

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List of Abbreviations

CP	Cerebral palsy
SPSS	Statistical Package for Social Sciences
PPTI	Positive Psychotherapy Inventory
CDS	Caregiver Difficulties Scale
PBA	Parental Burnout Assessment
DASS	Depression, Anxiety and Stress Scale
SOC	Sense of Coherence
OLS	Orientation of Life Scale
MSPSS	Multidimensional Scale of Perceived Social Support
PPT	Positive Psychotherapy

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May Allah shower the above-cited personalities with success and honour in their life

(Ameen)

Saima Waqar

Abstract

The current study was aimed to assess the effectiveness of positive psychotherapy for treatingpsychological issues of caregivers of cerebral palsy children. Sample of the present study wascomprised of caregivers (mother, father and other related relatives) of cerebral palsy children.The data of the present study was collected from out patients & inpatient departments of National Institute of Rehabilitation Medicine (NIRM) Islamabad. The present research was based upon three studies. All the studies were interconnected with each other's. Study I was translation, adaptation and language validation of Caregiver difficulties Scale. In study I of the present research, translation, adaptation and cross language validation of caregiver difficulties scale was done. The major purpose of selecting this instrument was that it's purely developed for the caregivers of cerebral palsy children. Translation was carried out into four steps. After the translation of the scale, pilot study was carried out. The urdu translated scale was administered on 80 caregivers of cerebral palsy children. Age ranges of the participants was between 25 to 50 and pilot testing done. Findings of the present study (Table3)showed that urdu translation of the Caregiver difficulties scale (CDS) scale was reliable and valid for the present study. Cross language, validation was also satisfactory for Caregiver difficulties scale (CDS). Confirmatory factor analysis was also carried out, which showed model fit for the translated scale. Study II dealt with translation, adaptation and validation of positive psychotherapy manual. The manual comprises of 15 sessions worksheets and clinician part. Positive psychotherapy (PPT) basic emphasis is on positive aspects of a client in their lives without focusing on symptoms, negative life stories, past negative memories, or abruptly substituting them with negatives. Translation of the worksheets & manual was completed in four steps (forward translation, committee approach, backward translation, committee approach). For adaptation and validation of PPT adaptation committee approach and clinical expert consultation was carried out. Tryout testing (n=2) was done for feasibility testing of the therapy in both language on the sample of caregivers . Study III was comprised of the main study aimed at hypotheses testing. Depression Anxiety Stress Scale (DASS), Parental Burnout Assessment (PBA), Caregiver Difficulties Scale (CDS), Multidimensional Perceived Social Support (MPSSS), Positive Psychotherapy Inventory (PPTI) (mental wellbeing) and Orientation of Life Scale (OLS) (sense of coherence) were administered on the sample of 100 caregivers of cerebral palsy children for collecting data of the main study. Study III of the preset study also aimed at measuring the effectiveness of Positive Psychotherapy (PPT) and testing formulated hypotheses of the present study. For main study of the present research, sample of (N=100) caregivers of cerebral palsy children were selected with age ranges of the 25 to 55 years. Caregivers were approached by employing purposive sampling technique. During main study phase, at pretest level, screening of the participants was done on the basis of their moderate to high level scores on Caregiver Difficulties Scale (CDS), Parental Burnout Assessment (PBA), Depression Anxiety and Stress Scale (DASS-21), while lower scores on Multidimensional Perceived Social Support (MPSS), Orientation of Life Scale (OLS) (sense of coherence) and Positive Psychotherapy Inventor (PPTI) (mental wellbeing). After screening, participants (n=20) were randomly assigned intotwo groups, treatment group (positive psychotherapy group) and control group (counseling group). In treatment group, participants (n=10) were given urdu translated positive psychotherapy based interventional sessions and counseling sessions. Whereas for caregivers in control group (n=10) regular counseling sessions were provided. After completion of the interventional therapeutic sessions, assessment was done at posttest level for measuring the efficacy of positive psychotherapy for managing mental health issues of caregivers of cerebral palsy children. Present research indicated significant difference between the scores of treatment group and control group. In treatment group (after taking complete 15 sessions of positive psychotherapy)the score of caregiver burden, burnout psychological distress (Depression, anxiety & stress) decreased as compared to the scores of caregivers of cerebral palsy children in control (after taking general counselling sessions). Whereas level of sense of coherence, social support & mental wellbeing increased among caregivers in positive psychotherapy treatment group ascompared to caregivers in control group. Findings further revealed that positive psychotherapyis an effective intervention for psychological, social, emotional and behavioral rehabilitation of caregivers of CP children. The results can also be applied to the development of multi modal, holistic interventions that enhance the well-being of caregivers of cerebral palsy children and for all types of disabilities.

Keywords: Cerebral palsy, Caregiver, Caregiver Difficulties Scale, Depression Anxiety, StressScale, Social Support, Sense of Coherence, Positive Psychotherapy.

Chapter 1

Introduction

Any bodily or mental health condition (impairment) that create difficulty for the individualwith the same state to perform specific activities (activity limitation) and having restricted activities of daily living is called disability. Disability is connected with the problems that startedfrom birth and may affect later-life like physical, cognition (understanding, learning & memory),vision, hearing, behavior, and other areas (WHO, 2001). Approximately, there are more than 1 billion disabled individuals in the world. It indicates that around 15% of the world's population, with up to 190 million (3.8%) persons aged 15 and older are experiencing substantial functional physical challenges and required regular medical assistance. The spectrum of disability is enormous. However, persons with disabilities needs the same general healthcare requirements, which everyone required (WHO, 2011).

The World Health Organization (WHO) ranked Pakistan the sixth-highest disease burdened country. Prevalence of disability in Pakistan is about 13.4 %. The majority of disabilities are those that are lifelong and affect person's whole life. According to the WHO's estimate, 31 million people in Pakistan are expected to have some type of disability (WHO, 2011).

There are several many different kinds of disabilities, and many of those require lifelong rehabilitation. Cerebral palsy is regarded as a physical disability with multiple disabilities, including intellectual, speech, and physical, among many others. Intellectual disability (ID) and cerebral palsy (CP) are developmental disabilities that significantly restrict a person's ability to function. The frequent form of severe physical disability is cerebral palsy (CP), which affects 2 to 2.5 children out of every 1000 in developed nations (Taft, 1995). CP is a complex disorder in which mostly seizure disorders coexist frequently with the motor disorders. Other symptoms of CP include sensation, perception, cognition, communication, and behavior disturbances (Gulati, & Sondhi, 2018). CP is a chronic condition that affects person’s whole life form their own activities of daily living to learning every aspects of life (education & profession). They are relianton their caregivers in every aspect of life (Schiariti, Selb, Cieza, & O'Donnell, 2015).

Cerebral Palsy: Cerebral palsy is collection of long-term, non-static, physical disability. (Cans, 2000). In the beginning, CP was known as Little's disease and was first identified by William Little in 1862. It is a condition that seemed to effect the new born before the age of one year, interfered with the development of social and cognitive skills, and did not get better with time. Little also made the connection between this disorder and inadequate oxygen during birth. Itwas hypothesized that CP may have its origins in the cortex development, as the fetus is developing,linking abnormal fetus brain development (Accardo, 1982). During birth oxygen deprivation alonewas once believed to be the only cause of cerebral palsy (CP), but biomedical research in the 1980sdiscovered that this etiology was less likely and only one of many that could cause CP (Moster etal., 2001, Nelson & Ellenberg, 1986). CP has chronic symptoms of posture; movement and restricted function are believed to be brought on by non-progressive disruptions in the newborn brain. Cerebral palsy is a motor disorder that is frequently occurred with muscular issues as well as epilepsy, problems in cognitive ability, communication, and behavior (Rosenbaum, Paneth et al., 2007).

Cerebral palsy effect an individual’s movement, maintaining balance and restricted posture. It is the disability of motor impairment in children. Cerebral is related to brain related disability and palsy referred to as muscular weakness. Individual is unable to control their musclesbecause of abnormal brain development or damage. A non-progressive trauma to the brain occurred during or shortly after birth up to the age of one year causes cerebral palsy (CP). It is a dvelopmental disorder. Children who have cerebral palsy are unable to reach typical motor developmental milestones, which results in a variety of condition that effect their daily living (Molner, 1991).

According to Paneth, Hong, and Korzeniewski (2006), non-progressive disturbance in thedeveloping brain can cause cerebral palsy (CP), which can happen prior to, during, or after birth. Motor function disorders are just a few of the conditions that fall under the umbrella term "CP" (Rosenbaum et al., 2007). According to Sajedi, Soleiman, and Ahmadi (2013), in Iran prevelanceof CP is 2.6 per 1,000 births. According to Pearsall-Jones, Piek, and Levy (2010) no treatment iscurrently effective in healing the affected areas of brain that regulate movement and muscles. Because a child with CP frequently requires extensive special care over a long period, families with CP children frequently have poor physical and mental health.

Classification of Cerebral Palsy:

A wide range of clinical syndromes with altered muscular issues and postural responses are included in the definition of cerebral palsy. These neurological abnormalities frequently result in recognizable abnormal movement patterns that are known as cerebral palsy's distinguishing features. Although a motor deficit that results in ambulation dysfunction or delay as well as difficulty in performing self-care tasks is the key diagnostic indicator. In cerebral palsy, spastic &diplegia are the most prevalent types (Dias & Dias, 2017).

Cerebral palsy is classified according to motor function impairment are spastic cerebral palsy, athetoid, ataxic, mixed and hypotonic CP. Spastic cerebral palsy indicates heightened tonein the muscles. Because muscles are always contracting, limbs are stiff, unyielding, and unable toflex or relax. Exaggerated reflexes and abrupt, clumsy movements are common. afflicted legs and arms frequently. There are other conditions that can also affect the tongue, mouth, and pharynx, including mixed cerebral palsy, hypotonic cerebral palsy, athetoid cerebral palsy (dyskineticCP, which causes difficulty controlling muscular movements and twisted, abrupt movements), and speech impairments, eating difficulties, chewing and swallowing difficulties. Classification according to patterns of involvement of limbs are monoplegia (one limb is affected.), diaplegia (legs affected, mainly affects the lower body), hemiplegia(one sided arm and leg of the body is affected) & paraplegia(lower part of the body, including both legs, are affected), triplegia (three limbs affected, including face). Double hemiplegia(four limbs affected, but one side of the body is more affected than the other). Tetraplegia (all four limbs are involved, major three limb are more affected then one). Quadriplegic (four limbs affected). Pentaplegia (four limbs are involved,with neck and head paralysis, mostly having feeding and respiratory complication) (Ferluga et al.,2013).

CP's Spastic, hypotonic, athetiod, ataxic and dystonic are based on muscle tone and CP's based on body parts involvement are monoplegia, diplegia and hemiplegia. According to a second method, CP can be classified as either pyramidal (spastic) or extra pyramidal (nonspastic), depending on the area of the brain that has been affected and the predominant motor disorder. Spastic CP is also known as upper motor neuron damage. About 30% of cases of CP are thought to be spastic, which makes up 70% to 80% of all cases (Taft, 1995 & Thorogood, 2001) . Athetoidand dystonic CP are the subsequent subtypes of dyskinetic CP (Rosembaum, 2003). According toSanger et al. (2003) from all 15% to 20% of cerebral palsy, dyskinetic CP is accounting for 10 to 15%. Myopathy and neuropathy is major cause of hypotonia, so it should be addressed before diagnosing CP. Major symptom is floppiness, noticeable decline in gross muscle tone, develop their motor milestones significantly later. Feeding issues are frequently present due to weak facial and oral muscles (Taft, 1999).

Additionally in children about 20% of cerebral palsy in the 1960s had athetoid CP (lessento 5 to 10% now), with 80–90% of cases being caused by spastic CP. This decline is primarily attributable to improvements in the management of hyperbilirubinemia. Acute bilirubin encephalopathy, or bilirubin passing into the brain, is a possibility if a newborn has intense jaundice. Orthopedic surgeon William little classified the CP first. Hemiplegia affect just one side of the body, though less impairment of the limb that appeared unaffected was frequently noted; generalized rigidity, which affects both legs more than the arms, and paraplegia (Dunn, 1995). According to Swedish classification of cerebral palsy, it is divided as according to affected limbs (monoplegia, hemiplegia, diplegia, tetraplegia, and quadriplegia), and according to type of muscle tone (spastic, dyskinetic, ataxic, or mixed) (Hedgberg, 1989).

Prevalence of cerebral palsy: it is treatment wise most costly childhood disability and its prevalence is increasing day-by-day (Darras et al., 2009). In both the United States and different countries, there are 1.5 to 2.0 cases of CP for every 1000 live births. Despite technological advancements are reducing infant mortality in term and preterm infants, this rate has remained stable from almost forty years (Clark & Hankins, 2003; Gibson et al., 2003). Prevalence of CP's in worldwide is around 3.16% (Livinec, 2005). About 2-5 per 1000 newborn in USA have this disease which effects about 0.7 Million. It has a very broad range of etiology including congenital, genetic, inflammatory, infectious, traumatic, and metabolic. Prenatal, natal, or postnatal trauma to the developing brain are all possible reasons. Less than 10% of cases are the result of severe birth trauma or asphyxia, while up to 75% to 80% are the result of prenatal injury (Patel et al.,2020).

Premature birth and low birth weight appears to be main risk factors of cerebral palsy. Risk of disability increases as gestational age and birth weight decreases (Li, Hong, Wang et al., 2003).According to different studies worldwide, its prevalence ranges from 1.5 to 4 per 1000 births. Despite of recent improvements in obstetric and neonatal care its prevalence is same. In spite of the fact that infant mortality has decreased, cerebral palsy has become more common and severe.Premature babies are more affected as compared to full term babies.

Males are more likely than females to have cerebral palsy, and black children are more likely to have it than in white children. Spastic cerebral palsy (77.4%) is more common (Hirtz & Thurman et al., 2007).

Due to higher survival rates, the prevalence has risen globally over the past few decades. In western countries, approximately 10,000 infants are born with cerebral palsy yearly. The birth prevalence ranges from 3.4 per 1000 live births. In UK Between 1,200 to 1,500 school-aged children are diagnosed with CP each year (McIntyre & Goldsmith,et al., 2022). The prevalence ofCP in Asia is 2.19 per 1000 children (Andromeda, Hartini, & Suryanto, 2023).

Etiology of cerebral palsy: There are many risk factors associated with CP during prenatal, perinatal and postpartum (Rosembaum, 2003). Currently, it is believed that the majorityof cases are perinatal and postnatal due to asphyxia and preterm birth (Moster et al., 2001). A quarter to one third of infants having CP were born before 37 gestational week. The major risk is associated with newborn weights less than 1.5kg (Winter et al., 2002). The motor tracts in the developing brain are particularly vulnerable between 24 and 32 weeks of gestation, which is the cause of these injuries (Naeye et al., 1989). According to Perlman (1996) CP develops in 80% to 85% of infants with periventricular white matter damage. The prevalence of CP can be decreased because of better medical care of mothers during pregnancy.

Risk Factors: Major risk factors for CP including, problem in prenatal, perinatal, and postnatal stages. Causes of CP in prenatal stage included premature birth, low birth weight, due mother's poor nutritional status, and maternal epilepsy. It can be if a mother has hyperthyroidism or any infections, including severe toxicemia, eclampsia, rubella, cytomegalovirus (CMV), syphilis, or any other. Children can develop CP because of a mother's history of placental insufficiency, drug abuse, trauma, or multiple pregnancies. Risk factors for postnatal (0–2 years) include head trauma, hypoxia, seizures, neonatal issues and infections of the central nervous system (encephalitis, meningitis). None of these causes always causes brain damage, and even whenit does, Cerebral palsy has no guaranteed outcome. As an illustration, some kids may have isolatedhearing loss as a result of meningitis, while others may have severe intellectual disability or cerebral palsy (Abd Elmagid et al., 2021). Birth asphyxia & low birth weight were common risk factors, reported as 25.6% & 28.8 % respectively (van Lieshout et al., 2107).

Diagnosis of cerebral palsy: Clinical observations play a large part in the diagnosis of CP. First of all focus neonatal history of the child is important. Slow motor and neuro development, poor reflexes, and deviant body postures are the main symptoms in a CP diagnosis. There is no single abnormal physical symptom that can be used as a diagnostic tool, multiple symptoms and abnormal movements can be signs of CP (Batshaw, 2002). If there is known brain damage that hasbeen detected through cranial ultrasound, or MRI, the diagnosis is frequently made more quickly.The more severe cases are typically diagnosed by the time a child is 6 months old, while the mildercases take longer. Problems with feeding, sleeping, and temperament are also frequent. Confirmeddiagnosis enables family to be prepared for long term management of the child (Bennett, 1999).

Prognosis & other health related conditions in cerebral palsy: Unfortunately, there is frequently a "wait and watch" element. At times, CP patients have normal intellectual functioning

, but due to orol-motor, fine motor, and gross motor difficulties, their communication skills are compromised; this could affect the child's academic ability and in their social relationships. The degree and number of functional disabilities vary in their impact on survival and quality of life (Hutton & Pharoah, 2002). Limited intellectual functioning, language impairment, feeding difficulties, severe physical impairment, and history of fits are all contributing factors that reflectthe severity of the disability (Katz, 2003). The ability to walk or ambulate their own is one of the most important concerns of the child. Rosenbaum et al. (2002) developed a 5-level Gross Motor Function Measure to create the Gross Motor Functional Classification System. It has five levels: Level I is the ability to move freely; Level II is the ability to move freely without devices; Level III is the ability to move freely with mobility devices; Level IV is the ability to move freely with some restrictions (power mobility); and Level V is the ability to move freely with significant limitations, even with the aid of supportive technology. Prognosis of CP is not as much good dueto their multiple health related concerns. Due to their inability to reach typical motor developmental milestones, they have variety of functional limitations, such as motor dysfunction and intellectual impairment, and they typically require assistance in activities of daily living (Molner, 1991). According to Rosenbaum et al. (2007) and Novak, Hines, Goldsmith & Barclay (2012), CP's have multiple issues including motor, cognitive, behavioral, sensory & perceptual developmental delay.

Taking care of children diagnosed as cerebral palsy

Caregiver: A family member, friend, or neighbor who provides care to someone who has an acute or chronic condition without any payment in return. Caregivers provide support to disabled who needs help in multiple activities, from self-based activities to medications to tube feeding and other related care. 44 million adults over the age of 18 are estimated to be caregiver, according to recent studies (about one in five adults) (National Alliance for Care-giving and AARP, 2004). Anyone who provide care to a person who is disabled, or has some other conditionthat needs assistance are known as informal caregivers (Schulz & Tompkins, 2010).

Peoples have the ability to love and care for others from the moment they are born. It is a natural element of being a nurturing person. While it comes readily to the majority of people, it can be difficult for some. Persons with chronic diseases and with disabilities need assistance. Caring to family member is a rewarding experience that offers benefits beyond the duties, one assumes. Being a caregiver is providing care to another person without anticipating payment or any other sort of reward. The purpose of caregiver is to empower and support the person they are caring for in making responsible decisions. Setting boundaries and limits with boththe person receiving care and yourself is a necessary part of caring for someone. As a caregiver, taking care of oneself is essential to the wellbeing of everyone involved (Kent et al., 2016).

Definitions can be narrow or wide, and they have an impact on the subjects of basic and applied caring research. More stringent definitions restrict the eligibility of caregivers to those whomeet requirements for the number of hours of care given or assistance with daily care chores. Forinstance, according to some research, a family member must give at least four hours of care everyday or assistance with one action of daily living (ADL). Other studies only allow people who are the "primary" caregivers to participate. The only need for broader categories is that the care recipient must have some level of disability. It can be advantageous to have a lower threshold for Classifying someone as a "caregiver" in order to draw in a bigger sample, but some of the people so classified may not actually be providing much "hands-on" care (especially with regard to ADLs). This can be a significant problem because research including caregiver with light care- giving obligations may understate the effects of family care-giving (Kent et al., 2016).

Types of Caregivers: There are different caregiver roles in many different setups. Although all caregivers share the desire to assist others. The primary caregiving focus is on offering non-medical services to the weak elder, ill, injured, and disabled in the comfort of their homes. The major type of caregiver is a family caregiver, who provides care to member of their family unconditionally. The other types of caregivers are paid, private, informal, and volunteer ones. Family caregivers are family member who cares for disabled person at home on regular basis. They provide emotional, monetary, nursing, social, homemaking, and other services. Familycaregivers give their time and unpaid services to support their disabled.

Professional caregivers are professionals in the field who are hired for disabled. They offernon-medical or medical care in a facility or at home. Informal caregivers or casual caregiver, an unpaid informal caregiver is someone who has a close personal relationship with the person they are caring for. They are closed family members, friends, or neighbors. An informal caregiver is typically unrelated to the care recipient, which is a small difference from a family caregiver. It hasbeen observed that family members provide care to those in need in family including geriatric population and any disabled child. The committee used the term "care-giving trajectories" to conceptualize the evolution of care giving. Transitions in both the need of disabled and
environment of care provision are parts of care-giving trajectories. (Gitlin & Wolff, 2012).

Theories on Care-giving

Attachment-care giving social bond: According to attachment theory (Bowlby, 1969), people have an innate psycho-biological system that drives them to seek out the presence of important people especially their mothers when they are feeling vulnerable in order to feel secure (Shaver, 2000). ***Middle range theory of caregiving dynamics****:* Role negotiation, expectation management, and commitment are the three main ideas of this theory. According to Williams (2008), commitment is the ongoing caregiver duty that motivates life changes to place the patient first. According to the **Respite Care theory,** temporary relief from caregiving duties can reduce caregiving stress and increase wellbeing of caregivers (Montgomery et al., 2009). Caregivers encounter burden when they perform caregiving related tasks (Montgomery & Kosloski, 2013).

Model of Caregivers Stress: The experience of providing care and the resulting stress process are reflections of a dynamic process. Stressors are defined by Pearlin and colleagues as "tough conditions and challenging circumstances experienced by caregivers" that exceed or put undue demand on an individual's ability to adjust. It has two types: primary and secondary. According to Pearllin et al. (1990) the demands of the caring job itself are the source of secondary stressors, so the primary stressors are directly related to the individual and their handicap.

Integrative Model of Informal Caregiving (ICIM): The foundation of this paradigm isthe merging of professional burnout and informal caregiving stress (Gérain & Zech, 2019).

Phases in the Caregiving: Although the role of care giving is changing day by day. Trajectory of care giving may reflect growing care-giving responsibilities interspersed with episodic occurrences like hospital stays and placement in long-term care or rehabilitation facilities. Although there are recognizable phases in the care-giving trajectory. Continuous problem-solving,decision-making, interpersonal communication and constant vigilance over the welfare of the carerecipient are some of the examples of caregivers tasks (Gitlin & Wolff, 2012).

Every aspect of a caregiver's life is effected and may have a negative impact on their well-being too. Caregiving has both negative and positive impacts on life. Approximately 20% of caregivers reported that providing care is challenging for them both financially and physically, and44% say that it is emotionally challenging. Caregiving is challenging depending on people's need.Caregivers express comparatively higher levels of exhaustion, overwhelmed, and limited time for one's self (Kasper et al., 2013). According to Pinquart and Sörensen (2003), providing care has positive and negative psychological impact on the caregiver, major focus of the research was on the issues linked with caregiving. Individual's intrinsic and extrinsic characteristics also plays important role in caregiving perspective. There is a dire need to create interventions based publicpolicy to address caregiver's mental health related concerns.

Caregiver's health status: Generally speaking, caregivers do not take care of their own health. Higher subjective health status is routinely reported by caregivers for elderly care receivers(Berglund et al., 2015; Pinquart & Sörenson, 2003). A lower degree of correlation exists between poorer physical health of caregivers and depressive symptoms, caregivers burden, hours in care giving, activities performed, time spent in caregiving, behavioral, physical impairments and issuesof the disabled (Pinquart & Sörenson, 2007).

A significant amount of physical difficulties was found in 20% of caregivers and 39% of caregivers of older individuals with high needs. Over 40% of caregivers experienced sleep issues, which were strongly connected with reports of significant negative consequences of providing care(Wolff & Spillman, 2014).

Stenberg et al. (2010) conducted a research based on 192 articles covering caregiving from1990 to 2008 and discovered that common issues for caregivers were sleep deprivation, exhaustion, body aches, physical weakness, poor appetite, and weight loss. The prolonged, persistent stress that caregivers frequently endure can have a severe impact on their health, whichis partly mediated by immunological and autonomic disorders. Every day, doctors and their multidisciplinary teams are exposed to individuals delivering this type of care and have the chanceto intervene (Bevans & Sternberg, 2012). Findings were published in 2013 by Perkins and colleagues, reported that caregivers having high levels of caring strain had a 55 percent higher chance of death than those who did not report any stress. A study by several recent population- based research, however, point to the opposite conclusion also, according to that, providing care is linked with lower risk of death (Langer et al., 2009).

Need of self-health promoting behaviors in caregivers: Neglecting one's own health canexacerbate underlying conditions or make caregivers more susceptible to stress-related issues (Vitaliano et al., 2003). All of these caregiver's health dimensions like worst self-reported health,more unhealthy behaviors, and more use of medical services were linked to higher levels of stressors. Feelings of being burdened served as a mediator between objective pressures and health.These outcomes underscore how crucial of subjective assessments of stress and show how vulnerable caregivers are to the impacts of stressors on all the dimensions of health (Son et al., 2007).

The goals of health-promoting self-care practices are to enhance overall wellbeing, preserve optimal functioning, and promote health. Caregivers can take steps to promote their ownhealth and well-being by getting enough sleep, eating a balanced diet, exercising, getting preventive care and finding respite care when necessary (Acton, 2002; Collins & Swartz, 2011).

Previous research findings show that caregivers with higher levels of stress related to providing care had worse physical and mental health, more medical symptoms, high levels of depression and stress. The study found that early interventions to improve functional ability and self-care behaviors in response to symptoms experienced by some caregivers are necessary (Lu, & Wykle, 2007).

Health-risky behaviors for caregivers can include alcohol use (de Nooijer et al., 2003) andsmoking. Around 39% of caregivers reported smoking, which is considerably higher than others (Salgado-Garcia et al., 2015). Poor diets, substance abuse, psychological distress and inactive behaviors (Vitaliano et al., 2003) are included in health risky behaviors. They may ignore self-health due to caregiving responsibilities. Limited time and strength for self-care and thedisintegration of social networks is also present. Reduced self-efficacy, perceived stress, and higher caregiver load were linked to a general decline in health promoting behavior practice (Sonet al., 2023). In a research on caregiver's physical health it was seen that about one-third missed their own medicine doses frequently, and nearly half missed their own doctor's appointments (Piette et al., 2010). Salgado-Garcia et al. (2015) found that in a different sample of caregivers 40% of them admitted to quit smoking, and 25% of them said they had recently started more smoking.

Miserable caregiver's health behavior is more common in females, older & youngers (Wang et al., 2015). The connection between providing care and healthy habits and self-care, however, is nuanced. Research demonstrates that stress, sadness, and burden affect health-relatedbehaviors. Risky health behaviors are more likely to be reported by caregivers having higher stress level (Sisk, 2000; Zarit, Bottigi & Gaugler, 2007). Negative health behaviors of caregivers are linked with worse condition of illed person (Rabinowitz et al., 2007). Higher depression ratings are linked with caregivers who smoke more (Salgado-Garcia et al., 2015). All the time keeping record of the medicine for patients, multiple appointments schedule by the caregivers and increased dependency in daily living activities are linked with self-neglected behavior of the caregivers (Wang et al., 2015). According to Martindale-Adams et al. (2015), those caregivers who even spend limited time in taking care also utilize more medical services for them. It was reported that as compared to caregivers with higher subjective burden, individuals who perceive less subjective burden engage in more health-promoting behaviors (Sisk, 2000). Adopting healthybehaviors for caregivers and feeling competent to handle challenges of caregiving are connected. Higher self-efficacy in managing distressing thoughts and getting breaks are linked with less riskyhealth behaviors and more participation in healthy behavior (Rabinowitz et al., 2007).

Changes in family connections plays an important role while caregiving, including those with a spouse, kids and other near relatives. Socialization and family support from a larger network are dire need of caregiving. There may be a decrease in the time and effort spent fosteringsocial connections, which can lead to social constriction over time and isolation

(Hajek, 2021). Hence, moments of helplessness and a corresponding sense of being alone were found to be the primary causes of feelings of loneliness. However, feelings of loneliness were also felt in the absence of others and in the presence of their support indicating that a variety of situations can contribute to feelings of aloneness (Vasileiou et al., 2017).

The pressure of providing care can also affect family relationships and quality of life. According to Amirkhanyan and Wolf's (2006) the negative psychological effects of caring is not limited to the primary caregivers but rather affect the entire family. It may take some time for negative effects to become apparent because according to Bookwala (2009) caregivers are unhappy in their marriage life mostly depends upon length of caregiving role.

Conflict, arguments, and adversity in the caregiver's family were known to have a direct impact on caregiver strain. In particular, family conflict was found to partially moderate the effectsof caregiver income and caregiver-care receiver relationship, as well as the effects of caregiver's mental health and educational level on caregiver's stress (Scharlach et al., 2006). Research findings showed a negative correlation between the difficulty of caring for family members and depressed symptoms in those who receive social support. The connection between social support and depressive symptoms were somewhat mediated by the caregiver burden. Increasing social support, keeping an eye on health, and implementing planned interventions are all important ways to help family caregivers manage their caregiving responsibilities and lessen their depressive symptoms (Zhong, 2020).

Risk factors associated with caregiving: There are many risk factors associated with caregiving i.e, caregiving time, sex, relationship (wives are more affected than husbands are), and awkward behavioral symptoms of the patients. In population-based studies, the level of caring intensity has been demonstrated to be a reliable predictor of detrimental psychological impacts. According to Cannuscio et al. (2002), an increase in caring time commitment was associated withan increased level of depressive or anxious symptoms. Women, who cared for a sick or disabled spouse for 36 hours or more a week, experienced depressive or anxious feelings at a rate that wasalmost six times higher than that of non-caregivers. Caregivers who gave extensive care for prolonged period, experienced higher level of psychological distress; more women than males were found to be effected. The longer a person spent providing care each week, the higher they are experiencing distress (Hirst, 2005). According to findings from recent systematic review females reported higher levels of psychological discomfort than male caregivers, women experienced lower level of mental well-being and higher level of burden and depression as compared to men in their meta-analysis of 229 researches. Disparities in caregiver stressors, suchas longer weekly caregiving hours and a higher proportion of caregiving responsibilities carried out by women have been implicated in explaining gender variations in depression (Pinquart & Sörensen, 2006).

A negative impact on caregiver is also linked to behavioral symptoms of care recipients, such as agitation, irritability, and aggressiveness (Gitlin et al., 2012). Van der Lee and colleagues(2014) found that care recipient issues such as difficulty sleeping, refusal to take help, and verbaland physical aggression are major causes of caregiver burden and depression than the care recipient's cognitive or functional status. Additionally, Pinquart and Sorensen (2003) discovered that behavioral issues had a higher effect on caregiver stress and depression than physical and cognitive deficits did. According to Torti et al. (2004), behavioral issues are linked, in both culturaland geographical contexts, to caregiver burden. According to Hinton and colleagues (2003), familycaregivers of Latinos with cognitive impairments who experience behavioral issues are more likelyto experience depressive symptoms; however, this relationship is strongest among caregivers whoare not spouses.

Caregiver Burden: Caregiver Burden (CB) is a multifaceted response to providing care that encompasses issues that are social, psychological, emotional, physical, and economical (Kasuya et al., 2000). Burden is the stress or load that a person has when taking care of a family member who is disabled, or chronically sick. Understanding the traits associated with caregivers load is essential, as it affects both the caregiver and the person receiving care (Stucki, 2000). Caregiver burden denote to the level of stress felt by people who are caring for another disabledor ill person, typically a family member with some kind of illness (Kim, Chang et al., 2012).

Level of stress caregiver experiences because of providing long-term care to the family member is known as caregiver burden. According to the literature, self-perception, multifarious strain, and over time are the three main characteristics of caregiver burden. The study indicated that lack of social activities, tackling multiple responsibilities, and limited financial resources arethe root causes. The negative effects leads to caregiver burden, poor quality of life and poor physical and mental health (Liu et al., 2020). Caregivers often quit their regular jobs due to takingcare of their closed ones that affect them financially. 18% of caregivers reported that it leads to financial stress (National Alliance for Caregiving, 2005). Caregivers need psychological, physicaland spiritual support as well required self-care, assistance in daily activities, emotional support, and medication monitoring (Toseland et al., 2001). Caregivers have spouses, kids, or relatives, and have to execute multiple roles, and they struggle to balance between these roles whilefulfill caregiving responsibilities (Stamataki, 2014). Caregivers who are involved in long-term careof others typically experience caregiver strain (Park et al., 2012). According to Goldstein et al., (2004), caregivers with limited social networks are more likely to feel burdened. Even in cases where caregiver burden was reduced due to social support, there is an improvement in symptomsrelated to caregiver burden (mood & coping) (Adelman et al., 2014). According to a study by Given et al. (Given et al., 2011) quality of life is affected by caregiver’s level of stress. A caregiver's physical and mental health, their perception of child's condition, have an impact on thechild's physical and mental health (Chou et al., 2000). They give all their time to the child and dueto limited time, caregivers frequently neglect their own health, when they suffer from some healthissue, they do not take medical treatment (Song et al., 2011). Caregivers of developmental disabled children are burdened due to lifelong caregiving. Compared to fathers, mothers felt more burdened as caregivers. Parents of neurodevelopmental disabled children reported higher levels of caregiver burden. Mothers of down syndromes and with numerous other disabilities reported moreburden (Roper et al., 2014). Parental and child-related factors influence caregiver strain. The majority of parents have high level of caregiver load, high levels of social support, moderate to severe sadness, weariness, anxiety, and poor sleep quality. The characteristics associated with theparent's burden are, minimum educational level, disturbed sleep patterns, depressive state, anxiety, limited social support, child's issues, such as treatment kind and duration. 73.5% of the caregiver burden experienced by parents could be described by the effective predictive parameters(Ozdemir Koyu, 2021).

Burnout

Roskam et al. (2017) described parental burnout as a condition of extreme emotional tiredness associated with parental duty, which involves emotional detachment from children and uncertainties about the ability to be a good parent (Roskam et al., 2017). According to the findingsof the research, when parenting-related stress becomes chronic, it can result in parental burnout, asevere tiredness that makes parents feel distant from their kids and uncertain about their parentingskills. According to Mikolajczak, Gross, and Roskam (2018), this kind of burnout increases parental harm, thoughts of harming the child, and neglect.

Globally, parental burnout is on the rise, mostly in societies where parents are held to highstandards. In contrast with depression, parental burnout may have a special impact on a child's development (Yakupova & Suarez, 2023). Among caregivers of CP children, burnout was linkedwith higher level of parental stress and lower level of social support (Seo, Lee, & You, 2017). Anintense tiredness is connected to parental position, emotional distance from kids, and a feeling of inadequacy as a parent are the hallmarks of parental burnout (Mikolajczak, Gross, & Roskam, 2019).

Psychological distress

Mirowsky & Ross, (2002) stated that it is a state of emotional pain denoted by the symptoms of depression, anxiety & stress. The broad idea of dysfunctional psychological functioning in the face of stressful life circumstances is known as psychological distress (Abeloffet al., 2000).

A person is psychologically distressed when mental functioning is affecting the functionality of all other domains of life, i.e. social domain, emotional domain, and occupational domain. Depression, anxiety, and stress are manifestations of psychological distress (Cairney, etal., 2007). Psychological distress is mostly caused by stressful events that affect an individual's physical or mental well-being. Adapting, coping, and battling life's challenges in the form of psychological distress are typically observed following significant stressful events. One of the main causes of psychological distress is the incapacity to manage these pressures and emotional issues (Horwits, 2007).

Psychological distress is characterized by feelings of anxiety, melancholy, irritability, self- consciousness, and emotional vulnerability. It is widely associated with physical morbidity, decreased life quality and duration, and higher health care utilization (Lahey,2009).

The complex coexistence of depression, stress and anxiety is psychological distress. A complicated and multifaceted concept, psychological distress is defined as the existence of internalor external stressors that result in an adverse psychological state and high levels of emotional fatigue. The symptoms of sadness, anxiety, and stress are all considered psychological distress (Varela, Pereira, Pereira, & Santos, 2017). Stress, strain, and discomfort are frequently present inthe context of psychological distress, which is rarely characterized as a separate category. This causes uncertainty for caregivers who are trying to provide care to the patients (Rinder, 2004).

Sense of Coherence: Components of sense of coherence (SOC) are understanding, managing, and meaningfulness. It indicates an individual's ability to cope with daily stressors of life (Super et al., 2016). Self-acceptance, personal development, a sense of autonomy in one's thoughts and actions, the capacity to successfully manage activities, and meaningful parts of life are all components of psychological well-being (Ryff & Singer, 2008). Sense of coherence, is strongly correlated with psychological features, including stress and behavioral elements. Sense of coherence scale is only useful predictor for health that is assessed by adding psychological components (Flensborg-Madsen et al., 2005). SOC is highly connected with the psycho-emotionalresistance resources (Volanen et al., 2004). The SOC theory is helpful in understanding the psychological adaptation in caregivers of intellectually disabiled (Olsson et al., 2002).

The components of the sense of coherence include the capacity to comprehend life's events (Sense of comprehensibility), the sense of manageability, and the sense of meaningfulness. It hasbeen demonstrated that sense of coherence is valid, dependable, and applicable across cultural boundaries (Eriksson & Lindstrom, 2005). Rather than being a fixed personality trait, the sense of coherence is better understood as an ongoing process (Eriksson & Lindstrom, 2005). According toresearch, the sense of coherence may develop throughout life and become more prevalent as peoplebecome aged (Nilsson et al., 2010). Sense of coherence is also generally greater in men than females and inversely correlated with depressive symptoms (Dezutter, Wiesmann, Apers, & Luyckx, 2013). Having a strong sense of coherence helps people gather the tools they need to dealwith stress and adapt to change (Mittelmark et al., 2022). The attributes of the sense of coherenceare manageability (behavioral element), meaningfulness (motivational element), and comprehensibility (cognitive element) (Griffiths et al., 2011). The idea of "comprehensibility" relates to the process of making sense of both internal and external components through rationalization, which makes the components predictable or makes it possible to use problem- solving techniques. The sense of whether the difficulties faced are considered worthwhile is knownas meaningfulness (Januszewski et al., 2011). Salutogenesis, according to Schnyder et al. (2000) is centered on preserving health in the face of unfavorable stresses. Salutogenesis is concerned with the causes and assets of health.

The Salutogenesis model centers on SOC, which is shaped by an individual's experiences in life. As a result, it addresses the elements and resources that contribute to good health and wellness. General resistance resources (GRR) are tools that people utilize to build their sense of coherence and are strategies they employ to reduce stress during difficult situations (Bhattacharya et al., 2020). GRR include money, knowledge, self-esteem, and social support or support networks (Vaandrager, 2013). Braun-Lewensohn and Mayer (2020) elaborate that sense of coherence is an appraisal of the environment to utilize the available resources and to cope witha stressful event or situation. (Lindstrom et al., 2006). Sense of coherence is an individual’s abilityof being resilient when facing stressors. The sense of coherence measures the ability to utilize the proper coping strategies. Individuals with high scores in SOC, effectively apply strategies to encounter stressors, while individuals with low sense of coherence show different response (Schnyder et al., 2000).

Sense of coherence worked as a mediator in enhancing wellbeing of the individuals. Mediation analysis indicated that sense of coherence was directly related to the mental health components. Sense of coherence is a process that effect the mental health, which has an impact onwellbeing (Ericksson, 2022). It was concluded from Jiang Qianjin’s stress system model that sense of coherence is a potential mediator. Model proposes that there are many mediating variableslike sense of coherence, social support, psychological factors between stressors and stress reactions(Qianjin, 2005).

Social Support: The support by the social settings in the surroundings of any person is their social support. The environmental structural measures address social support as basic elementfor existence. The functional dimensions of support exemplify the stress-buffering concept, while structural support demonstrates a linear relationship with quality of life. (Helgeson, 2003). Parentalpsychological health is impacted by the social support they receive from the environment. The psychological health of parents are effected by their children's dependence on them, and social support from friends and family (Raina et al., 2005). Receiving support from others in one's immediate vicinity, such as family, friends, and coworkers, is another definition of social support(Schwarzer et al., 2005).

Close and caring relationships, health, and well-being is definitive across all stages of the human life cycle. However, there is a lack of comprehensive understanding on the precise mechanisms by which close relationships contribute to the enhancement of overall well-being (Feeney et al., 2015).

Social support is a multifaceted concept that may be examined from various angles. Recognizing the construct's bi-directional nature and drawing conclusions from a range of disciplines can aid in mapping it. The process of becoming bi-directional necessitates paying attention to moderators like gender, cultural shift, and personal growth in addition to the dynamic between the support provider and the recipient (Sarason et al., 2009). Previous research findings indicate that parents' attitudes about their child's disability have a significant impact on the child'spsychological well-being. While some parents view their disabled children favorably, they may choose to nourish differently from other parents. The majority of parents believe that up bringinga child with cerebral palsy can be demanding, stressful, and dependent on social assistance. In CP, severe parental distress and lack of social support are associated with a higher level of disability level. Parental distress and social support have a negative correlation (Al-Gamal & Long, 2013).

Social support mediated the negative effect of burnout and effect on health of the individual(Ruisoto et al., 2021). Mediation analysis suggested that social support partially mediated the relationship between caregiver burden and quality of life. It revealed that social support is an important factor (Marsack-Topoleweski, 2021).

Stress Buffering Model: Cohen's (2004) Model states that social support plays a significantrole in reducing the negative effects of stress on an individual's health. Social support lowers the harmful impact of stress by assisting people in maintaining or regaining their strengths, especially when they are experiencing difficult life events or are under stress. Literature supported the contextthat social support mediate between burnout and psychological well-being. Social support helps to reduce life exhaustion and increases mental well-being. Consequently, social support improves people's mental health, including psychological well-being, in addition to assisting in thereduction of life stressors (Rehman et al., 2020).

The Independent Model given by Ensel and Lin (1991) suggested that social support, regardless of the degree of stress experienced, might benefit people by enhancing their well-being or by protecting them against distres. Wheaton (1985) provides evidence that social support functions as a stand-alone stress reducer. On the other hand, feeling alone could lead to discomfortif there is a perception of a lack of social support, perceiving lack of social support may increase the likelihood of distress (Segrin et al., 2003).

Bronfenbrenner’s, (1979) socio-ecological model of health asserts that there are several layers that affect an individual's health. Personal basis, inter-personal relationships, social factors,organizational environment, and government-based aspects are important. Using this socio- ecological model it was studied that theoretically, the characteristics of the caregiver, interpersonalrelationships, social support, and the supportive environment all have an impact on the caregiver burden (Vadivelan et al., 2020).

Mental wellbeing

The capacity for creativity and adaptability in navigating life's ups and downs is a sign of mental well-being. It concerns with our feelings and opinions. Understanding our own emotions and perspectives as well as those of others is necessary for it. Control over emotions and related behaviors are necessary for this. With this knowledge, people manage stress and build wholesome relationships (Peterson, 2018).

Tripartite Model of subjective wellbeing describe wellbeing as person's quality of life in terms of three elements, life satisfaction, positive and negative affect (Diener & Ryan 2009).

Positive psychological functioning, positive interpersonal relationships, and self-realization are generally acknowledged as expressing two (a) the subjective experience of happiness (the impact)and enjoyment of life; and b) both of these viewpoints. The second one comprises competence, self-acceptance, autonomy, pleasant interpersonal interactions, and the capacity to grow personally(Greenberg & Seltzer, 2011).

The cultivation of one or more of the five components, positive emotion, engagement, relationships, meaning, and accomplishment, makes up wellbeing (**PERMA Wellbeing Model**). According to Forgeared et al. (2011), these five components represent the exact representation ofwhat people seek out for their own sake. Parents of children with cerebral palsy (CP) have significantly worse psycho-social well-being. They also report poor satisfaction in life and higher anxiety and depression levels (Cheshire et al., 2010). The delivery of rehabilitation services has undergone a paradigm shift in recent decades, with the family-centered approach emerging as the"gold standard" model of care (Kuhlthau et al., 2011).

Positive Psychotherapy

The humanistic and psychodynamic approaches for diagnosis and treatment have influenced the relatively new therapeutic method known as positive psychotherapy (PPT). Its main goal is to help people to shift their attention from what they perceiveas "wrong" or their negative traits to their positive and desirable traits. Therapeutic approach that aims to realign the therapeutic approach is positive psychotherapy (Rashid & Seligman, 2018). Itsgoal is to support individual's in using inner resources to overcome obstacles, comprehend and recognize areas of growth, and work towards resilience and improved wellbeing (Rashid, 2015).

Martin Seligman's Positive Psychology

Martin Seligman was originator in the field of positive psychology. According to Seligman's original theory, people have three essential psychological needs: need of experiencing pleasant emotions, participate in meaningful activities that give their lives meaning and purpose, and maintain healthy interpersonal relationships. Thereafter, two more demands were identified: pursuing and savoring successfulness and accomplishments, and identifying meaning and satisfaction in our work (Seligman, 2011).

Theoretical Perspective

There are five fundamental theories behind positive psychotherapy in enhancing wellbeing. First is **self-determination theory, which** elaborates that growth and development are driven by three fundamental psychological demands that all people have: connectedness, autonomy and competence (Deci & Ryan, 2009). Second is b**roaden & build theory**, which describes how happiness emotions increase a person's repertoire of thoughts and actions, which gradually increases their personal resources. Positive emotions broaden thought processes and build personal resources. For disorders like depression or anxiety, fostering positive emotions can counteract negative thought patterns and improve resilience. (Fredirikson, 2013).

Third is w**ellbeing theory,** Seligman's attempts to address these important topics with hisPERMA theory of well-being. Positive emotion, engagement, relationships, meaning, and accomplishment are the five building blocks that facilitate flourishing (Seligman, 2011). Fourth is **strengths theory** (Practor et al., 2011) based on the concept of inner strengths an individual have.When combining all the four theories the ultimate result will be the growth of individual's well- being and the chance to prosper a person's life. Focusing on caregiver's strengths and positive emotions heighten sense of purpose and wellbeing (Seligman & Csikzentmihalyi, 2014). Fifth is **mindfulness-based interventions**, based upon cultivating mindfulness that reduce stress and enhance wellbeing (Kobat-Zin, 2003).

Lyubomirsky and Layous (2013) proposed the positive-activity model to explain how and why engaging in positive activities can improve wellbeing. They concluded that engaging in such activities promotes the satisfaction of fundamental psychological needs, including those for autonomy, connectedness, and competence, as well as an increase in positive emotions, thoughts, and behaviors. As per their model, the degree to which well-being is improved will be determined by characteristics of the activity (like social support or dosage) as well as characteristics of the individual (like motivation or efficacy beliefs).

Positive psychology is the study of three domains related to three facets of life. Positive feelings about the past, present, and future are the focus of the first domain, "pleasant life." Contentment, closeness, and mental tranquility are among the positive feelings of the previous life.Hope, optimism, and trustfulness are the positive feelings regarding the future. A "pleasant life" isdefined as a life that has a net rise in happy feelings and a net decrease in negative ones. The term"engaged life" relates to the second domain, which emphasizes virtues and strengths that are positive aspects of each human. Strengths are those attributes, like tenderness, common sense, andthe ability to love and be loved, people from all backgrounds and countries have always valued that. "Meaningful life" is the third domain of positive psychology, focusing on the sense of service and belonging to positive organizations and communities. The idea behind this domain isthat positive emotions and traits can flourish in these kinds of environments, leading to a meaningful existence (Seligman et al., 2005).

Within positive psychology, positive psychotherapy (PPT) is an attempt to expand the application of conventional psychotherapy. Its fundamental idea is that to treat symptoms & to treat psychopathology and it addresses the positive resources of the client, such as positive emotions, character traits, and meaning. Putting an emphasis on positive resources could be mostbeneficial for patients during difficult times rather than easy ones. In psychopathology there are more focused towards negatives. It is ingrained in the mind to pay attention to and to react towards positives. (Rashid, 2020). Positive psychotherapy integrates symptoms with strengths, weaknesseswith values, and hopes with regrets in a way that is more balanced than other psychotherapy approaches (Rashid, 2015).

In contrast to conventional depression interventions, positive psychotherapy (PPT) enhances positive mood, engagement, and meaning instead of immediately focusing depressive negative symptoms. It is considered life-changing" therapy. When positive psychology based interventions were given, it reduced depressed symptoms for a minimum of six months as opposed toplacebo interventions, which had effects that vanished in less than a week. All of these findings has potential benefit of adding exercises that specifically promote positive feeling, engagement, and purpose to depression treatment (Seligman, Rashid & Parks, 2006).

The foundation of positive psychotherapy was the PERMA model. Each component's initial character creates the well-known acronym "PERMA," which also denotes the PERMA model, also known as the flourishing model (Seligman,2011), a novel theory of psychological health. According to Rashid and Seligman (2013), PPT makes the assumption that a deficiency or absence of these five components can be viewed as a pathogenic agent that causes depression.

Until now Positive Psychotherapy (PPT) as a standalone cohesive treatment model using the PPT manual (Rashid & Seligman, 2018). Twenty studies have tested it in an effort to gather empirical proof of its efficacy and effectiveness. Research has already been done on a range of clinical conditions. A range of clinical disorders, including depression, anxiety, psychosis, borderline personality disorder, and nicotine dependence, were the focus of the majority of group-based studies (Seligman, Rashid, & Parks, 2006).

Above-mentioned theories support the assumption that positive psychotherapy is effectivein promoting wellbeing among caregivers by nurturing positive emotions, enhancing self-relianceand self-determination, building social relationships and reducing psychological problems throughmindfulness.

Keeping in mind the all perspective mentioned above, it was assumed that there must be some relationship exist between caregiver burden, burnout, psychological distress, social support,sense of coherence and wellbeing among caregivers of CP's. It was elaborated above that caregivers of cerebral palsy children required some rehabilitation also. Through positive psychotherapy, the psychological issues of the caregivers of CP's can be addressed in a positive way.

Literature Review

Numerous psychosocial processes are present in each person to modulate the effect of stress on health and well-being. There are endless range of situations exist in which stress can ariseand be managed, depending on the attribute of the caregiver, the person receiving care, past experiences, and the economical, community based cultural contexts in which they live. However,the role itself has consequences that contribute to the explanation of some typical patterns of stress and stress outcomes (such as a decline in emotional well-being and a worsening self-concept) in caregivers. People usually have several roles in their lives, like family role and role in offices or at work. Taking the job of a caregiver for a child with a long-term impairment involves rearrangingpriorities and refocusing energy, as noted by Eisenberg & Scarr (1993). Five themes emerged from research on parents and caregivers of disabled children: (i) the stress of caring; (ii) the detrimental effects on caregiver's health; (iii) sharing the load; (iv) apprehensiveness; and (v) caregiver coping techniques (Liew et al., 2003). From the caregiver's perspective, 41% elaboratedthat throughout the previous year, their health had gotten worse. Caregiver health may benefit frominterventions that address these problems (Murphy, Christian, Caplin & Young, 2007). Accordingto assessments, women and individuals who care for their children for longer periods hadworse mental health (Byrne, Hurley, Daly & Cunningham, 2010).

In a research on caregivers of cerebral palsy, it was analyzed that caregivers of CP's experienced moderate to severe psychological and social problems. 42% parents of CP's were considered burdened (Parkes & White et al., 2008). There is an increase in anxiety and depressive symptoms in parents with CP due to child's conditions. The frequency of mental problems in parents are influenced by variables including the socioeconomic status and level of functionality of the disabled child (Barreto et al., 2020). Dahlbeck's (2009) research indicates that CP’s parents experience higher level of stress. Both mothers and fathers feel stressed, although women' levels were higher than males' (Petersen et al., 2020). Parents of cerebral palsy patients may experience increased stress due to the difficulties posed by their children's limited activities and participation restrictions (Park & Kim, 2020).

The hallmark of cerebral palsy syndrome is decreased motor function; many children withthis developmental illness are having intellectual, sensory, and communication deficits, as well ascomplex limits in self-care duties. Providing care for a young CP child is a difficult aspect for parent, when a child has functional limits and having long-term dependency. Effectively managingchild's chronic health issues and at the same time balancing the specific care-giving duty with the demands of daily life is the biggest challenge parents are facing. CP child’s behavior and caregiving demands has significant impact on the psychological and physical well-being of caregivers, specifically on mothers. Behavior issues in children is a significant predictor of the psychological problem in parents. Demands of providing care had a direct impact on the caregiver’s physical and mental well-being. Parents had difficulties because of the daily-based child's practical demands. There is a need of social support for caregivers. Strategies are needed for maximizing caregiver mental health concerns in families having cerebral palsy include stress management and self-efficacy approaches, as well as supports for behavioral control and everydayfunctioning activities. There is a need of family-centered bio-psycho-social frameworks for caregivers rather than merely technical, brief rehabilitation interventions that are only child- centered. Giving parents behavioral and cognitive coping mechanisms to control their child's behavior may have a supporting role on caregiver health outcomes in the long run (Raina et al., 2005).

Caregiver burden in caregiver’s of cerebral palsy children: Caregiver burden (CB) encompasses issues that are social, psychological, emotional, physical, and financial (Kasuya,Polgar-Bailey, Takeuchi, 2000). It was discovered that parents of CP children with low functionalstatus have greater levels of caregiver burden. According to Kaydok, Solum, and Cinaroglu (2020),mothers of children with cerebral palsy who also has secondary difficulties has much higher caregiver burden than mothers of children without such problems. Social support, which is a significant element in the stress that mothers of CP’s face, might be viewed as an intervening variable that can help to lessen that burden (Kim et al., 2009). Parents of intellectually disabled CPs & hearing impaired in Pakistan have reported caregiver burden. Parents of children with intellectual disabilities face greater responsibility and stress because of cognitive deficiencies (Imran & Waqar, 2020). In caregivers of cerebral palsy, the caregiving burden is a major ignoredissue. Along with the psychological problems, the parents experience social isolation, stigmatization, and restricted social activities. They become source of conflict within family andsociety. They experience bodily stressors, body aches, pain in the musculoskeletal system, loss ofsleep and high blood pressure. Consequently, it is imperative to comprehend and tackle the often-overlooked issue of caregiver burden (Thrush & Hyder, 2014).

Due to the intense physical demands of providing care, the mothers experience aches and pains. They also experienced guilt due to child's state of illness. They were severely financially burdened because of their inability to balance job and family obligations. They also felt that there was lack of information and awareness regarding their child's treatment alternatives. In termsof interpersonal support, the mother's husbands and relatives did not provide them with the necessary care. In addition, they had to endure the negative consequences of their husbands' drunkenness and domestic abuse. They were forced to make accommodations for their other children who are without cerebral palsy as well as for the other members in the family. The mothersfelt alone and unsupported by the people in the community. Due to not attending social-gatherings and isolation they are experiencing discrimination. Environmental stressors, such as the absence of inclusive public setups, limited public transports, and unwelcoming work schedules and surroundings weresignificant sources of hardship. The mothers believed that there is no program for contacting withsome other mothers bearing a comparable burden and the government's assistance for disability benefits was woefully inadequate. In a middle and low-income countries, caregivers of CP's face particular challenges that must be addressed to ameliorate the quality of life. These challenges include stigmatization, limited finance and non-inclusive public policy (Vadivelan, Sekar et al., 2020). Five themes emerged from research on parents and caregivers of disabled children: (i) the stress of caring; (ii) the detrimental effects on caregiver's health; (iii) sharing the burden; (iv) apprehensions; and (v) caregiver coping techniques. 41% of caregivers reported worse health throughout the previous year. Caregiver health may benefit from interventions that address these problems (Murphy, Christian, Caplin & Young, 2007). According to assessments, women and individuals who care for their children for longer periods had worse mental health (Byrne,Hurley, Daly & Cunningham, 2010).

Caregiver burden & Positive Psychotherapy

It is conceivable that character strengths may also be connected to other reactions to stress, such as caregiver burden, given that some character strengths have been linked to lower stress and fewer psychological issues, such as depression and anxiety. Caregiver burden has a negative correlation with wellbeing and a positive correlation with anxiety and depression. Moreover, it has been proposed (Duan 2016; Li et al. 2017) that character strengths might serve as buffers against stress and mental health issues. Therefore, it's feasible that some character traits could also act as a buffer against caregiver stress, meaning that caregivers who exhibit these traits would be less stressed. Previous studies' findings suggested that hope-based interventions could increase feelings of positivity and lessen perceived negative effects.

Burnout in caregivers of cerebral palsy children: Primary caregivers of cerebral palsy patients reported burnout due to child's difficulties as compared to non-parents of challenged children. It has been determined that the following elements contribute to caregiver burnout: children's ambulatory status, speech difficulties, father's' lack of interest, and the existence of chronic disease and suffering. The psychological & physiological well-being of caregivers has a direct negative impact on the child (Demirhan et al., 2011). The statistical significance of emotional exhaustion and personal accomplishment ratings derived from the burnout questionnaireindicated that caregivers of cerebral palsy (CP) children having high levels of burnout, which ultimately leads to an unavoidable declination in quality of life (Basaran et al., 2013). In Pakistan, previous research reported the connection between burnout, mental health issues, and psycho social stressors in CP's caregivers. The findings revealed that among CP's mothers, psychosocialstressors like burnout, poor social support, and poor self-regulation was positively correlated withdepression, stress, and anxiety (Naeem et al., 2018).

A particular syndrome known as "parental burnout" is seen due to prolonged exposure to ongoing parenting stress. It includes three aspects: a sense of helplessness in parenting duty, an intense tiredness connection to one's own role, and emotionally distant from children. In order to improve preventative and intervention strategies, health care professionals should keep in mind the relevant parental burnout related issues. The association between parental burnout and multiple personality characteristics from five categories (sociodemographic, child particularities, stable parent attributes, parenting, and family functioning) was examined. They first looked at the degree to which these potentially significant risk factors were correlated with burnout in 862 parents. Next, they looked at how much of the overall explained variation and their respective predictive weights were for burnout. According to the findings, parenting a disabled, family functioning, and steady parental qualities are the threekey elements that predict parental burnout (Mikolajczak, Raes, Avalosse, & Roskam, 2018).

A population of 69 mothers of disabled were analyzed to examine the association betweenmajor factors contributing to parental burnout. Personal resilience was more predictive of helplessness than coherence, as a measure of tiredness. (Kwiatkowski, Piotr; Sekulowicz, Malgorzata, 2017). According to research, parental burnout is a severe fatigue that makes parentsfeel aloof from their children and doubtfulness of their parenting skills can develop when the everyday stress of parenting turns chronic. Parental neglect, harm, and thoughts of being escapedcan all increase due to this kind of burnout, which can have detrimental effects on both the parentand the child (Mikolajczak, Gross & Roskam, 2019).

In a research on 115 patients, of which 56.5% were boys and 43.5% were girls. Mothers accounted for 96.5 percent of the 111 children's primary caregivers. Disabled child include hemiplegia (20%), tetraplegia (43.5%), and diplegia (27.8%). Burnout inventory sub dimensions measurement scores were as depersonalization: 3.81, emotional exhaustion: 12.21, and decreasedpersonal accomplishment: 23.25. Emotional exhaustion was associated with both chronic illness (31.3%) and pain (69.6%) and the children's ability to walk. Depersonalization and fathers' lack ofinvolvement (27%) was associated. Emotional fatigue and depersonalization was associated with speech disorders. Factors that contributed to caregiver burnout included chronic pain & illness, fathers' negligence, children's walking status, and speech disorders. The child is impacted by the caregiver’s physical and psychological well-being (Demirhan et al., 2011).

The study's findings showed that those mothers of children with medical complexity who were actively participating in particular forms of social support were able to lessen their feelings of loneliness and parental stress. The aforementioned results recommend that community-based social support is essential to decrease parental burnout among mothers of mentally disabled children (Yamoah & Brown, 2023).

Positive psychotherapy & Burnout

Empirical research has demonstrated that positive psychology interventions, or PPIs, significantly improve people's mental health and well-being. To help people cope with psychological states like stress, burnout, and anxiety, these techniques can be used to emphasize and amplify positive emotions (Meyers, van Woerkom, and Bakker Citation 2013).

According to earlier studies, positive psychological interventions can improve an individual's wellbeing and reduce burnout (Su-Keene & DeMatthews, 2022).

Sense of Coherence in caregivers of cerebral palsy children: Parents of children with cerebral palsy reported lower levels of sense of coherence and pathetic meaningfulness in their lives. Avoidance, wishful thinking, and resignation were more common among parents with lowersense of coherence. Additionally, they used distraction as a type of avoidance-oriented approach and the emotion-oriented coping (Dabrowska, 2007). According to earlier studies, parents of disabled children with poor sense of coherence more likely to experience depression (Olsson &Hawang, 2002).

The study found a connection between fathers' sense of coherence and the kind of developmental problem their child had. Fathers with high SOC level were more likely to utilize playful problem solving, positive reappraisal, and confrontation, whereas fathers having low SOCmostly use avoidance tactics. The study's findings suggest that caring for a challenged child may reduce self-esteem, which may make it harder to handle stress (Gugała et al., 2019). Additionally,they used distraction as a form of avoidance-oriented style and the emotion-oriented approach. Findings demonstrated that caring for a CP child is a possible source of chronic burden, which could lead to diminish state of consciousness and low level of sense of coherence (Dabrowska, 2007).

Sense of coherence, psychological distress, burnout & wellbeing

Sense of coherence worked as a mediating role in enhancing wellbeing of the individuals.Mediation analysis indicated that sense of coherence was directly related to the mental health components. It was concluded that sense of coherence is a psychological process that improves mental health, which in turn affects physical health (Ericksson, 2022). Higher sense of coherencelevel was linked with improved mental health outcomes and lower levels of subjective caregiver strain. Findings imply that sense of coherence is a critical factor in determining caregiver wellbeingand may shield caregivers from severe psychological distress and massive caregiver burden (Del-Pino-Casado et al., 2019). Higher sense of coherence level is linked with lower risk of a number of health issues and may shield people from stress. (Jaracz et al., 2012). Sense of coherence seemsto be a significant reaction in reducing perceived burden, particularly in cases of depression symptoms (Chumbler et al., 2004). The functional limitations of a patient in their everyday activities is a reliable indicator of the caregiver's workload. High coherence appears to provide abuffer against the load. These findings may suggest that, despite caregiving responsibilities,

caregivers who find their work fulfilling & controllable were less adversely affected by caregiving(Potier et al., 2018). Previous research reported that sense of coherence worked aa a mediating role between psychological burden and burnout (Wilczek-Rużyczka et al., 2019).

Positive psychotherapy & Sense of coherence

An investigation was conducted into the effects of positive psychotherapy on the psychological well-being, resilience, sense of coherence, and self-efficacy of nurses working in social security hospitals. Positive psychotherapy dramatically improved the psychological well-being, sense of coherence, and resilience in nurses (Asl & Parooie, 2021).

Social Support in caregivers of cerebral palsy children: Social assistance plays a crucialrole in mitigating and preventing the stressful circumstances that families facing while caring for CP's. According to the study, most parents of CP's with high stress level also felt that their children received little social assistance. As a result, previous research may offer recommendations to healthcare professionals on how to best support individuals in adjusting the challenges (Alias & Azzizan, 2020). Nonetheless, it appears that not much work has been done to record primary caregivers' experiences over the course of a diagnosis. The findings of present research will affect policy in terms of enhancing the welfare of primary caregivers, particularly mothers of cerebral palsy children.

As compared to mothers of bedridden CP children, the mothers of CP’s with cognitive deficits and who can walk experienced greater strain. The results make clear that the mother's perception of burden can be significantly decreased by supports like brief stays and home care (Moriwaki et al., 2022). According to Skok et al., (2009), social support was considered to be having mild to moderate role in mediating the effect of stress on mothers of CP’s.

Thus, it was determined that informal caregiver’s quality of life, social support system, andburden level were all significantly impacted by raising a child with cerebral palsy. In addition, theunpaid caregivers experienced a high degree of life satisfaction, excessive strain, and moderate level of social support, mostly from family and close friends. Therefore, it was suggested that researchshould focused on assessing the degree of burden, social support, and quality of life between caregivers of healthy children and informal caregivers of patients with cerebral palsy (CP) (Ahanotu et al., 2018). Overall, family caregiver expressed high levels of satisfaction while expressing significant levels of burden on their daily lives. Rural caregiver reported more family support than urban caregivers did, but they also saw a greater negative impact on their income. The study's findings raise concerns about the financial status of older women who provide care as wellas about the expectations of traditional family structures in both urban and rural settings (Ehrlich et al., 2015).

The study found that the relationship between parenting stress and life satisfaction was mediated by family and friend support, but not by significant-other support. According to these findings, mothers of CP’s may find that their level of life satisfaction increases when they receivemore support from friends and family and experience less stress as a parent (Wang, Huang, & Kong, 2020).

Data from 181 mothers of CP children (under the age of 18) were gathered through surveys.Mothers' level of impairment, her health, and her social support system were all highly significantindicators of their parenting stress. Mothers who struggle greatly to care for their children with cerebral palsy must be understood and acknowledged for the psychological and physical suffering they endure. Furthermore, the government must focus on social responsibility for the parenting ofits citizens by creating safety net programs and making them widely accessible to support the mental and physical well-being of mothers of children with cerebral palsy (Jeong et al., 2013).

Social support was considers to be the mediating factor in previous researches. Social support is mediating the negative effects of burnout on mental health (Ruisoto et al., 2021). Socialsupport is the basic element in the life of an individual, individual want to be nurtured, valued andrespected by those who exist around him, like family, friends, and other community member (Rehman et al., 2020). Stress is the major element of burnout, mediating effects of social support identified that stress has a significant effect on social support. (Jun & Lee, 2017). Burnout was negatively connected with psychological well-being. Social support, as a mediator, make a link between burnout and psychological well-being (Koniarek & Dudek, 1996). Social support is a mediating factor that can help to reduce stress level and help in finding effective coping strategiesto overcome the difficult situation (Yasin & Dzulkifli, 2010).

Positive psychotherapy & Social Support

Positive psychotherapy places a strong emphasis on the value of social support for mental health and wellbeing. PPT views social ties as critical to fostering resilience, positive emotions, and overall life satisfaction. PPT and social support are related in this way: the main theory PERMA Good psychotherapy relies heavily on relationships (Rashid & Seligman, 2018). Recent years have seen a rise in interest in positive psychotherapy because of its capacity to promote positive interactions and improve people's capacities. A prior study looked at the effects of a positive psychotherapy program on resilience, positive affect, interpersonal relationships, and mental health recovery in community-dwelling individuals with schizophrenia. Positive psychotherapy improved social support (Kim & Na, 2017).

Psychological distress among caregivers of cerebral palsy children

Research shows that caregivers experience more psychological distress than individuals who are not caregivers (Forstmeier et al., 2015). Extended periods of caregiving result in higher levels of distress for caregivers, women experiencing higher levels of anguish than men do. The likelihood of experiencing distress gradually rises in proportion to the weekly amount of time spentproviding care, as compared to those who do not. Negative impacts on the mental health of highlyengaged caregivers are particularly noticeable at the beginning and end of their caregiving episodes. Continuous caring makes them more vulnerable to recurrent distress, and negative healthconsequences persist after their caregiving episodes conclude. When compared to non-caregivers,a number of caregiver groups have psychological health disparities. These include mothers who are caring for a sick or impaired child (CP) and those who are taking care of a spouse or partner (Hirst, 2005).

Large segments of the population who provide care for others experience negative effects,as evidenced by the prevalence of negative psychological effects among caregivers. For instance,in NSOC (Wolff et al., 2014), 26% of caregivers and 29% of those caring for the most disabled older adults reported significant emotional difficulties. Anxiety and depression symptoms were reported by 13% of all caregivers and 15% of those taking care of the most disabled seniors. Studies that track the effects of caregiving on a person's psychological health over time indicated that there are positive and negative effects at different points in the care giving process, though there may be vulnerable times when a person is most likely to experience increased psychologicaldistress. According to longitudinal study on caregivers, it was reported that a decline in mental health has a strong correlation with physical sickness. In additional research, depressed symptoms have also been linked to worse outcomes for individuals with preexisting cardiovascular illness, a higher risk of all-cause death in hospital inpatients, and an increased risk of cardiac issues (Cannuscio et al., 2002). Study reported that primary stressors related to caregiving were associated with depressive symptoms. Taking a caregiver role is associated with an elevated risk of developing depressive symptoms later in life (Dunkle et al., 2014).

Because positive psychological impacts are linked with low level of burden and depressionas well as greater general mental health, they may be able to offset the negative effects of caregiving. In contrast to Kim and colleagues (2007), who discovered that caregiver's' self-esteemwas linked with low level of psychological distress and better mental wellbeing. Van der Lee andcolleagues (2014) found that sense of competence or self-efficacy was connected with lesser caregiver burden and greater mental health. Women who spend numerous hours each week providing care to a patient and who exhibits difficult behavioral symptoms from children may be particularly vulnerable. In order to pinpoint the precise range of risk factors that exist for any givencaregiver, multidimensional assessment is required. Similarly, interventions must be customized for particular caregiver population (Schulz et al., 2016).

Research reported that severe disability due to cerebral palsy was associated with high mental distress in the caregivers and associated with low social support. Parental stress & depression was negatively correlated with social support among parents of CP's. The most psychologically distressed parents were those who were least well supported (Gamal & Long, 2012).

Taking care of a normal child requires a significant investment of resources, but taking care of a disabled child frequently puts excessive demands on these resources. The caregiver's psychological and physical well-being is effected by these responsibilities. Findings suggest thatparents of children with CP are more likely to experience physical and psychological health issues,even though many families manage well despite the additional challenges of caring for a child witha disability. Caregivers of CP's also have money related problems, which is also a contributing factor of caregiver burden. The significant link between caregiver's health and child impairment should be known to doctors and other medical professionals. The wellbeing of caregiver's and their families is expected to be enhanced through family-centered policies and services that specifically take caregiver health into account (Brehaut et al., 2004). According to research, parents who care for a child with cerebral palsy experiencing miserable psychosocial well-being. So,to enhance parental well-being there is an immediate need for psycho-social based interventions(Cheshire et al. 2010).

Psychological Distress & positive psychotherapy:

Positive psychotherapy aims to reduce psychological discomfort by helping individuals to recognize and capitalize on their inherent strengths. While happiness, fulfillment, and a sense of purpose in life are prioritized, it also acknowledges the significance of negative experiences. PPT is an effective tool for managing issues like stress, anxiety, and depression because it fosters resilience and emotional well-being. According to studies, PPT can lessen psychological suffering by encouraging happiness, life involvement, and a sense of achievement. Shifting the focus from merely treating symptoms to thriving and flourishing is the aim of the therapy (Rashid & Seligman, 2018). Following positive psychotherapy, patients with acquired brain injuries reported less psychological distress.

Patients with acquired brain injuries experienced less psychological distress after receiving positive psychotherapy. The outcomes showed that participants found this therapy to be acceptable and that it was feasible to administer with high fidelity. (Cullen et al., 2018)

Mental wellbeing

According to the previous study's findings, it was seen that mothers of children with cerebral palsy have poor cardiovascular and musculoskeletal fitness and are frequently to eventually acquire chronic illnesses. Psychological wellbeing of the caregivers is also poor. Clinical care must to be given to mothers' psychological well-being as well. Additionally, it is determined that raising a disabled child necessitates the highest standards of endurance, organization, and general wellbeing for the caregivers. Better care for the CP child and better treatment adherence would result from improved physical and mental health of the carers (Shaik,2023).

Positive psychotherapy & mental wellbeing

Positive psychotherapy is based upon the PERMA theory, which emphasis on mental wellbeing. So the basis aim of the therapy is to enhance mental wellbeing of the patients. Previous research reported that positive psychotherapy enhance mental wellbeing of psychosis patients (Schrank et al., 2015). Positive therapies have also been repeatedly demonstrated to be successful in raising quality of life, optimism, hope, and happiness in individuals with breast cancer (Casellas-Grau et al. 2014), as well as in enhancing well-being and lowering distress in those with clinical illnesses (Chakhssi et al. 2018).

Caregiver’s rehabilitation

Corey and McCurry (2018) concluded that providing care has long-term,lasting implications on the carers' health. Previous studies have shown that in a typical low- and middle-income setting, caregivers of children with cerebral palsy confront unique obstacles. Thesedifficulties include norms, gender, stigmatization, poverty and discriminatory public policies. Toimprove carers' mental health, these problems must be addressed (Vadivelan et al., 2020).Previous research reported that for caregivers of cerebral palsy, systems theory and the strengths perspective were the two theories are the most relevant. The study was guided by systemstheory to comprehend how a child with cerebral palsy functions on a daily basis. The strengthstheory also examined the family's coping strategies and strengths for accepting and managing thechild's impairment, strategies and coping mechanisms utilized by the family to maintain the family’s strength and functionality when the child has cerebral palsy (Keforilwe & Smit, 2021).

Status of Caregivers of disabled in Pakistan

Frequent observations of childbearing practices in Pakistan suggest that a child with a disability is more vulnerable due to stress generatedby the child. It is postulated that this spiral of rising tensions may start long before the child is officially diagnosed with a handicap. According to research, parents who abuse their disabled childmay be responding more to the social exclusion and stigma they experience from neighbors, family, and other acquaintances than to the child's illness. When friends and relatives distant themselves from parents of disabled children, they may find it difficult to find a school that will accept their child or reside in an area with limited social services available to assist with their child's requirements. As a result, parents of disabled children frequently lack social supports (Qidwai, 2018). It's probable that social isolation and pressures created by children combine tocreate stress in a home raising a disabled child. It's also true that not all Pakistani households withdisabled children experience stress, and that some families in the same communities have coping techniques that keep their children from acting out, while other households' children with similar problems have to deal with the burden placed on them. The primary source required is affectionatesupport for the caregivers and other is conventional family support. The family caregivers are heavily burdened by this caregiving burden (Shaji, 2009).

In most households, the impaired child might get less food, medical attention, or other amenities. This can take many subtle forms. For instance, parents or caregivers might wait a few more days before investing limited funds on medication, or the child might eat less or less healthythan their sibling. The family's low socioeconomic standing and the nation's current inflation rate could make things even worse. Neglect of this kind can result in more impairments, creating a vicious cycle of developmental regression where the impaired child get developmentally worse day by day (Qidwai, 2018). Gender may make this kind of neglect even more worse. For instance, in Pakistan, parents tend to spend far more on the rehab of their disabled sons than disabled daughters, even if the prevalence of disabilities is the same for both gender. The obviouscause of these deaths is neglect, which manifests itself as a lack of access to relevant resources, inadequate medical care, or less nutrient-dense diet. Typically, parents in Pakistan keep their children at home to protect them from harm, such as being hit by a cart or mistreated by someonein the neighborhood (Omiegbe, 2023).

However, in a great deal of other cases, even in well-educated and/or porch homes, a childis kept apart because the family is afraid of what other community members will think. Accordingto the treatment described by the locals (non professional), children in certain villages are held inwindowless storerooms, have their hands and feet bound with iron chains, spend the night in scorching courtyards of homes, or spend the night in dark floors, frequently with little to no interaction from family members. It is possible that the neighbors next door are unaware of the child's existence. Parents must be made aware of the need for special schools for their impaired children. For impoverished disabled children in Pakistan, particularly in rural regions, as well as in most developing and underdeveloped nations, begging may be the most common type of employment outside the home. Children with disabilities are frequently utilized as begging machines. Some of them are abandoned by their families to beg on the streets, while others are sold by them to people who maintain stables for deformed kids within formal networks of beggars. In any case, accounts and testimonies from numerous nations suggest that these children are frequently the targets of violence, both from those trying to keep them off the streets and from ordinary people who regard them as easy pickings. However, in more recent times, a discourse centered on rights has evolved to understand "disability" as a socio-political construct. (UKessays,2018).

According to the study, women reported higher levels of stress, especially if they worked outside the home. It is hypothesized that the primary caregiver viewed all forms of support from extended family as a tangible way to reduce stress. The results suggested that in the absence of help, the social and financial toll that dementia takes on Pakistani caregiver families may worsen. This suggests the necessity for multifaceted involvement from the community, government, and nongovernmental organizations in order to create programs for carers that are embedded in Pakistan's filial piety culture. In addition, these tactics ought to be gender-sensitive and prioritizeparticularly vulnerable populations (Qadir et al., 2013).

In Pakistan, there are few and culturally unacceptably trained caregivers. A study evaluatedthe stress levels of senior caregivers and found correlations between the burden of providing careand several attributes of the elderly. The perceived burden of being a caregiver was measured in 350 participants. Women made up the majority of caregivers (68.9%). A perceived care burden scale yielded a positive result for half (50.3%) of the caregivers. The perceived burden of being acaregiver was strongly correlated with financial impact. Higher levels of physical and cognitive dependency put more strain on those providing care. Elderly behavioral problems like and troublein sleeping were associated with higher caregiver burden (Sabzwari et al., 2016).

Between July and September 2015, a teaching hospital in Karachi, Pakistan, carried out a study. The study was open to those over the age of eighteen and who were providing care to familymember, either currently or previously. Due to the high demands and scarce resources of caregiving, caregivers have reported negative effects from their role. Consequently, it is critical that health care professionals investigate, recognize, and assist carers in order to help them better manage the demanding responsibility of providing care (Irfan et al., 2017). Parents with disabled children whether they are mentally challenged or have hearing impairments bear a heavy responsibility of their child. It was also determined that, because of cognitive deficiencies, parents of intellectually disabled bear greater hardship than hearing impaired parents. Analytical research is advised to determine the connection between caregiver burden, children's numerous disabilities, gender variations among caregivers, and caregivers' quality of life. Parents of childrenwith intellectual disabilities have increased stress and hardship because of cognitive deficiencies that result in atypical behavior (Syed, Awan, & Syeda, 2020).

Family caregivers are considered the foundation of the healthcare system in Pakistan Majority of the time; the primary caregivers are the patient's spouse, parents, or closest relatives. Their job is to give the patients long-term, month-to-year-long emotional and physical assistance.The mental, physical, and overall well-being of the primary caregiver may be impacted by this responsibility. Additionally, it may result in both objective and subjective burdens for the entire family, including psychological, physical, and economic effects as well as emotional ones (shame,embarrassment, guilt, and self-blame). Stigmatizing attitudes of society against psychiatric patients and their families can also lead to burden (Imran et al., 2013).

Lluch (2008) created a multi factor model of positive mental health (PMH). According toit, PMH is characterized as a condition in which an individual strives to feel and remain positive as possible as he can in the circumstances in every situation. The six variables that collectively make up the positive mental health concept are personal satisfaction, prosocial attitude, self- control, autonomy, problem solving and self-actualization, and interpersonal connection skills.

Positive Psychotherapy

One of the pioneers in the subject of positive psychology was Martin Seligman. Positive psychology encourages psychologists to view people's skills, talents, and capabilities with acceptance. In other words, it is a scientific investigation into optimal humanbehavior. The study of three domains pertaining to three aspects of life is known as positive psychology. The first domain, "pleasant life," is centered on positive sentiments regarding thepast, present, and future. Among the good memories of the past life are contentment, intimacy, and mental tranquilly. The positive emotions with reference to the future are hope, optimism, andtrust. Overall, living a "pleasant life" raises positive feelings while lowering negativeones. The second is called the "engaged life," and it emphasizes an individual's good traits, such as their virtues and strengths. Strengths are defined as those qualities—like tenderness, common sense, and the ability to love and be loved—that have always been valued by people from all backgrounds and countries. The third is "meaningful life," which focuses on having a sense of purpose and contributing to virtuous organizations and communities. It is the belief that these environments are the ideal places for the development of positive traits and feelings, which in turnleads to a meaningful existence. Together, these are thought to be three paths that lead to happiness (Duckworth, Steen, & Seligman, 2005).

Basic emphasis of psychology is on enhancing human strengths and virtues and creates thepossibilities for individuals to succeed (Seligman & Csikszentmihalyi, 2000). This domain directed towards positive aspects and individual’s abilities and recommend the professionals to consider the positive aspects of their patients that mostly seldom happened in their lives (Seligman, Rashid, & Parks, 2006). Positive Psychotherapy is conceptualized by positive psychology. Two major theories of Seligman are the basic of Positive Psychotherapy, first is PERMA conceptualization of wellbeing (Seligman, 2002a, 2012) and the other is character strengths (Peterson & Seligman, 2004). PERMA is a model that sorts wellbeing into five scientifically measurable components, (a) positive emotions (b) engagement (c) relationships (d) meaning and (e) accomplishment (Seligman, 2012). Gratitude is one of the basic of positive psychotherapy, which create positive emotions by involving the thankfulness of anything we have in our life (Emmons, McCullough & Tsang, 2003). Gratitude can be directed towards specific event or towards set of circumstances (Wood et al., 2010). Research has reported that gratitude based interventions may be beneficial for parental wellbeing (Timmons et al., 2017; Timmons, 2015).

The major focus of the psychotherapy is towards identification of the strengths as well asthe weakness. Therapist created such kind of psychotherapy, which explicitly builds positive emotions, strengths, and meaning in clients' lives to promote happiness. This approach is called positive psychotherapy (PPT). Previous therapies primarily attended to negative emotions and characteristics of clients. Therapy needs to go beyond negatives and should explicitly focus on the positive emotions and strengths of a client. It was believed that PPT is may be an effectivetreatment for many disorders. Results from previous study, concluded that PPT is effectivefor depressive patients (Rashid & Anjum, 2008).

Positive Psychotherapy Interventions

In a variety of clinical settings, positive psychotherapy has shown promise in treating a wide range of mental health issues. PPT uses a variety of interventions, many of which are based on the patient's statements during therapy sessions. The way PPT interventions use creativity and intuition to aid in the healing process is one of their unique features. Another important way PPT helps people connect with their therapeutic journey is through storytelling, and the concept of including the self into the narrative facilitates people's ability to express their experiences, goals, obstacles, and adventures. By using this method, PPT therapists can start making changes or going further into delicate subjects without coming across as "attacking" the patient (Rashid & Seligman, 2018).

Additionally, therapists can assist their clients in finding better balance by reframing their symptoms and experiences in a positive light. People typically stop repeating bad experiences after they learn to accept every part of who they are and start to see the positive side of things (Tugade & Fredrickson, 2004). The particular therapies employed in this process are centered on giving the person the power and means to confront unpleasant or traumatic events, build resilience, and improve their emotional functioning. These include being grateful, forgiving, fostering optimism and hope, being altruistic, concentrating on relationships with improved communication skills, and many more (Rashid & Seligman 2018).

Positive Psychotherapy and mental disorders

A wide range of mental health conditions, such as psychosis (Schrank et al., 2016), suicidal ideation (Johnson et al., 2010), depression (Seligman et al., 2006; Carver, Scheier, & Segerstrom, 2010), and borderline personality disorder (Uliaszek, Rashid, Williams, & Gulamani, 2016), have been shown to benefit greatly from positive psychotherapy (PPT). PPT's emphasis on strengths and cultivating life's positive aspects is effective for many mental disorders. Positive psychotherapy aims to promote well-being by increasing feelings of pleasure, involvement, and meaning in life. Previous research analyze acceptability and viability of brief positive psychotherapy for persons with emotional distress and acquired brain damage patients. Participants were randomized to two groups, one was given positive psychotherapy and the otherwas given only usual treatment. Brief individual based eight positive psychotherapy sessions weregiven to each participants. It was possible to implement the intervention with high fidelity, and theparticipants found it acceptable. The overall retention rate at 20 weeks was 63%. (Karagiorgou etal., 2018).

Positive Psychotherapy and caregivers of cerebral palsy children

CP is the prevailing neuro-developmental disorders in children and it is linked with lifetime impairment. Long-term caregiving leads to negative effect on the health and wellbeing ofthe caregiver. Research has demonstrated that the most effective approach to enhance the CP child's health requirements is to involve their family. The study comprised 32 caregivers of cerebral palsy kids. The findings indicated that caregiver's education has a beneficial impact on the caregivers' burden and their quality of life. The idea behind the caregiver education could potentially enhance the well-being and lessen the mental strain experienced by guardians of the CP's (Chippala et al., 2019).

A strength focused mutual group based interventions were administered on caregivers of CP children. The social support was significantly enhanced during the interventions. The implementation of this group intervention program has the potential to significantly alleviate parenting stress among caregivers and promote a greater sense of hopefulness. Implementing an expanded program featuring additional sessions and consistent follow-up sessions could potentially facilitate the preservation of favorable outcomes and foster the development of a robustsocial support network (Fung et al., 2011).

Previous research on positive psychotherapy show significant differences in happiness andlowering mental distress. Study reported that positive psychotherapy is more effective than cognitive-behavioral therapy in increasing happiness (Asgharipoor et al., 2012). The positive psychotherapy based intervention was feasible for caregivers of stroke survivors. The efficacy ofthe positive psychotherapy based intervention regarding enhancing psychological well-being and the daily functioning was studied in community-based stroke survivors and their caregivers, it shown fruitful results for enhancing well-being in both (McMakin, 2016). Previous research in Pakistan on positive psychotherapy demonstrated that Positive psychotherapy based sessions werefound to be effective in diminishing depressive symptoms among females with depression (Mazhar& Riaz, 2020).

Psychological welfare of the caregivers of CP children is affected due to child’s prolong treatment. Present study was planned to give psychological rehabilitation to the caregivers of CP children through positive psychotherapy based interventions after translation and adaptation of positive psychotherapy manual. It is relatively new therapeutic approach, its core focus is to divert client attention from negatives of life and focus them towards the positives of life. The presentstudy was based upon two groups’ i.e, treatment group and control group. It was based on assessingthe depression, anxiety, stress, caregiver burden and burnout among caregivers of CP children andhow sense of coherence and social support have impact on the mental wellbeing of caregivers ofCP children. In case of the positive psychotherapy, treatment is effective as compared to other treatment approach it will reduce caregiver psychological issues and help to improve their mental wellbeing. Previously positive psychotherapy based therapeutic techniques were not used on caregivers of CP’s in Pakistan.

Rationale of the study

A neuro-developmental disorder affecting posture, balance, muscular control, coordination, and body movement is known as cerebral palsy. In addition to their physical handicap, people with cerebral palsy (CP) may also suffer from related disorders such as social isolation, emotional and behavioral difficulties, feeding and swallowing difficulties, growth and developmental delays, seizures, and speech difficulty. A multidisciplinary strategy encompassing physical therapy, occupational therapy, speech therapy, medicinal therapies, limitations in daily living activities, and social support is necessary to address these challenges (Rosenbaum, Paneth et al., 2007).

Effectively managing child's chronic health issues and balancing this job with the demands of daily life is one of the biggest challenges which have been facing by the caregivers of children suffering from cerebral palsy. Mostly the task of providing home based care for a child with multiple disabilities may be somewhat tough for caregivers. Another challenge for the parents is to handle their child's requirements of everyday living. Consequently, the caregiver suffer from mental health issues. Caregiver of disabled children were more accessible to health related problems as compared to caregivers of healthy children, and empirical facilities are required for caregivers (Brehaut et al., 2009).

The main content of present research is to identify and address the mental health problems& wellbeing of the caregivers of CP's with specific reference to Pakistani culture. CP is the most neglected neurodevelopmental disorder due to multiple health related concerns, CP's experience problems that have a negative and direct impact on their families (Keforilwe & Smit, 2021). The primary aim of the present study was to evaluate the psychological issues of caregivers of cerebral palsy children and to rehabilitate the caregivers. Previous research on the parents of CP has shown that the depression and anxiety are more prevalent in parents of children with cerebral palsy than parents of normally developing children. The major risk factor of increased parental mental health issues is severity of the child’s disability and impairment. It was studied that mothers spent more time on child’s care,so they have higher risk of mental health problems (Barreto et al., 2019). Research reported that the health and well-being of caregivers is related to the health and well-being of their CP children (Murphy, et al., 2007). Caregivers are stressed and burdened due to prolonged care. Caregivers' burden is the major predictor of negative outcomes in caregivers of CP (Omole et al., 2019). Caring for a child with CP had significant impact on the level of burden, social support and quality of life of caregivers (Ahanotu, et al., 2018). So in the present study it was planned to translate, adapt and validate a scale specifically measuring the caregiver burden among caregivers of cerebral palsy children. Caregiver difficulties scale was selected as it was purely developed for measuring the caregiver burden among caregivers of CP (Wijesinghe, Fonseka, & Hewage, 2013).

Previous study reported that poor psycho-social well-being of caregivers who are caring for a CP child may have an impact on the CP child’s health also (Williams et.al, 2002). Previous researches in Pakistan mainly focused on assessment & identification of mental health issues of caregivers of CP’s. On CP’s caregivers a lot of work has been done on clinical topics like assessing anxiety, depression, parental acceptance and rejection in Pakistan (Yazdani, 1994; Verda, 2005; Rauf, 2006) but the domain, enhancing caregiver’s psychological wellbeing have been neglected. In Pakistan previous study reported that majority of the caregivers of CP’s required rehabilitationbased services to manage their own caregivers’ burden (Kiani et al., 2021). A study concluded that most of the parents of CP’s undergo moderate level of depression, which shows that how mucha CP child’s health status affects their caregiver’s mental health. It was concluded in the study that there is a need of screening of mental health problem as well as counseling sessions are required for the caregivers of CP children (Malik et al., 2019). Previous research reported that parents of children with cerebral palsy in Pakistan face significant psychological challenges including emotional distress, social isolation, physical health issues, and financial strain. Policymakers and healthcare providers must collaborate to create interventions that address the unique needs of parents caring for children with CP in Pakistan (Ullah & Ahmed, 2024). Previously as a treatment model of psychological disorders the major focus was on cognitive behavioral therapy which focus on irrational beliefs and negative thoughts. The goal of cognitive-behavioral therapy, or CBT, is to recognize and modify the harmful thought patterns (also known as maladaptive behaviors) and behaviors that lead to emotional distress. It functions on the tenet that thoughts, feelings, and behaviors are intertwined and that people can modify their emotional reactions and behavior by correcting erroneous thinking.

In Pakistan, there is a need to address psychological issues of parents of disabled children with positive psychological interventions (Bodla & khalily, 2018). There is no effective treatment intervention for the parents/care giversare available in Pakistan and current study will help in designing the effective psychological treatment for such parents. This therapy is closer to our day-to-day life challenges. Positive Psychotherapy was selected as a therapeutic tool in the present study because it is relatively new therapeutic approach, its central focus is on positive aspects of an individual instead of focusing towards negatives. Positive psychotherapy is such a therapeutic framework which aimed to reorient the therapeutic approach by supporting clients in using their inner resources, to overcome obstacles, comprehend and identify areas of growth, and concentrating on achieving resilience and greater sense of well-beig(Rashid & Seligman, 2018). Positive psychology emerged during the late twentieth century as a branch of psychology concerned with the scientific study of wellbeing and the ‘good life’. Previously main focus of the Psychology was towards disease model. So Martin Seligman in 1998 coined the term of positive psychology. It is a well-being promoting approach, and a paradigm shift from disease or illness model to wellness model (Sin and

Lyubomirsky 2009).

The major goal of positive psychology was to focus positive emotions and wellness as compared to psychopathology (Seligman & Csikszentmihalyi, 2000). Unlike conventional deficit-oriented treatment paradigms, positive psychotherapy aims to concentrate on the satisfaction and well-being of people. This approach's main tenet is that positive emotions, self-awareness, and a sense of purpose are especially helpful in treating mental diseases since people are prone to the so-called negativity bias, especially in stressful life situations. The negativity bias is the belief that negative experiences, emotions, and thoughts have a greater psychological impact than neutral or positive ones (Baumeister et al., 2001).

The positive psychotherapy based interventions instead of concentrating only on treating mental health issues, it aims to improve well-being, inner strengths, and happy feelings. Conventional therapies, such as psychodynamic approaches or cognitive-behavioral therapy (CBT), frequently focus on addressing particular psychological disorders or resolving past conflicts. PPT, on the other hand, refocuses attention on building resilience, optimism, and happiness elements that, according to research, can both lessen the symptoms of mental health issues and enhance long-term wellbeing. Seligman, Rashid, and Parks (2006) claim that PPT helps people develop positive resources that can fend off future misfortune. Through assisting individuals in recognizing and leveraging their unique strengths, PPT leverages human potential for development, contentment, and direction. This strategy is especially helpful in addressing life satisfaction (Sin & Lyubomirsky, 2009). PPT is applicable in a variety of contexts, from clinical settings to wellness programs, and it promotes holistic mental health because of its strength-based, future-focused design.

Former research on effectiveness of positive psychotherapy & CBT on happiness has reported that positive psychotherapy show significantly better results in increasing happiness then cognitive behavioral therapy (Asgharipoor et al., 2012). In comparison with CBT, positive psychotherapy showed better outcomes, such as life satisfaction and subjective well-being. Additionally, PPT lead to significant effects in the treatment of borderline (Rashid et al., 2103) and depression (Laireiter, & Furchtlehner 2018).

Cerebral palsy is a lifelong disability and due to struggling efforts with the CP children caregivers become depressed and exhausted and stop working on their children's treatment. Prognosis of the CP child is very slow, child's adaptive skills functioning suffers a lot due to multiple disabilities. Child's dependency on the care givers effect their mental health so the positive psychotherapy based intervention will be helpful for them and directly affect their psychological issues which indirectly target their child's rehabilitation. Properly designed positivepsychotherapy have been administered session vise to help the caregivers to resolve their own mental issues. However, almost no research study investigated the effects of positive psychotherapy based interventions on increasing the wellbeingof caregivers of children with cerebral palsy. In this regard, the present study aimed to evaluate the effectiveness of positive psychotherapy interventions in increasing the wellbeing and coherence of caregivers of children with CP. For the management of burnout, caregiver burden, psychological distress and enhancement of social support, mental wellbeing & sense of coherence,interventions based on the manual of positive psychotherapy was used. Previous research reportedthat strength focused intervention program could effectively help the caregivers to reduce their parenting stress and enhance their hopefulness. Beginning a similar program with more sessions and regular follow-up sessions might help to maintain positive effects and establish a social support network (Fung et al., 2011). Previous international research also showed that positive psychotherapy is effective for improving quality of life of caregivers (mothers) of physically handicapped (Barzi &.Jafari, 2016). Research reported that the positive psychotherapy is effective for mental health, social relationships, emotional reactions and the attraction of children's support in mothers who have physical-motor handicapped children. Positive psychotherapy-based interventions were given to mothers of children with autism to enhance psychological well-being, hope and quality of life. 11 participants were in experimental group. Results revealed that positive psychotherapy was effective for mothers of autism. (Yanik & Arsalan, 2024).

In Pakistan, there is scarcity of scientific studies conducted on caregivers of cerebral palsychildren, by using interventions based on knowledge of positive psychology. The current study will help the professionals to understand the caregiver’s issues and addressing the issues in a befitting manner. Standard plan of interventions will help in reducing the caregiver’s burden and help the professional to choose a treatment option, which is evidence, based in local culture. Previous research in Pakistan showed that community-based rehabilitation strategies should consider the care-giving environment of children with disabilities and shift the para-dime from a child only to family focused management (Yousafzai et al., 2011).

In Pakistan, caring for children with special needs is challenging due to a shortage of mental health facilities for caregivers of disabled. A study was conducted on to adapt a family peer Support Buddy Respite Program from a developed country to support caregivers of mentally challenged children in Pakistan. Culturally adapted interventions were beneficial for caregivers of intellectually disabled (Waqar, et al., 2024). Many interventional studies have been done in Pakistan based on therapeutic interventions like cultural specfic CBT, Acceptance and commitment therapy, and many other interventional studies based on enhancing mental wellbeing. Previous research in Pakistan on positive Psychotherapy showed that Positive psychotherapy sessions were found to be effective in decreasing depression among depressed females (Mazhar & Riaz, 2020). Another earlier study mentioned that Asian patients prefer a more structured and directive approach (Hays & Iwamasa, 2006). Positive psychotherapy is an evidence based structured approach. It was selected to translate in the present research as there are some aspects of the PPT, which might be helpful while giving positive psychotherapy based therapy to Pakistani population. For example, in positive psychotherapy many sessions are related to Pakistani culture & religion so it was prefer to use this therapy for translation and adaptation like gratitude, forgiveness, hope and optimism, altruism and positive relationships. Previously, in Pakistan Cognitive Behavioral Therapy was translated and culturallyadapted (Naeem, 2015).Translation and Adaptation of Simplifying Mental Illness plus Life Enhancement Skills (SMILES) Program was translated and adapted in Pakistan and used for the depressed parents of behavioral problem children (Khan & Batool, 2013).

In the present study the Positive psychotherapy was used as it has many dimensions relevant to the nature of the sample as its major focus on enhancing strengths of the individuals and caregivers need strengths to overcome their psychological issue while dealing with their disabled children. Secondly, the focus of the prior researches were based on illness model depicting mostly on the medical aspects of parents of CP children, in the present study the main focus was on rehabilitation model focusing positive interventions to enhance the wellbeing of the caregivers of CP. That should be based upon family centered approach. Thirdly, many concepts in the therapy like analyzing signature strengths, practicing gratitude, forgiveness, hope and optimism, altruism, posttraumatic growth, improving relationships with communication skills and meaning in life were the key concepts, which help, in enhancing wellbeing of caregivers of CP. Previous researches also showed that positive psychotherapy is effective for caregivers.

During the present research, above-mentioned research gaps have been identified and effort has been made to fill these gaps. This research study provide an Urdu language based standardized positive psycho therapeutic based intervention for mental health practitioners for treating mental health issues of caregivers of cerebral palsy children in Pakistan. Present researchnot only assess the sample regarding their mental health issues, but in addition, it also contributed in the provision of psycho-metrically sound Urdu translated positive psychotherapy. For the Pakistani society, this will be a novel plan for caregivers of cerebral palsy children in identification of their mental health issues and treatment of their mental health issues by employing standardized Urdu language based positive psychotherapeutic intervention. Present research will provide complete information for mental health practitioners all over Pakistan, regarding implementation of Urdu language based positive psychotherapy along with all its specifications, session wise for enhancingmental wellbeing of caregivers of cerebral palsy children.

Keeping in view the specific concerns and considering its effectiveness for the present study it was planned to select positive psychotherapy for the population of caregivers in Pakistan. Positive psychotherapy manual was translated, adapted and validated in the present study and used for the first time for the caregivers of cerebral palsy children. In Pakistan urdu positive psychotherapy was used first time on the caregivers. Due to multiple disabilities of the child there are parents who have given up, overwhelmed by their child'sneeds and the constant battle to get help. By supporting the caregivers, one is indirectly supporting the child to feel positive about their abilities and differences. Through positive psychotherapy, a ray of hope and optimism can be inculcated in the caregivers so they can work effectively with theCP child with gratitude.

Over all Objectives

1. To examine the relationship of caregiver burden, burnout, sense of coherence, social support, psychological distress (Depression, Anxiety & Stress) and mental wellbeing among caregivers of cerebral palsy children.
2. To translate, adapt and validate the Caregiver Difficulties Scale into Urdu language for measuring caregiver burden among caregivers of cerebral palsy children.
3. To assess the psychometric properties of the Caregiver Difficulties Scale among caregivers of cerebral palsy children.
4. To translate positive psychotherapy manual into urdu language for the treatment of psychological and social issues of caregivers of cerebral palsy children.
5. At pretest level assessment of caregiver burden, burnout, psychological distress, mental well-being, social support and sense of coherence among caregivers of cerebral palsy children
6. At pretest level screening & randomly assigning the participants into two groups i.e treatment group & control group on the basis of moderate to high levels of scores on caregiver burden, burnout, and psychological distress (depression, anxiety & Stress).
7. At pretest level screening & randomly assigning the participants into two groups i.e treatment group & control group, based on low scores on sense of coherence, mental well-being & social support among caregivers of cerebral palsy children.
8. To find out the efficacy of positive psychotherapy urdu manual for the treatment of caregiver burden, burnout, psychological distress, mental well-being, social support and sense of coherence among caregivers of cerebral palsy children.
9. At posttest level assessment of caregiver burden, burnout, psychological distress, mental well-being, social support and sense of coherence among caregivers of cerebral palsy children.

10. To explore the differences of demographic variables including, age of the caregivers, gender of the caregiver, education level, marital status, the total number of children, family system and income levels, cerebral palsy type of the child, additional problems (Speech Impairment, Intellectual deficit), family system and income levels of caregivers of cerebral palsy children on scales of measurement, i.e., caregiver burden, parental burnout, psychological distress(depression, anxiety & stress), sense of coherence, mental well-being and social support.

Hypotheses

Following hypotheses have been formulated for the present research:

1. There will be positive relationship of caregiver burden and burnout with psychological distress(depression, anxiety and stress) among caregivers of cerebral palsy children.
2. There will be negative relationship of caregiver burden with sense of coherence, social support& mental wellbeing among caregivers of cerebral palsy children.
3. There will be negative relationship of burnout with sense of coherence, social support & mentalmental wellbeing among caregivers of cerebral palsy children.
4. There will be negative relationship of sense of coherence and social support with psychologicaldistress among caregivers of cerebral palsy children.
5. There will be positive relationship of sense of coherence and social support with mental wellbeing among caregivers of cerebral palsy children
6. There will be positive relationship of sense of coherence with social support among caregiversof cerebral palsy children.
7. There will be negative relationship of psychological distress with mental wellbeing among caregivers of cerebral palsy children.
8. At pretest level caregivers of cerebral palsy children in both treatment and control group will score high on caregiver burden, burnout, psychological distress (depression, anxiety & stress).
9. At pretest level, caregivers of cerebral palsy children in both treatment and control group will score low on sense of coherence, social support and mental wellbeing.
10. At post-test level after getting the positive psychotherapy intervention there will be a significant decrease in the level of caregiver burden, burnout, depression, anxiety & stress in treatment group as compared to control group among caregivers of cerebral palsy children.

11. At post-test level after getting, the positive psychotherapy intervention there will be a significant increase in the level of sense of coherence, social support and mental wellbeing in treatment group as compared to control group among caregivers of cerebral palsy children.

12. Sense of coherence will mediate the relationship between burnout and psychological distress among caregivers of cerebral palsy children.

13. Social support will mediate the relationship between burnout and psychological distress amongcaregivers of cerebral palsy children.

14. Sense of coherence will mediate the relationship between caregiver's burden and mental wellbeing among caregivers of cerebral Palsy children.

15. Social Support will mediate the relationship between caregiver burden and mental wellbeing among caregivers of cerebral Palsy children.

16. Female caregivers of cerebral palsy children will score high on caregiver burden, burnout,depression, anxiety & stress as compared to male caregivers of cerebral palsy children.

Figure 1

Conceptual Framework

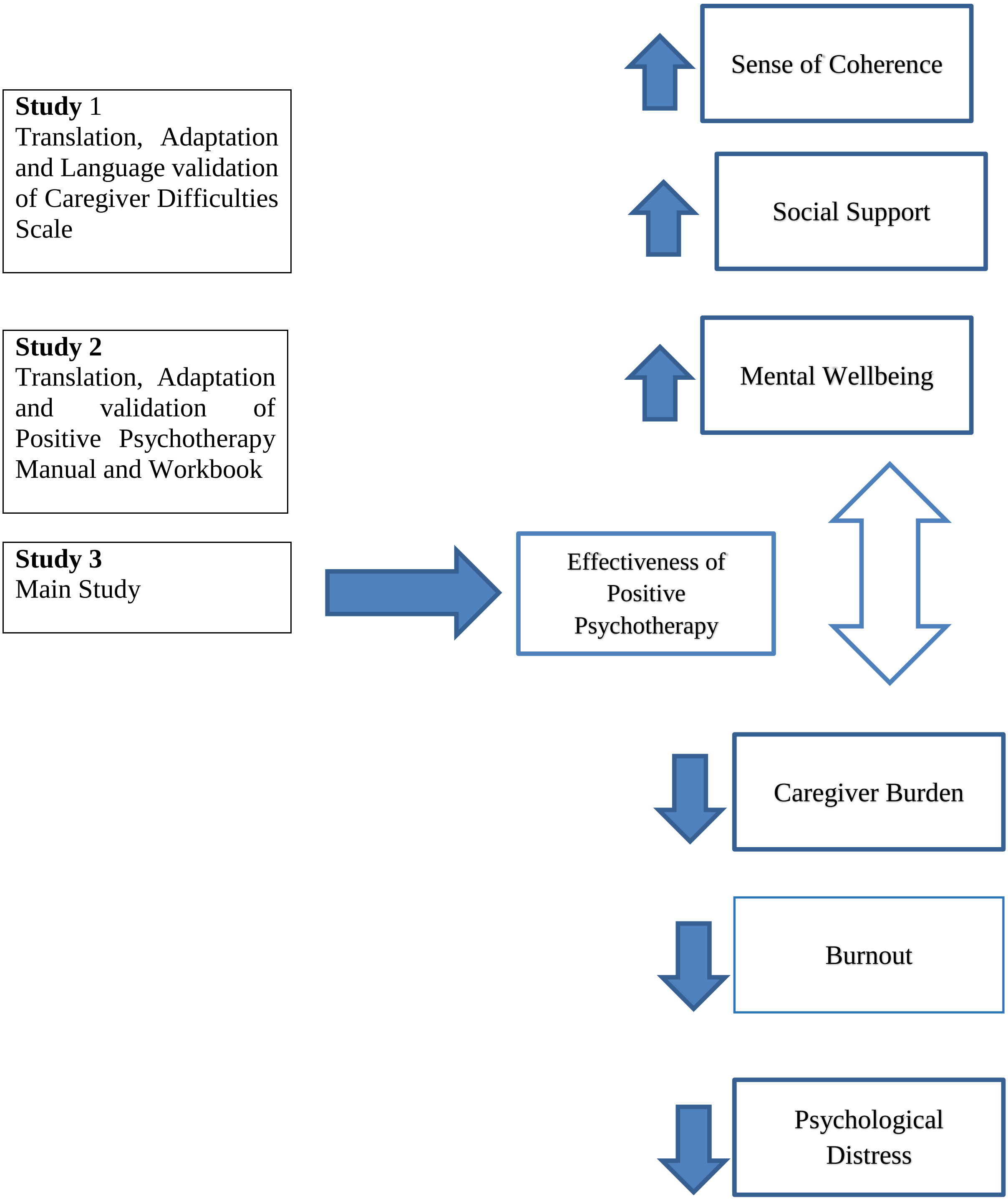
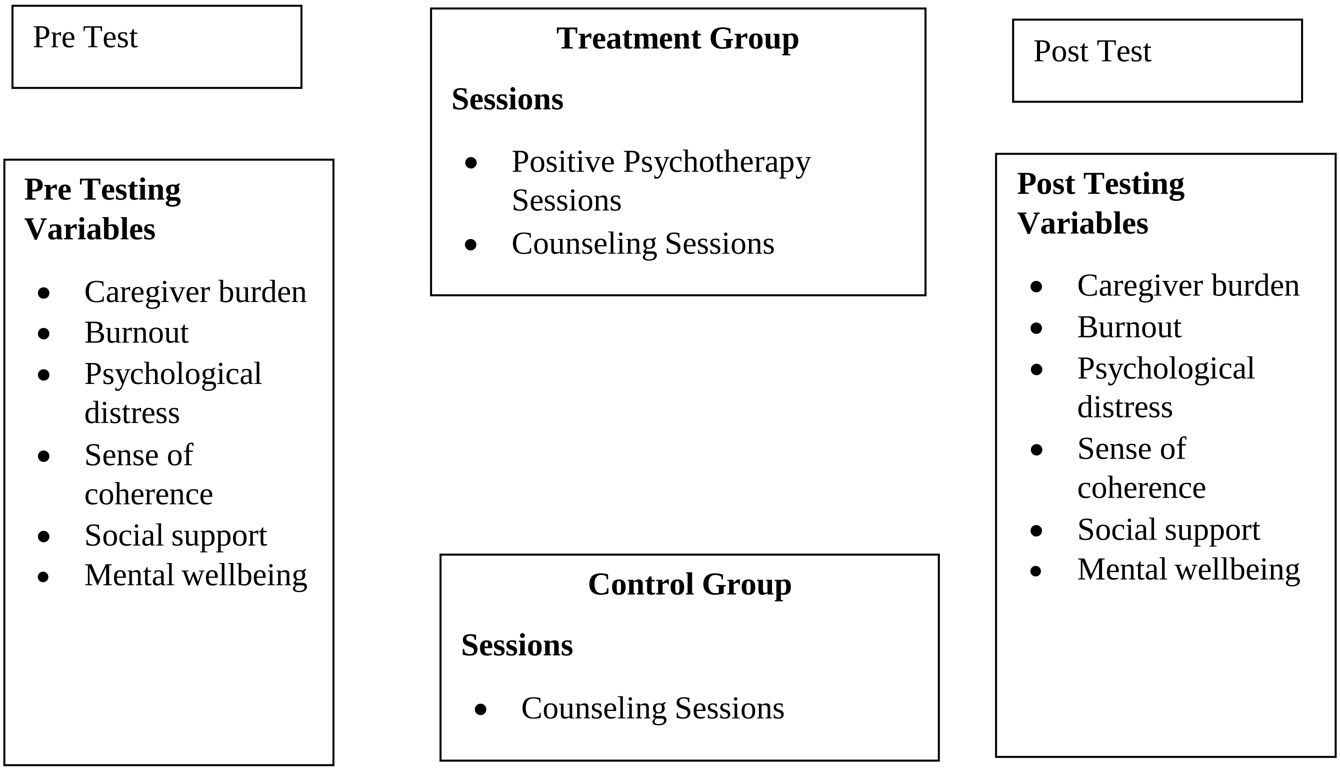


Figure 2

Research Design



Chapter 2

Method

The major aim of the present study was to see the effectiveness of positive psychotherapybased interventions for treating the psychosocial problems of caregivers of cerebral palsy children. It was intended to give burdened caregivers proper interventions based on positive psychotherapy and evaluate its effectiveness on the well-being of the caregivers. In the present study translation, adaptation and cross language validation of caregiver difficulties scale and positive psychotherapy worksheets & manual was done. It was also aimed to assess & analyze therelationship between caregiver burden, burnout, psychological distress, depression, anxiety & stress, social support, sense of coherence & mental wellbeing among caregivers of cerebral palsychildren. 20 caregivers of cerebral palsy children having moderate to high scores on study variables, caregiver burden, burnout, psychological distress (depression, anxiety & stress) and lower scores on mental well-being, sense of coherence & social support were randomly assigned into two groups' i.e, treatment group (positive psychotherapy group) and control group (counseling group). The present research was accomplished in three phases (studies). Study I, was based upon translation,adaptation and cross language validation of caregiver difficulties scale, study II was translation adaptation and cross language validation of positive psychotherapy worksheets and manual. Study III included the main study aimed at hypotheses testing and measuring effectiveness of positive psychotherapy intervention.

Research design

The research design was randomized control trail & employing a quantitative approach.The trail registry no is NCT05613595.

Sample

The research was carried out on the caregivers of children with cerebral palsy having cognitive & physical impairments and are taking rehabilitation services regarding their child medical issues. Purposive convenient sampling technique was used for taking initial sample (N=100) of caregivers of cerebral palsy children. On the basis of required scores on study variables participants were further selected from main study data and participants (n=30) were randomly assigned into two groups, treatment group (positive psychotherapy treatment group)(n=15) and control group (n=15). But due to drop out rates only 20 participants were given therapies i.e, 10 participants in treatment group and 10 participants in control group. Ethical approval was obtained from the ethics committee of department of Psychology, International Islamic University and ethical review Board of International Islamic University, Islamabad Pakistan before starting the study. Written consent was also acquired from the caregivers who were agreed to participate. Caregivers without any chronic physical or psychiatric problems were included in the study. Demographic data related to caregivers of CP was collected in terms of their, age (25-55), gender, educational status (matric and above), occupation status,marital status, marriage type (family out of family), total number of children, and previous history of disability, family system and income levels. Demographic data related to cerebral palsy child of the caregivers (participants) was collected in terms of gender, child age, CP type and additional problems (physical, Speech impairment & intellectual deficit).

Inclusion and Exclusion Criteria of Sample. Caregiver was someone who takes the primary responsibility for providing care to a child with cerebral palsy.

Inclusion Criteria

- Only caregivers of diagnosed CP child
- Caregivers having only 1 CP child in the family

- For main study only those participants were included who would have moderate to high score on caregiver burden, burnout, psychological distress (depression, anxiety & stress) and lower score on mental wellbeing, social support & sense of coherence.
- Interventions were given to the caregivers having moderate to high level of caregiver burden, burnout, psychological distress (depression, anxiety & stress) and lower level of mental wellbeing, social support & sense of coherence.
- Age of CP child under 13 years
- Educational status of the caregiver was matric and above.

Exclusion Criteria

- Caregivers with any severe diagnosed psychiatric illness were not added in the present study.
- More than 1 CP child in the family of caregivers were not included.
- Illiterate caregivers of CP were not included in the present study.

Operational Definition

Cerebral Palsy

Cerebral palsy is a persistent disorder of movement and posture affecting movement, muscle tone and coordination caused by damage to the developing brain typically before birth or in early childhood (Rosenbaum et al., 2006). Diagnosed cases of Cerebral palsy were taken from pediatric and physiotherapy department of NIRM. They were diagnosed on the basis of medical history, birth history, developmental milestone history Assessing motor skills, muscle tone, reflexes, and coordination. Using MRI or CT scans to identify brain abnormalities. Gross Motor Function Classification System (GMFCS) is used to categorize the severity of motor impairment in individuals with cerebral palsy. In the present study the CP's with cognitive impairment were assessed by developmental history, adaptive skills functioning and neuro-imaging.

Caregiver

A person who provides direct care, as for children, elderly people, or the chronically ill or disabled is caregiver (Merriam Webster Dictionary, 2010).

Caregiver Burden

Caregiver's burden is defined as the physical, emotional, social, and financial problems that can be experienced by family caregivers. Caregiver burden is operationalized in terms of scoreon Caregiver Difficulties Scale (CDS) (Wijesinghe, Fonseka, & Hewage, 2013).

Parental Burnout

Parental burnout is defined as a state of intense exhaustion related to one's parental role, inwhich one becomes emotionally detached from one's children and doubtful of one's capacity to bea good parent (Roskam, Raes, & Mikolajczak, 2017). For the present study, burnout is operationalized in terms of scores on Parental Burnout Assessment (PBA) (Roskam, Brianda & Mikolajczak, 2018).

Sense of Coherence

Sense of coherence (SOC) reflects a coping capacity of people to deal with everyday life stressors and consists of three elements: comprehensibility, manageability and meaningfulness(Antonovsky, 1987). Sense of Coherence was operationally defined in terms of scores on The Orientation of Life scale. A higher score indicates a better sense of coherence (Jibeen & Khalid, 2010).

Social Support

Social support refers to the psychological and material resources provided by a social network to help individuals cope with stress (Zimet, Dahlem, Zimet, & Farley, 1988). Social support was operationalized in terms of scores on Multidimensional Scale of Perceived Social Support (MSPSS) (Akhtar et al., 2010).

Psychological Distress (Depression Anxiety & Stress)

Psychological distress (PD) is broadly defined as a state of emotional suffering characterized by symptoms of depression (e.g., loss of interest; unhappiness; desperateness) and anxiety (e.g., restlessness; feeling tense) and stress. Psychological distress is cognitive, emotional and behavioral response to a critical problematic sudden event perceived as intimidating and manifested by anxiety and depression (Potter, 2007). Higher scores on DASS indicates higher levelof depression, anxiety & stress. DASS is a self-report questionnaire designed to measure depression, anxiety and stress and is available in two forms, DASS-42 and short form DASS-21. (Lovibond & Lovibond, 1995b; Lovibond & Lovibond, 1995a). In the present study, DASS-21 wasused to assess the psychological distress (depression, anxiety & stress). Urdu translated scale by Aslam and Tariq (2010) was used in the present study. It is important to note that this questionnairecannot clinically diagnose depression, anxiety, or stress. Instead, it provides an indication of whether these problems influence a person's quality of life. The questionnaire is used urdu and it took 5–10 min to complete. (Kouther et al., 2022).

Mental Wellbeing

According to positive psychotherapy, mental well-being is defined in terms of positive emotions, engagement, relationships, meaning, and accomplishment (Rashid, 2018). Mentalwellbeing was operationally defined in terms of scores on Positive Psychotherapy Inventory (Rashid, 2018).

Positive Psychotherapy

Positive psychotherapy (PPT) is a contemporary approach to therapy that draws upon the principles of positive emotions, engagement, relationships, meaning, and accomplishment (Rashid, 2018).Its techniques are based upon both humanistic and psychodynamic approaches in the realm of diagnosis and treatment. In the present study, positive psychotherapy is operationalized in terms of therapy based on positive psychotherapy by Rashid, (2018) in the present study positive psychotherapy has been defined in terms of treating symptoms of caregiver burden, burnout and psychological distress and to enhance mental wellbeing. Positive psychotherapy manual was translated adopted and validated in Urdu and applied on caregiver of cerebral palsy children in the present study.

Instruments

Demographic Sheet

Demographic details of the caregivers were measured in terms of caregiver age, gender, caregiver’s educational level, and marital status, the total number of children, family system and income level. Demographic details regarding cerebral palsy child included child’s gender, age, type of cerebral palsy, additional current problems of the cerebral palsy child (Motor, speech & intellectual disability).

Caregiver Difficulties Scale (CDS)

Caregiver difficulties scale (CDS) (Wijesinghe, Fonseka & Hewage,2013) is a self-administered questionnaire designed to be completed by the principal caregiver of the child with cerebral palsy.For the present study, urdu translated version of caregivers difficulties scale was used. Above the cutoff scores indicating a higher level of burden. There are four subscales of CDS. Concern for child (1-8), Impact on self (9-15), Support for caregiving (16-20) and social & economic strains (21-25). A score assigned for each item (except items 11, 12, 16, 17, 18 & 20) based on the response alternative selected by the respondent, in the following manner. Always = 4, often =3, sometimes = 2, rarely = 1, never = 0 Completely = 0, to a greater extent = 1, to some extent = 2, to a lesser extent = 3, not at all = 4 . The items 11, 12, 16, 17, 18 & 20 require reverse scoring as follows. Always = 0, often = 1, sometimes = 2, rarely = 3, never = 4 . There is no definite cut off threshold for CDS; the total CDS score can be used to get an idea about the level of burden experienced by the caregivers, CDS scores ranged from 0 to 100 (1-125) a higher score above cut off indicating a higher level of caregiver burden (Wijesinghe, Fonseka, & Hewage, 2013).

Parental Burnout Assessment **(PBA)**

Parental burnout assessment was used to assess the burnout and it is developed by Roskam et al, in 2018. It is a 23- item self-report questionnaire. The PBA encompasses 23 items forming four factors: exhaustion (being emotionally and physically exhausted by one's parental role), emotional distancing (affective distancing from the children), saturation (being fed up withone's parental role) and contrast (not being the parent you used to be and wanted to be, and beingguilty and ashamed of the parent you have become). Items are rated on 7-point Likert scales: never(0), a few times a year or less (1), once a month or less (2), a few times a month (3), once a week(4), a few times a week (5), every day (6)**.** PBA ranged from 0 to 138. Higher scores indicate higherlevels of parental burnout. Urdu translated version was used in the present study (Roskam, Brianda& Mikolajczak, 2018).

Orientation of Life Scale (Sense of Coherence) (OLS)(SOC)

Sense of coherence is measured by the orientation of life scale developed by Antonovsky in 1987. Urdu translated version was used in the present study (Jibeen & Khalid, 2010). A higher score indicates a better Sense of coherence. It contains 13 items, of which 4 itemsare reverse scale. Participants were required to circle a number from 1- 7 to indicate the strength of their feelings toward each item; a higher score indicated a stronger Sense of coherence and viceversa.

Multidimensional Scale of Perceived Social Support (MSPSS)

Multidimensional Scale of Perceived Social Support was developed by Zimet et.al, 1988. This scale measures social support across three domains; friends, family and significant others. The responses reflect participant's perception of support from each of these three sources. For ease of understanding, the Urdu version of the scale, translated by Akhtar et al., (Akhtar et al., 2010) was used It has a total of 12 items divided in three sub-scales; friends, family and significant others. A7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree) is used to mark responses. A score can be obtained for the total scale to assess the social support.

Positive Psychotherapy Inventory (PPTI)

Positive Psychotherapy Inventory is developed by Tayyab & Seligman in 2018. Positive psychotherapy inventory is self-report inventory having 25 items. The positive psychotherapy inventory has five dimensions positive emotions, engagement, relationships, meaning, and accomplishment. Items are rated on 5-point Likert scales: not at all like me (1), not like me (2), neutral (3), like me (4) and very much like me. Urdu translated version was used in the present study. Lower scores on positive psychotherapy inventory indicates lower level of mental wellbeing, whereas higher scores indicate higher mental wellbeing.

Depression Anxiety Stress Scale **(DASS-21)**

Depression Anxiety Stress Scale (DASS), is a self-report questionnaire designed to measure depression, anxiety and stress and is available in two forms, DASS-42 and short form DASS-21. (Lovibond & Lovibond, 1995b; Lovibond & Lovibond, 1995a). In the present study urdu translated version of DASS 21 have been(Aslam & Tariq, 2010). Score on each item range from 0-3 with following response categories: (0= Not at all 1=Rare,2=Sometimes, 3=Often). Items of Depression are (3, 5, 10, 13, 16, 17, and 21), Items of anxiety are (2,4,7,9,15,19,20), and items of stress are (1,6,8,11,12, 14,18).

Positive Psychotherapy

Positive Psychotherapy (PPT) is a structured therapeutic approach. Positive psychotherapyoffers mental health practitioners of many orientations a compelling alternative to symptom- focused techniques. This therapeutic approach aims to empower clients by fostering a feeling of purpose and meaning, which is often perceived as lacking in conventional therapeutic modalities (Rashid & Seligman, 2018). It is based upon a series of 15 positive psychotherapy sessions, each comprising fundamental principles, techniques, and exercises aimed at reinforcing the abilities acquired during the sessions. The manual comprises of worksheets and clinician part. Every session is based upon positive strength based therapeutic interventions.

Ethical Consideration

Ethical approval was obtained from the ethics committee of department of Psychology International Islamic University and ethical review Board of International Islamic University, Islamabad Pakistan before starting the study. Ethical approval was also attained from ethical review board of National institute of Rehabilitation Medicine. Permission was taken from the National Institute of Rehabilitation Medicine, Islamabad to collect the data. After getting permission letter by the administration department of NIRM present research was conducted on the caregivers of cerebral palsy children. As CP is chronic and prolonged disability, so caregivers, suffer a lot while taking care of their children. In the present study ethical consideration was take into account as caregivers were not to be forcefully involved in this study. Consent form was taken to confirm the participation of the caregivers. Their data remained confidential. Study was conducted on two groups, control group and treatment group, it was unethical to not provide any remedial strategies to control group, so both groups were given interventions.

Procedure

The present research was conducted in to three studies.

Study I was based upon translation, adaptation and cross language validation of the Caregiver Difficulties scale (CDS). Translation was carried out into four steps. For cross languagevalidation and test retest reliability of the scale, it was re-administered on two groups (Group 1 (n=10) & Group 2 (n=10). Group 1 was given the scale's original english version, whereas group 2 was given the scale's translated urdu version. After a week, the same subjects were given the scale again, but in a different way. Groups 1 a (n=10) and 1 b (n=10) were further separated. In the same manner, Group 2 split into 2a (n=10) and 2b (n=10). The original english version scale was given to groups 1a and 2a, while the urdu version scale was given to groups 1b and 2b. Afterthe translation of the scale, pilot study was carried out. The purpose of the pilot study was to checkthe reliability and further psychometric properties of the instrument for the present research. The urdu translated scale was administered on 80 caregivers of cerebral palsy children. Age ranges ofthe participants was between 25 to 50 and pilot testing done. Sample was taken from OPD of National Institute of Rehabilitation Medicine (NIRM). Correlation between the two groups was analyzed through SPSS. Correlation between english and urdu-based data was performed for crosslanguage validation. Alpha coefficient reliability of the scale was assessed. CFA was done throughSMART(PLS).

Study II

Study II of the present study was aimed at translation, adaptation and validation of positive psychotherapy intervention based manual into urdu language. In this phase forward translation, committee approach, backward approach, committee approach (Brislin, 1980) and in adaptation & validation steps expert committee approach, clinical expert reviews and tryout testing was done (Hambilton et al ., 2005).

Study III

Study III was the main study of the present research. Main Study was carried out on the caregivers of cerebral palsy children. The primary goalof the main study phase was to acquire data and analyze it statistically in order to measure the effectiveness of positive psychotherapy. Pretest questionnaires were given to a sizable sample of participants in the primary trial in order to conduct screening. The present research was carried outon caregiver's of CP children (N=100) with purposive convenient sampling from outpatient & in patient department of NIRM. The age range of the sample was between 25 to 55 years. The entire sample was comprised of the caregivers of CP children.

Study III was the interventional part of the study, where the targeted sample was selected from main study sample and participants were randomly assigned into two groups. Treatment group (positive psychotherapy intervention group) and control group (counseling group).

Chapter 3

Study I: Translation, Adaptation and Cross Language Validation of the Caregivers Difficulties Scale

Study I of the present study was further divided in to three parts which included part I urdutranslation of the Caregiver difficulties Scale**,** part II adaptation and cross validation of the Caregiver difficulties Scale and part III pilot study of the urdu translated version of Caregiver Difficulties scale.

Part I

Translation of Caregiver Difficulties Scale

Part II

Adaptation and cross validation of the Caregiver Difficulties Scale,

Part III

Pilot study of the urdu translated version of Caregiver Difficulties scale

Objectives of the Phase I of the Study

1. To translate & adapt the Caregiver Difficulties scale (CDS) (Wijesinghe, Fonseka, & Hewage, 2013) into urdu language.
2. To determine the cross language validation of the Caregiver Difficulty scale
3. To determine the psychometric characteristics of Caregiver Difficulty Scale

Instrument

The following scale was translated into urdu language for the present research.

Caregiver Difficulties Scale (CDS-25)

Caregiver Difficulties Scale (CDS) (Wijesinghe, Fonseka & Hewage,2013) is a self-administered questionnaire designed to be completed by the caregiver of the child with cerebral palsy. There is no definite cut off threshold for CDS; the total CDS score can be used to get an idea about the level of burden experienced by the caregivers, a higher score indicating a higher level of burden. There are four sub scales of CDS. Concern for child (1-8), Impact on self (9-15), Support for caregiving (16-20) and social & economic strains (21-25). It's a five point likert scale, score was assigned for each item (except items 2, 11, 12, 16, 17, 18 & 20) based on the response alternative selected by the respondent, in the following manner. Always = 5, often = 4, sometimes = 3, rarely = 2, never 1. The items 2, 11, 12, 16, 17, 18 & 20 require reverse scoring as follows. Always = 1, often = 2, sometimes = 3, rarely = 4, never = 5 . Caregiver difficulties scale was translated into Urdu in the present study.

Translation of CDS into urdu languagePart I

Translation of the Caregiver Difficulties scale was carried out, to determine the caregiverburden. Translation of the scale was completed in four steps. 1. Forward Translation 2.Committee Approach 3. Backward translation 4. Committee Approach (Breslin, 1986).

Forward Translation

For the translation of Caregiver Difficulties Scale committee of five bilingual experts (proficient in both english and urdu language) were approached for the translation of the scale. Expert were briefed about the scale and also about the rationale of the research. Five professionals were selected from International Islamic University. Among them three experts were professional psychologists, two experts were graduates from International Islamic University. Experts were requested to emphasize conceptual rather than literal translation and to use brief and simple language.

Committee Approach

As experts translated the scale, a committee constituting of five members (n=5) was constituted to select the best urdu translation for each item. This committee was consisted of the supervisor of the study, clinical psychologists (n=2) counselors (n=2) from International Islamic University, Islamabad, and the researcher herself. All committee members carefully reviewed the each item of the translated scale in terms of language and relevance to the original content. The most appropriate final urdu translation for each item of the scale was selected by the committee members.

Backward Translation

To ensure the accuracy of translated scale, five specialists (n = 5) were requested, from which two were from, departments of english at International Islamic University Islamabad (n =2) and Riphah International University (n = 1), and three were from National University of Modern Languages (n=3). All the experts were requested to translate the scale items into english language. These experts were masters of english language and were not included in the translation of this scale earlier, therefore; they were not acquainted with the language and words used in original english version scale.

Committee Approach

A group of expert comprising six bilingual experts (n=5) were requested to critically examine the back translation of the items and to select the most suitable english translation. The committee was comprised of the supervisor of the study, lecturers in Psychology (n=2) Assistants professors in Psychology (n=2) from International Islamic university, Islamabad, and the researcher herself. All the members of the committee confirmed that translated items conveyed the same meaning and the meaning closer to the original items. However considering cultural relevance of all items of the scale, committee members agreed that adaptation of any item was not required.

Part II Cross language Validation of Caregiver Difficulties ScaleSample & Procedure

For Cross language validation of the Caregiver Difficulty Scale a sample (n=40) of caregivers of CP were selected. The sample was divided in to two equal parts (Group 1 (n=20) &Group 2 (n=20). Original english version scale was administered on group 1 and translated urdu version scale was administered on group 2. The scale was re administered in a different manner to the same participants after gap of 01 week. During re administration of the scale, group 1 of theparticipants were further divided into groups 1 a (n=10) and 1b (n=10). In a same way Group 2 was formed 2a (n=10) 2b (n=10). Original english version scale was given to group 1a and 2a while urdu version scale was given to group 1b and 2b. For cross validation correlation was measured between first and second administration of the scale (english and urdu based CaregiverDifficulties Scale) (Brislin, 1986).

Figure 3

The distribution of the sample for Cross language validation

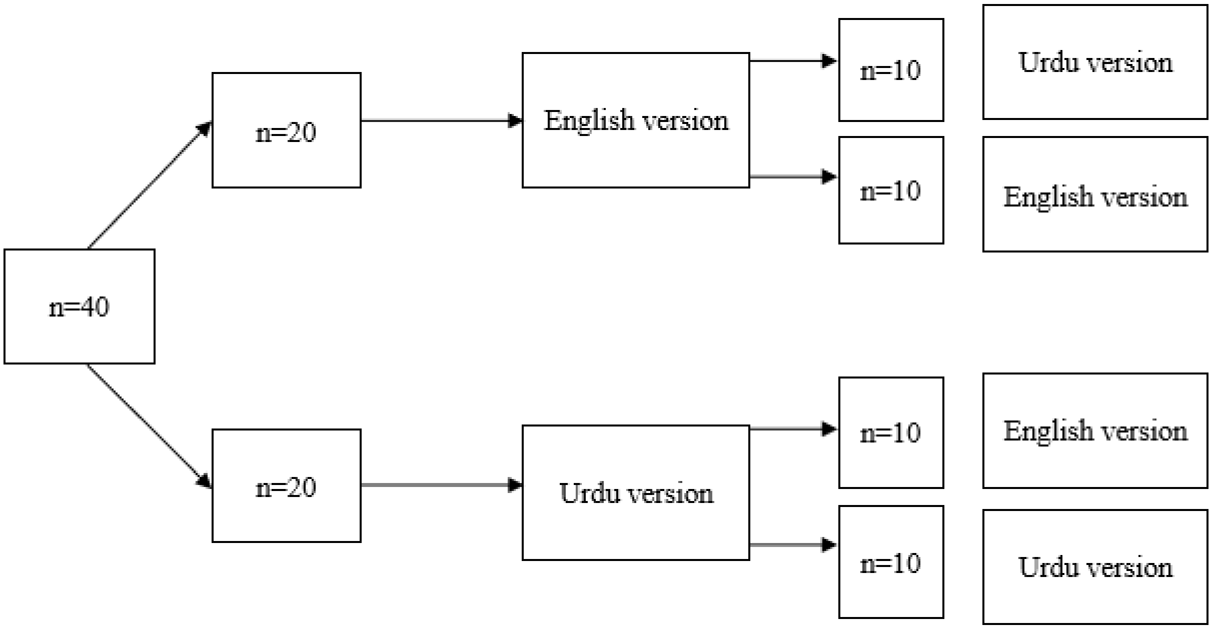
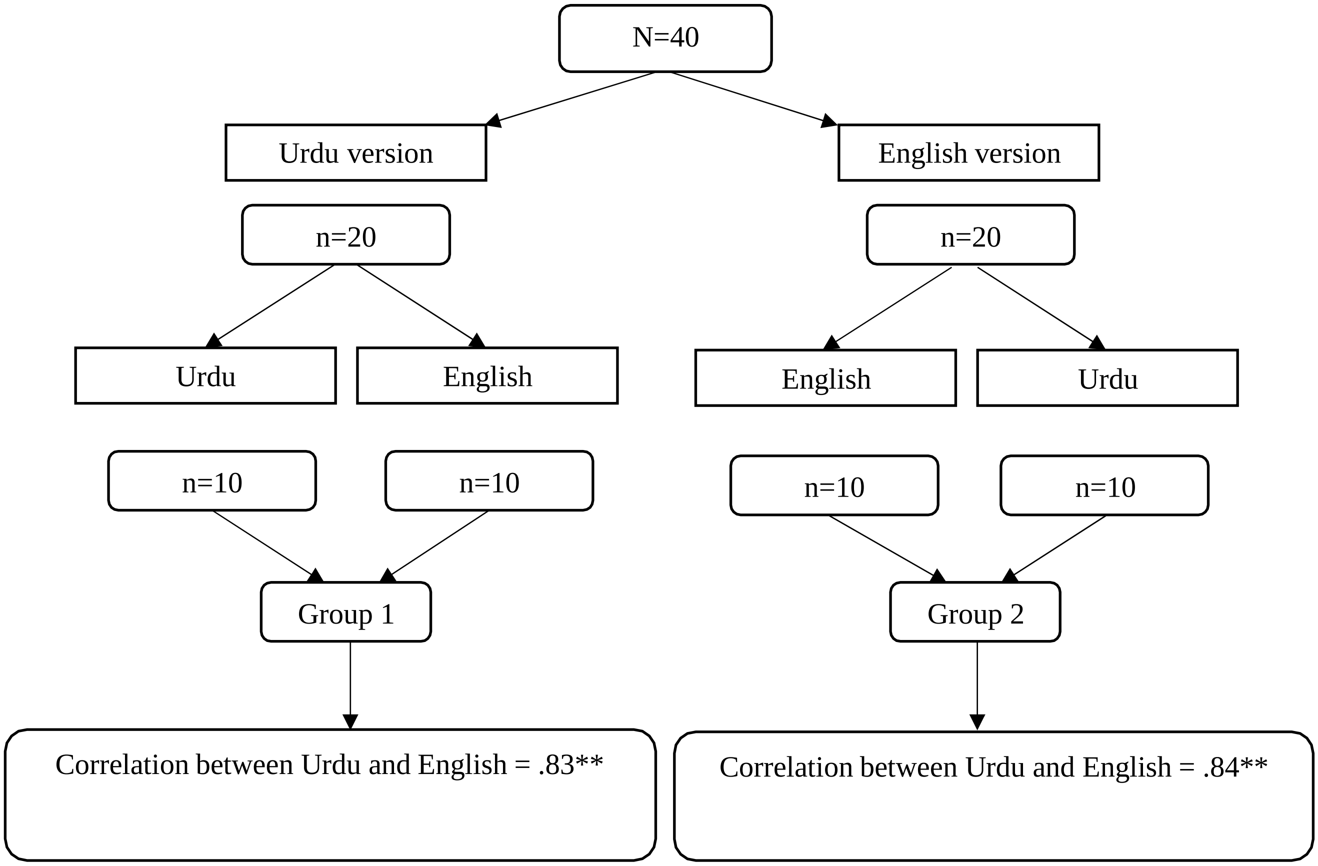


Figure 4

Cross Language Validity of the Caregiver
Difficulty Scale



Results

Table 1

Cross language validation and Test-Retest Reliability of Caregiver Difficulties Scale (N=40)

Groups	*N*	*1st Administration*	*2nd Administration*	*R*
I	*10*	*English*	*English*	*.83***
II	*10*	*English*	*Urdu*	*.83***
III	*10*	*Urdu*	*Urdu*	*.88***
IV	*10*	*Urdu*	*English*	*.84***

***p<.01*

Table 1 shows that correlation between Caregiver Difficulties Scale (CDS) Urdu and Caregiver Difficulties Scale (CDS) English versions are significant (p<.01). The correlation value ranges from .88** (Urdu to Urdu) to .83** (English to English). This reveals that scores on Urdu and English have significant positive correlation for both the groups. It indicates that original Englishand translated Urdu version of the Caregiver Difficulties Scale has significant high conceptual equivalence and cross language validity.

Part III Pilot Study for Reliability Analysis and Validation of the Caregivers Difficulties Scale

Part III comprised of pilot testing in which scale of the study was administered on (n=80)caregivers of cerebral palsy children for determining reliability of the scale.

Objective

1. To determine the reliability & validity of urdu translated version of the Caregiver Difficulties Scale (CDS).

Sample

In this part of the study caregivers of the cerebral palsy children were the sample of the study. Sample comprised of (n=80) caregivers of cerebral palsy children. Participants were selected from out patient department of National Institute of Rehabilitation medicine (NIRM). It was assured that the information they provided would be kept private and used exclusively for thepresent study. The participants filled out the urdu version of the scale. Following the collection ofdata from the caregivers, SPSS and SmartPLS was used to process the findings further.

Results

Table 2

Frequency and Percentage of Demographic variables of Caregivers of Cerebral Palsy children(n = 80).

Demographics	Groups	*f*	%
Caregiver Gender	Male	54	67.5
	Female	26	32.5
Relationship with child	Father	54	67.5
	Mother	26	32.5
	Others	00	00
Caregivers Age	30-40	44	55
	41-50	34	42.5
	51-60	2	2.5
Child Age	5-10	65	81.3
	11-15	15	18.08

The above table 2 shows the frequency and percentage of each demographic variable of the study. From 80 caregiver 54 were males (67.5 %) and 26 were females (32.5%). Both the caregivers were mother and fathers only. (The age of respondents varies from 30 years to 60 years,44 out of 80 respondents age is 30-40 years (55%), 34 respondent has 41-50 years (42.5%) and 2 out of 80 respondents were aged between 51-60 (2%). Ages of the child is between 5 to 15 years.65 children were between age 5 to 10 (81.3 %) and 15 are between 11 to 15 years (18.08 %).

Table 3

Descriptive statistics and Alpha Reliability Coefficient of the translated version of the CaregiverDifficulties Scale (CDS) (n=80)

				Range			
variables	*k*	*M(SD)*	*a*	Actual	Potential	Skewness	Kurtosis
CDS(Urdu)	25	93.2(14.9)	.91	42-119	5-125	-.6	1.67
CFC	8	32.1(5.22)	.84	16-40	5-40	-.49	.32
IoS	7	26.6(5.15)	.81	7-35	7-35	-1.4	2.9
SfCg	5	15.83(5.06)	.91	5-25	5-25	-.20	-.27
SES	5	18.69(4.09)	.67	5-25	5-25	-1.4	1.2

CFS= Care for caregivers, IoS= Impact on Self, SfCg= Support for Child, SES= Social & economic Stains

Note k= No. of Items, M (SD) =Mean (Standard Deviation), a=Cronbach's Alpha

Table 3 shows the descriptive statistics of study variable. In the table each variable along with number of items (k). Mean value and standard deviation of each variable is also presented inthe above table. Reliability is also calculated using (α) Reliability test in the SPSS, the reliability of each variable is >0.9. Skewness and kurtosis of each variable was calculated to check the normalityof data, the Skewness and kurtosis results show that data is normal and parametric test can be usedfor further analysis.

Table 4

Correlation between Caregiver Difficulties Scale and its sub scales (n=80)

Variables	M	SD	1	2	3	4	5
CDS	93.24	14.96	-	.81**	.86**	.74**	.62**
CfC	32.08	5.22		-	68**	.37**	.37**
IoS	26.65	5.15			-	.56**	.35**
SfCg	15.83	5.06				-	.31**
SES	18.69	4.08					-

***p< .01, *p< .05 Note:* CDS =Caregiver Difficulties Scale, *CFS= Care for Child, IoS= Impact on Self, SfCg= Support for Caregivers, SES= social & economic Stains*

Table 4 indicated that the relationship between the Caregiver Difficulties Scale (CDS) andits sub scales. All the variables are positively correlated with each other's. Concern for the child is positively correlated with the Impact on Self (IoS) (.68**), support for caregivers (.37**) and social & economic strains (.37**). Impact on Self (IoS) is positively correlated with support for caregivers (.56**) and social & economic strains (.37**). Support for caregivers is positively correlated with Social and economic strains (.31**).

CFA Measurement Model

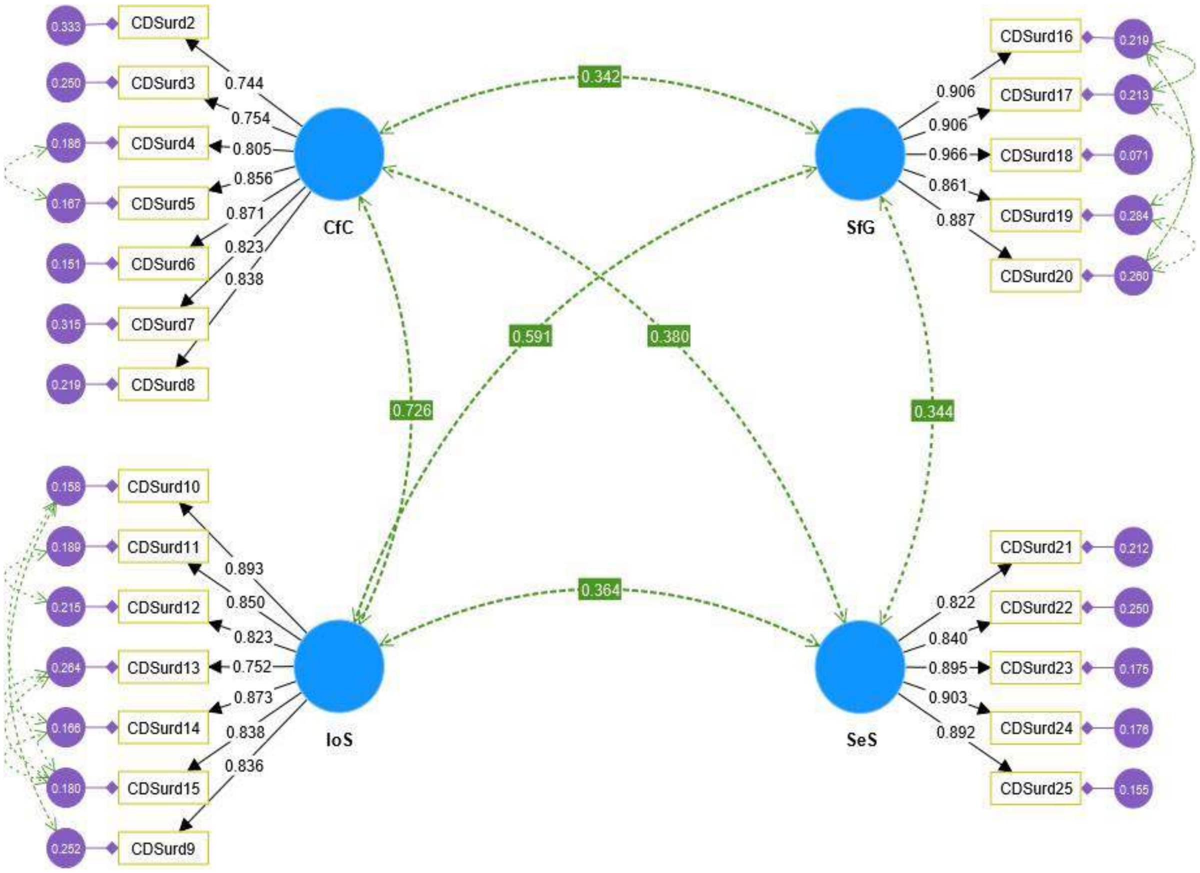


Figure 4. Confirmatory Factor Analysis Model

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child , IoS= Impact on Self,SfCg= Support for Caregiver, SES= Social & Economic Strains,

Table 5

Factor Loadings of Caregiver Difficulties Scale (CDS) (n=80)

Items	CfC	IoS	SES	SfCg
CDSurd10		.89		
CDSurd11		.85		
CDSurd12		.82		
CDSurd13		.75		
CDSurd14		.87		
CDSurd15		.84		
CDSurd9		.84		
CDSurd16				.91
CDSurd17				.91
CDSurd18				.97
CDSurd19				.86
CDSurd20				.88
CDSurd21			.82	
CDSurd22			.84	
CDSurd23			.89	
CDSurd24			.90	
CDSurd25			.89	
CDSurd2	.74			
CDSurd3	.75			
CDSurd4	.80			
CDSurd5	.86			
CDSurd6	.87			
CDSurd7	.82			
CDSurd8	.84			
CDSurd10	.74			

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child , IoS= Impact on Self,SfCg= Support for Caregiver, SES= Social & Economic Strains, The above table 5 shows the factor loading (estimated value) of each dimension. Concernfor the Child (CfC) was measured by eight items; Impact on Self (IoS) was measured by seven items, Support for Caregivers (SfCg) was measured by five items and Social and Economic Strains (SeS) was measured by five items. If any item having factor loading ≥0.40 (Cua et al., 2001), it was included for further analysis. No item has factor loading of less than 0.40 so forfurther analysis no item of the scale was excluded.

Table 6

Model fit Indices for the Caregiver Difficulties Scale (n=80)

Fit Indices	X^2	df	XMIN/df	RMSEA	GFI	NFI	CFI	TLI
Model 1	369.19	235	1.57	0.084	.74	.85	.94	.93
Benchmark		- -	< 3	< 0.08	≥ 0.90	≥ 0.90	≥ 0.90	≥ 0.90

Note. *p=REMSEA <.01, *p= CMIN<3.0;

The above table 6 shows the model fit indices of caregiver Difficulties Scale (CDS), theresults show that all indicators are within the range and best fit for analysis.

Discussion

In the first study of the present research the major aim was to translate adapt and validate theCaregiver Difficulties Scale (CDS) in Urdu. The major purpose of selecting this instrument was that it's purely made for the caregivers of cerebral palsy children. Previous Research reported thatthe Caregiver difficulties Scale (CDS) is an instrument that demonstrates both valid and reliable in evaluating the level of caregiver burden experienced by caregivers of children diagnosed with cerebral palsy in the context of Sri Lanka (Wijesinghe, Fonseka, & Hewage, 2013).

The translation into urdu language was undertaken with the aim of making the instrument comprehensible for caregivers of the cerebral palsy children in Pakistan. The researcher should considered administering this instrument to the Pakistani people in order to enhance their understanding of the urdu language and ensure their comfort in providing accurate responses in urdu. The instrument underwent translation process by following the sequential procedures. The process of scale translation encompassed many steps. Firstly, bilingual experts conducted a forward translation, followed by a committee method to ensure accuracy and consensus. Subsequently, a separate group of bilingual experts, distinct from those engaged in the initial forward translation, performed a backward translation. Finally, the same experts who conducted the forward translation employed a committee approach to review and refine the backward translation. The implementation of parallel translation methods necessitated the involvement of many multilingual specialists who separately translated the identical questionnaire. The final stageof the study involved convening a consensus meeting to determine the most optimal reconciled version of the translated scale, with the aim of achieving the objectives of the present study (Brislin, 1986).

An essential component of the translation phase involves assessing the cross-language validity of the translated scale through a comprehensive analysis of the translated urdu version incomparison to the original english language version of the scale. To ensure the validity of the measure, a sample of 40 caregivers of cerebral palsy children were selected and both the English and urdu versions of the scale were administered. Two groups of participants were subjected to two rounds of testing, one with a sequence of Urdu-English and the other with a sequence of Urdu- Urdu. Subsequently, these two groups were further separated into four subgroups, each consisting of 10 individual caregivers. The study examined the test-retest reliabilities and correlations amongfour language groups: urdu-english, urdu-urdu, english-english, and english-urdu. The findings revealed a statistically significant positive association between the two versions of the scale. The link between urdu and urdu is strongly favorable, and the scale measuring caregiver difficulties/burden is also considered. The urdu translation version was found to be more comprehensible for caregivers of CP (Figure 1 & table 1).

In Table 2, demographic information of caregivers were obtained. In the current study translation of Caregivers Difficulties Scale (CDS) in Urdu language was the main objective. The subsequent aim was to ascertain the alpha reliability coefficients of the urdu version. The originalscales in the english edition have been widely employed and subsequently translated into several languages. The table 2 shows the frequency and percentage of each demographic variable of the study. From 80 Caregiver 54 were males (67.5 %) and 26 were females (32.5%). Both the caregivers were mother and fathers only. (The age of respondents varies from 30 years to 60 years,44 out of 80 respondents age is 30-40 years (55%), 34 respondent has 41-50 years (42.5%) and 2 out of 80 respondents were aged between 51-60 (2%). Ages of the child is between 5 to 15 years.65 children were between age 5 to 10 (81.3 %) and 15 are between 11 to 15 years (18.08 %).

Table 3 shows the descriptive statistics of study variables. In the table each variable alongwith number of items (k). Mean value and standard deviation of each variable is also presented inthe table. Reliability is also calculated using α-Reliability test in the SPSS, the reliability of each variable is between .91. to .96. Reliability of the scale is CDS is .91 and scale has four sub scales.First subscale is Care for caregivers (CFC), and its reliability is .84, second subscale is Impact onSelf (IoS) ant its reliability is .81, third subscale is Support for Caregivers (SfCg),its reliability is.91 and reliability of the fourth subscale Social & Economic Stains, is .67.

Previous research reported that the reliability of original scale of CDS is between .69 to .91(Wijesinghe, et.al, 2013). Previous research reported that CDS was also translated into Persian language for Iranian population. The psychometric features of the Caregiver Difficulties Scale (CDS) among Iranian caregivers of children diagnosed with cerebral palsy (CP) was evaluated. The fit indices indicate that the initial model of CDS demonstrated a reasonable level of adequacy($\chi2$/df = 2.03, CFI = .90, TLI = .88, and RMSEA = .08). The reliability criterion for all domains of the P-CDS were met, as indicated by Cronbach's alpha and ICC values over 0.7 (Farajzadeh et.al, 2018). CDS is also translated into Turkish language for the caregivers of Cerebral Palsy children and the Cronbach alpha coefficients were found as .88 for the test and .85. The Turkish iteration of the Caregiver Burden Scale (CDS) demonstrates sound validity and reliability as an assessment tool for evaluating the burden experienced by family caregivers of children diagnosedwith cerebral palsy (CP). Park et al. (2021) conducted a translation of the CDS into the Korean language and afterwards assessed the reliability and validity of the Korean version, referred to as K-CDS. The reliability of the scale and its dimensions were between .71 to .91 respectively.

Table 5 indicated that the relationship between the variables of the study. All the variable are positively correlated with each other's. Previous research reported that CDS is a valid measure of caregiver burden among caregivers of CP children. In Sri Lanka, raising a kid with cerebral palsy is likely to result in caregiver overload, especially if the child has multiple siblings or a severe degree of disability. It's critical to track caregiver load as part of regular cerebral palsy caresince this enables families who most require psycho-social support to receive it (Hewawitharana et al., 2023). The Caregiver Difficulties Scale (CDS), created especially for this purpose,as it wasused to quantify caregiver burden, which was described as "caregiver's response to various stressors associated with caregiving." In order to determine if coping lessens the impact of stressors on caregiver burden, multivariate linear regression was utilized to analyze relationships between caregiver burden, sociodemographic, stressors, and coping characteristics. Spousal support was connected with lower caregiver burden, while poor income, living in a remote area, being male, and the amount of functional deficits the impaired kid has all strongly correlated with higher caregiver burden. By seeking out social assistance, the increasing load that comes with more severefunctional limitations was lessened. Families at high risk of caregiver distress may benefit from psycho social interventions centered on assessing and enhancing social support for caregivers of CP’s in order to reduce unfavorable outcomes (Wijesinghe et al., 2015).

In a previous research in Pakistan, caregiver burden was assessed through caregiver burden inventory. The findings of the study indicate a heightened demand for respite and additional support services for caregivers of children diagnosed with cerebral palsy. Among the participantsinvolved in the study, it was found that 54.33% (n = 163) reported occasional need for relief and other services, while 36.67% (n = 116) reported regular need for such support. Additionally, a minority of parents, namely 6.33% (n = 19), indicated rare need for relief and other services. The findings indicate that a significant proportion of caregiver responsible for children with cerebral palsy require assistance and additional support in order to effectively manage the burden associated with their caregiving responsibilities. This burden encompasses various aspects, including hindrances to personal growth, negative impacts on physical and emotional well-being, and challenges in maintaining social relationships (Kiani et al., 2021).

In Pakistan to assess the caregiver burden, Zarit Burden Inventory (Zarit et al., 1980) is mostly used. Understanding and mitigating the negative impact of caregiver stress on families is acrucial result that warrants careful examination. The comprehension of such concepts has the potential to positively impact the overall welfare of both caregiver and children with disabilities. Through an examination of the effects of caregiving burden on the mental well-being of caregiverswho are responsible for children with varying disabilities, it was determined that the burden of caregiving exerts a noteworthy influence on the mental health of these caregivers (Arif & Ammara& Saleem, 2018).

The results display good psychometric qualities. The construct validity was assessed usingconfirmatory factor analysis.Validity of the scale was also good. Previous results reported that Face validity, content validity and consensual validity of CDS was established through the process of item generation. Moderate to high correlations ($r \geq 0.3$) with scores of CDS, confirming construct validity among caregivers of CP children in Sri-lanka (Wijesinghe et.al, 2013). Anotherresearch reported that the fit indices showed that the original model of CDS was relatively adequate($\chi 2/df = 2.03$, CFI = 0.90, TLI = 0.88 and RMSEA = 0.08) in perscian version of Caregiver Difficulties Scale (CDS) (Farajzadeh et al., 2018).

Conclusion

Based on the findings of the present study during study I, translation, adaptation and validation of Caregiver Difficulties Scale (CDS) , it can be inferred that both languages of the Caregiver Difficulties Scale (CDS) exhibit consistency in terms of their conceptual interpretation within the Pakistani population. Additionally, the study demonstrated that the Urdu vocabulary terms employed in the scale is straightforward, comprehensible, and effectively express the intended meaning of the sentence, effectively communicating the notion to the individual in Pakistan. The concept of cross-language validity suggests that the urdu version of the Scale (CDS)may exhibit indications of validity, reliability, and cultural fairness specific to the Pakistani context. In the present study, urdu translated Caregiver difficulties Scale was used to assess the caregiver burden first time. From the reliability and psychometric properties of urdu version it is concluded that it is the most accurate scale to assess caregiver burden. The utilization of this urduversion scale can be beneficial in the diagnosis process, particularly when employed in conjunctionwith other assessment instruments. This approach enables the caregivers of children with cerebralpalsy to accurately evaluate and develop an effective management & rehabilitative plan that meetstheir specific needs.

Chapter 4

Study II: Translation & Adaptation of Positive Psychotherapy Manual & Worksheets

Study II was based on translation of Positive Psychotherapy (PPT) manual into urdu language, establishing its validity and assessment of its effectiveness by administering on caregivers of cerebral palsy children. This study was divided into following steps.

Step I: Translation of the Positive Psychotherapy (PPT) worksheets & manual into Urdu language Step II: Adaptation and cross language validation of the Positive Psychotherapy (PPT) manual **Step I: Translation of the PPT worksheet & manual into Urdu language**

Objective

1. Translation, adaptation and validation of Positive Psychotherapy worksheets.
2. Translation & adaptation & validation of Positive Psychotherapy clinician manual.

Instrument

The following positive psychotherapy manual was used for the present research.

Positive Psychotherapy

Out of many therapeutic approaches, one therapeutic approach is positive psychotherapy. It is based on positive psychology. It focuses on helping clients to develop resilience anda stronger feeling of wellness by assisting them in using their inner resources to overcome obstacles, comprehending and identify areas for progress (Seligman, 2012). Positive psychotherapy (PPT) is a contemporary approach to therapy that draws upon the principles and techniques of both humanistic and psychodynamic approaches in the realm of diagnosis and treatment. The primary emphasis lies in shifting the attention from identifying an individual's shortcomings to highlighting their strengths and positive attributes (Rashid, 2015). According to Seligman, Rashid, and Parks (2006), Positive Psychotherapy (PPT) differs from conventional therapies for depression in such a way that it primarily focuses on enhancing positive mood, engagement, and meaning, rather than immediately addressing depressive symptoms.

There exists a wide array of psychotherapeutic approaches that can be utilized to ameliorate symptoms and mitigate psychological distress. Positive psychotherapy (PPT) basic emphasis is on positive aspects of a client in their lives without focusing on symptoms, negative life stories, past negative memories, or abruptly substituting them with negatives. This approach recognizes that despite the widespread presence, strength, and influence of negative emotions, themajority of clients seek treatment to alleviate feelings of sadness, anxiety, anger, or ambivalence.Positive emotions (P), engagement (E), relationships (R), meaning in life (M), accomplishment (A). The process of PPT can be segmented into three distinct parts: beginning, middle, and final.Specific sequence of exercises within these phases can be customized to effectively address the specific presenting problems experienced by clients. A validated outcome measure, known as thePositive Psychotherapy Inventory (PPTI), has been developed to evaluate the wellbeing a distinctcomponent of Positive Psychotherapy (PPT) (Rashid & Howes, 2016).

Positive psychotherapy (PPT) differs from conventional therapies for depression as it focuses on enhancing positive mood, engagement, and meaning instead of immediately addressingdepressive symptoms (Seligman, Rashid, & Parks, 2006). Positive psychotherapy (PPT) is an intervention in the field of positive psychology that aims to expand the range of traditional psychotherapy. The primary focus of this approach is to attend to the constructive assets of individuals, including positive emotions, character qualities, and a sense of purpose, alongside thetreatment of symptoms associated with psychopathology.

Positive psychotherapy (PPT) is derived from the positive psychology movement and is acomprehensive approach that facilitates therapeutic transformation via the cultivation of involvement, pleasure, and meaning. There exists empirical data supporting the efficacy of this intervention in the treatment of depression. The utilization of PPT is suggested as a versatile framework that can be implemented with various patient cohorts in conjunction with alternative treatment methodologies (Walsh, Cassidy, & Priebe, 2017).

Positive Psychotherapy Manual (Worksheets & clinician manual)

Positive Psychotherapy (PPT) offers therapists a structured therapeutic approach that is derived from positive psychology. Positive psychology is a rapidly growing field of research thatinvestigates the factors and mechanisms that contribute to the well-being and success of individuals, communities, and institutions. The initial section of this clinician's manual provides a comprehensive introduction to the theoretical underpinnings of positive psychotherapy. It delves into the examination of character strengths and the application of positive psychology practices, while also discussing the various processes and mechanisms via which positive change can be achieved. The last portion of the book encompasses a series of 15 positive psychotherapy sessions,each comprising fundamental principles, recommendations, techniques, and exercises aimed at reinforcing the abilities acquired during the sessions. Every session also incorporates a minimumof one vignette, along with an examination of the cross-cultural implications. Positive psychotherapy offers mental health practitioners of many orientations a compelling alternative to symptom-focused techniques. This therapeutic approach aims to empower clients by fostering a feeling of purpose and meaning, which is often perceived as lacking in conventional therapeutic modalities (Rashid & Seligman, 2018). The manual comprises of worksheets and clinician part. Every session is based upon positive strength based therapeutic interventions.

In this step translation of the PPT worksheets & manual was carried out, to determine the effectiveness of therapy on caregiver’s of cerebral palsy children. Translation method of the worksheet and manual was completed in four steps.

Step I: Translation & Adaptation of Positive Psychotherapy

Objective

4. To translate & adapt the positive psychotherapy (PPT) (Clinician manual and worksheets)as an interventional tool into urdu language.

Procedure

In Step I, translation & adaptation of the Positive Psychotherapy manual was carried out, all sessions in the manual was translated and adapted into urdu language. Translation of the worksheets & manual was completed in four steps. 1. Forward translation 2. Committee Approach

3. Backward translation 4. Committee Approach (Breslin, 1980).

Steps of translation, adaptation & validation of Positive Psychotherapy

Forward Translation

Positive Psychotherapy manual has two parts one is for the clients and one is for the clinician. Both parts were translated in the present study. Five bilingual experts (Proficient in both english and urdu language) were approached for the translation of worksheets and manual. Expert were given detailed about the positive psychotherapy sessions and also about the rationale of the research. Five bilingual professionals were selected having proficiency in english to urdu language for the translation of worksheets & manual. Three experts were from international Islamic University, two were from the NUML university. Worksheets & manual were given to the literature experts to translate into urdu. Both manual and worksheets were translated side by side. Experts were requested to emphasize conceptual rather than literal translation and to use brief and simple language.

Committee Approach

As all the experts completed the translations, for the selection of most appropriate translation committee approach was carried out. A committee constituting five members (n=5) was constituted to select the best translation for each item. The committee was consisted of the supervisor of the study, Assistant Professor (n=2) lectures (n=2) from International Islamic University, Islamabad, and the researcher herself. All committee members carefully reviewed the each items of the translated manual & worksheet in terms of language and relevance to the original content. The translated PPT manual was thoroughly examined by all committee members for both language use and consistency with the original content. Best Urdutranslation was selected by the experts for backward translation.

Backward Translation

To ensure the accuracy of translated manual, five experts (n=5) from English literature were requested to translate the manual in english. Three specialists in languages (n = 3), and one from the Department of English of International Islamic University Islamabad (n = 1) and one from Punjab university (n = 1) translated these Urdu translation of the PPT manual into english. These experts were literature experts and were not included in the translation of this manual earlier, therefore; were not acquainted with the language and words used in original english version scale.

Committee Approach

A group of expert comprising 3 bilingual experts (n=3) was held to critically examine the back translation items and to select the final manual. The committee was made up of the study's supervisor, assistant professors of the department of Psychology (n = 2) International Islamic University Islamabad and the researcher herself. All the member of the committee confirmed that translated items conveyed the same meaning or the meaning close to the original items.

Step II Adaptation and cross language validation of the Positive Psychotherapy Manual& worksheets

Objective

1. To determine the adaptation & cross language validation of urdu translated positivepsychotherapy manual & worksheets

Adaptation of Positive Psychotherapy (Hambilton et al.,2005)

Adaptation Committee Approach

Adaptation of Positive Psychotherapy led to the replacement and modification of its content according to the cultural values. A three-member adaptation committee was formulated forthis purpose. Two committee members were practicing clinical psychologists having their doctoraldegrees in psychology and the remaining one member was professor in Psychology. The worksheets and therapy (clinician part) was given to the committee to see its cultural appropriateness. In the adaptation, process the committee discussed in group form, the content of positive psychotherapy and its cultural relevance. Committee reviewed the worksheets & clinicianpart. Committee members recommended some minor changes including cultural and familiarity adaptation, which eventually resulted in replacement of some words/items like in worksheet 7.2, ten ways to increase Satisficing, in item 10, it was mentioned that “never drink more then two glasses of wine in evening”, that is not cultural specific, so committee suggested that to change itwith tea’ instead of using wine. In session 12, worksheet 12.1, in worksheet of tree of positive relationships, name of the persons were replaced by just initials like (Jackson was replaced by Mr.J). In the same worksheet for currency, dollar was used which was replaced by rupees.

Expert Consultation (Hambilton et al., 2005)

For the present study for cross language validation of the positive psychotherapy, the manual and worksheets were given to the two experts practicing clinical psychologists. Both of them were from National Institute of Rehabilitation Medicine and practicing clinical psychologists. According to the experts the positive psychotherapy can be administered and mostof the concept are easy to understand in urdu language.

Sample & procedure of tryout

After getting permission from the Psychology department of NIRM, caregivers of CP (parents) were contacted from Outpatient department (OPD) and in patient department. In first step Depression Anxiety Stress Scale (DASS-21), caregiver Difficulties Scale (CDS), Parental Burnout Assessment (PBA), OLS (sense of coherence), MSPSS (social support) & positive psychotherapy inventory (mental wellbeing) along with the informed consent form were administered on caregivers of cerebral palsy children, to assess their mental well-being. Caregivers were briefed about the sessions. For tryout (feasibility testing) of the positive psychotherapy manual & worksheets a sample of caregivers of CP children (n=02) were selected who scored high on study variables. Original English version worksheets and manual was administered on 1 participant (female) and newly urdu translated was administered on 1(female) participant separately. For language validation post testing was done and the results showed that both manual & worksheets were easy to comprehend and participants easily understood the therapy sessions. Positive Psychotherapy was provided in 15 sessions.

Positive Psychotherapy

The goal of positive psychotherapy (PPT) is to extend the application of traditional Psychotherapy through therapeutic positive psychology. Its main idea is that, in addition to treat psychopathology's symptoms, therapy should also focus on a client's positive resources, such as their charatec traits, positive emotions, and purpose in life, Positive psychotherapy Sessions were mainly divided into 3 phases. Phase I is the Narrative of Resilience (Positive Introduction). It has included first 4 sessions. Phase II is the Hope of

Cultivating a Better versionof the self, including 4 sessions (Session 5 to 8). Phase III is the Aspiration of Leaving Positive Legacy having 7 sessions (Session 9 to 15). Details of sessions were discussed in table 7.

Sessions Format (Positive Psychotherapy)

Table 7: Positive Psychotherapy Sessions Description

Sr. No.	Session Number & Title	Content	Main practices
	Phase One		
1	Positive Introduction and Gratitude Journal	In this session client, learn how to think about positive events in life. This session also teaches how to start the ongoing practice of cultivating gratitude through journaling positive experiences and appreciating the impact of gratitude.	1. Positive Introduction (Positive Story of Life) 2. Gratitude Journal writing 3 good (big or small) things that happened in whole day)
2	Character Strengths and Signature Strengths	Identification of Character Strengths & signature Strengths (positive traits that can be developed through practice and can contribute to personal growth & wellbeing	Assessment of Character Strengths & signature strengths

3	Session Three: Practical Wisdom	This session presents the skills of practical wisdom. These skills teach us how to adaptively apply the signature strength in a balanced way to solve the problems	Know-how of strengths (learning application of 4 wisdom strategies, specificity, relevance, conflict reflection, reflection & calibration) t resolve three specific scenarios.
4	Session Four: A Better Version of Me	Written plan based on positive, pragmatic & persistent self development	A better version of me: writing self development Plan
	PHASE II		
5	Session Five: Open and Closed Memories	● Client recall, write & process memories ● Developing skills of dealing open and closed memories	□ Relaxation □ Memorizing bitter memories and explore for ways to deal adaptively.
6	Session Six: Forgiveness	Clarifying the concept of forgiveness, as it's a process of change, rather then an event.	□ REACH process

			□ Letter of forgiveness
7	Session Seven: Maximizing versus Satisficing	Focus on the concept of Maximizing (aiming to make the best possible choice) and Satisficing (making a good enough choices)	□ Focusing on satisficing as compared to maximizing
8	Session Eight: Gratitude	Thanking a person in life who helped the client in past but at that time client didn't say thanks.	1. Gratitude letter 2. Gratitude Visit
	PHASE III		
9	Session Nine: Hope and Optimism	Learn to see the best possible realistic outcomes. They learn that challenges are temporary & to develop sense of hope	One Door closes, another door open
10	Session Ten: Post-traumatic Growth	Exploring deep feelings about any traumatic event that are bothering them.	Expressive writing of traumatic event in life
11	Session Eleven: Slowness and Savoring	Client learn that how to slow down oneself in different tasks in life and how to savor oneself. Mindfully focusing on positives	Slowing & savoring practices in life
12	Session Twelve: Positive Relationships	Identification & recognizing the strengths of their family members	Tree of Positive Relationship

13	Session Thirteen: Positive Communication	Client learn how for style of responding a good news and which of these predicts relationship prediction	Active constructive Responding
14	Session Fourteen: Altruism	Client learn that how being Altruistic help both themselves and others	Gift of Time
15	Session Fifteen: Meaning and Purpose	The focus of this session is to search and pursuit of meaningful endeavors for the greater good.	Positive Legacy

Discussion

The aim of this study of the present research was to translate the positive psychotherapy manual into urdu language. The major purpose of translating this therapeutic manual into urdu was as the participants cannot understand the english language. The translation into urdu language was undertaken with the aim of making the positive psychotherapy manual understandable for caregivers of the cerebral palsy with specific reference to Pakistani population. The manual underwent translation in accordance with the sequential procedures. The process of manual translation encompassed many steps. Firstly, bilingual experts conducted a forward translation, followed by a committee method to ensure accuracy and consensus. Subsequently, a separate group of bilingual experts, distinct from those engaged in the initial forward translation, performeda backward translation. Finally, the same experts who conducted the forward translation employeda committee approach to review and refine the backward translation. The implementation of parallel translation methods necessitated the involvement of many multilingual specialists who separately translated the identical questionnaire. The final stage of the study involved convening a consensus meeting to determine the most optimal reconciled version of the translated manual, with the aim of achieving the objectives of the present study (Brislin, 1986).

Presently Bresilin model (1980) & Hambleton et al., (2005) was used to translate adapt and validate the positive psychotherapy manual. Used following steps: Forward translation, committee Approach, Backward translation and committee approach, Adaptation committee approach, expert reviews and tryout for feasibility testing. Positive psychotherapy was adapted for Pakistani families by adaptation guidelines and translation techniques provided by Hambleton & Lee, 2013. Brislin (1980) suggests the steps of translation as forward translation, back translation and committee approach should be utilized to preserve equivalence between one language and culture and another language and culture. These guidelines (e.g., forward translation, committee approach, backward translation, committee approach, and pilot study) have been utilized in most researches for cultural adaptation of interventions. Parents and fellow professional's feedback was also incorporated during adaptation process. For adaptation mostly 5 steps were followed (1) instrument translation from source language into target language (2) synthesis of the translated version (3)analysis of the synthesized version by expert judges.(4)back translation,and (5)a pilot study (Hambelton, 2005) For cultural adaptation of interventions Barrera & Castro (2006) was also followed based on cultural adaptation of interventions. In present study PPT therapy was translated by using the following steps keeping in mind the contextual adaptation and content adaptation (1) forward translation (2) committee approach (3) backward translation (4) committee approach (5) cultural Adaptation by experts (6) evaluation by experts (6) instrument evaluation by target population (tryout).

The positive psychological interventions are using more frequently and replacing the old psychotherapy based intervention. The effectiveness of very broadly defined positive psychological interventions or therapies that improve well-being through pathways congruent with positive psychology theory. The concept includes a broad spectrum of positive psychological interventions, such as mindfulness, mind-body, and physical exercise-based therapies (Carr et al.,2023).

Positive psychotherapy (PPT) is a well-researched psychological practice that was first shown to be effective with those exhibiting signs of depression. Positive psychology intervention, or PPT, is an academic field that evolved relatively apart from psychotherapy that prioritizes enhancing well-being above reducing deficit. Traditional psychotherapy methods to psychosis donot place as much emphasis on the processes that PPT targets, such as strengths, forgiveness, gratitude, and savoring. Creating a new treatment strategy to assist individuals going through psychosis is the aim of the PPT modification process. In a previous research, a manual based intervention termed wellfocus PPT—a 14-session standard PPT modified using an evidence-basedtheoretical framework—was created with the goal of enhancing the well-being of individuals suffering from psychosis (Riches et.al, 2016). The analysis of the previous findings demonstratedthe beneficial effects of positive psychotherapy on infertile women's resilience, self-compassion, and mental fortitude. As a result, it has helped infertile women's perseverance, self-compassion, and mental fortitude (Mohammadi et.al, 2019). Previous research has reported that PPT can effectively treat symptoms of depression in individuals suffering from psychosis (Schrank et al., 2015). Positive Psychotherapy was not translated earlier, this is the first time it is translated into urdu language in Pakistan for the convenience of the caregivers of CP children.

Conclusion

Based on the findings of the present study, it can be inferred that the positive psychologicalinterventions are using more frequently and replacing the old psychotherapy based intervention. The effectiveness of positive psychological interventions can improve well-being of the individuals. Additionally, the study demonstrated that the urdu vocabulary terms employed in thetherapy are straightforward, comprehensible, and effectively express the intended meaning of thesentence, effectively communicating the notion to the populace in Pakistan. In the present study urdu translated Positive Psychotherapy was used as an interventional tool for the first time for caregivers of CP children. Positive Psychotherapy (urdu) can be used as an effective empirical evidence in clinical settings, rehabilitation & counseling practice by mental health professionals in Pakistan.

Chapter 5

Study III Main Study

The aim of the main study was to assess the caregiver burden, burnout, psychological distress(Depression, Anxiety & stress), social support, sense of coherence & mental wellbeing among care givers of cerebral palsy children and to provide therapeutic interventions to the caregivers of cerebral palsy children. The major goal of this study was also the selection & allocation of caregivers into two groups i.e., treatment group and control group for therapy. After screening data from the main study, the random allocation was done. It was intended to give the participants of the data proper interventions, based on positive psychotherapy and counseling. For this purpose, participants were divided into two groups, positive psychotherapy treatment group & counseling group. The aim was to evaluate the effectiveness of positive psychotherapy on mental being of the caregivers of cerebral palsy children.

Objectives

1. To examine the relationship of caregiver burden, burnout, sense of coherence, social support, psychological distress (Depression, Anxiety & Stress) and mental wellbeing among caregivers of cerebral palsy children.
2. At pretest level assessment of caregiver burden, burnout, psychological distress, mental well-being, social support and sense of coherence among caregivers of cerebral palsy children
3. At pretest level screening & randomly assigning the participants into two groups i.e treatment group & control group on the basis of moderate to high levels of scores on caregiver burden, burnout, and psychological distress (depression, anxiety & Stress) and low scores on sense of coherence, mental well-being & social support among caregivers of cerebral palsy children.
4. To find out the efficacy of positive psychotherapy urdu manual for the treatment of

caregiverburden, burnout, psychological distress, mental well-being, social support and sense of coherence among caregivers of cerebral palsy children.

5. At posttest level assessment of caregiver burden, burnout, psychological distress, mental well-being, social support and sense of coherence among caregivers of cerebral palsy children.

6. To explore the differences of demographic variables including, age of the caregivers, gender of the caregiver,education level, marital status, the total number of children, family system and income levels, cerebral palsy type of the child, additional problems (Speech Impairment, Intellectual deficit), family system and income levels of caregivers of cerebral palsy childrenon scales of measurement, i.e, caregiver burden, parental burnout, psychological distress(depression, anxiety & stress), sense of coherence, mental well-being and social support.

Hypotheses

Following hypotheses have been formulated for the present research:

1. There will be positive relationship of caregiver burden and burnout with psychological distress(depression, anxiety and stress) among caregivers of cerebral palsy children.
2. There will be negative relationship of caregiver burden with sense of coherence, social support& mental wellbeing among caregivers of cerebral palsy children.
3. There will be negative relationship of burnout with sense of coherence, social support & mentalmental wellbeing among caregivers of cerebral palsy children.
4. There will be negative relationship of sense of coherence and social support with psychologicaldistress among caregivers of cerebral palsy children.
5. There will be positive relationship of sense of coherence and social support with mental wellbeing among caregivers of cerebral palsy children.
6. There will be positive relationship of sense of coherence with social support among

caregiversof cerebral palsy children.

7. There will be negative relationship of psychological distress with mental well being among caregivers of cerebral palsy children.

8. At pretest level caregivers of cerebral palsy children in both treatment and control group will score high on caregiver burden, burnout, psychological distress (depression, anxiety & stress).

9. At pretest level caregivers of cerebral palsy children in both treatment and control group will score low on sense of coherence, social support and mental well being .

10. At post-test level after getting the positive psychotherapy intervention there will be a significant decrease in the level of caregiver burden, burnout, depression, anxiety & stress in treatment group as compared to control group among caregivers of cerebral palsy children.

11. At post-test level after getting the positive psychotherapy intervention there will be a significant increase in the level of sense of coherence, social support and mental well being in treatment group as compared to control group among caregivers of cerebral palsy children.

12. Sense of coherence will mediate the relationship between burnout and psychological distress among caregivers of cerebral palsy children

13. Social support will mediate the relationship between burnout and psychological distress amongcaregivers of cerebral palsy children.

14. Sense of coherence will mediate the relationship between caregivers burden and mental wellbeing among caregivers of cerebral Palsy children

15. Social Support will mediate the relationship between caregiver burden and mental wellbeing among caregivers of cerebral Palsy children.

16. Female caregivers of cerebral palsy children will score high on caregiver burden, burnout,depression, anxiety & stress as compared to male caregivers of cerebral palsy children.

Operational Definitions

Cerebral palsy

Cerebral palsy is a persistent disorder of movement and posture affecting movement, muscle tone and coordination caused by damage to the developing brain typically before birth or in early childhood (Rosenbaum et al., 2006).

Caregiver Burden

Caregivers' burden is defined as the physical, emotional, social, and financial problems that can be experienced by family caregivers. Caregiver burden is operationalized in terms of scoreon caregiver difficulties scale (Wijesinghe, Fonseka, & Hewage, 2013).

Burnout

Burnout is state of intense weariness related to one's parental role, in which one become emotionally detached from one's child and doubtful about one's capacity to be a good parent (Roskam, et.al, 2017). For the present study parental burnout is operationalized in terms of scores on Parental Burnout Assessment (PBA) (Roskam, Brianda & Mikolajczak, 2018).

Sense of Coherence

Sense of coherence (SOC) is a coping capacity to deal with everyday life stressors. (Antonovsky, 1987). Sense of coherence was operationalized in terms of scores on the Orientationof Life scale. A higher score indicates a better sense of coherence (Jibeen & Khalid, 2010).

Social Support

Social support is defined as psychological and material support provided by a social network to help the person’s to cope with stress (Zimet, Dahlem, Zimet, & Farley, 1988). Social support was operationalized in terms of scores on Multidimensional Scale of Perceived Social Support (MSPSS) (Akhtar et al., 2010).

Psychological Distress (Depression Anxiety & Stress)

Psychological distress is broadly defined as a state of emotional suffering characterized bysymptoms of depression (e.g., loss of interest; unhappiness; desperateness) and anxiety (e.g., restlessness; feeling tense) and stress. Psychological distress is operationalized in terms of the scores of DASS (Depression, anxiety & stress) scale (Lovibond & Lovibond, 1995b; Lovibond &Lovibond, 1995a). DASS 21 was used in Urdu to assess the psychological distress. Urdu translatedscale by Aslam and Tariq (2010) was used in the present study. It is important to note that this questionnaire cannot diagnose depression, anxiety, or stress. It provides an indication of whether these problems influence a person's quality of life. The questionnaire is used urdu and it took 5–10min to complete. (Kouther et al., 2022).

Mental Wellbeing

According to positive psychotherapy well-being is defined in terms of positive emotions, engagement, relationships, meaning, and accomplishment (Rashid, 2018). Wellbeing was operationalized in terms of scores on Positive Psychotherapy Inventory (Rashid, 2018).

Instruments

Demographic Sheet

Demographic details of the caregivers were measured in terms of caregiver age, gender, caregiver’s educational level, marital status, the total number of children, family system and income level. Demographic details regarding cerebral palsy child included child’s gender, age, type of cerebral palsy,additional current problems (Motor, speech & intellectual disability).

Caregiver Difficulties Scale (CDS)

Caregiver difficulties scale (CDS) (Wijesinghe, Fonseka & Hewage,2013) is a self-administered questionnaire designed to be completed by the principal caregiver of the child with cerebral palsy. For the present study urdu translated version of caregivers difficulties scale was used. Above the cutoff scores indicating a higher level of burden. There are four subscales of CDS. Concern for child (1-8), Impact on self (9-15), Support for caregiving (16-20) and social &economic strains (21-25). A score will be assigned for each item (except items 11, 12, 16, 17, 18& 20) based on the response alternative selected by the respondent, in the following manner. Always = 4, often = 3, sometimes = 2, rarely = 1, never = 0 Completely = 0, to a greater extent = 1, to some extent = 2, to a lesser extent = 3, not at all = 4 . The items 11, 12, 16, 17, 18 & 20 requirereverse scoring as follows. Always = 0, often = 1, sometimes = 2, rarely = 3, never = 4 . There is no definite cut off threshold for CDS; the total CDS score can be used to get an idea about the level of burden experienced by the caregivers, CDS scores ranged from 0 to 100 a higher score above cut off indicating a higher level of caregiver burden (Wijesinghe, Fonseka, & Hewage, 2013). In the main study urdu translated version of Caregivers Difficulties Scale was used (Waqar& Mushtaq, 2023).

Parental Burnout Assessment **(PBA)**

Parental Burnout Assessment was used to assess the burnout and it is developed by Roskam et al, in 2018. It is a 23- item self-report questionnaire. The PBA encompasses 23 items. Items are rated on 7-point Likert scales: never (0), a few times a year or less (1), once a month orless (2), a few times a month (3), once a week (4), a few times a week (5), every day (6**.** PBA ranged from 0 to 138. Higher scores indicate higher levels of parental burnout. Urdu translated version was used in the present study (Roskam, Brianda & Mikolajczak, 2018).

Orientation of Life Scale (Sense of Coherence)(OLS)(SOC)

Sense of coherence is measured by the orientation of life scale developed by Antonovsky in 1987. Urdu translated version was used in the present study (Jibeen & Khalid, 2010). A higher score indicates a better Sense of coherence. It contains 13 items, of which 4 itemsare reverse scale. Participants were required to circle a number from 1- 7 to indicate the strength of their feelings toward each item; a higher score indicated a stronger Sense of coherence and viceversa.

Multidimensional Scale of Perceived Social Support (MSPSS)

Multidimensional Scale of Perceived Social Support was developed by Zimet et.al, 1988. This scale measures social support across three domains; friends, family and significant others. The responses reflect participant’s perception of support from each of these three sources. For ease of understanding, the Urdu version of the scale, translated by Akhtar et al., (Akhtar et al., 2010) was used It has a total of 12 items divided in three sub-scales; friends, family and significant others. A 7-point Likert-scale ranging from 1 (very strongly disagree) to 7 (very strongly agree) is used to mark responses. A score can be obtained for the total scale to assess the social support.

Depression Anxiety and Stress Scale (DASS-21)

Depression anxiety & stress scale is a self-report questionnaire designed to measure depression, anxiety and stress and is available in two forms, DASS-42 and short form DASS-21. (Lovibond & Lovibond, 1995b; Lovibond & Lovibond, 1995a). In the present study urdu translated version of DASS 21 have been(Aslam & Tariq, 2010). Score on each item range from 0-3 with following response categories: (0= Not at all 1=Rare,2=Sometimes, 3=Often). Items of

Depression are (3, 5, 10, 13, 16, 17, and 21), Items of anxiety are (2,4,7,9,15,19,20), and items of stress are (1,6,8,11,12, 14,18).

Positive Psychotherapy Inventory (PPTI-25)

Positive Psychotherapy Inventory is developed by Tayyab & Seligman in 2018. Positive psychotherapy inventory is self-report inventory having 25 items. The positive psychotherapy inventory has five dimensions positive emotions, engagement, relationships, meaning, and accomplishment. Items are rated on 5-point Likert scales: not at all like me (1), not like me (2), neutral (3), like me (4) and very much like me. Urdu translated version was used in the present study. Lower scores on positive psychotherapy inventory indicates lower level of wellbeing, whereas higher scores indicate higher wellbeing.

Sample

Sample of main study

Sample of the main study comprised of caregivers of cerebral palsy children. At first stage,screening was done by administering the questionnaires on a large sample (n=100) of caregivers of cerebral palsy children. Sample was taken from Psychology department of National Institute ofRehabilitation Medicine (NIRM) with the permission of ethical board of NIRM. Age range of thesample was between 25 to 55 years old. Both males and females caregivers were included in the study. Educational status of the participants were matric and above. In the present study caregivers were those who take the primary responsibility for providing care to a child with cerebral palsy.In the current study only the caregivers of cerebral palsy children were included.

Inclusion Criteria

Caregiver was someone who takes the primary responsibility for providing care to a child with cerebral palsy. Only caregivers of diagnosed cerebral palsy child were included in the study.Diagnosed cases of cerebral palsy were referred to psychology department from

Pediatric Medicine/surgery and physiotherapy department of National Institute of Rehabilitation Medicine.

Exclusion Criteria

Caregivers having any severe diagnosed psychiatric illness & sever medical illness were not included in to the present study. Caregivers who were taking any psychiatric medication werenot included in the present study.

Sample for intervention

For selection of the sample for intervention simple randomization was applied. Coin method was used to divide the sample into treatment group and control group. The research samplefor intervention was comprised of caregivers (n=20) of cerebral palsy children, who scored moderate to high on burnout, caregiver burden, psychological distress and lower score on mentalwellbeing, social support & sense of coherence. Their age range was from 25-55 years. All thosecaregivers were included who were taking care of the CP child and coming to NIRM for rehabilitation of their CP child. Educational status of the caregiver was matric and above.

Randomization:

For selection of the sample simple randomization was applied. Coin method was used todivide the sample into treatment group and control group.

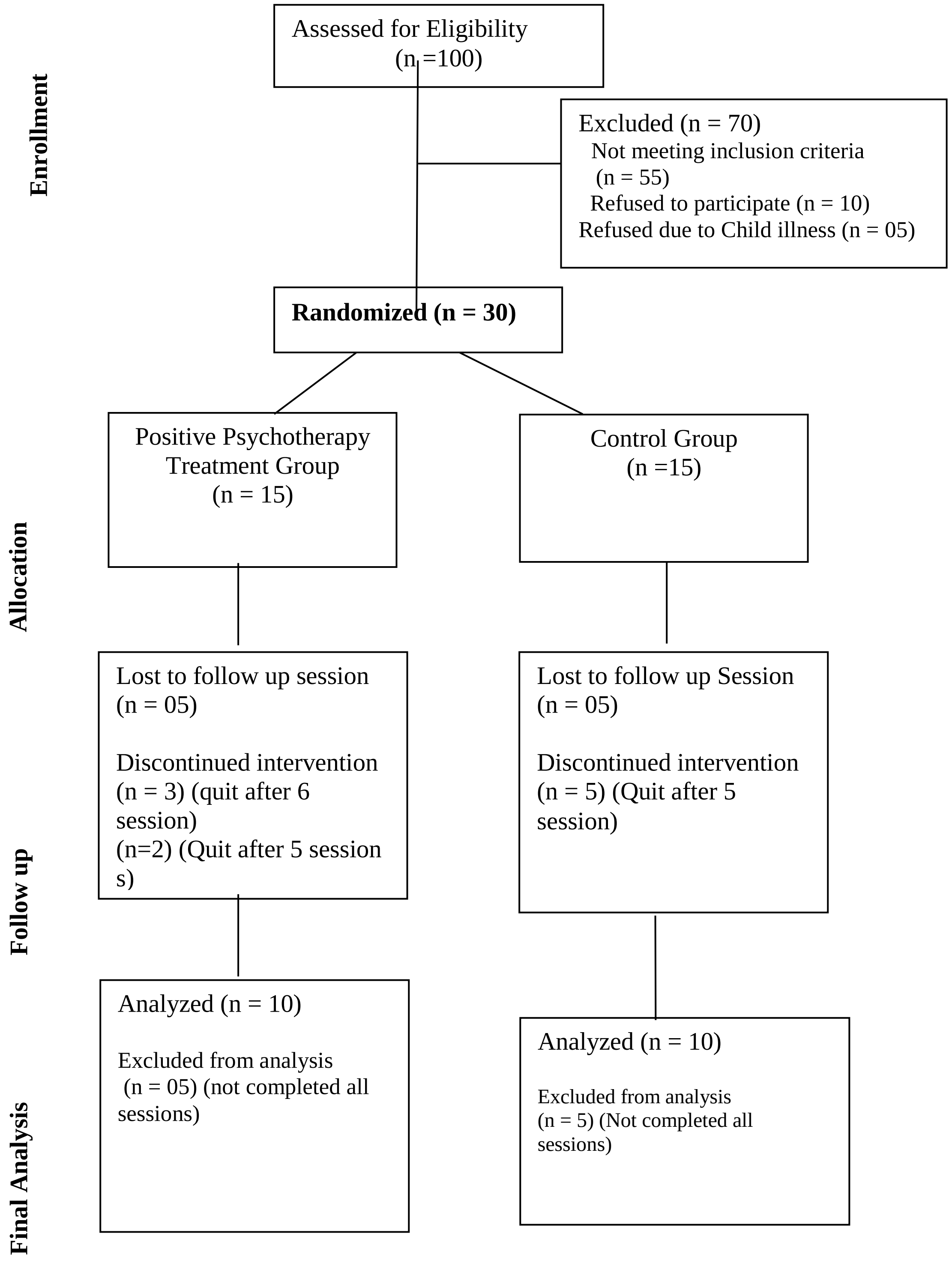
Procedure

After translation, adaptation and validation of Caregiver Difficulty Scale (CDS). All scales were organized in a booklet form comprised of consent form, demographic sheet, Caregiver Difficulties Scale, Parental Burnout Assessment, Depression Anxiety Stress Scale, Orientation oflife Scale and Multidimensional Scale of Perceived Social Support & Positive psychotherapy Inventory. All the scales were administered on sample of caregivers of cerebral palsy children (n=100). Demographic details included age, gender, educational status, marital status, marriage type, family system, previous history of disability, total no of children, family system and incomestatus. Demographic of CP child included CP child gender, age, birth order, CP type and current problems or functional status of children with cerebral palsy.

Instructions about each scale was printed on the respective questionnaires. Caregivers werealso given assurance that their identity would be kept confidential. They were asked to respond toall the scales items according to the given instructions. CP diagnosis was confirmed from the Pediatric/Surgery and physiotherapy department of NIRM. CP children referral for rehabilitation was mandatory inclusion of caregivers as sample into the present study. All the caregivers were taken with the permission of competent authority of NIRM.

At first stage, screening was done by administering the questionnaires on a large sample (N=100) of caregivers of cerebral palsy children. The study's clinical trial registration number is NCT05613595. Sample was taken from Psychology Department of National Institute of Rehabilitation Medicine (NIRM) with the permission of ethical board of NIRM. The manual of positive Psychotherapy was translated, adapted and validated with the permission of principal author and with the permission of Oxford press. Author provided the detailed therapy manualto the researcher & workbook having detailed of therapy and video links, all the sufficient knowledge, its principles and methods were mentioned in detail in the manual.Researcher read the manual thoroughly with supervisor and clinical experts experts in psychotherapy. Through email and online sessions, principal author permit the researcher to used it with the discussion of relevant supervisor. Emails are attached in the Annexure section. Sample of twenty caregivers of CP children (*N* = 20) was selected for present study from National Institute of Rehabilitation Medicines, Islamabad on the basis of moderate to high scores on mental health issues. 20 caregivers of CP were randomly assigned into two groups’ treatment and control group (10 participants in each group). Participants of the treatment group were given positive psychotherapy based interventional sessions along with regular counseling sessions. Whereas forcaregivers in control group only regular counseling sessions were provided (psycho education). Age range of the caregivers of cerebral palsy children were from 25-55 years old. Detailed information was provided to the participants about the study, and their consent was obtained for the present study. The respondents were instructed regarding the interventions. They were requested to follow and take proper time for the sessions. Each session was based upon individual session and duration of the session was 45 minutes. Feedback was taken in the start of the every session about the previous session and home based assignments were discussed. After completion of positive psycho therapeutic intervention & counseling group interventions, post assessment of study variables was done for both treatment and control group at posttest level for measuring theeffectiveness of positive psychotherapy.

Figure 5 CONSORT Diagram



(Schulz et al., 2010)

Positive Psychotherapy

Treatment Group (Positive Psychotherapy Treatment Group)

Positive Psychotherapy (PPT) treatment is based upon 15 session's interventional plan which aims to improve the psychological wellbeing of the caregivers of cerebral palsy children. All the sessions are adapted and translated into urdu language from PPT manual. All the sessions were completed in 6-8 months approximately. Caregivers were taken from indoor as well as outdoor departments of NIRM.

Brief Summary of Positive Psychotherapy Intervention Sessions (n=10)

Positive psychotherapy manual & worksheets (Urdu Version) were administrated on caregivers of cerebral palsy children in rehabilitation department of Islamabad with regular counseling sessions. There is no evidence of previous research, assessing the effectiveness of PPT with caregivers in rehabilitation settings in Pakistan. All the sessions were individual based weekly sessions. Following are the session details of treatment group.

Psychological Intake Session

The focus of the first session was history taking & rapport building with the clients (CP's caregivers). After rapport building the objective of the study was discussed with the caregivers ofCP children. Detailed history related to the CP child was taken and relevant issues were discussedregarding child rehabilitation. It was make clear to the caregivers that the major focus of these sessions would be on them (caregivers). Major mental health concerns of the caregivers due to long lasting physical activities with the CP child were discussed with the clients. History taking and assessment revealed that most of the caregivers scored high on caregiver difficulties scale, burnout, psychological distress, depression, anxiety & stress and scored low on sense of coherence, social support and mental wellbeing. Major stressors identified in the intake session was as under.

Table 8

Stressors of caregivers

	Individual stressors	Family stressors	Social stressors	Environmental stressors	Health system and policy stressors
Physical	Burden of house hold work, lack of rest Physical aches and muscular pains	Poor interpersonal Relationship , lack of physical support, Failure to give good care to other children	No physical support from family & community members	Physical accessibility barriers Difficulty in public transport facilities	No concerns & facility in health care system to cater caregiver physical health
Emotional	Excessive worries, Self-blaming Guilt, worries regarding the future of the child as a disabled	Emotional abuse by spouse, sadness & guilt of not being able to care for other children	Sense of isolation in society, Avoid social gatherings	Worried about how to get around with the child throughout life	Health related Self-negligence (Ignorance)
Social	Social stigma, Blame by society on the parents, Social restriction	Not caring for the family, Avoid visiting social places	Discrimination by the society	Non-inclusive spaces	Lack of social support
Financial Concerns	Expensive medical & rehab treatment Unable to	Neglect other expenses due to limited resources, limit other	Avoid social gatherings/ shopping due to financial issues	Lack of job opportunities	Disability welfare support insufficient

	Individual stressors	Family stressors	Social stressors	Environmental stressors	Health system and policy stressors
	work, financial burden	children expenses			
Informational & Awareness	Lack of knowledge about the child disability, Lack of knowledge about caregiving		Societal mis-guidance (myths related to child's treatment) False hope from society		Lack of support groups and information

The above table show the stressors of the caregivers of cerebral palsy children. These stressors were identified after taking intake session with the caregivers of cerebral palsy children.

Table 9

Gender , type of CP & current Issues, major concern of the caregivers of CP children (n=10)

Participant Allocated no	Gender	Child's Type of CP & Current issues	Issues/Concerns of caregivers
Caregivers 1, 7, 9	Female	Spastic CP Physical, Intellectual & speech Impairment	Excessive sadness, feeling of helplessness, Lack of social support, Stressors due to child dependency, Apprehensive, anger, change in sleep pattern,
Caregivers 3,5, 6	Female	Athetoid CP Physical, Intellectual & speech Impairment	Guilt feelings, fatigued , easily agitated, hopelessness, Lack of social support
caregivers 2,8	Female	Hemiplegic CP Physical, Intellectual & speech Impairment	Worried about future, fearful, fatigued, restriction of going other places due to social stigma
Caregivers 4,10	Female	Diaplegic CP Physical Impairment	Headaches, change in sleep patterns, Loss of interest in recreational activities, negative thoughts related to future

Above table show the age , gender , type of CP & current Issues, major concern of the eachcaregivers of CP children in treatment group.

Positive Psychotherapy Sessions Details

Session One: Positive Introduction and Gratitude JournalGoals

1. Positive Introduction
2. Gratitude Journal

The session was started with relaxation exercise (given in PPT manual). The first session was about introductory regarding Positive Psychotherapy. The major two aspects covered in this session was positive introduction and gratitude journaling. In the first part of the session "the positive introduction' encourages clients to recall a significant event or experience that ended verywell. This therapy was about revision of positive aspects of life, so the start of the session was about positive story of life. The reason behind focusing positive aspect of life was to allow caregivers to be aware of their past efficacy. Positive introduction can act as a guiding principle for caregivers to focus about their narratives from past to present and then peruse future goals accordingly.

Start of the session Relaxation:

Session was started with a brief relaxation exercise & mindfulness practice.

a. In-session Practice: Positive Introduction

In this opening session caregivers introduce themselves through a real life story. The instructions for caregivers were to close their eyes, sit comfortably, and take slow breaths before giving themselves three to four minutes to recollect a tale. It was made clear to consider an actualinstance in which they responded positively to a difficult circumstance. It shouldn't be a major event; instead, a modest occasion that brought out the best in the client might come to mind. Worksheet 1.1 was given to the caregivers and ask them to write down the event after opening their eyes. After they completed the story caregivers were asked to reflect and discussed about thestory they mentioned. Discussion points of the story was how the story impacted the Self-concept

of the caregivers? What helped caregiver's to deal with the situation such as personal attributes (persistence, optimism & faith), environmental attributes (such as support from close friends, family members or professional relationships). It was also discussed, that is there any significant person in caregiver’s life who were aware of this story in the same spirits or way as the caregiversrecalled it.

b. Gratitude Journal

The second part of this session was gratitude journaling. Before turning in for the day, clients were required to write down three blessings, or positive things that occurred that day. Writeat least one line explaining why the positive thing occurred on that day next to each blessing theyhave listed. For the client, what does that mean? After taking the time to identify that blessing or positive item, what has the client learned? How did other people help bring that blessing or wonderful thing about? The customer was asked to discuss the following aspects after finishing the task: did they have any trouble remembering certain positive experiences? Were the blessingslinked with family, friends, work or nature? Did they find new ways of looking at situation and people? Have they shared with others or did they find it difficult to write them down.

Phase I [The Narrative of Resilience (Positive Introduction)]

This part of Positive Psychotherapy having three (session two to four) consecutive sessions of assessment, identification and implementation of character strengths and signature strengths of the client. Sessions included in this phase were firstly identification of character strengths and signature strengths, secondly learning about how to adaptively apply their strengths in a proportionate way to solve the problems and thirdly a journey towards ‘A better version of me’. Details of the sessions were mentioned below.

Session Two: Character Strengths and Signature Strengths

The second of three sessions, which centre on character and signature strengths—positive attributes that may be cultivated by practice and support wellbeing and personal development. Together, sessions two to four address how to evaluate strengths, comprehend how to use them incontext and in different situations, and how to use certain strengths to become a better or desirableversion of oneself.

Session Goal

Start of session was relaxation & mindfulness exercises (based on manual)Character

Strengths Assessment

Signature strengths AssessmentIn-session practice

In this session, eight steps were focused to assess the signature strengths which are the heart of PPT. In step one by using a video clip having some pictures with strengths mentioned (forbrief period of time) was shown to the clients, and work sheet 2.1 was given (What are your HeartStrengths) and client was asked to record five strengths that best represent the client through images. The video was about strengths, in the video there is some pictures and with every picturesome description is given, client was asked to focus on the written strengths without focusing eitherthis strength representing the picture or not. Try to focus on choosing just five strengths that best represent the client. After completing the worksheet 2.1, transfer the identified strengths to column2 of the worksheet 2.6 (Signature Strength profile).

In Step two client was given worksheet 2.2 (What are your “Head” Strengths) having description of 24 strengths asked to select five statements that best represent you. As the client completed the task client was asked to transfer the identified strengths to column 3 of the worksheet 2.6 (Signature Strength profile).

In Step three worksheet 2.3 was given to client to write down the both head and heart based selected strengths. Heart strengths are based upon our rapid audio visual based selection and head strengths are based on our thinking. This step is necessary to just assess the overlapping between two strengths.

In Step four two work sheets 2.4 and 2.5 were given to the client to assess five character strengths by close friends and family members. Which they think the best representation of client'spersonality. After section it was ask to shift it in column 4 and 5 respectively.

These sessions were completed in 90 minutes (two sessions), and with a 10 minute breakin the middle, it was mostly based upon assessments in the present scenario due to sample non availability only those family members added who were coming with the client, 8 worksheets arecompleted in in session with the client. The tasks of session 3 & 4 are merged in 1 session (45Minutes session).

In Step five Signature Strength Questionnaire (SSQ-72) was given to the client through which five of six top score strengths were identified, after identification shift it to column 6 of theSignature Strength profile. In step six, complete the column 7 of the Signature Strength profile. By adding all the strengths (from work sheet 2.1 to worksheet 2.6) from each row. In Step seven go to the column 8 of the worksheet 2.6 and identify strengths client underused (U) and over use (O). In step eight client was asked to fill the column 9 of worksheet 2.7, by keeping in mind the reason of coming in the therapy session. The desired strengths, i.e, the signature strengths client want in themselves that can help to solve their problems or to be the person they always wanted tobe. After completing all these steps clients was asked to discuss and reflect on multiple relatedquestions. Worksheet 2.7 were given to the client based upon "markers of your signatureStrengths", through which client identified strengths are truly their own signature strengths. Reflection and discussion question was discussed with the client. After completing it ask client tocontinue with worksheet 2.8. in the discussion it was discussed with the client that our negative thinking about others can be due to under and over use of strengths,.

At the end of the session relaxation practice was done.

Session Three: Practical Wisdom

In Session three, clients learn about the Aristotelian concept of practical wisdom, that is, the adaptive use of strengths to be used to live a good, meaningful, and virtuous life. These skillsteach us how to adaptively apply signature strengths in a balanced way to solve problems. The central positive psychotherapy practice covered in this session is Know-How of Strengths.

Session Goal

Start of Session Relaxation & Mindfulness exerciseIn Session Practice

Client was given worksheet 3.1, illustrating clients under and over use of strengths. The major reason is that we use our signature strengths to manage our negatives. After that three scenarios were given to the client and elicit their responses in terms of over and under use of strengths. From scenario client learn the know-how of strengths. The major goal of this session was towards developing practical wisdom skills. In work sheet 3.2 five strategies were given to the client for building practical wisdom or know how of strengths. Through different approaches mentioned in the PPT therapy tasks "building your strengths" client is able to develop practical wisdom skills through signature strengths. After completing this worksheet client was asked to start worksheet 3.3. The challenge" in which client has to write about the current challenge that need to be resolve. When did it start? How long it lasted? What were its effect and it was due to over use of the strengths? Which ones? How? Which aspect of challenge would the client want tochange? Which specific practical wisdom strategy can the client use to make adaptive changes?. All these questions were discussed in detailed with the client and focus them to use the proper practical wisdom skills in the client.

At the end of the session relaxation practice was done.

Session Four: A Better Version of Me

The fourth and final session (phase I) of the program, session four, concentrates on character strengths and examines how to formulate and carry out a documented plan for persistent, practical, and positive self-development. The central positive psychotherapy practice covered in this session is A Better Version of Me.

The main goal of this session is self-improvement. Client was counsel with relevant material to focus on their future self, the best possible self. The aim is to redirect client's strengths, skills and abilities to achieve their goals. Clinician have to make an effort to assess the content and structure of client's goal. Client was given worksheet 4.1 : A better version of me, and counselthem to visualize a better version of themselves and set appropriate realistic goals. Different examples of goals for a better version of Me, including emotional resilience, social resilience, physical resilience and workplace resilience were discussed to make the process easy to address. After completing this worksheet reflection and discussion was done with the client. The ultimate goal of this session is to give the client practical goals, which remind them that they are the ultimatejudge of their better version. As long as they are putting their best effort, A Better version of themselves will take shape.

Session four was about better version of oneself after getting know how about the strengths. Detailed about the better version of self was discussed with the care givers. The main focus of these sessions were inculcating practical wisdom skills in the caregiver's life. Home based assignments and tasks was also given.

At the end of the session relaxation practice was done.

Phase II (The Hope of Cultivating a Better version of the Self)Session Five: Open and Closed Memories

Goal: Practice Positive Appraisal

Session five was about open and closed memories and it was 45 minute's session. Sessionfive is the start of the phase two of the positive Psychotherapy session. In Session Five, clients recall, write, and process their open and closed memories. Positive Appraisal. Client write about bitter memories and explore four ways to deal with the adaptively. In this session an introductorysession was given about the concept of open and closed memories to the client. Memories that are not fully understood and those that triggers negative emotional responses are called open memory,whereas memories that ended somewhat conclusively with a positive outcome even consisted on past challenges or difficulties are referred to as closed memories. Session was done in different steps with comprehensive relaxation exercise in step one client was asked to recall negative memory of life and recall only such feelings like sadness, loss, rejection and frustration linked withthat memory. In step 2 client was asked to recall a closed memory of a difficult experience, any memorizing incident whom you are thankful for and having positive consequences which at the time was tough to go through, but as the client look it back client feel satisfied. Reflection and discussion was done with the client related to the memory. According to the PPT when the open memories are not addressed actively they often evolved into resentment, revenge and hostility. Sothrough four skills of Positive Appraisal PPT can help the client to deal with the open memories. Positive Appraisal is a meaning based coping approach that reinterprets event or situation in a positive manner. Worksheet 5.1 was given to the client having four steps based on how to handlea situation or coping ability. First is ‘create psychological space, in which client was given task toanalyze personal negative memories from third person perspective. Practice was given to the clientwith specific situation. Second is ‘Reconsolidation’, while focusing only negative aspects of life try to pay attention on meager positive aspect of the memory that may have been missed. Third is‘Mindful self-focus’ which mean that try to unfold that memories by watching it like a film is going through and try to be like an observer. Fourth is divert your attention from negative memories through different other hands on and complex tasks. After this refection and discussionwas done.At the end of the session relaxation practice was done.

Session Six: Forgiveness

Goal: 1. Practice steps of forgivenessWriting a forgiveness letter

Session Six teaches clients that forgiveness is a process for change rather than an event. Inthis session client was counseled about to willingly decide not to seek revenge and instead offer the offending person their kindness.

Start of the session Relaxation and Mindfulness practice doneIn-session Practice

This concept of forgiveness was explained in this session. The central positive psychotherapy (PPT) practices covered in this session are writing a Forgiveness Letter and REACH, which is an approach to forgiveness, as follows: Step One: R = Recall an event; Step Two: E = Empathize from the perpetrator’s point of view; Step Three: A = Altruistic gift of forgiveness; Step Four: C = Commit yourself to forgive publicly; and Step Five: H = Holdonto forgiveness. After these all practical steps client was counseled and reflection and discussionwas done. Second practice of the session was writing a forgiveness letter who have wronged you in the past and you have never explicitly forgive. Write down a letter of forgiveness for a person but this is just practice, client do not need to deliver or email that person. Reflection and discussionwas done after the session. Session 6 Forgiveness, in-session 45 minutes worksheet based sessiondone with the client.

At the end of the session relaxation practice was done.

Session Seven: Maximizing versus Satisficing

Goal: Assessing for being Maximizer or Satisficer

Practice ten ways to increase Satisficing

Session Seven presents clients with the concepts of maximizing, which involves aiming to makethe best possible choice, and satisficing, which involves making a “good enough” choice.

Therapist identify whether clients are maximizers or satisficers. The central positive psychotherapy practice covered in this session is toward Satisficing. Session Seven was Maximizing versus Satisficing techniques, assessment and practice done in 90 Minutes sessionwith 10 minutes break.

Start of the session Relaxation and Mindfulness practice doneIn-session Practice.

Client was given worksheet 7.1 to assess as they are maximizer or Satisficer. 13 items based work sheet was given to the client to rate on seven point likert type scale. After they have completed computation of the scale was done independently. As the assessment completed reflection and discussion was done with the client. Discuss both aspects separately because the major goal of this session is towards Satisficing. Worksheet 7.2 was given to the client about 10 ways to increase Satisficing. First strategy is be a chooser, not a picker, in which two options weregiven to the client to become a satisficers, second is satisfice more and maximize less, in this threeoptions were given to the client, third is think about the opportunity cost, having four options to try. Fourth strategy is make your decision non reversible, (listing reversible and non-reversible decisions in life), fifth is practice an attitude of gratitude (less disappointment), sixth is regret less(three options given), seventh is anticipate adaptation (three options given), eighth is control expectations (three options given), ninth is curtail social comparison (two option given) and tenthis learn to love constraints. Detail reflection and discussion was done with the client.

At the end of the session relaxation practice was done.

Session Eight: Gratitude

Goal: Writing Gratitude Letter & Gratitude Visit

Start of the session Relaxation and Mindfulness practice done

Session Eight is based upon the concept of gratitude journaling. Clients have to recall andwrite for someone who is alive now and who did something positive but the client has never fullythanked them. Practices covered in this session are the Gratitude Letter and Gratitude Visit. Session eight was about gratitude journaling, it was 45 minutes session.

In-session Practice**:**

After relaxation exercise it was asked to client to write a letter to express their thanks by saying in a concrete way whatever the person did that helped the client. If it is possible for client to visitthat person then arrange a visit with the client.

At the end of the session relaxation practice was done.

Phase III (The Aspiration of Leaving Positive Legacy)

Session Nine: Hope and Optimism

In Session nine, clients learn to see the best possible, realistic outcomes. They learn that challenges are temporary and how to develop a sense of hope. The central positive psychotherapypractice covered in this session is One Door Closes, Another Door Opens.

Session 9 was about hope & optimism and it was 45 minutes in session practice.

Goal: Concept of One Door closes another door opens Start of the session Relaxation and Mindfulness practice doneIn-session Practice

This session was start with the saying of Winston Churchill, “A pessimist sees the difficultyin every opportunity; an optimist sees the opportunity in every difficulty”. Worksheet 9.1 was given to the client having two steps. In step one client was asked to write down about the door thatclosed and door that open immediately. In step two client explore the reasoning behind why the door closed. The main goal is to focus the positive aspect of life. Like most of the client take thisconcept like this islamically as Allah as the door opener. May the doors He opens and close for us, always best for us .

Reflection and discussion was done with the client.

At the end of the session relaxation practice was done.

Session Ten: Post-traumatic Growth

Session Ten is about to explore deep feelings and thoughts about a traumatic experience that continues to bother the caregivers. The practice covered in this session is expressive writing. Session 10 was about art of writing the traumatic event it was 45 minute session.

Start of the session Relaxation and Mindfulness practice doneIn-session Practice

This session is about art of writing the traumatic event (writing therapy). Ask the client towrite in detail about a trauma in life for 15 to 20 minutes in consecutive four days. The basic goalis to link the trauma with the character strengths. Discussion and reflection was done with client related to the trauma. Concept of Post traumatic growth (PTG) was explained to the client that is to develop a deeper and satisfying philosophy of life. PTG help the client to understand the relationships by discovering who pass the test and who fail in difficult situation. PTG is facilitatedby positive reinterpretation, positive focused coping and positive religious coping. Most of the client take this practice as a healing one, as significant external stressors can overwhelm most of us, performing the writing practice will heal the incident's bad thoughts. Reflection and discussionwas done with the client.

At the end of the session relaxation practice was done.

Session Eleven: Slowness and Savoring

Goal: Strategies to slow down

Savoring Experiences & techniques

It was reported by the client that despite speeding up almost everything, including human maturation, we are not happier or healthier. Naturally as a human being we are addicted to speed. So the major practice of the session is practicing slowness in life attentively & intentionally. In Session Eleven, clients learn how to intentionally slow down and develop an awareness of how tosavor.

In start of session relaxation and mindfulness practice done.

In-session Practice

This session is based upon the concept of slowing down in life. This helps the clients to grasp the concept of slowing down with concrete suggestions. Worksheet 11.1 is given to the clienthaving 6 suggestions of slowing down for the client to select one that they can easily opt like in awhole day working from some of the task start slowing down activities. Ask clients to start with a small decrease and gradually decelerate. Initially pick from two areas of life you usually hurry through and gradually slow those ares down (example eating at least 2, or 1 meal slowly in a weekor twice a week, or having a media technology free time in a day or twice week). Another task given in the session was getting involved in nature like watching the sunset, feeling the breeze, enjoying the weather the surroundings peacefully etc). To educate others (family & friends) on hazardous effect of speeding is also part of this worksheet. Creating gadget free zone (no cell phones after 8pm or no TV in the living room. These all above mentioned tasks were discuss in the session one by one and client has to choose any one from these all to practice slowing down. Reflection and discussion was done with the client related to that chosen specific strategy. Anotherconcept discussed in this session was Savoring. Savoring is a process of acknowledging the positive events. Worksheet 11.2 was given to the client having kinds of savoring experiences (basking, thanksgiving, luxuriating, Mindfulness) and savoring techniques (sharing with others, memory building, self- praise, Sharpening perceptions). Discussion was done to address each onein detail.

In session Activity II

Prior to the start of the session show something from the natural environment to the clientlike flowers, stones, feathers, Pictures & Post cards of natural beauty, souvenir etc.) Place these items to the next of the client and discuss about different savoring techniques with the help of worksheet 11.2. Client has to select one item from these and savor the object using one or more savoring technique. Through discussion and reflection client address the moment of savor with the therapist. Homework practice was also given to the client, which is to plan a savoring date withyour family members or friends. Different options of enjoyment was given to the client. Reflectionand discussion was done based on the view regarding during the savoring date did the client think about other things that were hanging on them, like problems difficulties and worries that they arefacing or have to face.

At the end of the session relaxation practice followed by the manual was shown to the client.

Session Twelve: Positive Relationships

Goal: How to make Tree of positive Relationships Reflecting on your Tree of Positive

Relationships

Positive relationships are the major theme of this sessions, involving the family. Biological family members were discussed specially. In this session clients identify the importance of acknowledging the strengths of their family members. The positive psychotherapy practice covered in this session is creating a Tree of Positive Relationships.

The main goal of this session is focusing on positive relationship, the quality of time spentwith others also matters, and evidence showed tat positive interaction act as a buffer against number of psychological problems, especially against depression and other mental illness.

Start of the session Relaxation and Mindfulness practice was done.In-session Practice

All of the previous sessions till yet has broaden the client's mind set, from this session PPT sessions focus primarily on interpersonal relationships and social & communal resourcefulness. Work sheet 12.1 was given to the client base on tree of positive relationships. Through making tree of positive relationship client not only identify the closed loved ones in the family but also identify their strengths. Like most clients start tree from their parents, then husband or wife, then siblings and children with their specific strengths. In the present sample many clients identify their parents as the most caring, loving and kind and supportive towards them while taking care of theirCP child and helping them positively.

Signature Strengths Questionnaire- 72 client was asked to identify signature strengths of the family members and mention in the family tree with appropriate name. Work sheet 12.2 was given to the client based on "reflecting on your tree of Positive Relationships". like in reflecting tree of positive relationship while addressing her CP child one of the client elaborated that ' I knowthat my CP child will remain with this diagnosis forever, instead of seeing his symptoms of CP and behavioral issues, I have seen many strengths like lots of zest, vitality and energy. As I lookedback for the most time he has used his zest in a productive way. He can't study but I have tried toteach many positive behaviour in him through his strength of love of learning through constant trail and error (like partial toilet training, self eating simple apple etc, one on one balloon play etc).through identification of others strengths it can only be possible to work on that specific parameters.

At the end of the session relaxation & mindfulness exercise based practice was done with theclient.

Session Thirteen: Positive Communication Goal: Practice of Active Constructive

responding

Identifying Partner’s Strengths

In Session Thirteen, clients learn about four styles of responding towards new great achievement. These include active constructive, active destructive, passive constructive, and passive destructive responding. Of these styles, only Active Constructive Responding (ACR)— the central practice covered in this session was satisfaction in relationships. This session is about relationship satisfaction, focusing towards style pf responding towards good news through four responding style. Active constructive responding style was practiced in the session. Core conceptof this session is based upon Swedish Proverbs “Shared joy is double joy; Shared sorrow is half sorrow. Social support is beneficial for coping. Self-disclosure is covered in this session of PPT.Self-disclosure is done in a constructive and positive manner. Capitalization is the process of sharing positive news with another person. When people tell others about positive events, they experience more positive emotions and feel greater life satisfaction than they cannot or choose notto tell others about these positive events.

Start of the session Relaxation and Mindfulness practice doneIn-session Practice

Worksheet 13.1 was given to the client with examples of four responding styles followed by in-session exercise. Worksheet was based upon example of four responding style to communicate with the client's partner. The goal of doing exercises of this worksheet was to adapta constructive responding style focusing on positive communication skills. Like one of the client shared about the negative destructive communication due to hectic routine with the child with herhusband &b other children all the time. After practicing positive psychotherapy session practices in this exercise she elaborated that now in the same circumstances I tried my level best to communicate in a positive way. I tried to be kinder towards other children and husband too by using strengths of kindness and love. After completion this practice reflection and discussion wasdone. Worksheet 13.2 is about identification of Partner's strengths. It was based to identifying signature strengths of the partners at home. Both the parents took part in up bring a child. Same isthe case with CP child, it is the responsibility of the both partners so from this exercise of positive relationship role of all family members also identified by understanding each other's role as acaregiver.

At the end of the session relaxation practice was done.

Session Fourteen: Altruism

Goal: The Gift of time

After taking feedback of the previous session tasks, client was asked to discuss about the relaxation and mindfulness based exercise. This session was revolving around helping others andfeeling the pain of the others. Simple discussion about meaning of altruism is discussed with the client. Altruism is defined as helping others without being asked for it and without any financial reimbursement. In this session clients learn altruism and concept of "Gift of Time". session was about watching a video that captures the concept of altruism and illustrate the Gift of time practice,it was 45 minutes session

Start of the session Relaxation and Mindfulness practice doneIn-session Practice

Video practice on "Gift of Time"

This is an in-session practice focuses on watching a video that captures the concept of Altruism and illustrate the Gift of time practice. After watching the video client was asked to discuss and reflect on the questions related to the video. Concept of Altruism was cleared to the client through this video. Worksheet 14.1 was given to the client to have an exercise on the Gift of Time. Client watch a video based upon altruism, the theme of the video was about helping others unconditionally, without focusing on the benefits in return. Helping others shift the attentional focus from indulging in one's own thoughts (like all the time having depressing thought about child' future, child's dependency etc) towards healthy thoughts. Helping other is a healthy endeavor, so it is a shifting of oneself towards healthier behavior endeavor. Gift of time was also known as environmental volunteerism. In our community altruism is also practiced like one of theclient decided to teach the students who cannot afford any single penny in return (home tuition). One of the client decided to learn the physio CP based exercises from physiotherapist and to helpthe needy family having CP child who cannot come to rehabilitation unit for child's rehabilitationdue to limited financial resources.

At the end of the session relaxation practice was done.

Session Fifteen: Meaning and Purpose

Goal: A story from your Past and envisioning a future Goal

This was the final session which integrates the all above sessions of positive psychotherapy (PPT). Session Fifteen focuses on the finding of the meaningful endeavors for thegreater good, and the central PPT practice in this session is positive legacy.

Meaning refers to a logical understanding of the world that promotes the pursuit of long term goalsthat provide a sense of purpose and fulfillment. As per Seligman's saying this session is based uponGod, nation and family. This session was start with the first session's story, client was asked to recall that story which was written in the first session.

After previous session feed back, at the start of the session Relaxation and Mindfulness practice was done.

In-session Practice

This session was start with the first session's story, client was asked to recall that specificlife story which was written in the first session. Then worksheet 15.1 was given to the client. In the practice, resilience in life was discussed by keeping in mind the character strengths and goalsin life. Core concept discussed in this session was leading a life towards meaningful life. Meaningin life help us to create ways to justify actions. In the session client was asked to think about the goals they would like to pursue in the future. Goals should be very close to their daily life based activities like most decided to reuse home based materials and making them productive, and recycle electronics. Investing on inborn talents and utilizing them like most of the female caregivers decided to start some home based baking and cooking based activities and make a goalof future to work on that grounds. Becoming a mentor to disadvantage people, like helping the needy, many clients decided to help the other caregivers of CP children who are facing the samecrisis and don't have the opportunity to come for rehabilitation like, sharing the information, detailed about the rehabilitation, sharing the extra wheelchairs to needy etc. Promoting innovativeways to increase charitable giving. Most of the client decided to work on identifying the needy person in family and trying to help them out on personal capacity and working on the concept of food bank to communal dinning (Dastar khwaan for needy). it can contribute to the cause that cancomfy the needy.

In session practice

It is based upon positive legacy, which forces us to envision our future and really able theclient to think about how the clients fulfil their hope and dreams. Worksheet 15.2 was given to theclient regarding Positive Legacy. Clients mentioned the goals related to their life which they wantto acquire in their life. Caregivers specify many goals like working based, family support based, and child related goals etc, like one of the client express that she would like to be the healer for others through helping others who asked and those who needed specially the caregivers of cerebralpalsy in the family and in the community. According to one client ‘ I cannot help others, find peaceand happiness in myself, without first finding my own track of meaning life. If I will be able manage my self I will be able to manage and feel the life of people like me (caregiver’s of cerebralpalsy). Clients made list in which they prioritize their goals by keeping in mind the key aspects they have learned in the previous sessions.

Reflection and discussion was done.

At the end of the session relaxation & meditation practice was done.

Maintenance & Follow Up Sessions plan

Participant were briefed on the pros and cons of each session tasks & exercise in order to have a positive change in life. Every participants were instructed to follow the practice repeatedlyfor several consecutive months as the simplest way to maintain their positivity of life. Follow up plan was planned with the client after one month accordingly.

Control Group

Control Group (Counseling sessions) (n=10)

The researchers introduced the participants about the research, informed them about the counseling sessions and their consent was taken. It helped the participants to become aware of their responsibility for personal change.

- Psycho-education regarding the treatment of the child

1. Elaborate about the disability of the child.
2. Treatment and management guideline regarding the disability of the child.

Rapport Building session

It helps to build relationship with the client. The psychologist can understand client's ideasor feelings and client can communicate well. Rapport building is a procedure to gain trust and confidence of the client (Myers, 2007). Rapport was built through active listening, engaging skills,empathy, building trust, and co-operation. In the beginning sessions the client enjoyed general discussion in which easygoing speak was done about the client and the therapist, their preferencesand aversions were additionally requested that be highlighted. In order to build the rapport client was observed in their natural behavior (participant and non-participant observation) (Harwood &Eyberg, 2004).

Sessions plan

Following were the goals

- Rapport was built and maintained with the client to gain trust and confidence of the client.
- Client has partial insight about their problems so psych education regarding their problem was done.
- The researcher introduced the concept of counseling to the participants and

informed theparticipant about the session plan and their responsibilities

- Signs of the stressors were discussed with the client. Physical emotional and behavioralsymptoms of stress due to child’s life long disability was addressed.
- Counseling sessions were given for current problem of the caregivers.

Control Group

Present study was held in psychology department of National Institute of Rehabilitation Medicine (NIRM) on the basis of regular clinical practice psycho-education based counseling was given to every caregivers of the Cerebral palsy children. Keeping in mind the prevailing practice of NIRM present study was planned. Treatment-As-Usual (TAU) means that the usual treatment according to accepted standards for particular discipline is given to a group of participants (Staines et al., 1999), like in the present study the general counseling given to the caregivers of cerebral palsy children in NIRM. Treatment As Usual(TAU) within the area of mental health has been investigated in a number of studies (Freedland et al., 2011; Somerville et al., 2008; Witt et al., 2018; & Gul et al., 2022). In the present study control group was given treatment as usual (TAU).

Sessions detail (TAU)

For control group overall (15) fifteen counseling sessions were conducted. One sessionper week was conducted with caregivers of cerebral palsy children in control group. During initial, first, second and third session caregivers of CP child in control group were counseled onchild’s disability i.e., cerebral palsy and issues linked with it. Clients were asked about their own major concerns due to having and taking care of a CP child. Fourth session was about management regarding insight of the child’s issue by focusing client’s attention towards child’sstrengths. Thoughts regarding the future of the child, due to child’s disability were discussed. Fifth session was about client’s own irregular sleep habits. The clients were counseled on limiting their own intake of food and beverages before bed. Limit their caffeine intake (tea, coffee). Go to bed by ten o'clock every night. Avoid using their phone or watching TV on bed. Make journal writing a part of their life. Clients were overburdened & fatigued due to having long lasting effort with the child. In sixth session, clients were counseled through differentsteps, like to divide their activities with other family members regarding child (spouse or family). Participants/clients were guided not to be over perfectionist in daily household activities. They were advised to channelize their daily activities and limit the over expectations. Clients were told to enjoy small achievements in their lives in spite of waiting some big to come. seventh session was related to client’s appetite issues. Counseling was done, regarding their appetite issues. While handling the child client’s basic, diet should be up to the mark. Certain tasks were given to the client like to divide activities with other family members regarding child (spouse orfamily) and have proper meal timely. Follow proper meal timings (breakfast, lunch & dinner) mindfully. Observe daily caloric intake according to requirement or add some multivitamins also, add short meals. Follow the routine of diet, increase water intake and add physical activityin their own life. Three sessions were conducted on skilled behavior and problematic behaviors of the CP child. Clients were counseled on the skilled behavior of the child like self-help based activities (toilet training, self eating & self dressing). In these sessions counseling session was conducted based on child’ activities (Skilled behavior & problematic behavior). Counseling wasprovided for self-help skills and tasks were given and behavioral issues of their CP’s Child was also discussed. Eleventh session was about anger of the clients. Clients were counseled regarding how to minimize the anger due to child’s problematic behavior. In twelfth session clients majorconcerns regarding the independent activity of the child was discussed. Clients were counseled to have patience in each step and give positive attention to their child. Clients were counseled onhealthy activities (routine, necessary and pleasurable). In thirteenth session clients were counseled about how to come out from social isolation. They were advised to start meeting anddiscussion with the persons whom they feel comfortable (friends & family). They were also told about going to market places. Start from least bothering points of social restriction to the point of most restricted places. In last two session clients were counseled about importance of support group in their social circles involving their family, friends, relatives and teachers etc.

Posttest

After the completion of the therapeutic sessions, post assessment of the study variables, caregiver burden, burnout, and psychological distress, sense of coherence, social support and wellbeingwas done on both treatment and control group for analyzing the effectiveness of positive psychotherapy.

Results

Table 10

Frequency and percentages of demographics of Caregivers of Cerebral Palsy (N=100)

Variable	Groups	*f*	%
Caregiver Gender	Male	26	26
	Female	74	74
Relationship with child	Father	19	19
	Mother	68	68
	Other Relatives	13	13
Caregivers Age	25-35	47	47
	36-45	46	46
	46-55	7	7
Caregiver Education	Less educated	68	68
	Highly Educated	32	32
Caregiver Occupation	No Occupation	64	64
	Labor Work/Pvt Job	12	12
	Government Servant	21	21
	Business	3	3
Marital Status	Married	92	92
	Unmarried/Alone	08	8
Marriage Type	In Family	73	73
	Out of family	23	23
	NA	4	4
Family System	Joint Family	64	64
	Nuclear Family	36	36

No of Children	1-3	53	53
	4-6	38	39
	7-9	5	4
	No children	4	4
H/o disability in family	Yes	36	36
	No	64	64
Monthly Income	20,000 -40,000	39	39
	41,000- 60,000	27	27
	61,000-80,000	24	24
	81,000-100,000	6	6
	.<100,000	4	4

The above table 10 shows the frequency and percentage of each demographic variable of the study. The gender of the caregivers included in the study were males (26%) and female (74%).The age of respondents varies from 25 years to 55 years. In between 25-35 there were 47 participants and from 36 to 45 there were 47 (46%) participants whereas 7 participants were from46 to 55 years old (7%). Caregiver’s relationship with child included father mother and other related caregivers (siblings, Uncle, Aunts). From the caregivers fathers were 19 (19%), mothers were 68 (68%) and others were 13 (13 %). Educational status of the caregivers were less educatedto highly educated, 68% were less educated, and 32% were highly educated. Occupational statusof the caregivers included, no occupation (House wives) were 64 (64%), labor Work/Pvt Job were12 (12%), government Servants were 21 (21%) Business based were 3 (3%). In marital status therewere married 92 (92%) and alone were 8 (unmarried & widowed). In marriage type there were infamily marriage (73%) out of family marriage (23%) and (4%)

were not married. In family systemthere were joint family system (64%) and nuclear family system (36%). In no of children caregiverhaving 1-3 children were 53 (53%), having 4-6 children were 39 (39%) , having 7-9 children were4 (4%) and with no children there were 4 respondents (4%). No of disability status in family. Previous family history of disability is also part of demographics, as 64 respondents (64%) have no previous history of disability and 36 % have family history of disability. Monthly income included from 20,000 to 100,000. 39% respondents were having income status between 20,000 to40,000. 27% respondents were having income status between Rs. 41,000 to 60,000. 24% respondents were having income status between Rs.61,000 to 80,000. 6% respondents were having income status between Rs.81,000 to 100,000, and 4% respondents were having income status Rs.<100,000.

Table 11

Frequency and percentages of demographics of cerebral palsy children of caregivers (N=100)

Demographics	Groups	*f*	%
Gender of CP Child	Male	67	68
	Female	33	32
Age Of CP Child	2year to 7years	54	54
	8years to 13 years	46	46
Birth order	First	28	28
	Second	28	28
	Third	18	18
	Fourth	13	13
	Fifth	7	7
	Sixth	4	4
	Seventh	0	0
	Eighth	0	0
	Ninth	2	2
Current disability	Physical, Intellectual Disability, Speech Impairment	83	83
	Physical Impairment	14	14
	Physical & Speech Impairment	3	3
Type of CP	Spastic	70	70
	Athetoid	9	9
	Hemiplegic	9	9
	Diplegic	4	4
	Paraplegic	8	8

The above table 11 shows the frequency and percentage of demographic variable related to Cerebral Palsy child included in the study. The gender of the CP child included in the study weremales (67%) and female (33%). The age of CP child varies from 2 years to 13 years Approx. From2 years to 7 years there were 54 (53%) children, from 8 to 13 (46%) years. Birth order of the

children included 1st to 9th, 28 (28%) children were 1st born 28 (28%) were 2nd born, 18 (18%) were 3rd born, 13 (18%) children were 4th born, 7 (7%) were fifth born, 4(4%) were 6th born and 2 (2%) were 9th born. Current functional status of the child with CP is the problem child is facingcurrently (assessed by physiotherapist, speech therapist and Psychologist). 83 (83%) of CP children were having physical, intellectual and Speech disability, 14 (14%) of CP children were having physical disability only, 3 (3%) of the respondents having Physical & speech disability only. Types of CP included in the study were spastic (70%), Athetoid (9%), paraplegic (8%), hemiplegic (7%) and Diplegic (4%).

Table 12

Descriptive Statistics and Alpha-Reliability Coefficient of Caregiver burden, burnout, psychological distress (depression, Anxiety & Stress), Sense of Coherence, Social support and mental wellbeing among Caregivers of Cerebral Palsy Children (N =100)

variables	k	α	*M*	*SD*	Range		Skewness	Kurtosis
					Actual	Potential		
CDS	25	.85	84.73	11.94	29-116	5-125	-.88	3.1
Concern for the child (CFC)	8	.80	30.50	5.08	12-40	5-40	-.59	.72
Impact on Self (IoS)	7	.62	23.07	4.19	7-30	5-35	-1.03	1.83
Support for Caregiver (SfCg)	5	.77	14.52	3.14	7-23	5-25	.05	.19
Social & Economic Stains (SeS)	5	.63	17.22	3.21	5-24	5-25	-.33	1.01
PBA	23	.91	72.19	27.08	23-134	7-161	.43	-.64
DASS	21	.94	48.44	13.09	22-82	4-84	.21	-.45
Depression	07	.85	16.13	4.84	7-28	4-28	.22	-.36
Anxiety	07	.84	15.06	4.53	7-28	4-28	.28	-.50
Stress	07	.85	17.18	4.67	7-28	4-28	.24	.48
SOC	13	.89	49.61	16.35	13-91	7-91	.05	.08
MSPSS	12	.96	43.03	18.98	12-84	7-84	.04	-.92
Wellbeing	25	.97	76.20	23.06	30-124	5-125	.12	-.70

Note. k= No. of items, *M*(*SD*)= Mean (Standard Deviation), *α*= Cronbach's Alpha. *CDS= Caregiver Difficulties Scale, CFC= Concern for the Child, IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & EconomicStrains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence,SS= Social Support, PPTI= Positive Psychotherapy Inventory*

Table 12 shows Cronbach's Alpha for caregiver burden (Caregiver Difficulties Scale), & its dimensions CFC, IoS, CfCg,and SeS, PBA (Parental Burnout Assessment), Psychological distress DASS (Depression Anxiety, Stress Scales), Sense of Coherence (Orientation of Life Scale), Social Support (Multidimensional Scale of Perceived Social Support) and mental wellbeingbased on Positive Psychotherapy Inventory (PPT). The results indicate satisfactory internal consistency for CDS,PBA, DASS-21, Sense of Coherence, Social Support and wellbeing. The score of caregiver burden (CDS) is ranged from 29 to 116 *(M=84.73, SD=11.94)* and score of Parental Burnout based on the scores of PBA is ranged from 23 to 134 *(M=72.19, SD= 27.08),* score of Psychological Distress based on the scores of DASS-21 is ranged from 22 to 82 *(M=48.37,SD= 12.99)* and score of sense of coherence based on the scores of The Orientation of Life scale is ranged from 13 to 91 *(M=49.61, SD= 16.35).* The scores of social support based upon the scale of (Multidimensional Scale of Perceived Social Support scale ranged from 12 to 84 *(M=43.03, SD = 18.98)* and scores of wellbeing based on the scales of PPTI ranged from *30-124 (M=76.20, SD=23.06).* Caregiver Burden (Caregiver Difficulties Scale (CDS) score was normally distributedwith skewness of -.88 *(SE = .24)* and Kurtosis of 3.71 *(SE = .47),* burnout PBA (Parental BurnoutAssessment) score was normally distributed with skewness of .43 *(SE = .24)* and Kurtosis of -.64*(SE =- .47),* Psychological distress DASS (Depression Anxiety, Stress Scales) score was normallydistributed with skewness of .21 *(SE = .24)* and Kurtosis of .48 *(SE = .47),* Sense of Coherence (Orientation of Life Scale) score was normally distributed with skewness of .05 *(SE = .24)* and Kurtosis of .08 *(SE = .47),* Social Support (Multidimensional

Scale of Perceived Social Support) scores was normally distributed with Skewness of -.04 *(SE = .24)* and Kurtosis of -.92 *(SE = .48),* and wellbeing based on Positive Psychotherapy Inventory (PPT) score was normally distributed with Skewness of .12 *(SE = .24)* and Kurtosis of -.70 *(SE = .47).*

Reliability test in the SPSS, the reliability of each variable is >0.60 which is recommended in thesocial sciences. The range of each variable is compared with actual and potential values. Skewnessand Kurtosis of each variable is calculated to check the normality of data, the Skewness and kurtosis results show that data is normal and parametric test can be used for further analysis.

Table 13

Correlation matric of Caregiver burden, burnout, psychological distress (depression, anxiety &Stress), Sense of Coherence, Social support and mental wellbeing among Caregivers of CerebralPalsy Children (N =100)

Table 13

Correlation matric of Caregiver burden, burnout, psychological distress (Depression, Anxiety & Stress), Sense of Coherence, Socialsupport and mental wellbeing among Caregivers of Cerebral Palsy Children (N =100)

	1	2	3	4	5	6	7	8	9	10	11	12	13
CDS	-	.71**	.74**	.65**	.73**	42**	.49**	.49**	.38**	.49**	-.49**	-.45**	-.43**
Concern for the child		-	.47**	.14	.45**	.24*	32**	.26**	.28**	.39**	-.27**	-.22*	-.17
Impact on Self			-	.33**	.48**	.18	31**	.29**	.24**	.33**	-.32**	-.21*	-.25*
Support for Caregiver				-	.49**	.33**	32**	.41**	.19	.24*	-.38**	-.46**	-.47**
Social & Eco. Strain					-	.26**	.33**	36**	.26**	.30**	.-28**	-.32**	-.31**
PBA						-	.64**	.66**	.58**	.54**	-.71**	-.45**	-.51**
DASS							-	.92**	.91**	.93**	-.63**	-.41**	-.46**
Depression								-	.77**	.79**	-.62**	-.43**	-.48**
Anxiety									-	.78**	-.55**	-.39**	-.43**
Stress										-	-.51**	-.32**	-.37**
OLS											-	.57**	.51**
MSPSS												-	.54**
PPTI (M.Wellbeing)													-

Note: CDS=Caregiver Difficulties Scale, PBA= Parental Burnout Assessment, DASS=Depression Anxiety and Stress Scale, OLS= Orientation of Life Scale, MSPSS = Multidimensional Social Support Scale and PPTI= Positive Psychotherapy Inventory
***p< .01 * p<.05*

Above table 13 shows that there correlation between total of CDS, PBA, DASS, OLS, MPSSS and PPTI and its sub scales among the scores of Caregivers of cerebral palsy Children. Table indicates that there significant (**p<.01) correlation between scales and sub scales of the present study. Some variables are positively correlated and some are negatively correlated. Caregiver burden is negatively correlated with the Social Support, which indicates that as the social support increase caregiver burden will be low among caregivers of CP Children. Caregiver burdenis negatively correlated with the Sense of Coherence, which indicates that as the caregiver burdenincrease Sense of Coherence decreases among caregivers of CP Children. Caregiver burden is negatively correlated with mental wellbeing.

Table 14

Sample demographics of Caregivers of Cerebral Palsy children in Positive PsychotherapyTreatment Group (n=10)

Variable	Groups	*f*	%
Caregiver Gender	Male	00	00
	Female	10	10
Relationship with child	Father	00	10
	Mother	10	10
Caregivers Age	25-35	07	70
	36-45	03	30
Caregiver Education	Matric	03	30
	FA	03	30
	Graduation	03	30
	MA	01	10
Caregiver Occupation	No Occupation	09	90
	Government Servant	01	10
Marital Status	Married	09	90
	Alone	01	10
Marriage Type	In Family	09	90
	Out of Family	01	10
Family System	Joint Family	08	80
	Nuclear Family	02	20
No of Children	1-3	03	30
	4-6	07	70
No of Disability in Family	Yes	04	40
	No	06	60
Monthly Income	20,000 -40,000	03	30

	41,000- 60,000	03	30
	61,000-80,000	03	30
	81,000-100,000	01	10

The above table 14 shows the frequency and percentage of each demographic variable of the study. The gender of the caregivers included in the study were males (0%) and female (10%).The age of respondents varies from 25 years to 45 years. In between 25-35 there were 07 (70%) participants and from 36 to 45 there were 04 (40%) participant. caregiver's relationship with childincluded mothers only included in the group. Educational status of the caregivers were Matric to masters Level. 03 (30%) were having matric education, (30%) were having FA education, 03(30%)were having Graduation education, 1 (10%) were having MA education . Occupational status of the caregivers included, no occupation (House wives) were 09 (90%), and government Servants were 01 (10%). In marital status there were married 09 (90%) and alone were 1 (widowed). In marriage type there were in family marriage (90%) out of family marriage (10%). In family systemthere were joint family system (80%) and nuclear family system (20%). In no of children caregiverhaving 1-3 children were 03 (30%), having 4-6 children were 07 (70%). Previous family history of disability is also part of demographics, as 04 respondents (40%) have no previous history of disability and 60 % have family history of disability. Monthly income included from 20,000 to 100,000. 30% respondents were having income status between 20,000 to 40,000, 30% respondentswere having income status between Rs. 41,000 to 60,000. 30% respondents were having income status between Rs.61,000 to 80,000. 10% respondents were having income status between Rs.81,000 to 100,000 respectively.

Table 15

Display of sample demographics of cerebral palsy children of the caregivers in PositivePsychotherapy Treatment Group (n=10)

Demographics	*Groups*	*f*	*%*
Gender of CP Child	Male	07	70
	Female	03	30
Age Of CP Child	02year to 6years	05	50
	7years to 11 years	05	50
Birth order	First	06	60
	Second	03	30
	Fourth	01	10
Current disability	Physical, Intellectual Disability, Speech Impairment	09	90
	Physical Impairment	01	10
Type of CP	Spastic	05	50
	Athetoid	02	20
	Hemiplegic	02	20
	Diplegic	01	10

The above table 15 shows the frequency and percentage of demographic variable related to Cerebral Palsy child included in the study. The gender of the CP child included in the study weremales (70%) and female (30%). The age of CP child varies from 2 years to 11 years Approx. From2 years to 6 years there were 05 (50%) children, from 7 to 11 05 (50%) years. Birth order of the children included 1st to 4th, 06 (60%) children were 1st born, 03 (30%) were 2nd born, 01 (30%) were 4th born. Current functional status of the child with CP is the problem child is facing currently (assessed by physiotherapist, speech therapist and Psychologist). 09 (90%) of CP children were having physical, intellectual and Speech disability, 01 (10%) of CP children were having physical disability only. Types of CP included in the study were spastic (50%), Athetoid (20%), hemiplegic (20%) and Diplegic (10%).

Table 16

Sample demographics of Caregivers of Cerebral Palsy in Control Group (n=10)

Variable	Groups	*f*	%
Caregiver Gender	Male	02	20
	Female	08	80
Relationship with child	Father	02	20
	Mother	08	80
Caregivers Age	25-35	04	40
	36-45	06	60
Caregiver Education	Matric	04	17
	FA	04	9
	Graduation	2	6
Caregiver Occupation	No Occupation	08	80
	Labor Work/Pvt Job	02	20
Marital Status	Married	10	100
	Unmarried/Alone	00	00
Marriage Type	In Family	09	90
	Out of Family	01	10
Family System	Joint Family	03	30
	Nuclear Family	07	70
No of Children	1-3	05	50
	4-6	04	40
	7-9	01	10
No of Disability in Family	Yes	04	40
			60

	No	06	39
Monthly Income	20,000 -40,000	03	27
	41,000- 60,000	03	24
	61,000-80,000	03	6
	81,000-100,000	01	

The above table 16 shows the frequency and percentage of each demographic variable of the study. The gender of the caregivers included in the study were males (20%) and female (80%).The age of respondents varies from 25 years to 45 years. In between 25-35 there were 40 participants and from 36 to 45 there were 47 (60%) participants. Caregiver’s relationship with child included father & mother. From the caregivers fathers were 20 (20%), mothers were 80 (80%). Educational status of the caregivers were from matric level to graduation Level. 04(40%) were having matric education, 04(40%) were having FA education, 02(20%) were having Graduation education. Occupational status of the caregivers included, no occupation (House wives) were 08 (80%), and labor Work/Pvt Job were 02 (20%). In marital status there were all married. In marriage type there were in family marriage 09(90%) out of family marriage 01 (10%).In family system there were joint family system 03(30%) and nuclear family system 07(70%). In no of children caregiver having 1-3 children were 5 (50%), having 4-6 children were 4 (40%) , having 7-9 children were 01 (10%). Previous family history of disability is also part of demographics, as 04 respondents (40%) have no previous history of disability and 6 (60%) have family history of disability. Monthly income included from 20,000 to 100,000. 30% respondents were having income status between 20,000 to 40,000. 30% respondents were having income statusbetween Rs. 41,000 to 60,000. 30% respondents were having income status between Rs.61, 000 to80,000. 01% respondents were having income status between Rs.81, 000 to 100,000.

Table 17

Sample demographics of Cerebral Palsy children of caregivers in control group (n=10)

Demographics	Groups	*f*	%
Gender of CP Child	Male	06	60
	Female	04	40
Age Of CP Child	2year to 6years	05	50
	7years to 11 years	05	50
Birth order	First	04	28
	Second	02	28
	Third	02	18
	Fifth	01	13
	Ninth	01	7
Current disability	Physical, Intellectual Disability, Speech Impairment	10	10
Type of CP	Spastic	6	60
	Athetoid	3	30
	Hemiplegic	1	10
	Diplegic	0	0
	Paraplegic	0	0

The above table 17shows the frequency and percentage of demographic variable related toCerebral Palsy child included in the study. The gender of the CP child included in the study weremales (60%) and female (40%). The age of CP child varies from 2 years to 10 years Approx. From2 years to 5 years there were 05(50%) CP children, from 6 to 10 years there were 05(50%) CP children. Birth order of the children included 1st to 9th, 04 (40%) children were 1st born 02(20%) were 2nd born, 02(20%) were 3rd born, 01 (10%) were fifth born,) and 01 (10%) were 9th born.

Current functional status of the child with CP is the problem child is facing currently (assessed byphysiotherapist, speech therapist and Psychologist). 10 (100%) of CP children were having physical, intellectual and Speech disability. Types of CP included in the study were spastic (60%),Athetoid (3%), paraplegic (1%), hemiplegic (0%) and Diplegic (0%).

Table 18

Comparison of treatment group (positive psychotherapy) and control group of caregivers of CP children on caregiver burden, parental burnout, psychological distress, depression anxiety & stress, sense of coherence, perceived social support & mental wellbeing among caregivers of CP children. (n=20)

		Groups						95% Confidenc eInterval		Cohen's d
		Control Group (n = 10)		Treatment Group(PPT) (n = 10)						
Variables	*K*	*M*	*SD*	*M*	*SD*	*t*	*p*	*Lower*	*Upper*	
CDS	25	77.10	5.08	65.80	4.94	5.04	.000	6.59	16.01	2.25
PBA	23	73.20	9.15	63.10	11.14	2.21	.04	.52	19.68	.99
DASS	21	45.50	4.52	40.70	4.14	2.47	.02	.72	8.87	1.11
Dep	7	15.30	2.91	12.40	1.58	2.77	.01	.70	5.09	1.24
Anxiety	7	13.70	2.49	11.10	1.66	2.74	.01	.60	4.69	1.23
Stress	7	14.20	2.44	11.90	1.73	2.43	.03	.31	4.29	1.09
OLS	13	44.10	7.72	56.30	7.41	3.60	.002	-19.31	-5.09	1.61
MSPSS	12	43.80	8.32	56.00	11.69	2.69	.01	-21.73	-2.66	1.20
MW	25	69.60	10.40	80.20	5.96	2.79	.01	-18.56	-2.63	1.25

Note: CDS=Caregiver Difficulties Scale, PBA= Parental Burnout Assessment, DASS=Depression Anxiety and Stress Scale, OLS= Orientation of Life Scale, MSPSS = Multidimensional Social SupportScale and MW= Mental Wellbeing

The above table 18 shows the comparison of two groups: Treatment group and control group of caregivers of cerebral palsy children on the scales of CDS, PBA, DASS, Depression, Anxiety, Stress, OLS (Sense of coherence), MSPSS (social support) & PPT (Mental wellbeing). The *p* value label, the significance value of independent sample t-test is given. The result shows that the mean value of CDS in control group is 77.10 with standard deviation 5.08 and the mean value in treatment group (positive psychotherapy) is 65.80 with standard deviation4.94, it indicates that in treatment group (positive psychotherapy) the score of CDS decrease as compared to control group. The control group and treatment group (positive psychotherapy) of caregivers of CP on CDS show significance difference $p \leq .001$, it is p=.000.

This value indicatesthat there is a significant difference between control group and treatment group (positive psychotherapy) among caregivers of CP children. Caregiver burden level in the treatment group (positive psychotherapy) decreased after getting positive psychotherapy based interventions.

The result shows that the mean value of PBA in control group is 73.20 with standard deviation 9.15 and the mean value in treatment group (positive psychotherapy) group is 63.10 withstandard deviation is 11.14, it indicates that in treatment group (positive psychotherapy) the scoreof PBA decrease as compared to control group. The control group and treatment group (positive psychotherapy) of caregivers of CP on PBA show significance difference $p \leq .05$, it is p=.04. Thisvalue indicates that there is a significant difference of burnout between control group and treatmentgroup (positive psychotherapy) among caregivers of CP children. Burnout level in the PPT intervention group decreased after getting positive psychotherapy based interventions.

The result shows that the mean value of psychological distress (DASS) in control group is45.50 with standard deviation 4.52 and the mean value in treatment group (positive psychotherapy) is 40.70 with standard deviation 4.14, it indicates that in treatment group (positive psychotherapy)the score of DASS decreased as compared to control group. The control group and treatment group (positive psychotherapy) of caregivers of CP on DASS show significance difference $p \leq .05$, it is p=.02. This value indicates that there is a significant difference between control group interventionand treatment group (positive psychotherapy) among caregivers of CP children. Psychological distress level in the treatment group (positive psychotherapy) decreased after getting positive psychotherapy based interventions.

The result shows that the mean value of depression on control group is 15.30 with standarddeviation 2.91 and the mean value in treatment group (positive psychotherapy) is 12.40 with standard deviation 1.58, it indicates that in treatment group (positive

psychotherapy) group the score of depression decreased as compared to control group. The control group and treatment group (positive psychotherapy) of caregivers of CP on depression show significance difference *p*
≤.05, it is p=.01. This value indicates that there is a significant difference between control group and treatment group (positive psychotherapy) among caregivers of CP children. Depression levelin treatment group (positive psychotherapy) decreased after getting positive psychotherapy basedinterventions.

The result shows that the mean value of anxiety in control group is 13.70 with standard deviation 2.49 and the mean value in positive psychotherapy treatment group is 11.10 with standard deviation 1.66, it indicates that in PPT treatment group the score of anxiety decreased ascompared to control group. The control group and PPT treatment/intervention group of caregiversof CP on anxiety show significance p ≤.05, it is p=.01 difference . This value indicates that there is a significant difference between control group and treatment group (positive psychotherapy) intervention among caregivers of CP children. Anxiety level in the treatment group (positive psychotherapy) decreased after getting positive psychotherapy based intervention.

The result shows that the mean value of stress in control group is 14.20 with standard deviation 2.44 and the mean value in treatment group (positive psychotherapy) is 11.90 with standard deviation 1.73, it indicates that in treatment group (positive psychotherapy) the score of stress decreased as compared to control group. The control group and treatment group (positive psychotherapy) of caregivers of CP on stress show significance p ≤.05, it is p=.03 difference. Thisvalue indicates that there is a significant difference between control group intervention and treatment group (positive psychotherapy) interventions among caregivers of CP children. Stress level in the PPT intervention group decreased after getting positive psychotherapy based intervention.

The result shows that the mean value of OLS (sense of coherence) in control group is 44.10 with standard deviation 7.72 and the mean value in treatment group (positive psychotherapy)group is 56.30 with standard deviation 7.41, it indicates that in treatment group (positive psychotherapy) group the score of sense of coherence increased as compared to control group. Thecontrol group and treatment group (positive psychotherapy) of caregivers of CP on OLS show significance $p \leq .005$, it is p=.002 difference. This value indicates that there is a significant difference between control group and treatment group (positive psychotherapy) intervention among caregivers of CP children. Sense of coherence of the treatment group (positive psychotherapy) improved after getting positive psychotherapy based interventions

The result shows that the mean value of MSPSS (Social Support) in control group is 43.80 with standard deviation 8.32 and the mean value in treatment group (positive psychotherapy) is

56.00 with standard deviation 11.69, it indicates that in treatment group (positive psychotherapy)the score of social support increased as compared to control group. The control group and PPT treatment/intervention group of caregivers of CP on social support show significance difference p

$\leq .05$, it is p=.01. This value indicates that there is a significant difference between control group intervention and treatment group (positive psychotherapy) among caregivers of CP children. Social support of the treatment group (positive psychotherapy) improved after getting positive psychotherapy based interventions

The result shows that the mean value of PPTI (mental wellbeing) in control group is 69.60 with standard deviation 10.40 and the mean value in treatment group (positive psychotherapy) is 80.20 with standard deviation 5.96, it indicates that in treatment group (positive psychotherapy) the score of mental wellbeing increased as compared to control group. The control group interventions and treatment group (positive psychotherapy)of caregivers of

CP on mental wellbeing show significance *p* ≤.05, it is p=.01 results. This value indicates that there is a significant difference between control group and treatment group (positive psychotherapy) interventions among caregivers of CP children. Mental wellbeing of the treatment group (positivepsychotherapy) improved after getting positive psychotherapy based intervention.

Table 19

Comparison of per-treatment and post treatment in positive psychotherapy treatment group on caregiver burden, parental burnout, psychological distress, depression anxiety & stress, sense ofcoherence, perceived social support & wellbeing among caregivers of CP children. (n=10)

Variables		Treatment Groups						95% Confidence Interval		Cohen's d
		Pre testing (n = 10)		Post testing (n = 10)						
	K	*M*	*SD*	*M*	*SD*	*t*	*p*	*Lower*	*Upper*	
CDS	25	94.70	8.07	65.80	4.94	12.10	.000	23.50	34.30	4.31
PBA	23	106.60	15.34	63.10	11.14	16.75	.000	37.63	49.37	3.24
DASS	21	62.40	8.29	40.70	4.14	6.36	.000	13.98	29.42	3.31
Dep	7	21.30	3.65	12.40	1.58	6.74	.000	5.91	11.88	3.16
Anx	7	19.50	2.17	11.10	1.66	19.68	.000	7.43	9.37	4.33
Stress	7	21.60	3.66	11.90	1.73	10.99	.000	7.70	11.69	3.38
OLS	13	34.60	6.99	56.30	7.41	6.79	.000	-28.93	-14.47	3.01
MSPSS	12	23.40	11.12	56.00	11.69	8.76	.000	-41.02	-24.18	2.86
MW	25	49.00	9.03	80.20	5.96	9.02	.000	-39.03	-23.37	4.08

Note: CDS=Caregiver Difficulties Scale, PBA= Parental Burnout Assessment, DASS=Depression Anxiety and Stress Scale, OLS= Orientation of Life Scale, MSPSS = Multidimensional Social SupportScale and MW= Mental Wellbeing

The above table 19 shows the comparison of two groups (within group pre & post PPT): Positive psychotherapy pre treatment group and PPT post treatment group of caregivers of cerebralpalsy children on the scales of CDS, PBA, DASS, Depression,Anxiety, Stress, OLS (Sense of coherence), MSPSS (social support) & PPT (Mental wellbeing). The value label, the significancevalue of the paired sample t-test is given. The result shows that the mean value of CDS in PPT pre treatment group score is 94.70 with standard deviation 8.07 and the mean value on PPT post treatment group is 65.80 with standard deviation 4.94, it indicates that in PPT post treatment groupthe score of CDS decrease as compared to PPT pre treatment group. The PPT pre treatment groupand PPT post treatment group of caregivers of CP on CDS show significance $p \leq .001$, difference,it is p=.000. This value indicates that there is a significant difference between PPT pre treatment group and PPT post treatment group among caregivers of CP children.

The result shows that the mean value of burnout in PPT pre treatment group score is 106.60with standard deviation 15.34 and the mean value on PPT post treatment group is 63.10 with standard deviation is 11.14, it indicates that in PPT post treatment group the score of PBA decreaseas compared to PPT pre group. The PPT pre treatment group and PPT post group of caregivers ofCP on PBA show significance difference $p \leq .001$, it is p=.000. This value indicates that there is asignificant difference of burnout between PPT pre treatment group and PPT post treatment groupamong caregivers of CP children.

The result shows that the mean value of psychological distress (DASS) in PPT pre treatment group score is 62.40 with standard deviation 8.29 and the mean value in PPT post treatment group is 40.70 with standard deviation 4.14, it indicates that in PPT post treatment groupthe score of DASS decreased as compared to PPT pre treatment group. The PPT pre treatment group and PPT post treatment group of caregivers of CP on DASS show significance $p \leq .001$, difference it is p=.000. This value indicates that there is a significant difference between PPT pretreatment group and PPT post treatment group among caregivers of CP children.

The result shows that the mean value of Depression in PPT pre treatment group score is 21.30 with standard deviation 3.65 and the mean value on PPT post treatment group is 12.40 with standard deviation 1.58, it indicates that in PPT post treatment group the score of depression decreased as compared to PPT pre treatment group. The PPT pre treatment group and PPT post treatment group of caregivers of CP on depression show significance difference $p \leq .001$, it is p=.000. This value indicates that there is a significant difference between PPT pre treatment groupand PPT post treatment group intervention among caregivers of CP children.

The result shows that the mean value of anxiety in PPT pre treatment group score is 19.50with standard deviation 2.17 and the mean value in PPT post treatment group is 11.10 with standarddeviation 1.66, it indicates that in PPT post treatment group the score of anxiety decreased as compared to PPT pre treatment group. The PPT pre treatment group and PPT post treatment groupof caregivers of CP on anxiety show significance difference $p \leq .001$, it is p=.000. This value indicates that there is a significant difference between PPT pre treatment group and PPT post treatment group intervention among caregivers of CP children.

The result shows that the mean value of stress in PPT pre group score is 21.60 with standarddeviation 3.66 and the mean value in PPT post treatment group is 11.90 with standard deviation 1.73, it indicates that in PPT post treatment group the score of stress decreased as compared to PPT pre treatment group. The PPT pre treatment group and PPT post treatment group of caregiversof CP on stress show significance difference $p \leq .001$, it is p=.000. This value indicates that there is a significant difference between PPT pre treatment group and PPT post treatment group interventions among caregivers of CP children.

The result shows that the mean value of OLS (Sense of Coherence) in PPT pre treatment group score is 34.60 with standard deviation 6.99 and the mean value in PPT post treatment groupis 56.30 with standard deviation 7.41, it indicates that in PPT post treatment group the score of sense of coherence increased as compared to PPT pre treatment group. The PPT pre treatment group and PPT post treatment group of caregivers of CP on OLS show significance difference p

$\leq$.001, it is p=.000. This value indicates that there is a significant difference between PPT pre treatment group and PPT post treatment among caregivers of CP children.

The result shows that the mean value of MSPSS (Social Support) in PPT pre treatment group score is 23.40 with standard deviation 11.12 and the mean value on PPT post treatment group is 56.00 with standard deviation 11.69, it indicates that in PPT post treatment group the score of social support increased as compared to PPT pre treatment group. The PPT pre treatmentgroup and PPT post treatment group of caregivers of CP on social support show significance difference $p \leq .001$, it is p=.000. This value indicates that there is a significant difference betweenPPT pre treatment group and PPT post treatment group among caregivers of CP children.

The result shows that the mean value of PPTI (mental wellbeing) on PPT pre treatment group score is 49.00 with standard deviation 9.03 and the mean value in PPT post treatment groupis 80.20 with standard deviation 5.96, it indicates that in PPT post treatment group the score of PPTI increased as compared to PPT pre treatment group. The pre treatment PPT group and PPT post treatment group of caregivers of CP on wellbeing show significance $p \leq .001$, it is p=.000. This value indicates that there is a significant difference between pre treatment PPT group and PPT post treatment group intervention among caregivers of CP children.

Table 20

Comparison of pre-testing and post testing in control group on caregiver burden, parental burnout, psychological distress, depression anxiety & stress, sense of coherence, perceived socialsupport & mental wellbeing among caregivers of CP children. (n=10).

Variables		Control Group								
		Pre testing (n = 10)		Post testing (n = 10)				95% Confidence Interval		Cohen's d
	K	*M*	*SD*	*M*	*SD*	*t*	*p*	*Lower*	*Upper*	
CDS	25	97.50	4.35	77.10	5.08	40.48	.000	19.32	21.48	4.31
PBA	23	105.90	17.96	73.20	9.15	4.76	.001	17.17	48.23	2.29
DASS	21	62.20	6.86	45.50	4.53	9.20	.000	12.59	20.80	2.87
Dep	7	21.60	2.84	15.30	2.91	4.33	.002	3.01	9.58	2.80
Anx	7	18.30	2.45	13.70	2.49	4.44	.002	2.26	6.94	1.86
Strs	7	21.60	2.83	14.20	2.44	13.66	.000	6.17	8.62	2.80
OLS	13	27.10	10.83	44.10	7.72	4.14	.003	-26.28	7.71	1.81
MSPSS	12	24.00	8.86	43.80	8.32	14.09	.000	-22.97	16.62	2.30
MW	25	50.60	4.43	69.60	10.41	9.09	.000	-23.73	14.27	2.37

Note: CDS=Caregiver Difficulties Scale, PBA= Parental Burnout Assessment, DASS=Depression Anxiety and Stress Scale, OLS= Orientation of Life Scale, MSPSS = Multidimensional Social Support Scale and MW= Mental wellbeing

The above table 20 shows the comparison of control group (pre control group and post control group) of caregivers of cerebral palsy children on the scales of CDS, PBA, DASS, Depression,Anxiety, Stress, OLS (Sense of coherence), MSPSS (social support) & PPT (Mental wellbeing). The *p* value label, the significance value of paired sample t-test is given. The result shows that the mean value of CDS in pre control group score is 97.50 with standard deviation 4.35and the mean value on post control group is 77.10 with standard deviation 5.08, it indicates that inpost control group the score of CDS decrease as compared to pre control group. The control group and post control group of caregivers of CP on CDS show significance difference *p* ≤.001, it is p=.000. This value indicates that there is a significant difference between pre control group and post control group among caregivers of CP children.

The result shows that the mean value of PBA in pre control group score is 105.90 withstandard deviation 17.96 and the mean value on post control group is 73.20 standard deviation is9.15, it indicates that in post control group, the score of PBA decrease as compared to pre controlgroup. The pre control group and post control group of caregivers of CP on PBA show significancedifference *p* ≤.001, it is p=.001. This value indicates that there is a significant difference of burnoutbetween pre control group and post control Group interventions among Caregivers of CP childrenThe result shows that the mean value of DASS (psychological distress) in pre control group score is 62.20 with standard deviation 6.86 and the mean value on post control group is 45.50 withstandard deviation 4.53, it indicates that in post control group the score of DASS decrease as compared to pre control group. The pre control group and post control group of caregivers of CP on DASS show significance difference *p* ≤.001, it is p=.000. This value indicates that there is a significant difference between pre control group and post control group among caregivers of CPchildren.

The result shows that the mean value of depression in pre control group score is 21.60 withstandard deviation 2.84 and the mean value on post control group is 15.30 with standard deviation2.99, it indicates that in post control group the score of depression decrease as compared to controlgroup. The pre control group and post control group of caregivers of CP on depression show significance difference *p* ≤.005, it is p=.002. This value indicates that there is a significant difference between control group intervention and PPT treatment group among caregivers of CP children.

The result shows that the mean value of anxiety in pre control group score is 18.30 with standard deviation 2.45 and the mean value on post control group is 13.70 with standard deviation2.49, it indicates that in post control group the score of anxiety decreased as compared to pre control group. The pre control group and post control group of caregivers of CP on anxiety showsignificance difference $p \leq .001$, it is p=.000. This value indicates that there is a significant difference between pre control group and post control group among caregivers of CP children.

The result shows that the mean value of stress in pre control group score is 21.60 with standard deviation 2.83 and the mean value in post control group is 14.20 with standard deviation2.44, it indicates that in post control group the score of stress decrease as compared to control group. The pre control group and post control group intervention of caregivers of CP on stress show significance $p \leq .001$, it is p=.000. This value indicates that there is a significant difference between pre control group and post control group among caregivers of CP children.

The result shows that the mean value of OLS (Sense of Coherence) in pre control group score is 27.10 with standard deviation 10.83 and the mean value in post control group interventionis 44.10 with standard deviation 7.72, it indicates that in post control group the score of sense of coherence increased as compared to pre control group. The pre control group and post control group of caregivers of CP on OLS show significance difference $p \leq .005$, it is p=.003. This value indicates that there is a significant difference between pre control group and post control group among caregivers of CP children.

The result shows that the mean value of MSPSS (Social Support) in pre control group scoreis 24.00 with standard deviation 8.86 and the mean value in post control group is 43.80 with standard deviation 8.32, it indicates that in post control group the score of social support increasedas compared to pre control group. The pre control group and post control Group of caregivers of CP on social support show significance difference *p* ≤.001, it is p=.000. This value indicates that there is a significant difference between pre control group and post control Group among caregivers of CP children.

The result shows that the mean value of mental wellbeing in pre control group score is 50.60 with standard deviation 4.43 and the mean value in post control group is 69.60 with standarddeviation 10.41, it indicates that in post control group the score of PPTI increased as compared topre control group. The pre control group and post control group of caregivers of CP on PPTI showsignificance difference *p* ≤.001, it is p=.000. This value indicates that there is a significant difference between pre control group and post control group among caregivers of CP children.

Table 21

Mediating role of sense of coherence between Burnout & Psychological Distress amongcaregivers of cerebral palsy children (N=100).

Effect	β	*SE*	*p*	*95% CI*	
				LLCI	*ULCI*
Indirect Effect (a*b) Burnout→Sense of Coherence→ Psychological Distress	.12	.04	-	.05	.20
Direct Effect (`c) Burnout→ Psychological Distress	.19	.05	.000	.09	.29
Total Effect (c) Burnout →Psychological Distress	.31	.037	.000	.23	.38

Result of the above table displays that the total effect of the burnout on psychological distress is statistically significant (β=.31,p<.001). With the addition of the mediating variable sense of coherence.The direct effect of burnout on psychological distress decreases and remained statistically significant (β= .19, p<.001).The indirect effect of burnout on psychological distress through sense of coherence was found to be statistically significant (β=.12, 95% CI: .05, .20). Thisindicates that the relationship between burnout and psychological distress is significantly partiallymediated by sense of coherence .The mediation model is shown in figure below.

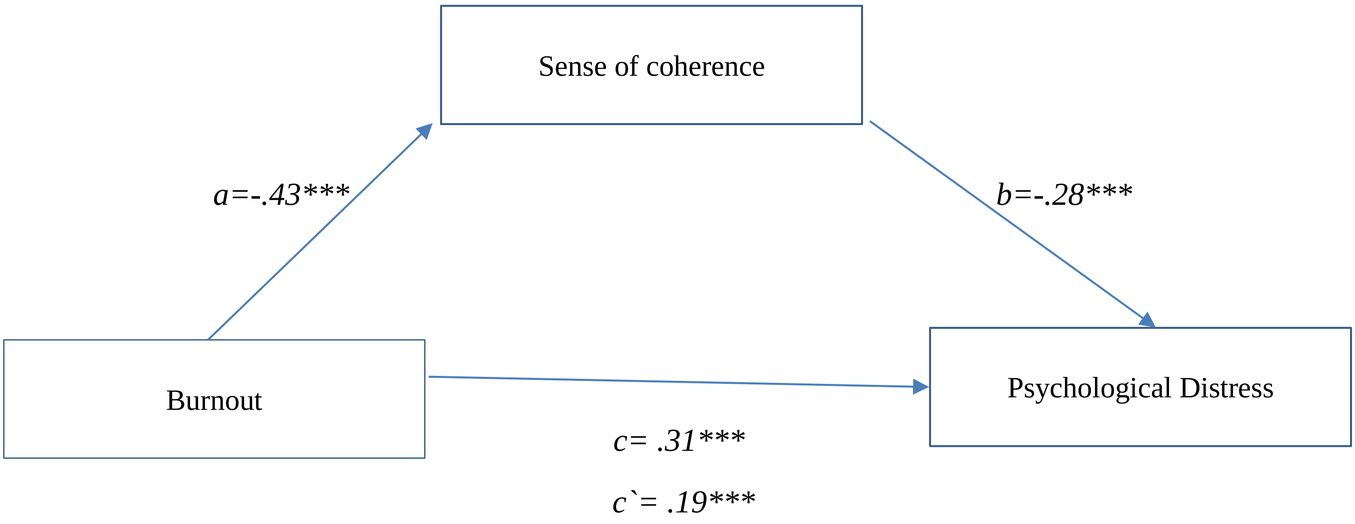


Figure 6 mediation model indicating direct paths and their significance

Result of above model indicated that variable of burnout positively predict psychological Distress,*β* =.31***, t= (8.29) p<.001, 95% BCaCl [.23, .38] and explain 41% of its variation. The sense ofcoherence negatively predict burnout, *β* =-.43***, t= (9.98), p<.001, 95% BCaCl [-.51, -.34] and explain 50% of its variation. Sense of coherence is negatively predicting psychological distress, *β*= -.28***, t= (3.33) p<.001, 95% BCaCl [-.44, -.11] and explain 47% of its variation. The effect of burnout (an independent variable) on sense of coherence (a mediator) is significant. The effectof burnout (an independent variable) on psychological distress (a dependent variable) is significant. Lastly the effect of sense of coherence on psychological distress is significant and theeffect of burnout on psychological distress is significant after controlling for sense of coherence. The direct effect suggests that, whilst controlling for the effect of burnout on psychological distress, the sense of coherence (mediator) has a significant negative relationship with psychological distress. The direct effect (path c') *β* = .19*** is smaller and significant than the total effect (path c) *β* = .31***. Therefore, from above model it can infer that a partial mediation effect of sense of coherence was found between burnout and psychological distress.

Table 22

Mediating role of social support between burnout & psychological distress among caregivers ofcerebral palsy children (N=100).

Effect	β	*SE*	*p*	*95% CI*	
				LLCI	*ULCI*
Indirect Effect (a*b) Burnout→Social support→ Psychological Distress	.34	.02	n.s	-.003	.09
Direct Effect (\`c) Burnout→ Psychological Distress	.28	.041	.000	.19	.35
Total Effect (c) Burnout →Psychological Distress	.31	.037	.000	.23	.38

Result of the above table displays that the total effect of the burnout on psychological distress is statistically significant (β=. 31,p<.001). With the addition of the mediating variable social support the direct effect of burnout on psychological distress decreases and remained statistically significant (β= .28, p<.001).The indirect effect of burnout and psychological distress through social support was found to be statistically non significant (β=..34, CI: -.003, .09). This indicates that the relationship between burnout and psychological distress is partially mediated by social support but it is non significant .The mediation model is shown in figure below.

Figure 7

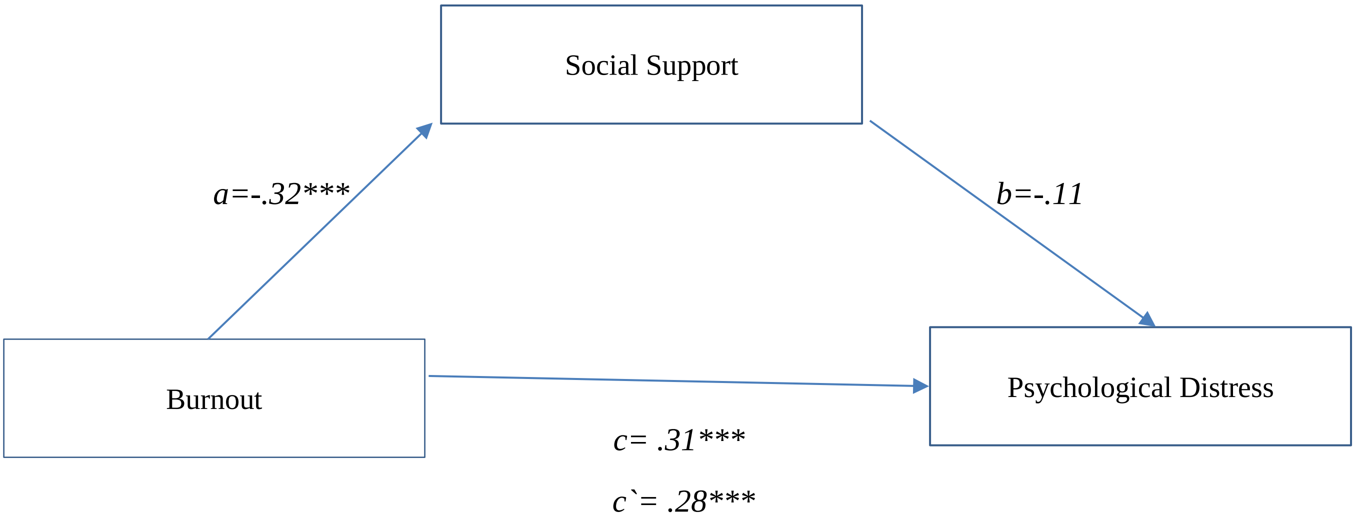


Figure 7 mediation model indicating direct paths and their significance

Result of above model indicated that variable of burnout positively predict psychological Distress,β =.31***, t= (8.29) p<.000, 95% BCaCl [.23, .38] and explain 41% of its variation. Social supportnegatively predict burnout, β = -.32***, t= (5.01), p<.000, 95% BCaCl [-.44, -.19] and explain 45% of its variation. Social support is negatively predicting psychological distress, β =-.11, t= (1.99) p=n.s, BCaCl [-.22, .009] and explain 43% of its variation. The effect of burnout (an independent variable) on Social support (a mediator) is negatively significant. The effect of burnout (an independent variable) on psychological distress (a dependent variable) is positively significant. Lastly the effect of social support on psychological distress is non significant and the effect of burnout and psychological distress is significant. The direct effect suggests that, whilst controlling for the effect of burnout on psychological distress, the social support (mediator) has anon significant relationship with psychological distress. The direct effect (path c') β = .28*** is smaller but significant than the total effect (path c) β = .31***. Therefore, from above model we can infer a partial mediation effect of social support through burnout and psychological distress but it is not significant.

Table 23

Mediating role of sense of coherence between burnout & mental wellbeing among caregivers ofcerebral palsy children (N=100).

Effect	β	*SE*	*P value*	*95% CI*	
				LLCI	*ULCI*
Indirect Effect (a*b) Burnout→Sense of Coherence→ M.Wellbeing	-.18	.07	-	-.34	-.04
Direct Effect (`c) Burnout→ M.wellbeing	-.26	.10	.01	-.46	-.05
Total Effect (c) Burnout →M.wellbeing	-.43	.07	.000	-.58	-.28

Result of the above table displays that the total effect of the burnout on wellbeing is statistically significant (β= -.43,p<.001). With the addition of the mediating variable sense of coherence. The direct effect of burnout on wellbeing decreases and remained statistically significant (β= -.26).Theindirect effect of burnout on wellbeing through sense of coherence was found to be statistically significant (β=-.18, 95% CI: -.34, -.04). This indicates that the relationship between burnout and wellbeing is significantly partially mediated by sense of coherence.The mediation model is shownin figure below.

Figure 8

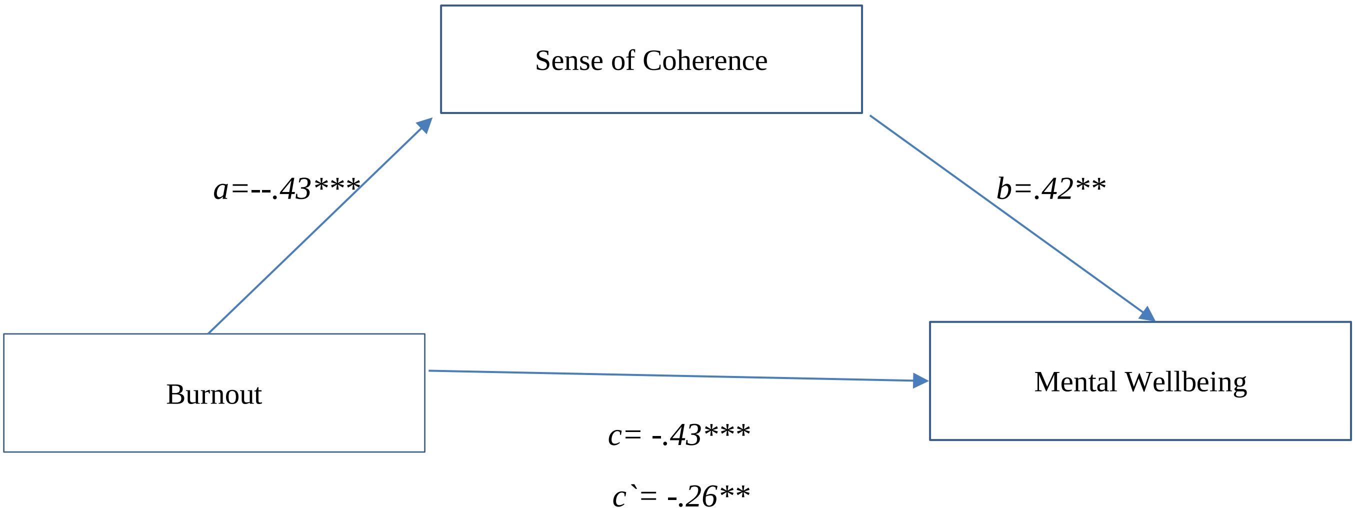


Figure 8 mediation model indicating direct paths and their significance

Result of above model indicated that variable of burnout negatively predict psychological wellbeing, *β* =-.43***, t= (5.89) p<.001, 95% BCaCl [-.58, -.29] and explain 26% of its variation.The sense of coherence negatively predict burnout, *β* =-.43***, t= (9.98), p<.001, 95% BCaCl [-.51, -.34] and explain 50% of its variation. Sense of coherence is positively predicting wellbeing,*β* =-.42**, t= (2.48) p<.05, 95% BCaCl [.08, .75] and explain 31% of its variation. The effect of burnout (an independent variable) on sense of coherence (a mediator) is significant. The effect of burnout (an independent variable) on Wellbeing (a dependent variable) is significant. Lastly, the effect of sense of coherence on Wellbeing is significant and the effect of burnout on wellbeing is significant after controlling for sense of coherence. The direct effect suggests that, whilst controlling for the effect of burnout on wellbeing, the sense of coherence (mediator) has a significant negative relationship with wellbeing. The direct effect (path c') *β* = -.26** significant and smaller than the total effect (path c) *β* = .43*** . Therefore, from above model we can infer asignificant partial mediation effect of sense of coherence through burnout on wellbeing.

Table 24

Mediating role of Social support between burnout & mental wellbeing among caregivers ofcerebral palsy children (N=100).

Effect	β	*SE*	*P value*	*95% CI*	
				LLCI	*ULCI*
Indirect Effect (a*b) Burnout→Social support→ M.Wellbeing	-.15	.05	-	-.25	-.07
Direct Effect (`c) Burnout→M. wellbeing	-.29	.076	.000	-.44	-.14
Total Effect (c) Burnout →M.wellbeing	-.07	.073	.000	-.58	-.28

Result of the above table displays that the total effect of the burnout on wellbeing is statistically significant (β=-.07,p<.001). With the addition of the mediating variable social support.The direct effect of burnout on wellbeing decreases and remained statistically significant (β=- .29, p<.001).The indirect effect of burnout and mental wellbeing through social support was found to be statistically significant (β=-.15, 95% CI: -.25, -.07). This indicates that the relationship between burnout and wellbeing is partially mediated by social support, significantly. The mediation model is shown in figure below.

Figure 9

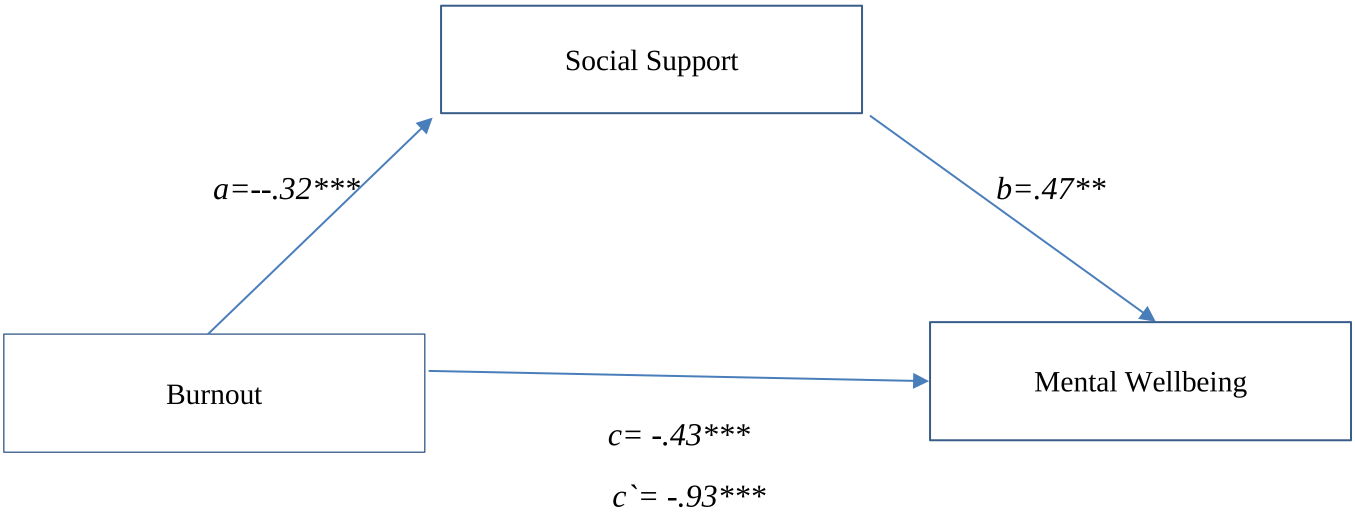


Figure 9 mediation model indicating direct paths and their significance

Result of above model indicated that variable of burnout negatively predict mental wellbeing, *β* =-.43***, t= (5.89) p<.001, 95% BCaCl [-.58, -.29] and explain 27% of its variation. The social support negatively predict burnout, *β* =-.32***, t= (5.01), p<.001, 95% BCaCl [-.44, -.19] and explain 20% of its variation. Social Support is positively predicting wellbeing, *β* =.47***, t= (4.28)p<.001, 95% BCaCl [.25, .68] and explain 37% of its variation. The effect of burnout (an independent variable) on social support (a mediator) is significant. The effect of burnout (an independent variable) on Wellbeing (a dependent variable) is significant. Lastly the effect of socialsupport on Wellbeing is significant and the effect of burnout on Wellbeing is significant after controlling for social support. The direct effect suggests that, whilst controlling for the effect of burnout on wellbeing, the social support (mediator) has a significant positive relationship with wellbeing. The direct effect (path c') *β* = -.29*** is significant but smaller than the total effect (path c) *β* = -.43*** . Therefore, from above model we it can infer that a significant partial mediation effect of social support occurred between burnout on wellbeing.

Table 25

Mean Standard Deviation & t-values of male and female Caregivers of Cerebral Palsy Children on the Scores of Caregiver burden, burnout, psychological distress (depression, Anxiety & Stress), Sense of Coherence, Social support and mental wellbeing (N=100)

Group	Male Caregivers (n=26)		Female caregivers (n=74)		t(df)	p	Cohen's d
Variables	*M*	*SD*	*M*	*SD*			
CDS	80.46	10.23	86.23	12.20	2.15(98)	.03	.05
CFC	29.19	5.07	30.96	5.05	1.53(98)	.12	
IoS	21.73	3.83	23.54	4.23	1.91(98)	.05	.04
SfCg	13.92	2.74	14.73	3.27	1.13(98)	.26	
SES	17.04	2.86	17.28	3.34	.33(98)	.74	
PBA	65.62	22.90	74.50	28.19	1.44(98)	.15	
DASS	43.00	10.20	50.35	13.51	2.53(98)	.01	.06
Depression	14.15	4.22	16.83	4.88	2.48(98)	.01	.06
Anxiety	13.46	4.03	15.62	4.59	2.13(98)	.03	.50
Stress	15.38	3.66	17.81	4.84	2.33(98)	.02	.57
SOC	54.46	16.43	47.91	16.08	1.77(98)	.08	
SS	50.73	17.21	40.32	18.93	2.47(98)	.02	
MW	82.88	18.00	73.85	23.69	1.74(98)	.08	

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child, IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS=Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= Social Support, PPTI= Positive Psychotherapy Inventory (MW)

Above table 25 shows Mean, SD and t values for comparing gender based differences on CDS & its dimension (Concern for the Child, Impact on Self, Support for Caregiver, Social & Economic Strains) PBA, DASS, Depression, Anxiety & Stress, Sense of Coherence, Social supportand wellbeing. Results show that gender differences are significant on CDS, DASS depression, Anxiety & stress variable ($p<.05$). Results revealed that there is significant gender difference is found on CDS, ($p<.05$) on caregiver's burden female caregivers scored high (M=86.23, SD=12.20)which indicate that females are more burdened as compared to male caregivers. Results indicate that female caregivers (M=50.35, SD=13.51) are more psychologically distressed as compared tomale caregivers of cerebral Palsy children (M= 43.00, SD=10.20). Results indicate that female caregivers (M=16.83, SD=4.88) are more depressed as compared to male caregivers of cerebral Palsy children (M= 14.15, SD=4.22). Results indicate that female caregivers (M=15.62, SD=4.59)have more anxiety as compared to male caregivers of cerebral Palsy children (M= 13.46, SD= 4.03). Results indicate that female caregivers (M=17.81, SD=4.84) are more stressed as comparedto male caregivers of cerebral Palsy children (M=15.38, SD=3.66).There are non-significant difference is found on PBA scales among caregivers of CP children but from mean difference results indicated that female caregivers (M=40.32, SD=18.93) are more burnout as compared to male caregivers (M=50.73, SD=17.21) of cerebral palsy children. Results revealed that female caregivers have less social support as compared to male caregivers, so there is a significant difference is found on social support. There is a non-significant difference is found on sense of coherence and mental wellbeing variables but from mean differences it is indicated that male caregivers having better wellbeing, social support and sense of coherence as compared to female caregivers of cerebral palsy children.

Table 26

Mean Standard Deviation & t-values of educational status of Caregivers of Cerebral Palsy Children on the Scores of caregiver burden, burnout, psychological distress (depression, Anxiety & Stress), Sense of Coherence, Social support and mental wellbeing (N=100)

Group	Less Educated		Highly Educated				Cohen's d
	(n=68)		(n=32)				
Variables	*M*	*SD*	*M*	*SD*	*t(df)*	*p*	
CDS	86.56	10.85	80.84	13.35	2.28(98)	.02	.04
CFC	31.49	4.46	28.41	5.74	2.93(98)	.004	.06
IoS	23.69	3.93	21.75	4.49	2.20(98)	.03	.05
SfCg	14.63	3.28	14.28	2.87	.51(98)	.61	.11
SES	17.71	3.10	16.19	3.24	2.25(98)	.03	.04
PBA	73.43	27.00	69.53	27.51	.67(98)	.51	
DASS	49.71	12.95	45.75	13.19	1.42(98)	.16	
Depression	16.53	4.73	15.28	5.06	1.20(98)	.23	
Anxiety	15.35	4.25	14.44	5.09	.94(98)	.35	
Stress	17.72	7.73	16.03	4.38	1.70(98)	.09	
SOC	47.16	16.49	54.81	14.98	2.22(98)	.03	.49
SS	40.75	19.02	47.88	18.23	1.77(98)	.08	
MW	76.90	19.61	83.66	24.37	1.79(98)	.06	

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child, IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS=Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= Social Support, MW=Mental wellbeing, PPTI= Positive Psychotherapy Inventory (Mental Wellbeing)

Table 26 indicates mean, standard deviation and t values of CDS & dimensions (CFC, IoS,SfCg, SES) PBA, DASS, Depression, Anxiety, Stress, Sense of Coherence, Social Support and well being across less educated (Matric, FA), highly educated (Graduate, Masters) among the caregivers of cerebral palsy children. Results revealed that there is significant education based difference is found on CDS, (p<.05). On caregiver Difficulty Scale less educated caregivers scoredhigh (M=86.23, SD=12.20) which indicate that less educated caregivers of CP are more burdenedas compared to highly educated caregivers. There is significant education based difference is foundon Concern for the Child (CfC), Impact on Self (ISs), and Social & Economical Strains (SeS).

` There is significant difference is found on OLS (Sense of Coherence) (p<.05) among less educatedand highly educated caregivers of Cerebral Palsy Children. It indicated that highly educated caregivers have better sense of Coherence as compared to less educated caregivers of CP children

Table 27

Mean Standard Deviation & t-values of family System of Caregivers of Cerebral Palsy Childrenon the Scores of caregiver burden, burnout, psychological distress (depression, Anxiety & Stress), Sense of Coherence, Social support and mental wellbeing(N=100)

Group	Nuclear Family		Joint Family			
	(n=36)		*(n=64)*			
Variable	*M*	*SD*	*M*	*SD*	*t(df)*	*p*
CDS	84.56	15.78	84.83	9.27	.11(98)	.91
CFC	31.17	5.59	30.13	4.78	.98(98)	.33
IoS	23.00	4.95	23.11	3.74	.13(98)	.90
SfCg	14.08	3.37	14.77	3.01	.95(98)	.30
SES	17.31	3.82	17.17	2.84	.19(98)	.84
PBA	69.75	28.32	73.56	26.52	.67(98)	.50
DASS	49.06	14.99	48.09	12.01	.35(98)	.73
Depression	16.00	5.06	16.20	4.75	.20(98)	.84
Anxiety	15.50	4.91	14.81	4.32	.73(98)	.47
Stress	17.56	5.87	16.97	3.87	.60(98)	.55
SoC	49.53	15.07	49.66	17.14	.03(98)	.80
SS	41.39	17.44	43.95	19.86	.65(98)	.49
MW	78.39	23.18	74.97	23.07	.71(98)	.43

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child , IoS= Impact on Self, CfCg= Support for Caregiver, SES= Social &

Economic Strains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= Social Support, MW=Mental wellbeing

Above table 27 shows Mean, SD and t-values for comparing family system based differences on CDS & dimensions(Concern for the Child , Impact on Self, Support for Caregiver,Social & Economic Strains,), PBA, DASS, Depression, Anxiety & Stress, Sense of Coherence, Social support and wellbeing. There is a non-significant difference is found on CDS & (dimensions), PBA, DASS, Depression, & Anxiety scales among caregivers from joint and nuclearfamily system. There is a non-significant difference is found on SOC, SS and Wellbeing variables.

Table 28

Mean Standard Deviation & t-values of caregivers on the Scores of Caregiver burden, burnout,psychological distress (depression, Anxiety & Stress), Sense of Coherence, Social support and mental wellbeing along with gender of their child with CP.

Group	Gender of the CP children						
	Male children (n=67)		Female Children(n=33)				
Variables	*M*	*SD*	*M*	*SD*	*t(df)*	*p*	Cohen's *d*
CDS	85.75	10.68	82.56	14.21	1.25(98)	.21	
CFC	30.60	4.73	30.25	5.84	.34(98)	.74	
IoS	23.15	3.71	22.91	5.13	.27(98)	.79	
SfCg	14.68	3.19	14.19	3.06	.72(98)	.47	
SES	17.72	3.04	16.16	3.35	2.32(98)	.02	.49
PBA	73.16	26.61	70.21	28.33	.51(98)	.61	
DASS	47.63	12.41	50.60	14.49	.89(98)	.37	
Depression	15.88	4.76	16.66	5.04	.74(98)	.46	
Anxiety	14.82	4.32	15.56	4.97	.76(98)	.45	
Stress	16.93	4.51	17.72	5.02	.79(98)	.43	
SOC	49.18	16.32	50.48	16.62	.71(98)	.71	
SS	41.96	19.29	45.21	18.41	.42(98)	.42	
MW	74.30	23.15	80.06	22.72	.24(98)	.24	

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child , IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= SocialSupport, MW (mental wellbeing) PPTI= Positive Psychotherapy Inventory

Above table 28 shows Mean, SD and t values for comparing gender of the child based differences on CDS & dimensions, PBA, DASS, Depression, Anxiety & Stress, Sense of Coherence, Social support and wellbeing. Results shows significant difference on Social & Economic Stains variable, having a disable male child have an impact on caregiver's social & economic burden. Results show that CP child's gender based differences are non- significant on all variables. There is non-significant difference is found on CDS, DASS, PBA, SOC, SS andmental wellbeing variable.

Table 29

Mean Standard Deviation & t-values of caregivers of Cerebral Palsy on the Scores of Caregiverburden, burnout, psychological distress (depression, Anxiety & Stress), Sense of Coherence, Social support and mental wellbeing based on age ranges of their CP child.

Group	Ages of the child						
	(Early childhood) (n=54)		(Middle & late childhood) (n=46)				
Variables	M	*SD*	*M*	*SD*	*t(df)*	*p*	Cohen's *d*
CDS	85.56	9.62	83.76	14.24	.75(98)	.46	
CFC	31.07	4.48	29.83	5.68	1.23(98)	.22	
IoS	23.39	3.36	22.70	5.01	.82(98)	.41	
SfCg	14.28	3.01	14.80	3.31	.83(98)	.41	
SES	17.59	2.64	16.78	3.75	1.26(98)	.21	
PBA	77.98	24.02	65.39	29.10	2.37(98)	.02	.53
DASS	51.00	11.87	45.43	13.93	2.15(98)	.03	.43
Depression	16.96	4.50	15.15	5.09	1.88(98)	.06	
Anxiety	16.09	4.46	13.85	4.35	2.53(98)	.01	.51
Stress	17.94	4.17	16.28	5.10	1.79(98)	.07	
SoC	47.59	13.44	51.98	19.09	1.34(98)	.18	
SS	42.02	17.76	44.22	20.44	.57(98)	.56	
MW	74.70	23.55	77.96	22.59	.70(98)	.48	

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child , IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= Social Support, PPTI= Positive Psychotherapy Inventory, MW= Mental wellbeing

Above table 29 shows Mean, SD and t values for comparing age ranges of the child baseddifferences on CDS & dimensions, PBA, DASS, Depression, Anxiety & Stress, Sense of Coherence, Social support and wellbeing. Results shows significant difference on burnout, psychological distress & Anxiety variables. Result indicated that there is a significant difference of burnout among caregivers who have children of CP having ages between 2 to 7 years. It revealedthat caregivers having cp child in early childhood (age ranges 2-7 years) are more burnout (M=77.98, SD=24.02 as compared to having children middle and late childhood (M=65.39, SD= 29.10) (age 8 to 13 years). Results revealed that parents of younger CP children are more psychologically distressed (M=51.00, SD=11.87) as compared to parents having elder children (M=45.43, SD=13.93). There is a significant difference of on anxiety variable, which revealed that care givers of younger CP children having more anxiety (M=16.09, SD= 4.46) as compared to caregivers of elder CP children (M=13.85, SD= 4.35).

Table 30

Mean Standard Deviation & t-values of history of disability in family of Caregivers of Cerebral Palsy Children on the Scores of Caregiver burden, burnout, psychological distress (depression,Anxiety & Stress), Sense of Coherence, Social support and mental wellbeing.

Groups	*H/o Disability in family*						
	H/o Disability (n=36)		*No h/o Disability (n=64)*				
Variables	*M*	*SD*	*M*	*SD*	*t(df)*	*p*	Cohen's *d*
CDS	87.86	9.71	82.97	12.77	1.99(98)	.05	.43
CFC	31.25	4.03	30.08	5.57	1.10(98)	.27	
IoS	23.61	4.35	22.77	4.10	.97(98)	.33	
SfCg	15.31	2.69	14.08	3.31	1.9(98)	.06	
SES	17.47	3.13	17.08	3.27	.59(98)	.55	
PBA	74.33	25.00	70.98	28.31	.59(98)	.55	
DASS	48.17	12.08	48.59	13.72	.16(98)	.87	
Depression	16.28	4.47	16.05	5.07	.23(98)	.82	
Anxiety	14.61	4.28	15.31	4.68	.74(98)	.46	
Stress	17.28	4.40	17.13	4.84	.16(98)	.87	
SOC	48.56	14.91	51.58	16.76	.89(98)	.37	
SS	43.56	16.73	46.63	19.62	1.48(98)	.14	
MW	72.89	17.83	82.53	22.49	1.66(98)	.10	

Note: Having disability in family, No history of disability in family, CDS= Caregiver Difficulties Scale, CFC= Concern for the Child , IoS= Impact on Self, CfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= SocialSupport, PPTI= Positive Psychotherapy Inventory, MW= Mental Wellbeing

Above table 30 shows Mean, SD and t values for comparing previous history of disabilityin family based differences on CDS & its dimensions, PBA, DASS, Depression, Anxiety & Stress, Sense of Coherence, Social support and wellbeing. Results show there is significant difference is found on caregiver burden variable among caregivers of CP having family history of disability (M=87.86, SD, 9.71) (p>.05) as compared to caregivers having no family history of disability (M=82.97, SD= 12.77), it indicates that caregiver's having already of disability are more burdenedas compared to caregiver's having no history of disability previously. There is non-significant difference is found on PBA, DASS, Depression, Anxiety & stress, sense of coherence, social support and wellbeing variables which indicates that both having no difference. But from mean difference it indicates that caregivers having previous history of disabled child in family are moreburdened, psychologically distressed and burnout as compared to caregivers having no family history of disability.

Table 31

One way ANOVA for type of caregivers on caregiver burden, burnout, psychological distress(depression, Anxiety & Stress), Sense of Coherence, social support, mental wellbeing & sub scales among caregivers of CP children(N=100)

Variables	Caregivers (type)	*n*	*M*	*SD*	95% Confidence Interval for Mean		*F(2, 97)*	*p*	η^2
					Lower Bound	*Upper Bound*			
	Father	19	82.42	10.60	77.31	87.53			
CDS	Mother	68	86.22	12.62	83.17	89.27	1.80	.17	
	Others	13	80.31	8.81	74.99	85.63			
	Father	19	30.47	4.53	28.29	32.66			
CFS	Mother	68	30.78	5.21	29.52	32.04	.60	.54	
	Other	13	29.08	5.33	25.86	32.30			
	Father	19	22.11	4.04	20.16	24.05			
IoS	Mother	68	23.43	4.33	22.38	24.47	.82	.44	
	Other	13	22.62	3.66	20.40	24.83			
	Father	19	13.84	2.911	11.28	14.40			
SfCg	Mother	68	14.97	3.228	13.21	15.23	2.43	.09	
	Other	13	13.15	2.609	9.36	13.41			
	Father	19	17.00	2.45	15.82	18.18			
SES	Mother	68	17.28	3.39	16.46	18.10	.05	.95	
	Other	13	17.23	3.39	15.18	19.28			
	Father	19	63.53	20.44	54.67	73.38			
PBA	Mother	68	76.29	28.16	69.48	83.11	2.51	.08	

	Others	13	63.38	26.45	47.40	79.37			
	Father	19	43.26	10.56	38.17	48.35			
DASS	Mother	68	51.24	13.34	48.01	54.46	5.35	.006	.09
	Others	13	41.38	10.64	34.95	47.82			
	Father	19	13.84	4.27	11.78	15.90			
Depression	Mother	68	17.16	4.70	16.02	18.30	5.23	.007	.09
	Others	13	14.08	4.90	11.11	17.04			
	Father	19	13.68	3.94	11.78	15.59			
Anxiety	Mother	68	15.88	4.55	14.78	16.99	3.86	.024	.07
	Others	13	12.77	4.22	10.22	15.32			
	Father	19	15.74	3.03	14.27	17.20			
Stress	Mother	68	18.09	4.91	16.90	19.28	4.57	.01	.08
	Others	13	14.54	3.99	12.13	16.95			
	Father	19	52.21	16.08	44.46	59.69			
SOC	Mother	68	47.32	16.15	43.37	51.27	2.60	.08	
	Others	13	57.77	14.79	48.83	66.71			
	Father	19	51.89	16.44	43.97	59.82			
SS	Mother	68	40.21	19.53	35.48	44.97	3.00	.05	.06
	Others	13	44.85	16.17	35.07	54.62			
	Father	19	86.84	18.27	78.03	95.65			
MW	Mother	68	71.22	22.23	65.84	76.60	5.39	.006	.10
	Others	13	86.69	26.17	70.88	102.51			

Note: Others = brother, sister & anty uncles & grandparents, CDS= Caregiver Difficulties Scale, CFC= Concern for the Child, IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= Social Support, MW=Mental Wellbeing

Table 31 indicates mean, standard deviation and F values of CDS & its dimensions (CFC,IoS, SfCg,SES), PBA, DASS, Depression, Anxiety, Stress, Sense of Coherence, Social Support and Wellbeing across categories of caregivers (father, mother and others) among the caregivers ofcerebral Palsy children. The results in table also indicate the η^2 values to check the eta square effectsize among different categories of caregivers groups.

Results indicates significant mean differences across categories of caregivers on psychological distress with F (2, 97) =.006. Findings revealed that from caregivers specifically mothers of cerebral palsy children are more psychologically distressed as compared to fathers and other caregivers of CP children. The value of η^2 is .096 (medium to large effect size). The post-hoc comparisons indicated significant between group mean differences of each group with other two group (2>1>3, mother>father>others).). Results indicates significant mean differences across categories of caregivers on depression with F (2, 97) =.007. Findings revealed that from caregiversspecifically mothers of Cerebral palsy children are more depressed as compared to fathers and other caregivers of CP children. The value of η^2 is .097 (medium to large effect size). The post- hoc comparisons is significant between group mean differences of each group with other two group(2>1>3, mother>father>others). Results indicates significant mean differences across categories of caregivers on anxiety with F (2, 97) =.02,p<.05. Findings revealed that from caregivers specifically mothers of cerebral palsy children are more anxious as compared to fathers and othercaregivers of CP children. The value of η^2 is .073 (medium effect size). The post-hoc comparisonis significant between group mean differences of each group with other two group (2>1>3, mother>father>others). Results indicates significant mean differences across categories of caregivers on stress with F (2, 97) =.013,p<.01. Findings revealed that from caregivers specifically mothers of cerebral palsy children are more psychologically stressed as compared to fathers and other caregivers of CP children. The value of η^2 is .086 (between medium to large effect size). The post-hoc comparison is significant between group mean differences of each group with other two group (2>1>3, mother>father>others).

Results indicates significant mean differences across categories of caregivers on social support with F (2, 97) =.05. Findings revealed that from caregivers specifically mothers of cerebral palsy children having less social support as compared to fathers and other caregivers of CP children. Thevalue of η^2 is .06 (medium effect size). The post-hoc comparison is significant between group mean differences of each group with other two group (2>1>3, mother>father>others).

Results indicates significant mean differences across categories of caregivers on mental wellbeingwith F (2, 97)=.01,p<.001. Findings revealed that from caregivers specifically mothers of cerebral palsy children having lower mental wellbeing as compared to fathers and other caregivers of CP children. The value of η^2 is .10 (large effect size). The post-hoc comparisons is significant betweengroup mean differences of each group with other two group (2>1>3, mother>father>others).

Table 32

One way ANOVA for Age-wise differences of caregivers on caregiver burden, burnout, psychological distress (depression, Anxiety & Stress), Sense of Coherence, social support,mental wellbeing & sub scales (N=100)

Variables	Age Ranges	*n*	*M*	*SD*	95% Confidence Interval for Mean		*F(2,97)*	*p*	η^2
					Lower Bound	*Upper Bound*			
CDS	25-35	47	84.98	9.76	82.11	87.85	.19	.82	
	36-45	46	84.89	13.77	80.80	88.98			
	46-55	7	82.00	13.86	69.18	94.82			
CFS	25-35	47	31.51	4.27	30.26	32.76	1.93	.15	
	36-45	46	29.46	5.58	27.80	31.12			
	46-55	7	30.57	6.05	24.97	36.17			
IoS	25-35	47	22.66	4.48	21.34	23.98	.44	.65	
	36-45	46	23.39	3.87	22.24	24.54			
	46-55	7	23.71	4.57	19.49	27.94			
SfCg	25-35	47	14.49	2.76	12.01	14.20	2.74	.07	
	36-45	46	14.93	3.40	13.12	15.62			
	46-55	7	12.00	3.00	8.22	15.20			
SeS	25-35	47	16.96	2.84	16.12	17.79	1.12	.33	
	36-45	46	17.67	3.62	16.60	18.75			
	46-55	7	16.00	2.52	13.67	18.33			
	25-35	47	69.70	28.19	61.42	77.98			

PBA	36-45	46	75.85	25.97	67.13	82.56	.42	.66
	46-55	7	71.43	29.17	44.45	98.41		
DASS	36-45	46	47.83	12.48	44.12	51.53	.12	.89
	46-55	7	50.00	17.55	33.77	66.23		
	25-35	47	16.19	4.85	14.77	17.62		
Depression	36-45	46	16.04	4.78	14.62	17.46	.01	.99
	46-55	7	16.29	5.94	10.80	21.78		
	25-35	47	15.04	4.81	13.63	16.45		
Anxiety	36-45	46	14.89	3.94	13.72	16.06	.28	.75
	46-55	7	16.29	6.57	10.20	22.37		
	25-35	47	17.57	4.73	16.19	18.96		
Stress	36-45	46	16.74	4.61	15.37	18.11	.38	.69
	46-55	7	17.43	5.19	12.63	22.23		
	25-35	47	49.34	17.32	45.14	54.43		
SOC	36-45	46	49.37	16.24	44.25	54.19	.15	.85
	46-55	7	53.00	10.82	44.55	63.00		
	25-35	47	41.64	19.50	35.91	47.36		
Social Support	36-45	46	44.02	19.06	38.36	49.68	.26	.76
	46-55	7	45.86	16.34	30.74	60.97		
	25-35	47	78.72	22.96	71.98	85.47		
MW	36-45	46	72.65	23.93	65.55	79.76	1.09	.34
	46-55	7	82.57	15.50	68.24	96.91		
	25-35	47	48.81	13.25	44.92	52.70		

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child, IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= Social Support, PPTI= Positive Psychotherapy Inventory, MW= Mental Wellbeing

Table 32 indicates mean, standard deviation and F values for CDS & its dimensions (CFC,IoS, CfCg,SES) PBA, DASS, Depression, Anxiety, Stress, Sense of Coherence, Social Support and Wellbeing across age groups (25 to 55) among caregivers of cerebral Palsy children. The results in table also indicate the η^2 values to check the eta square effect size among different age groups. There is no significant difference is found in all variables with the small effect size.

Table 33

One way ANOVA for occupation -wise differences of caregivers on caregiver burden, burnout, psychological distress (depression, Anxiety & Stress), Sense of Coherence, social support, mental wellbeing & sub scales (N=100)

Variables	Occupation	*n*	*M*	*SD*	95% Confidence Interval		*F(3,96)*	*p*	η^2
					Lower Bound	*Upper Bound*			
	Not Working	64	86.13	12.67	82.96	89.29	1.39	.25	
CDS	Labour/Private work	12	85.00	11.71	77.56	92.44			
	Government job	21	81.67	9.26	77.45	85.88			
	Business	3	75.33	9.87	50.83	99.84			
	Not Working	64	31.02	5.08	29.75	32.29	1.41	.24	
CFS	Labour/Private work	12	30.92	5.43	27.46	34.37			
	Government job	21	29.33	4.62	27.23	31.44			
	Business	3	26.00	6.08	10.89	41.11			
	Not Working	64	23.56	4.46	22.45	24.68	2.67	.05	.08
IoS	Labour/Private work	12	24.42	2.78	22.65	26.18			
	Government job	21	21.19	3.52	19.59	22.79			
	Business	3	20.33	3.21	12.35	28.32			
	Not Working	64	14.78	3.42	13.93	15.64	.45	.72	
SfCg	Labour/Private work	12	14.33	3.17	12.32	16.35			
	Government job	21	13.90	2.14	12.93	14.88			

	Business	3	14.00	3.46	5.39	22.61			
SeS	Not Working	64	17.48	3.39	16.64	18.33	.47	.70	
	Labour/Private work	12	17.00	3.19	14.97	19.03			
	Government job	21	16.71	2.69	15.49	17.94			
	Business	3	16.00	3.46	7.39	24.61			
PBA	Not Working	64	74.77	26.17	68.09	81.44	1.54	.20	
	Labour/Private work	12	57.83	27.61	40.29	75.38			
	Government job	21	74.14	27.82	61.48	86.81			
	Business	3	61.00	15.10	23.49	98.51			
DASS	Not Working	64	50.61	13.38	47.27	53.95	2.39	.07	
	Labour/Private work	12	45.67	12.89	37.48	53.85			
	Government job	21	45.43	11.39	40.24	50.61			
	Business	3	34.33	7.02	16.89	51.78			
Depression	Not Working	64	16.97	4.76	15.78	18.16	2.02	.12	
	Labour/Private work	12	14.67	4.77	11.63	17.70			
	Government job	21	14.90	4.82	12.71	17.10			
	Business	3	12.67	4.73	.93	24.41			
Anxiety	Not Working	64	15.59	4.63	14.44	16.75	1.36	.26	
	Labour/Private work	12	14.17	4.39	11.38	16.95			
	Government job	21	14.52	4.19	12.62	16.43			
	Business	3	11.00	4.36	.17	21.83			
	Not Working	64	17.94	4.93	16.71	19.17	3.17	.03	.09

Stress	Labour/Private work	12	16.83	4.41	14.03	19.63		
	Government job	21	16.00	3.19	14.55	17.45		
	Business	3	10.67	3.05	3.08	18.26		
	Not Working	64	48.25	16.74	44.07	52.43	.42	.74
SOC	Labour/Private work	12	51.17	19.03	39.08	63.25		
	Government job	21	52.43	14.54	45.81	59.05		
	Business	3	52.67	11.50	24.09	81.24		
	Not Working	64	40.69	19.24	35.88	45.49	1.16	.34
Social Support	Labour/Private work	12	43.83	18.58	32.03	55.64		
	Government job	21	48.24	18.75	39.70	56.77		
	Business	3	53.33	11.24	25.41	81.25		
	Not Working	64	77.55	22.01	68.05	89.05	.90	.44
MW	Labour/Private work	12	81.42	18.08	79.92	92.91		
	Government job	21	81.71	27.97	69.00	94.43		
	Business	3	73.33	27.00	6.25	140.42		

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child , IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= SocialSupport, PPTI= Positive Psychotherapy Inventory, MW=Mental Wellbeing

Table 33 indicates mean, standard deviation and F values of CDS & dimensions (CFC= Concern for the Child , IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains) PBA, DASS, Depression, Anxiety, Stress, Sense of Coherence, Social Support and Wellbeing across occupation (Not working, Labour/Private work, Government job, Business)among the caregivers of cerebral Palsy children.

The results in table also indicate the η^2values to check the eta square effect size among different categories of caregivers groups. Results indicates significant mean differences across occupation of caregivers on Impact on Self variable' with F (3, 96) =.05 $p \leq .05$. Findings revealed that caregivers having no working status are more burdened (Impact on self) as compared to caregivers having some job or working status. The value of η^2 is .08 indicate large effect size. Thepost-hoc comparisons is significant between group mean differences of each group with other groups (1>2>3>4).

The results in table also indicate the η values to check the eta square effect size among different categories of caregivers groups. Results indicates significant mean differences across occupation of caregivers on Stress variable' with F (3, 96) =.03, $p<.05$. Findings revealed that caregivers having no working status are more stressed as compared to caregivers having some job or working status. The value of η^2 is .09 indicate large effect size. The post-hoc comparisons is significant between group mean differences of each group with other groups (1>2>3>4).

Table 34

One way ANOVA for Number of children wise differences on caregiver burden, burnout, psychological distress (depression, Anxiety & Stress), Sense of Coherence, social support,mental wellbeing & sub scales (N=100)

Variables	No. of CP Children	*n*	*M*	*SD*	95% Confidence Interval for Mean		*F(3,96)*	*p*	η^2
					Lower Bound	*Upper Bound*			
	1-3	53	85.62	9.477	83.01	88.23			
CDS	4-6	38	82.29	14.09	77.66	86.92	3.13	.03	.09
	7-9	5	98.00	13.17	81.64	114.36			
	No Child	4	79.50	7.37	67.77	91.23			
CSF	1-3	53	30.81	4.86	29.47	32.15	1.47	.23	
	4-6	38	29.61	5.34	27.85	31.36			
	7-9	5	34.40	5.03	28.15	40.65			
	No Child	4	30.00	4.55	22.77	37.23			
IoS	1-3	53	23.49	3.48	22.53	24.45	3.50	.02	.09
	4-6	38	22.00	4.79	20.43	23.57			
	7-9	5	27.80	2.49	24.71	30.89			
	No Child	4	21.75	4.65	14.36	29.14			
SfCg	1-3	53	14.77	2.89	13.98	15.57	1.75	.16	.05
	4-6	38	14.18	3.20	13.13	15.24			
	7-9	5	16.40	4.45	10.87	21.93			
	No Child	4	12.00	3.37	6.64	17.36			

SeS	1-3	53	17.23	2.85	16.44	18.01	.65	.58	
	4-6	38	16.92	3.63	15.73	18.11			
	7-9	5	19.00	4.06	13.96	24.04			
	No Child	4	17.75	2.87	13.18	22.32			
PBA	1-3	53	72.81	25.61	65.75	78.87	.84	.47	
	4-6	38	70.32	30.18	60.39	80.24			
	7-9	5	88.20	25.69	56.30	120.10			
	No Child	4	61.75	9.94	45.92	77.58			
DASS	1-3	53	49.66	12.28	46.28	53.04	3.08	.03	.09
	4-6	38	45.58	13.58	41.12	50.04			
	7-9	5	62.20	12.21	47.03	77.37			
	No Child	4	42.25	8.77	28.29	56.21			
Depression	1-3	53	16.68	4.44	15.46	17.90	3.05	.03	.09
	4-6	38	14.87	5.02	13.22	16.52			
	7-9	5	21.00	4.31	15.66	26.34			
	No Child	4	14.75	5.50	6.00	23.50			
Anxiety	1-3	53	15.40	4.39	14.18	16.61	1.41	.24	
	4-6	38	14.53	4.69	12.98	16.07			
	7-9	5	17.80	4.09	12.73	22.87			
	No Child	4	12.25	4.57	4.97	19.53			
Stress	1-3	53	17.45	4.35	16.25	18.65	4.19	.008	.11
	4-6	38	16.18	4.75	14.62	17.74			
	7-9	5	23.40	4.39	17.95	28.85			

	No Child	4	15.25	2.22	11.72	18.78		
SOC	1-3	53	49.23	16.01	44.81	53.64	.82	.48
	4-6	38	50.32	17.04	44.71	55.92		
	7-9	5	41.40	14.06	23.94	58.86		
	No Child	4	58.25	17.73	30.04	86.46		
Social Support	1-3	53	42.42	19.06	37.16	47.67	.91	.43
	4-6	38	44.18	18.59	38.08	50.29		
	7-9	5	32.80	21.25	6.41	59.19		
	No Child	4	53.00	19.76	21.55	84.45		
MW	1-3	53	77.64	23.37	71.20	84.08	2.60	.06
	4-6	38	74.29	21.26	67.30	81.28		
	7-9	5	57.60	23.98	27.82	87.38		
	No Child	4	98.50	20.29	66.21	130.79		

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child , IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= Social Support, PPTI= Positive Psychotherapy Inventory, MW = Mental Wellbeing

Table 34 indicates mean, standard deviation and F values of CDS & dimensions(CFC= Concern for the Child , IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains), PBA, DASS, Depression, Anxiety, Stress, Sense of Coherence, Social Supportand Wellbeing across no of children (1-3,6-6,7-9, no child)) among the caregivers of cerebral Palsy children. The results in table also indicate the η^2 values to check the eta square effect size among different categories of caregivers groups. Results indicates significant mean differences across no of total children of caregivers on caregiver burden, Impact on Self, Support for CaregiverPsychological distress, depression and stress.

Results indicates significant mean differences across no of total children of caregivers on caregiver burden with F (3, 96) =.03 ,p<.05. Findings revealed that caregivers having 7 to 9 children with one CP child are more burdened as compared to caregivers having less children. Thepost-hoc comparisons indicated significant between group mean differences of each group with other groups (3>1>2>4). Results indicates significant mean differences across no of total childrenof caregivers on Impact on Self with F (3, 96) =.02, p<.05 . The post-hoc comparisons is significantbetween group mean differences of each group with other groups (3>2>1>4) & (3>1>2>4). Resultsreveals that there is a significant mean differences across no of total children of caregivers on psychological distress with F (3, 96) =.03, p<.05, which indicates that caregivers having more than7 children are more psychologically distressed as compared to caregivers having less no of children. The value of η^2 is .09 indicate large effect size. The post-hoc comparisons indicated significant between group mean differences of each group with other groups (3>1>2>4). Similarly Results indicates significant mean differences across no. of children of caregivers on depression F(3, 96) =.032, p<.01. Findings revealed that caregivers having more than 7 children are more depressed as compared to caregivers with less children. The value of η^2 is .87 indicate large effectsize. The post-hoc comparisons is significant between group mean differences of each group withother groups (3>1>2>4). Results reveals that there is a significant mean differences across no of total children of caregivers on stress with F (3, 96) =.008, p<.001, which indicates that caregivers having more than 7 children are more psychologically stressed as compared to caregivers having

less no of children. The value of η^2 is .1(>.14) indicate large effect size. Post-hoc comparisons issignificant between group mean differences of each group with other groups (3>1>2>4)

Table 35

One way ANOVA for type of Cerebral Palsy -wise differences of CP child of the caregivers oncaregiver burden, burnout, psychological distress (depression, Anxiety & Stress), Sense of Coherence, social support, mental wellbeing & sub scales (N=100)

Groups *Variables*	*CP Type*	*n*	*M*	*SD*	95% Confidence Interval for Mean		*F(4,95)*	p	η^2
					Lower Bound	*Upper Bound*			
	Spastic	70	87.96	9.91	85.59	90.32			
CDS	Hemiplegic	9	73.33	19.41	58.41	88.25	6.071	.000	.20
	Diplegic	4	80.00	6.93	68.98	91.02			
	Athetoid	9	82.22	11.66	73.26	91.18			
	Paraplegic	8	74.50	5.58	69.83	79.17			
	Spastic	70	31.71	4.16	30.72	32.71			
CSF	Hemiplegic	9	26.00	7.59	20.16	31.84	5.476	.001	.19
	Diplegic	4	32.00	2.94	27.32	36.68			
	Athetoid	9	28.89	6.37	23.99	33.79			
	Paraplegic	8	26.00	3.25	23.28	28.72			
IoS	Spastic	70	23.86	3.83	22.94	24.77	2.920	.02	.11
	Hemiplegic	9	20.44	5.57	16.16	24.73			

	Diplegic	4	20.75	6.34	10.65	30.85			
	Athetoid	9	23.11	3.82	20.17	26.05			
	Paraplegic	8	20.25	2.71	17.98	22.52			
CfCg	Spastic	70	14.89	3.27	14.11	15.67	.913	.46	
	Hemiplegic	9	13.44	3.05	11.10	15.79			
	Diplegic	4	13.00	1.41	10.75	15.25			
	Athetoid	9	14.22	3.15	11.80	16.65			
	Paraplegic	8	13.63	2.50	11.53	15.72			
SeS	Spastic	70	17.73	3.069	17.00	18.46	2.388	.05	.09
	Hemiplegic	9	14.56	4.45	11.14	17.97			
	Diplegic	4	16.25	3.09	11.32	21.18			
	Athetoid	9	17.22	2.82	15.06	19.39			
	Paraplegic	8	16.25	1.98	14.59	17.91			
PBA	Spastic	70	76.74	28.07	70.05	83.44	2.45	.05	.08
	Hemiplegic	9	73.22	25.39	53.71	92.74			
	Diplegic	4	58.00	16.99	30.96	85.04			
	Athetoid	9	52.89	22.26	35.78	70.00			
	Paraplegic	8	60.00	14.48	47.89	72.11			
DASS	Spastic	70	50.34	12.70	47.31	53.37	1.569	.189	
	Hemiplegic	9	46.33	15.43	34.47	58.19			
	Diplegic	4	45.25	7.81	32.83	57.67			
	Athetoid	9	40.89	13.42	30.57	51.20			
	Paraplegic	8	44.25	13.79	32.72	55.78			

	Spastic	70	16.71	4.74	15.58	17.85			
Depression	Hemiplegic	9	15.67	6.14	10.94	20.39	1.251	.29	
	Diplegic	4	15.50	3.32	10.22	20.78			
	Athetoid	9	13.33	4.74	9.69	16.98			
	Paraplegic	8	15.00	4.63	11.13	18.87			
Anxiety	Spastic	70	15.57	4.47	14.51	16.64	1.138	.34	
	Hemiplegic	9	15.11	5.30	11.04	19.19			
	Diplegic	4	12.75	4.27	5.95	19.55			
	Athetoid	9	13.11	4.01	10.03	16.20			
	Paraplegic	8	13.88	4.82	9.84	17.91			
Stress	Spastic	70	17.96	4.45	16.90	19.02	1.949	.11	
	Hemiplegic	9	15.56	4.75	11.91	19.20			
	Diplegic	4	17.00	2.16	13.56	20.44			
	Athetoid	9	14.44	5.15	10.49	18.40			
	Paraplegic	8	15.38	5.73	10.58	20.17			
SOC	Spastic	70	47.04	15.77	49.67	18.24	2.78	.03	.10
	Hemiplegic	9	49.67	18.24	35.65	63.69			
	Diplegic	4	57.50	14.06	35.13	79.87			
	Athetoid	9	64.67	19.27	49.85	79.48			
	Paraplegic	8	51.13	6.60	45.61	56.64			
	Spastic	70	38.39	18.66	34.48	43.38			
SS	Hemiplegic	9	45.22	13.25	35.04	55.40	4.37	.003	.15

	Diplegic	4	68.50	17.33	40.92	96.08		
	Athetoid	9	50.33	19.46	35.37	65.29		
	Paraplegic	8	55.50	10.39	46.81	64.19		
M.W	Spastic	70	72.66	21.69	67.48	77.83	1.70	.15
	Hemiplegic	9	80.11	29.02	57.80	102.42		
	Diplegic	4	94.25	21.51	60.01	128.49		
	Athetoid	9	85.89	24.45	67.09	104.69		
	Paraplegic	8	82.88	23.08	63.58	102.17		

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child , IoS= Impact on Self, CfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= Social Support, PPTI= Positive Psychotherapy Inventory, MW= Mental Wellbeing

Table 35 indicates mean, standard deviation and F values of CDS & its dimensions (CFC=Concern for the Child, Impact on Self, Support for Caregiver, Social & Economic Strains, PBA,DASS, Depression, Anxiety, Stress, Sense of Coherence, Social Support and Wellbeing across type of cerebral Palsy (Spastic, Hemiplegic, Diplegic, Athetoid & paraplegic) among the caregivers of cerebral Palsy children. The results in table also indicate the η^2 values to check the eta square effect size among different categories of caregivers groups. Results indicates significantmean differences across type of CP of children on caregiver burden with F (4, 95) =.000,p<.001. Findings revealed that caregivers having Spastic CP children are more burdened as compared to CP with athetoid, diaplegic and hemiplegia and paraplegia. The value of η^2 is .20 indicate large effect size. The post-hoc comparisons is significant between group mean differences of each groupwith other group (1>4>3>5>2).

Results indicates significant mean differences across type of CP of children on CSF with F (4, 95) =.001,p<.001. Findings revealed that caregivers having diaplegic CP children are more burdened (concern for the child) as compared to CP with Athetoid, spastic, hemiplegia and paraplegia. The value of η^2 is .20 indicate large effect size. The post-hoc comparison is significantbetween group mean differences of each group with other group (3>1>4>2>5).

Results indicates significant mean differences across type of CP of children on impact on self dimension with F (4, 95) =.025,p<.05. Findings revealed that caregivers having spastic CP children are more burdened which effect on their own self, as compared to CP with athetoid, diplegia and hemiplegia and paraplegia. The value of η^2 is .20 indicate large effect size. The post- hoc comparison is significant between group mean differences of each group with other groups (1>4>3>2>5). Similarly Results indicates significant mean differences across type of CP on social& economic Strains with F (4, 95) p<.05. Findings revealed that caregivers having Spastic CP children have poor social support as compared to others CP type. The value of η^2 **is** .09.1indicate large effect size. The post-hoc comparisons is significant between group mean differences of eachgroup with other groups (1>4>2>3>5).

Results indicates significant mean differences across type of CP on burnout with F (4, 95) =.05, p<.05. Findings revealed that caregivers having Spastic CP children are burnout as comparedto others CP type. The value of η^2 is .08 .1indicate large effect size. The post-hoc comparison is significant between group mean differences of each group with other groups (1>4>2>5>3).

Similarly Results indicates significant mean differences across type of CP on sense of coherence with F (4, 95) =.03, p<.05. Findings revealed that caregivers having Spastic CP childrenhave poor sense of coherence as compared to others CP type. The value of η^2 is .11.1indicate large effect size. The post-hoc comparisons is significant between group mean differences of each groupwith other groups (1>2>5>3>4).

Similarly results indicates significant mean differences across type of CP on social support with F (4, 95) =.003, p<.05. Findings revealed that caregivers having Spastic CP children have poor social support as compared to others CP type. The value of η^2 is .15 indicate large effect size.The post-hoc comparisons is significant between group mean differences of each group with othergroups (1>2>4>5>3).

Table 36

One way ANOVA for current disability status-wise differences of the CP child of caregivers oncaregiver burden, burnout, psychological distress (depression, Anxiety & Stress), Sense of Coherence, social support, mental wellbeing & sub scales (N=100)

Groups Variables	Current Disability	*n*	*M*	*SD*	95% Confidence Interval forMean		*F(2, 97)*	*p*	η^2
					Lower Bound	*Upper Bound*			
CDS	Physical,Intellectual, Speech	83	86.25	10.345	83.99	88.51	4.29	.02	.08
	Physical	14	76.86	17.065	67.00	86.71			
	Physical,Intellectual	3	79.33	14.468	43.39	115.27			
CFS	Physical,Intellectual, Speech	83	30.98	4.588	29.97	31.98	3.52	.03	.07
	Physical	14	27.29	6.944	23.28	31.30			
	Physical,Intellectual	3	32.33	4.163	21.99	42.68			
IoS	Physical,Intellectual, Speech	83	23.46	3.785	22.63	24.28	3.28	.04	.06
	Physical	14	21.86	5.201	18.85	24.86			
	Physical,Intellectual	3	18.00	7.211	.09	35.91			
	Physical,Intellectual, Speech	83	14.73	3.193	14.04	15.43			

SfCg	Physical	14	13.50	3.006	11.76	15.24	1.15	.32
	Physical,Intellectual	3	13.33	1.155	10.46	16.20		
	Physical,Intellectual, Speech	83	17.51	2.919	16.87	18.14		
SES	Physical	14	15.50	4.310	13.01	17.99	2.41	.09
	Physical,Intellectual	3	17.33	4.041	7.29	27.37		
	Physical,Intellectual, Speech	83	74.00	28.666	67.75	80.25		
PBA	Physical	14	61.64	16.92	53.03	70.26	1.25	.29
	Physical,Intellectual	3	71.33	18.87	24.44	118.2		
	Physical,Intellectual, Speech	83	49.23	13.105	46.37	52.09		
DASS	Physical	14	44.36	12.929	36.89	51.82	.89	
	Physical,Intellectual	3	45.67	14.364	9.98	81.35		
	Physical,Intellectual, Speech	83	16.36	4.930	15.28	17.44		
Depression	Physical	14	15.29	4.445	12.72	17.85	.69	.50
	Physical,Intellectual	3	13.67	4.619	2.19	25.14		
	Physical,Intellectual, Speech	83	15.30	4.480	14.32	16.28		
Anxiety	Physical	14	13.79	5.026	10.88	16.69	.70	.49
	Physical,Intellectual	3	14.33	4.041	4.29	24.37		
	Physical,Intellectual, Speech	83	17.48	4.554	16.49	18.48		

Stress	Physical	14	15.29	5.030	12.38	18.19	1.35	.26
	Physical,Intellectual	3	17.67	6.028	2.69	32.64		
	Physical,Intellectual, Speech	83	48.96	17.01	45.25	52.68		
SOC	Physical	14	52.71	11.98	45.80	59.63	.37	.69
	Physical,Intellectual	3	53.00	18.00	8.29	97.71		
	Physical,Intellectual, Speech	83	41.24	19.08	37.07	45.41		
SS	Physical	14	51.29	15.09	42.57	60.00	2.25	.11
	Physical,Intellectual	3	54.00	25.12	7.77	8.40		
	Physical,Intellectual, Speech	83	74.81	21.66	72.26	70.08		
MW	Physical	14	83.21	29.57	66.14	100.3	.89	.41
	Physical,Intellectual	3	82.00	30.19	6.98	157.0		

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child , IoS= Impact on Self, CfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= Social Support, PPTI= Positive Psychotherapy Inventory, MW=Mental Wellbeing

Table 36 indicates mean, standard deviation and F values of CDS & dimensions (CFC= Concern for the Child , IoS= Impact on Self, CfCg= Support for Caregiver, SES= Social & Economic Strains), PBA, DASS, Depression, Anxiety, Stress, Sense of Coherence, Social Support and Wellbeing across current status of cerebral palsy children (Physical,intellectual,speech problems, or physical & intellectual problem or physical problem only). The results in table alsoindicate the η^2 values to check the eta square effect size among different categories of caregivers groups. Results indicates significant mean differences across current status of cerebral palsy children having impact on caregivers, on caregiver burden with F (2, 97) =.02, p<.05. Findings revealed that caregivers having CP children with physical,intellectual, speech disability are more burdened as compared to caregivers of children having physical and intellectual disability & physical disability only. The value of η^2 is .08 indicate large effect size. The post-hoc comparisonsis significant between group mean differences of each group with other two group (1>2>3). Resultsindicates significant mean differences across current disability/problems of cerebral palsy childrenhaving impact on caregivers, on concern for the child variable with F (2, 97)=.03, p<.05. Findings revealed that caregivers having CP children with physical,intellectual,speech disability are more concerned towards their child's disability as compared to caregivers of children having physical and intellectual disability or having physical disability only. The value of η^2 is .06 indicate medium effect size. The post-hoc comparisons is significant between group mean differences of each group with other two group (1>2>3).

Results indicates significant mean differences across current disability/problems of cerebral palsy children on Impact on Self variable with F (2, 97)=.042, p<.05. Findings revealed that caregivers having CP children with three level of problems i.e,physical,intellectual,speech disability have more impact on caregiver's self-health as compared to caregivers of CP children having physical and intellectual disability & physical disability only. The value of η^2 is .06 indicatemedium effect size. The post-hoc comparison is significant between group mean differences of each group with other two groups (1>2>3).

Results indicates non-significant mean differences across current disability/problems of cerebral palsy children on sense of coherence, social support & wellbeing variables.

Table 37

One way ANOVA for Monthly Income-wise differences on caregiver burden, burnout, psychological distress (depression, Anxiety & Stress), Sense of Coherence, social support, mental wellbeing & sub scales (N=100)

Groups Variables	Monthly Income	*n*	*M*	*SD*	95% Confidence Interval for Mean *Lower Bound*	95% Confidence Interval for Mean *Upper Bound*	*F(4,95)*	*p*	η²
	20,000-40,000	39	88.95	10.785	85.45	92.44		.	
CDS	41,000-60,000	27	83.93	9.389	80.21	87.64	2.76	.03	.01
	61,000-80,000	24	81.54	15.211	75.12	87.96			
	81,000-100,000	6	80.33	8.595	71.31	89.35			
	Above	4	74.75	9.215	60.09	89.41			
	20,000-40,000	39	32.41	4.076	31.09	33.73			
CFS	41,000-60,000	27	30.37	4.892	28.44	32.31	3.44	.01	.01
	61,000-80,000	24	29.04	5.960	26.53	31.56			

	81,000-100,000	6	26.67	3.204	23.30	30.03		
	Above	4	27.25	6.185	17.41	37.09		
	20,000-40,000	39	24.31	3.968	23.02	25.59		
IoS	41,000-60,000	27	22.81	3.669	21.36	24.27	1.68	.16
	61,000-80,000	24	21.75	5.144	19.58	23.92		
	81,000-100,000	6	21.67	.816	20.81	22.52		
	Above	4	22.75	4.646	15.36	30.14		
	20,000-40,000	39	14.82	3.655	13.64	16.01		
SfCg	41,000-60,000	27	14.48	2.392	13.54	15.43	.66	.62
	61,000-80,000	24	14.33	2.854	13.13	15.54		
	81,000-100,000	6	15.00	4.195	10.60	19.40		
	Above	4	12.25	2.630	8.07	16.43		
	20,000-40,000	39	18.15	3.158	17.13	19.18		

SES	41,000-60,000	27	17.30	2.893	16.15	18.44	2.36	.05	.09
	61,000-80,000	24	15.96	3.420	14.51	17.40			
	81,000-100,000	6	17.33	2.944	14.24	20.42			
	Above	4	15.00	2.582	10.89	19.11			
	20,000-40,000	39	77.08	27.17	68.27	85.89			
PBA	41,000-60,000	27	66.70	24.69	56.94	76.47	1.72	.15	
	61,000-80,000	24	73.67	29.64	61.15	86.18			
	81,000-100,000	6	77.33	26.50	49.52	105.14			
	Above	4	45.00	5.48	36.28	53.72			
	20,000-40,000	39	53.85	14.35	49.19	58.50			
DASS	41,000-60,000	27	44.22	10.85	39.93	48.51	4.58	.002	.16
	61,000-80,000	24	45.42	11.42	40.60	50.24			

	81,000-100,000	6	53.50	4.93	48.33	58.67			
	Above	4	34.75	8.65	20.98	48.52			
	20,000-40,000	39	17.64	5.45	15.87	19.41			
Dep	41,000-60,000	27	14.81	3.96	13.25	16.38	2.78	.03	.10
	61,000-80,000	24	15.25	4.51	13.34	17.16			
	81,000-100,000	6	18.33	2.16	16.07	20.60			
	Above	4	12.25	4.19	5.58	18.92			
Anxiety	20,000-40,000	39	16.87	4.73	15.34	18.40	4.57	.002	.16
	41,000-60,000	27	13.85	3.81	12.34	15.36			
	61,000-80,000	24	13.83	4.36	11.99	15.67			
	81,000-100,000	6	17.00	2.76	14.11	19.89			
	Above	4	10.00	1.41	7.75	12.25			
Stress	20,000-40,000	39	19.15	4.89	17.57	20.74	4.34	.003	.15

	41,000-60,000	27	15.56	4.24	13.88	17.23			
	61,000-80,000	24	16.33	4.08	14.61	18.06			
	81,000-100,000	6	18.17	1.60	16.49	19.85			
	Above	4	12.50	4.20	5.81	19.19			
SOC	20,000-40,000	39	46.13	18.60	40.10	52.16	1.63		
	41,000-60,000	27	53.85	13.34	48.57	59.13			
	61,000-80,000	24	47.75	17.05	40.55	54.95			
	81,000-100,000	6	52.33	6.41	45.61	59.06			
	Above	4	62.00	5.29	53.58	70.42			
	20,000-40,000	39	32.67	19.25	32.43	44.91			
SS	41,000-60,000	27	41.74	16.49	35.22	48.26	2.78	.03	.09
	61,000-80,000	24	46.25	19.56	37.99	54.51			

	81,000-100,000	6	47.33	17.61	28.85	65.82			
	Above	4	68.50	11.68	49.92	87.08			
MW	20,000-40,000	39	71.18	20.63	64.49	77.87	2.71	.03	.08
	41,000-60,000	27	73.63	19.23	66.02	81.24			
	61,000-80,000	24	79.25	24.39	68.95	89.55			
	81,000-100,000	6	90.67	37.73	51.07	130.27			
	Above	4	102.5	14.48	79.46	125.54			

Note: CDS= Caregiver Difficulties Scale, CFC= Concern for the Child, IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains, PBA= Parental Burnout Assessment, DASS= Depression Anxiety Stress Scale, SOC= Sense of Coherence, SS= SocialSupport, PPTI= Positive Psychotherapy Inventory, MW= Mental Wellbeing

Table 37 indicates mean, standard deviation and F values of CDS & dimensions (CFC= Concern for the Child , IoS= Impact on Self, SfCg= Support for Caregiver, SES= Social & Economic Strains,,) PBA, DASS, Depression, Anxiety, Stress, Sense of Coherence, Social Supportand Wellbeing across monthly income (20,000-40,000,41,000-60,000, 61,000-80,000, 81,000- 100,000 and above) among the caregivers of cerebral palsy children. The results in table also indicate the η^2 values to check the eta square effect size among different categories of caregivers groups.

Results indicates significant mean differences across monthly income of caregivers on caregiver burden with F (4, 95) =.03, $p<.50$. Findings revealed that caregivers having less incomestatus having higher caregiver burden as compared to caregivers having high income group. The value of η^2 is .01 indicate small effect size. The post-hoc comparisons is significant between groupmean differences of each group with other groups (1>2>3,>4>5).

Results indicates significant mean differences across monthly income of caregivers on Care for Self (CFS) & Social & economic Strains (SES) indicator of CDS with F (4, 95) =.01, .05, $p<.50$.Findings revealed that caregivers having less income having poor self-care & social and econimicstrains as compared to caregivers having high income group. The value of η^2 is .01 & .09 indicatesmall effect size and large effect size. The post-hoc comparison is significant between group mean differences of each group with other groups (1>2>3,>4>5) & (1>4>2>3>5).

Results indicates significant mean differences across monthly income of caregivers on Psychological distress with F (4, 95) =.03, $p<.50$. Findings revealed that caregivers having less income are psychologically distressed as compared to caregivers having high income group. The value of η^2 is .01 indicate small effect size. The post-hoc comparison is significant between groupmean differences of each group with other groups (1>2>3,>4>5).

Results indicates significant mean differences across monthly income of caregivers on depression with F (4, 95) =.032, $p<.50$. Findings revealed that caregivers having less income having high depression well being as compared to caregivers having high income group. The valueof η^2 is .01 indicate small effect size. The post-hoc comparison is significant between group meandifferences of each group with other groups (1>2>3,>4>5).

Results indicates significant mean differences across monthly income of caregivers on Anxiety with F (4, 95) =.002, $p<.001$. Findings revealed that caregivers having less income are more anxious as compared to caregivers having high income group. The value of η^2 is .16

indicate large effect size. The post-hoc comparison is significant between group mean differences of eachgroup with other groups (1>2>3,>4>5).

Results indicates significant mean differences across monthly income of caregivers on stress with F (4, 95) =.003, p<.001. Findings revealed that caregivers having less income are morestressed as compared to caregivers having high income group. The value of η^2 is .15 indicate largeeffect size. The Post-Hoc comparisons indicated significant between group mean differences of each group with other groups (1>2>3,>4>5).

Results indicates significant mean differences across monthly income of caregivers on social support with F (4, 95) =.03, p<.05. Findings revealed that caregivers having less income have less social support as compared to caregivers having high income group. The value of η^2 is.15 indicate medium effect size. The post-hoc comparisons indicated significant between group mean differences of each group with other groups (1>2>3,>4>5).

Results indicates significant mean differences across monthly income of caregivers on wellbeing with F (4, 95) =.03, p<.05. Findings revealed that caregivers having less income have poor wellbeing as compared to caregivers having high income group. The value of η^2 is .15 indicatemedium effect size. The Post-Hoc comparisons indicated significant between group mean differences of each group with other groups (1>2>3,>4>5).

Discussion

The aim of the main study was to assess the caregiver burden, burnout, psychological distress, depression anxiety, and stress, sense of coherence, social support and wellbeing among caregivers of cerebral palsy children. It was also aimed to assess the relationship between the variables. The major goal of this phase was also the selection & allocation of caregivers for therapeutic interventions. After screening data from the main study, the random allocation was done. It was intended to give the participants of the data proper interventions, based on positive psychotherapy and counseling. For this purpose participants were divided into two groups, positivepsychotherapy treatment group & control group. The aim was to evaluate the effectiveness of positive psychotherapy on well being of the caregivers of cerebral palsy children.

Demographic details of the present study showed that the (table 10 & 11) caregivers included in the study were males (26%) and female (74%). The age of respondents varies from 25years to 55 years. In between 25-35 there were 47 participants and from 36 to 45 there were 47 (46%) participants whereas 7 participants were from 46 to 55 years old (7%). Caregiver’s relationship with child included father mother and other related caregivers (siblings, Uncle, Aunts).From the caregivers fathers were 19 (19%), mothers were 68 (68%) and others were 13 (13 %). Educational status of the caregivers were ranged as less educated to highly educated, 68% were less educated, and 32% were highly educated. Occupational status of the caregivers included, no occupation (House wives) were 64 (64%), labor Work/Pvt Job were 12 (12%), government servants were 21 (21%) Business based were 3 (3%). In marital status there were married 92 (92%)and alone were 8 (unmarried & widowed). In marriage type there were in family marriage (73%)out of family marriage (23%) and (4%) were not married. In family system there were joint family system (64%) and nuclear family system (36%). In no of children caregiver having 1-3 children were 53 (53%), having 4-6 children were 39 (39%)

, having 7-9 children were 4 (4%) and with no children there were 4 respondents (4%). No of disability status in family. Previous family history of disability is also part of demographics, as 64 respondents (64%) have no previous historyof disability and 36 % have family history of disability. Monthly income included from 20,000 to100,000. 39% respondents were having income status between 20,000 to 40,000. 27% respondentswere having income status between Rs. 41,000 to 60,000. 24% respondents were having income status between Rs.61,000 to 80,000. 6% respondents were having income status between Rs.81,000 to 100,000, and 4% respondents were having income status Rs.<100,000.

The above table 11 shows the frequency and percentage of demographic variable related to Cerebral Palsy child included in the study. The gender of the CP child included in the study were males (67%) and female (33%). The age of CP child varies from 2 years to 13 years Approx.From 2 years to 7 years there were 54 (53%) children, from 8 to 13 (46%) years. Birth order of the children included 1st to 9th, 28 (28%) children were 1st born 28 (28%) were 2nd born, 18 (18%) were 3rd born, 13 (18%) children were 4th born, 7 (7%) were fifth born, 4(4%) were 6th born and 2 (2%) were 9th born. Current functional status of the child with CP is the problem child is facingcurrently (assessed by physiotherapist, speech therapist and Psychologist). 83 (83%) of CP children were having physical, intellectual and Speech disability, 14 (14%) of CP children were having physical disability only, 3 (3%) of the respondents having Physical & speech disability only. Types of CP included in the study were spastic (70%), Athetoid (9%), paraplegic (8%), hemiplegic (7%) and Diplegic (4%).

Previous research based on the caregivers on cerebral palsy reported the following demographics. The average age of the children diagnosed with cerebral palsy (CP) was 8.5 years, with a standard deviation of 3.5. A total of 129 male students, accounting for 62.6% of the sample,were observed, while 77 female students, representing 37.4% of the sample, were also included inthe study. Furthermore, the study found that 77.2% of the children had spastic.

cerebral palsy (n = 159), whereas 13.6% displayed paraplegic cerebral palsy (n = 28), and 9.2% showed Athetoidcerebral palsy (n = 19). Furthermore, it is worth noting that a significant proportion of the moms, specifically 35.4%, 60.2%, and 4.4%, fell between the age ranges of 30-39 (n=73), 40-49 (n=124),and ≥50 (n=9) years old, respectively. Regarding the educational background, a significant proportion of the moms, specifically 77.2% (n = 159), had completed college. A smaller percentage, 20.9% (n = 43), had graduated from high school, while only 0.5% (n = 1) had completed middle school. Out of the total sample of mothers, 59 individuals, accounting for 28.6% of the group, were engaged in employment, while 154 individuals, constituting 69.9% of the group,were not employed (Park, 2023).

Table 12 indicate the Cronbach's alpha for caregiver burden (Caregiver Difficulties Scale), & its dimensions, PBA (Parental Burnout Assessment), Psychological distress DASS (Depression Anxiety, Stress Scales), Sense of Coherence (Orientation of Life Scale), Social Support (Multidimensional Scale of Perceived Social Support) and wellbeing based on Positive Psychotherapy Inventory (PPT). The results indicate satisfactory internal consistency for CDS, PBA, DASS-21, Sense of Coherence, Social Support and wellbeing. Reliability test in the SPSS, the reliability of each variable is >0.60 which is recommended in the social sciences.

Previous research on Caregiver Difficulties Scale on caregivers of CP children has reported the internal consistency of the whole scale was deemed satisfactory, as indicated by a Cronbach's α coefficient of 0.89. The internal consistency of Concern for the Child, Impact on Self, and Support for Caregiving was deemed satisfactory, as indicated by Cronbach's α coefficients of 0.823, 0.849, and 0.767, respectively. The internal consistency of Social and Economic Strain was found to be low, as indicated by a Cronbach's α coefficient of 0.69 (Park, 2021). In a Previous research on caregivers of cerebral Palsy children burnout was assessed by using Maslach Burnout Inventory (MBI) and its reliability is 0.86 on caregivers of CP children

(Vicentic, et al., 2013). Research reported that the value of Cronbach's α coefficient for the wholeanxiety and depression subscale is 0.81–0.89 (Gugal et al., 2019). Previous study aimed to evaluatethe factor structure of the Depression Anxiety and Stress Scale (DASS-21) among caregivers, andresult indicated that it is a valid measure to assess depression, anxiety, & stress (Murphy et al., 2023). In the previous research among the caregivers of cerebral Palsy children the Cronbach's alpha coefficient for the Sense of Coherence questionnaire was .82 (Farhadi et.al, 2022). Researchon Burden of caregiving, social support and quality of life of informal caregivers of patients withcerebral palsy showed that Multidimensional Scale of Perceived Social Support (MSPSS) is a reliable scale to measure social support among caregivers of CP (Ahanotu et al., 2018).

Table 13 shows that there is a correlation between caregiver burden (its sub scales), burnout, sense of coherence, social support, psychological distress (depression, anxiety & stress) and mental wellbeing among the scores of caregivers of cerebral palsy children. Table indicates that there is significant (**p<.01, *p<.05) correlation between scales and sub scales of the present study. Some variables are positively correlated and some are negatively correlated. There is a positive correlation of caregiver burden and burnout with psychological distress (depression, anxiety and stress) among caregivers of cerebral palsy children.

There is a negative correlation between with sense of coherence, social support & mental wellbeing among caregivers of cerebral palsy children. Caregiver burden is negatively correlated with the sense of coherence, which indicates that as the caregiver burden increase and sense of coherence decreases among caregivers of CP children. Caregiver burden is negatively correlated with the social support, which indicates that as the social support decreases, caregiver burden is increased among caregivers of CP children. In the present study it was analyzed that caregivers burden is positively correlated with burnout, depression, anxiety & stress among caregivers of cerebral palsy children. In the present study it was analyzed that burnout is negatively correlated with the sense of coherence, social support & mental wellbeing. In the present study, it is evaluatedthat psychological distress is negatively correlated with the sense of coherence, social support & mental wellbeing. In the present study it is investigated that depression & anxiety is negatively correlated with the sense of coherence, social support & mental wellbeing. In the present study, it was also studied that stress is negatively correlated with the sense of coherence, social support & mental wellbeing.

Previous research reported that burden of caregiving is positively related to psychological distress (depression & anxiety). The manifestation of mental diseases in caregivers is contingent upon the level of stress imposed upon them, and the presence of collaborative efforts serves to mitigate worry (Barutcu et al., 2021). In many previous studies, it was found that as a result of long-term care, caregiver burden can lead to severe depression, anxiety, a decrease in physical health, social isolation, and exhaustion (Sari, 2007).The findings of the previous study indicated that there is a positive relationship between caregiver burden and aspects of burnout.

The perception of burnout is found to be negatively linked with social support. Based on these results, interventions for familial caregivers should focus on enhancing social support and providing education on effective regulation of emotional empathy in order to reduce caregiver burden and burnout (Khalaila, 2022). In the present study it was analyzed that burnout is positivelycorrelated with depression, anxiety & stress among caregivers of cerebral Palsy children. Previousresearch reported that among caregivers, the participant who scored higher on burnout, also scoredhigher on anxiety and depression. It suggested that both are positively correlated with each other(Vicentic, 2016).

In the present study (table 13) it was analyzed that caregiver burden is negatively correlated with thesocial support, There was a substantial correlation between caregiver burden and social support,it was found that higher levels of spousal support were associated with decreased caregiver burden.The act of seeking social assistance has been found to mitigate the heightened burden that is often linked with more pronounced functional limitations (Wijesinghe, et.al, 2015). Previous research reported that caregiving burden was negatively associated with parent's social support (Carona etal., 2013).

Caregiver burden is negatively correlated with the sense of coherence, which indicates thatas the caregiver burden increase sense of coherence decreases among caregivers of CP children (table 13). Findings of the previous research reported that revealed that caregivers with intellectuallydisabled children reported more caregiver burden, and lower sense of coherence (Krenawi et al., 2011).

In the present study (table 13) it was analyzed that burnout is negatively correlated with the sense ofcoherence & wellbeing among caregivers of CP children. Previous research on nurses as a caregivers has depicted that there is a significant correlation between the various dimentions of burnout and sense of coherence, suggesting that SOC serves as a protective factor against the development of burnout. Conversely, the presence of perceived social support and access to resources serves as a safeguard, however the decline in mental and physical well-being remains the most significant risk factor (Navarro Prados et al., 2022).

In the current study, (table 13) it was determined that among carers of children with cerebral palsy, depression is adversely connected with sense of coherence, social support, and wellbeing. According to earlier studies, depression was the primary predictor of poor sense of coherence sincedepression is associated with a low sense of coherence (Välimäki et al., 2009). Anxiety was foundto have a negative correlation with sense of coherence (Henje et.al, 2010). Anxiety was found to have a negative correlation with social support (Davaridolatabadi et.al, 2016).

In the present study it was analyzed that stress is negatively correlated with the sense of coherence, Social Support & wellbeing (table 13). Previous research reported that sense of coherence and social support are linked take part in reducing stress in caregivers of hearing impaired children (Hintermair, 2004). Individuals who provide care for others and experience elevated levels of anxiety and despair are more inclined to report diminished levels of sense of coherence. The association between caregiving-related stress and depressive symptoms are influenced by the self- perceived sense of coherence among caregivers (Orgeta & Sterzo, 2013).

The major aim of the present research was to explore the effectiveness of positive psychotherapy on caregivers of cerebral palsy children. Positive psychotherapy manual & worksheet was translated into urdu by the researcher for the present study. Positive psychotherapywas used on caregivers of cerebral palsy children at rehabilitation unit of NIRM. Only those caregivers were selected having high scores on burnout, caregiver burden and psychological distress,depression, anxiety, stress & low scores on sense of coherence, social support & wellbeing. Caregivers of CP children are divided into two groups one is treatment group (positive psychotherapy) & other is control group. Participants are divided through randomization into two groups. Each group has 10 participants. Due to long lasting care of the disabled child caregiver's experience psychological issues. While caregiving of a child with chronic disability and long-termdependency entails enormous stress for both caregivers and their families, raising children is a crucial responsibility and hectic work for caregivers (Mori et al.,2017). Parents of children with cerebral palsy may experience financial hardship due to the high cost medical & rehabilitation care(Bareeto et al., 2020). A caregiver's quality of life may be significantly impacted by the on-goingprovision of excessive care, which can lead to depression and burdened (Albayrak et al., 2019).Caregivers of CP's were more likely to feel burdened than caregivers of normal kids, according to studies by Tugul (Corona et al., 2013)) and Turkey (Albayrak et.al, 2019). A multitude of factors may influence the burden experienced by parents of CP's within the framework of the stress process model. Previous research reported that it is important to lessen thestress of parents of children with cerebral palsy (Zhong et al., 2023). Thus, providing positive psychotherapy-based therapy to caregivers of children with cerebral palsy was the goal of the current study. Previous research based on fifty Bengali parents were given caregivers based therapeutic program. Every participant expressed satisfaction with the therapeutic interaction programs' efficacy; on average, 80% of parents preferred and rated this program as especially successful (Palit, & Chatterjee, 2006).

Stress and depression symptoms decreased in parents who received the combined Stepping Stones Triple P (SSTP) therapy and acceptance & commitment therapy (ACT) treatments. Parentalworry, parental confidence, or the degree to which parents found their parenting duties difficult were unaffected. This is a significant finding because parents of CP's are more likely to experience stress (Parkes et al., 2011) and depression (Barlow et al., 2006; Lach et al., 2009). Moreover, it aligns with previous studies that show how ACT helps parents of children with autism, as shown by Blackledge & Hayes (2006) and Brown et al. (2015).Study showed how well SSTP and ACT,two parenting interventions, work to improve both parental adjustment and children's functional performance and quality of life (Whittingham et al., 2016).

Present research indicated that in PPT treatment/ intervention group the score of caregiverburden, burnout and psychological distress & depression, anxiety & stress decrease as compared to control group and sense of coherence, social support and mental wellbeing increased **(table 18).** The present research indicates that there is a significant difference between control group intervention and PPT treatment group interventions among caregivers of CP children. Positive psychotherapy treatment group show more effective results as compared to control group. In a previous research, a manual based intervention termed well-focus PPT a 14-session standard PPTmodified using an evidence-based theoretical framework was created with the goal of enhancing the well-being of individuals suffering from psychosis.

Results demonstrated good results of positive psychotherapy (Riches et al., 2016). Previous research reported that the wellbeing & quality of life of caregiver is affected when they provide care for a child with a long-term physicalhandicap or health condition, thus it's critical to recognize and assess the efficacy of interventionsaimed at enhancing caregivers' well-being. This is crucial since there is currently a growing demand to enhance caregivers' mental health in addition to children with disabilities' quality of lifeand functional results (Dambi et al., 2016).

The delivery of rehabilitation services has undergone a paradigm shift in recent decades, with the family-centered approach emerging as the "gold standard" model of treatment delivery (Kuo et al., 2012). Along with addressing the functional needs of kids with CP, there is also a greater focus on offering support services for caregiver (Byrne, 2010). In order to attain the best possible rehabilitation results, the caregiver must adhere to appointment schedules and follow directions on how to facilitate better functioning by quickly putting the recommended home exercise program into practice (Jack et al., 2010).

According to recent research, caregivers' mental health significantly improves when PPT therapy is used to treat their psychological issues. The results of this study demonstrate that the post-PPT treatment group's scores on the Parental Burnout Scale (PBA), the Caregivers DifficultyScale (CDS), and the Caregivers Difficulty Scale were higher than those of the pre-PPT treatmentgroup. Depression, and Anxiety & Stress Scale (DASS), depression, anxiety & stress decreased and scores of (OLS) sense of coherence, (MSPSS) social support and (PPTI) wellbeing increased.The effects of CP caregiver' pre PPT treatment group and post-PPT treatment group therapies on CDS, PBA, DASS, and depression, anxiety & stress are noteworthy. This number shows that among caregivers of CP's, there is a substantial difference between the pre-PPT treatment group intervention and the post treatment group interventions **(table 19).** Furthermore, it has been shownthrough previous research that participation in support groups reduces parental stress and improvespsychological well-being in areas including hope, happiness, and self-esteem for Hong kong parents of CP's. To investigate the effectiveness of a mutual support group that emphasizes strengths in lowering stress and improving the psychological health of parents of CP's a study wasconducted recruited 12 primary caregivers of CP's in Hong Kong for this pre- and post- intervention outcome research.

A guidebook for strength-focused support groups was created to assist caregivers in recognizing and nurturing their children's character qualities while also boosting their own positive feelings. Participants showed noticeably reduced levels of parental stress and elevated levels of hope. When the group was still going strong, their perception of socialsupport was much higher, but not after it ceased. In summary, this group intervention approach was considered to be effective to assist caregivers in lowering their stress levels as parents and increasing their optimism. Introducing a curriculum such to this one with additional sessions and frequent follow-up meetings could aid in sustaining beneficial outcomes and creating a network of social support (Fung et al., 2011).

Present research reported that to address the caregiver's psychological issues through individual counseling, have a great impact on their wellbeing (control group). The result of the present study **(table20)** shows that in post control group the score of Caregiver Difficulty scale (CDS), Parental Burnout Scale (PBA), DASS (Depression Anxiety & Stress Scale), DASS (Psychological distress)and depression, anxiety & stress decrease as compared to pre control group. The control group interventions and post control group interventions on caregivers of CP on CDS, PBA, DASS& depression, anxiety, stress show significance difference. The values indicates that there is a significant difference between pre control group intervention and post control group interventionsamong caregivers of CP children. Previous research reported that in order to ascertain the effect offamily behavioral therapies, such as acceptance and commitment therapy, on the wellbeing of caregivers. Brown et al., 2015 conducted a randomized controlled study (RCT) in Australia. The findings suggested that family behavioral treatments such as Acceptance & commitment therapy (ACT) could enhance the psychological well-being, self-efficacy, confidence, and family adjustment of caregivers.

According to the current study's model I, feeling of coherence has a major mediating role in the association between psychological distress and burnout (table 21). As seen in model IIIabove, feeling of coherence serves as a partial mediating factor in the link between burnout and wellbeing **(table 23).** Previous studies have documented that the association between depression and sense of coherence might be partially explained by burnout, according to mediation analysis. Between depression and burnout, the perception of coherence served as a detrimental mediator (Pachi et al.,2022). Higher level of sense of coherence was associated with less psychological distress (Padmanabhanunni, 2022). Sense of coherence mediates psychological outcomes while simultaneously promoting mental health (Shankland et al., 2019). Research reported that there is significant associations between the sense of coherence, wellbeing and burnout levels. Research indicated sense of coherence and burnout as significant predictors of the wellbeing (Harry, & Coetzee, 2011).

According to the current study's model II, social support has a major mediating role in theassociation between psychological distress and burnout **(table 22).** Model of the current investigation showeda strong positive correlation between psychological distress and burnout. This suggests that thereis a small, but not statistically significant, social support component to the association between psychological distress and burnout. According to earlier studies, those who experience more socialsupport in stressful situations tend to exhibit better psychological well-being than people who experience less social support. According to earlier studies, low psychological well-being can be influenced by burnout through the mediation effect of inadequate social support (Rehman et al., 2020). According to the model IV research findings, social support has a substantial mediating role in the relationship between burnout and wellbeing. Psychological wellness and burnout are significantly correlated (Shin et al., 2014). There was a bad correlation between psychological health and burnout. According to Koniarek et al. (1996), social support can help to mitigate burnoutand facilitate the acquisition of support from diverse social networks, ultimately leading to enhanced psychological well-being. According to earlier studies, social support from friends and family can raise wellbeing and lower the risk of burnout (Gradeski et al., 2020). High levels of social support also correspond to high levels of wellbeing (Afonso et al., 2014).

In the table 25 it is analyzed gender differences are significant on caregiver burden, psychological distress (depression, anxiety & stress) variable (p<.05). Results revealed that there is significant gender difference is found on caregiver burden, (p<.05) on caregiver's burden femalecaregivers scored high (M=86.23, SD=12.20) which indicate that females are more burdened as compared to male caregivers.

Previous research reported that parents, particularly mothers who have children with cerebral palsy (CP), may experience negative effects and exhibit elevated levels of burden (Basaran, et.al, 2013). The responsibility of caregiving has been demonstrated to result in a diminished quality of life among parental individuals. Children diagnosed with cerebral palsy (CP)have been studied extensively in previous research (Glinac et al., 2017). In the prvious study, when comparing mothers the caregiver burden shown a considerable increase on caregiver burden scaleas compared to normal children's mother (Kaydok et al., 2020).

The findings show that female caregivers of children with cerebral palsy experience higher levels of psychological anguish than do male caregivers. The findings show that female caregivers of children with cerebral palsy experience higher levels of depression than male caregivers. The findings show that female caregivers of children with cerebral palsy have higher levels of worry than male caregivers. The findings show that female caregivers of children with cerebral palsy experience higher levels of stress than male caregivers.

Table 25 of the present study indicates significant mean differences across categories of caregivers on psychological distress. Findings revealed that from caregivers specifically females of cerebral palsy children are more psychologically distressed as compared to fathers and other caregivers of CP children. Results show significant mean differences across categories of caregivers on depression. Findings revealed that from caregivers specifically mothers of cerebral palsy children are more depressed as compared to fathers and other caregivers of CP children. Results indicates significant mean differences across categories of caregivers on anxiety. Findingsrevealed that from caregivers specifically mothers of Cerebral palsy children are more anxious ascompared to fathers and other caregivers of CP children. Results indicates significant mean differences across categories of caregivers on stress. Findings revealed that from caregivers specifically mothers of cerebral palsy children are more psychologically stressed as compared to fathers and other caregivers of CP children. Results indicates significant mean differences across categories of caregivers on wellbeing. Findings revealed that from caregivers specifically femalescaregivers of cerebral palsy children having lower mental well being as compared to male caregivers.

According to a study conducted by Sawyer et al. (2011) a significant proportion of womenwith children diagnosed with cerebral palsy (CP) experienced depression. Furthermore, the studyfound that this depression had a detrimental impact on the health-related quality of life of these mothers.

The presence of a disability in a child, which is a fundamental element within a family, canhave a profound impact on other family members and may generate significant levels of worry. The continuous responsibility of caring for a disabled kid throughout the day and over an extendedperiod of time has been found to have a detrimental impact on the physical and psychosocial well-being of family members (Erdoganoglu et al., 2007). Due to the cultural influences in Turkey, it is predominantly the mothers who assume the primary responsibility for caring for impaired children, hence necessitating their sustained engagement with the unique issues associated with the condition. Hence, it is posited that the well-being of mothers is significantly compromised in terms of both their physical and emotional health. In previous research, it was found that, the quality of life of mothers with children who have cerebral palsy is significantly impaired, particularly in terms of their mental well-being. Additionally, it was observed that high levels of depression had a detrimental impact on the quality of life of CP's mothers (Yilmaz et al., 2013). The results of the study suggest that there is a correlation between having a child with cerebral palsy and increased levels of depression and anxiety in mothers as compared to those with typicallydeveloping children. Furthermore, it was found that the severity of speech abnormalities and functional disability in children with CP is connected with the higher levels of sadness and anxietyexperienced by their mothers (Yilmaz et al., 2013). Research reported that mothers are more psychologically distressed as compared to others (Barlow, et.al, 2006). Most caregivers are mothers, who provide the majority of care. A greater number of psychological problems, such as anxiety, sadness, and distress in them, are predicted by long-term care of children with CP and limited social activities for the mother caregiver (Barreto et al., 2020).

According to present study in table 26 it was reported that less educated caregivers of CP are more burdened as compared to highly educated caregivers. There is significant education baseddifference is found on caregiver burden, concern for the child (CfC), Impact on Self (IoS), and Social & Economical Strains (SeS). There is significant difference is found on OLS (Sense of Coherence) ($p<.05$) among less educated and highly educated caregivers of cerebral palsy children.It indicated that highly educated caregivers have better sense of coherence as compared to less educated caregivers of CP children

Previous research reported that among caregiver related characteristics, caregiver burden was higher in individuals who were females and had less education (Kim et.al, 2009).

Previous study analyses that the burden was greater for caregivers with less education. It's possible that caregivers with higher levels of education are more capable of handling a variety of living circumstances, are better able to handle difficulties, and have access to social support, all of whichcan lessen their perceived burden (Adib-Hajbaghery & Ahmadi, 2019).

There are non-significant difference is found on burnout (PBA scale) among caregivers ofCP children but from mean difference results indicated that female caregivers are more burnout ascompared to male caregivers of cerebral palsy children. There is a non-significant difference is found on psychological distress, social support and wellbeing variables which indicates that no difference is found but from mean differences it is indicated that male having better well being, social support as compared to female caregivers of Cerebral palsy children. Previous research reported that parents of children with cerebral palsy, in comparison to parents of typically developing children, reported a decreased degree of sense of coherence (SOC) and experienced challenges in terms of manageability and meaningfulness (Dabrowska, 2007).

Previous study reveals that family caregivers faced challenges in accessing comprehensiveassistance and support from a broader spectrum of family members and society. Additional Chinese family caregivers also discussed the delicate equilibrium between their caregiving obligations and personal autonomy. This issue appears to be widespread, as previous research hassimilarly shown the challenges experienced by caregivers due to their heightened workload and significant obligations (Boztepe et al., 2019).

According to the present research table 27 indicated the t-values for comparing family system based differences (nuclear family system & joint family system) on caregiver burden and its dimensions(concern for the child , impact on self, support for caregiver, social & economic strains,), burnout, psychological distress depression, anxiety & stress, sense of coherence, social support and wellbeing among caregivers of cerebral palsy children. There is a non-significant difference is found on caregiver burden & (dimensions), parental burnout, psychological distress, depression, & anxiety scales among caregivers from joint and nuclear family system. There is anon-significant difference is found on sense of coherence, social support and wellbeing variables.Result of the present study showed significant difference between male & female CP children on Social & Economic Strains variable among caregivers of CP children. It revealed thathaving a disable male child have an impact on caregiver's social & economic strains. Having adisabled male child may effect caregiver's burden economically as being male child there are manyexpectation are attached with the future of the male child in Pakistan. Previous research reportedthat the most significant predictors of caregiver burden were severity of CP, level of caregiver'seducation, and male child. While the most significant predictors of stress were severity of CP,level of education, and stress. Stress and burden on caregivers are known to have harmful effects(Omole et al., 2019). There was a substantial correlation observed between caregiver burden andmany factors, including poor income, male sex, and the amount of functional deficits exhibited bythe challenged child. Additionally, it was found that higher levels of spousal support wereassociated with decreased caregiver burden. The act of actively seeking social assistance has beenfound to mitigate the heightened load that is often experienced in conjunction with more pronounced functional deficits. (Wijesinghe et al., 2015).

According to table 28 the present study result indicated that there is a significant differenceof burnout among caregivers who have children of CP having ages between 2 to 7 years. It revealedthat caregivers having younger (age ranges 2-7years) CP children have more burnout as comparedto elder one (age 8 to 13 years). Results revealed that parents of younger CP children are more psychologically distressed as compared to parents having elder children . There is a significant difference of on anxiety variable, which revealed that care givers of younger CP children having more anxiety as compared to care givers of elder CP children.

Previous research reported that the caregiver burden was found to be positively associated with higher disability-related expenditures, younger age of both the child and the mother, and better educational attainment of mothers (Oh & Lee, 2009).

Furthermore, a lack of substantial link was observed between the age of children with cerebral palsy (CP) and the stress experienced by their caregivers. Moreover, the gender of children diagnosed with cerebral palsy (CP) may have an impact on the level of burden experienced by caregivers. The responsibility associated with caring for male children tends to be more substantial as compared to that of female children, potentially due to the increased mobility typically observedamong male children (Jackman et al., 2022). Therefore, although caregiving is a typical aspect ofparenthood for any young CP child, the provision of extensive care for a child with enduring functional limitations can become onerous and potentially have adverse effects on the caregiver'sphysical and psychological well-being (Raina et al., 2004).

Present study result’s showed that caregiver’s having already history of disability are moreburdened as compared to caregiver’s having no history of disability previously. Results show thereis significant difference is found on caregiver burden variable among caregivers of CP having family history of disability as compared to caregivers having no family history of disability, it indicates that caregiver’s having already history of disability are more burdened as compared to caregiver’s having no history of disability previously. Previous research reported that prior historyof cerebral palsy in family and having more then one CP child in family is also linked with caregiver burden in mothers of CP children (Barutcu et al., 2021).

Results of the present study revealed that significant mean differences was found across categories of caregivers on psychological distress. Findings revealed that from caregivers specifically mothers of cerebral palsy children are more psychologically distressed as compared to fathers and other caregivers of CP children. Results indicates significant mean differences acrosscategories of caregivers on depression, anxiety & stress (table 31). It was reported in research thatthe mothers of children with CP are more psychologically distressed than mothers of normal children (Begum & Desai, 2010). Previous research reported that having a CP child increases therisk of developing depression in mothers as much as 2.26 times (Sajedi et al., 2010). It was also reported previously that mothers of children are more anxious and depressed (Kim, et al., 2001). Results indicates significant mean differences across categories of caregivers on social support. Findings revealed that from caregivers specifically mothers of cerebral palsy children having lesssocial support as compared to fathers and other caregivers of CP children. Results indicates significant mean differences across categories of caregivers on wellbeing. Findings revealed that from caregivers specifically mothers of cerebral palsy children having lower wellbeing as compared to fathers and other caregivers of CP children. Previous research reported that the psycho-social experiences of mothers of children with CP was discovered on the basis of multiplekey elements. These are burden of care, a lack of social support and the impact of CP children onmothers and poor mental wellbeing(Seroke, Sipho & Mkhize, 2023).

Findings of the present study revealed that caregivers having no working status are more stressed as compared to caregivers having some job or working status. Extensive caregiving demands had adverse effects on caregivers. Women having disabled children reported mental health issues. For females, no occupation and caring the child at home all the time, effected their mental health. Among men, those not working were at highest risk of adverse mental health effects(Kim et al., 2023).

Present findings revealed that caregivers having 7 to 9 children with one CP child are moreburdened and psychologically distressed as compared to caregivers having less children. Previous research illustrates that there is a significant difference is found in the mean burden score betweencaregivers with low income status and those with four or more children. Growing a family, providing for the needs of other children, and caring for a sick child are all linked to a higher perceived burden, maybe as a result of the added obligations and financial worries (Adib- Hajbaghery & Ahmadi, 2019). It was reported previously that caregivers neglect other family members, specially other children due to long lasting hectic caregiving responsibilities. Providingbalanced attention to non-CP children becomes difficult for caregivers. (Kurtuncu et al., 2015).

The findings of this study showed that caregivers of children with spastic cerebral palsy are more burdened than those of children with Athetoid, Diplegic, hemiplegic, or paraplegic CP's.Results revealed that, in comparison to caregivers of other CP types, caregivers of children withspastic CP had lower levels of social support. Previous research reported that caregivers hadstopped attending social events like cooking parties and other get-togethers due to social shame.They added that on sometimes, they declined the invitation because they felt uneasy leaving thedisabled child with someone who they didn't believe would provide the same level of care as theywould. According to the interpretation, the parent or caregiver experienced a load in terms ofsocial, mental, physical, and financial issues (Chiloba & Moya, 2017). Quality of life of the spasticCP and quadriplegic CP children is connected with the mother's burden. Caregivers havingspastic CP children with quadriplegia are more burdened. Burden in mothers is very high in thequadriplegia (Spastic CP) group, as compared to diplegic and the hemiplegic (Ozkan et al., 2018).Findings revealed that caregivers having CP children with Physical/Intellectual/Speech disability are more burdened as compared to caregivers of children having physical/intellectualdisability & physical disability only. Findings revealed that caregivers having CP children with alltype of Physical/Intellectual/Speech related problems are more concerned towards their child's disability as compared to caregivers of children having physical/intellectual disability & physicaldisability only. Findings revealed that caregivers having CP caregivers of children with Physical/Intellectual/Speech disability have more impact on their self-health as compared to caregivers of children having physical/intellectual disability & physical disability only.

Findings revealed that caregivers having CP children with Physical/Intellectual/Speech disability have poor well being as compared to caregivers of children having physical/intellectualdisability & physical disability only. Research reported that the level of assistance necessary to meet the biological and psycho social needs of the CP child is contingent upon the degree of disability and the constraints experienced by the child in their day-to-day activities. In the course of their daily routine, an individual tasked with the care of a child diagnosed with cerebral palsy (CP) must navigate the challenges posed by the child's motor and sensory impairments. Furthermore, this caregiver is also responsible for facilitating the execution of a diverse array of essential medical interventions and rehabilitation measures (physiotherapy & speech therapy). Parents encounter several hurdles when it comes to effectively managing their child's health issuesand meeting the prescribed standards of care. These all issues lead the caregivers towards psychological issues (Basińska et al., 2014).

Previous findings suggested that there exists a positive correlation between a child's morepronounced intellectual handicap and an increased probability of anxiety in the parent (Gugala etal. 2019). Parkes et al. (2011) have demonstrated a robust correlation between parental stress andintellectual impairment. According to current studies, there appears to be a significant associationbetween children with cerebral palsy's functional level and depression. A study found that the degree of functional limitation in children and the caregivers' depression were positively correlated. A child's quality of life is significantly impacted by their functional level when they have cerebral palsy.

Conclusion

According to the results of the current study, caregiver burden, burnout and psychologicaldistress (depression, Anxiety stress) is positively correlated with each other's. Whereas Caregiverburden, burnout and psychological distress (depression anxiety & stress) is negatively correlated with sense of coherence, social support & wellbeing. In addition to the stress of caring for others,the study's findings suggest that a variety of other factors, gender specially mothers (females), educational status of the caregivers, low income, the kind and quantity of support caregivers receive, the number of children they have, the severity of the children's conditions, and the currentstatus of child, may also have an impact on how much of a burden & psychologically distressed the caregivers feel. The current study set out to investigate the efficacy of positive psychotherapyfor caregivers of children with cerebral palsy. Caregivers with moderate to high burnout, caregiver burden, and depression scores were assessed. Two groups of caregivers of CP, one for PPT treatment and the other for control group were created. Urdu translated Positive psychotherapy manual was provided to caregivers of children with cerebral palsy. 15 positive psychotherapy based sessions were given to treatment group and 15 counseling sessions were given to control group Study results reported that there is difference between control group and positive psychotherapy treatment group. Positive Psychotherapy group show better results as compared tocontrol group.

Implications

The study conclusion should be taken into account by clinical psychologists who work withfamilies of CP children who have long-term medical & psychological issues. The results could help to identify the elements of caregiver’s rehabilitation based intervention programs and how it affect the psychological issues of caregivers. Based on current research, psychologists ought tobe concerned about the mental well-being of caregivers and offer therapeutic caregivers engagement therapy to help to alleviate the psychological issues and despair brought on by managing the child's illness. Our results imply that rehab professionals should discover ways to improve the children's self-management and transition skills, as this may lessen the mental healthissues among families with disabilities, even though further research is required to give a more complete picture.

Over all discussion of the study

The caregivers difficulties scale (CDS) was translated, validated, and adjusted for Urdulanguage use in the first part of this study. The main reason for choosing this tool was that it was designed exclusively with CP caregivers in mind. According to earlier studies, the caregivers Difficulties Scale (CDS) is a viable and reliable tool for assessing the caregivers load that parentsof children with cerebral palsy in Sri Lanka suffer (Wijesinghe, Fonseka, & Hewage, 2013). The translation into Urdu language was undertaken with the aim of making the instrument comprehensible for caregivers of the cerebral palsy population. The process of scale translation encompassed many steps. Firstly, bilingual experts conducted a forward translation, followed by a committee method to ensure accuracy and consensus. Subsequently, a separate group of bilingual experts, distinct from those engaged in the initial forward translation, performed a backward translation. Finally, the same experts who conducted the forward translation employed a committee approach to review and refine the backward translation. The implementation of paralleltranslation methods necessitated the involvement of many multilingual specialists who separatelytranslated the identical questionnaire. The final stage of the study involved convening a consensusmeeting to determine the most optimal reconciled version of the translated scale, with the aim of achieving the objectives of the present study (Brislin, 1986). The urdu version of the scale showedgood reliability and validity. CDA is purely developed for caregivers of CP, previously for it was reported that Zarit Burden Invntory was used to assess CP's caregiver burden in Pakaistan (Kiani et al., 2021).

The next study of the present research was to translate and adapt the positive psychotherapy manual & work sheets for the caregivers of cerebral palsy children. Translation wasdone in steps. Manual was transtlated adapted and validated by keeping in mind the models of Brislin, 1980, Hambilton, et al., 2005 & Barrera & Castro 2006). In Pakistan previously very limited work was done on translation, adaptation and validation of interventional manuals.Cognitive Behavioral therapy was translated and adapted in Pakistan (Gerada et al., 2016). Translation and adaptation of Coping CAT program in Pakistan for children (Khan, et al., 2020).Recently culturally adapted psychoeducation (CaPE) intervention for bipolar disorder was done in Pakistan (Hussnain et al ., 2017).

The third study of the research was to assess the caregiver burden, burnout, psychological distress, depression anxiety, and stress, sense of coherence, social support and wellbeing among caregivers of cerebral palsy children. It was also aimed to assess the relationshipbetween the variables. The results indicate satisfactory internal consistency for CDS (caregiver burden), PBA (burnout), DASS-21(psychological distress), OLS(sense of coherence), MSPSS (social support) and PPTI (mental wellbeing). Reliability of each variable is >0.60 which is recommended in the social sciences. Present research reported that there is a correlation between total of CDS, PBA, DASS, OLS, MPSSS and PPTI and its sub scales among the scores of caregivers of cerebral palsy children. Caregiver burden is negatively correlated with the social support, which indicates that as the social support increased caregiver burden is decreased amongcaregivers of CP children. Caregiver burden is negatively correlated with the sense of coherence, which indicates that as the caregiver burden increased sense of coherence decreased among caregivers of CP children. In the present study it was analyzed that caregivers burden is positivelycorrelated with burnout, depression, anxiety & stress among caregivers of cerebral Palsy children. In the present study it was analyzed that burnout is negatively correlated with the sense of coherence, social Support & wellbeing. In the present study it is evaluated that depression is negatively correlated with the sense of coherence, social support & mental wellbeing. In the present study it is investigated that anxiety is negatively correlated with the sense of coherence, social support & wellbeing. In the present study it was also studied that stress is negatively correlated with the sense of coherence, social support & mental wellbeing.

In the present study it was analyzed that caregiver burden is negatively correlated with thesocial support, There was a substantial correlation between caregiver burden and social support, it is found that higher levels of spousal support were associated with decreased caregiver burden.In the present study it was analyzed that burnout is negatively correlated with the sense of coherence & wellbeing among caregivers of cerebral palsy children. Depression is negatively correlated with the sense of coherence, social support & wellbeing among caregivers of cerebral palsy children.

In the present study it was analyzed that anxiety & stress is negatively correlated with thesense of coherence, social support & wellbeing. Gender differences are significant on caregiver burden, psychological distress, depression, anxiety & stress variable. Results revealed that there is significant gender difference is found on CDS, on caregiver's burden female caregivers scoredhigh which indicate that females are more burdened as compared to male caregivers. Results specify that female caregivers are more psychologically distressed as compared to male caregiversof cerebral palsy children. Results show that female caregivers are more depressed as compared tomale caregivers of cerebral palsy children. Results indicate that female caregivers have more anxiety as compared to male caregivers of cerebral Palsy children. Results indicate that femalecaregivers are more stressed as compared to male caregivers of cerebral Palsy children.

The present study signifies significant mean differences across categories of caregivers onpsychological distress. Findings revealed that from caregivers specifically mothers of cerebralpalsy children are more psychologically distressed as compared to fathers and other caregivers ofCP children. Results show significant mean differences across categories of caregivers ondepression. Findings revealed that from caregivers specifically mothers of cerebral palsy childrenare more depressed as compared to fathers and other caregivers of CP children. Results showssignificant mean differences across categories of caregivers on anxiety. Outcomes revealed that from caregivers specifically mothers of cerebral palsy children are more anxious as compared tofathers and other caregivers of CP children. Findings indicated significant mean differences across categories of caregivers on stress. Findings revealed that from caregivers specifically mothers of cerebral palsy children are more psychologically stressed as compared to fathers and other caregivers of CP children. Outcomes indicates significant mean differences across categories ofcaregivers on wellbeing. Findings revealed that from caregivers specifically mothers of cerebralpalsy children having lower wellbeing as compared to fathers and other caregivers of CP children.Present research reported that less educated caregivers of CP are more burdened as compared to highly educated caregivers. There is significant education based difference is foundon concern for the child , impact on self , and social & economical strains. There is significantdifference is found on sense of coherence among less educated and highly educated caregivers ofcerebral palsy children. It indicated that highly educated caregivers have better sense of coherence as compared to less educated caregivers of CP children.

Result of the present study showed significant difference between male & female CP Children on social & economic strains variable among caregivers of CP children. It revealed that having a disable male child have an impact on caregiver’s social & economic strains. Having a disabled male child may effect caregiver’s burden economically as being male child there are manyexpectations are attached with the future of the male child in Pakistan.

The results of this study showed that caregivers of children with spastic cerebral palsy aremore burdened than those of children with athetoid, diplegic, hemiplegic, or paraplegic cerebral palsy. Results showed that, in comparison to caregivers of other CP types, caregivers of children with spastic CP had lower levels of social support.

Findings revealed that caregivers having CP children with physical, intellectual, speechdisability are more burdened as compared to caregivers of children having physical, intellectualdisability & physical disability only. Findings revealed that caregivers having CP children with alltype of physical, intellectual,speech related problems are more concerned towards their child’s disability as compared to caregivers of children having physical, intellectual disability & physicaldisability only. Findings revealed that caregivers having CP children with all three type ofphysical, intellectual & speech disability having more impact on their self-health as compared tocaregivers of children having problem in physical & intellectual only or physical disability only. Findings revealed that caregivers having CP children with Physical/Intellectual/Speech disabilityhave poor wellbeing as compared to caregivers of children having physical/intellectual disability& physical disability only.

Results shown that caregivers having low income having higher caregiver burden as compared to caregivers having high income group. Findings revealed that caregivers having low income having poor self-care as compared to caregivers having high income group. Caregivers having less income are psychologically distressed as compared to caregivers having high income group. Outcomes revealed that caregivers having less income having high depression wellbeing ascompared to caregivers having high income group. Results indicated that caregivers having low income are more anxious as compared to caregivers having high income group same as it is signified that caregivers having low income are more stressed as compared to caregivers having high income group.

The major goal of the present study was to give therapeutic interventions to the caregiversof cerebral palsy children. Positive psychotherapy was selected as a therapeutic tool in the presentstudy. Positive psychotherapy is provided to caregivers of children with cerebral palsy. Caregivershaving high scores on burnout, caregiver burden, and psychological distress (depression, anxiety & stress) and low scores on social support, sense of coherence and mental wellbeing, were randomly divided into two groups PPT treatment group and the other was control group. Study results reported that there is a difference between counseling group and

PPT intervention/treatment group. Positive psychotherapy group show better results as compared to counseling group. The findings indicated that the positive psychotherapy applied had positive effects on caregivers of CP children. Children with cerebral palsy frequently require acute medical treatment and hospital stays, and their physical, speech, and cognitive impairments have been linked to mental health issues, according to their caregivers. All these type of concerns play a vital role in the life of caregivers. They also need some type of psycho-social rehabilitation to address many concerns oftheir life. In this research it is concluded that positive psychotherapy is effective for caregivers ofcerebral palsy children to manage their psychological issues.

Conclusion

It was concluded that long lasting caregiving leads to psychological issues in caregivers andthere is a need to design individualized rehabilitation interventions to decrease the caregiverburden, burnout, psychological distress and to enhance the mental wellbeing and sense ofcoherence of caregivers as it may ultimately affect the child's functional prognosis and healthoutcomes. Taking care of a kid who has cerebral palsy can be emotionally and physically taxing,as well as challenging and demanding. It is challenging for carers who face stigma anddiscrimination from society to alter their lifestyles in order to meet the needs of the child. Theyquit their employment, hobbies, social events, and numerous other self-related daily activities,which makes them depressed, hopeless, and gives up on their own aspirations for the future. It iscrucial to create innovative coping mechanisms to deal with these difficult problems and give carers the assistance they need. It facilitates the carers' ability to contribute effectively to society. The current study set out to investigate the efficacy of positive psychotherapy for caregivers of children with cerebral palsy. The researcher translated the worksheet and handbookfor positive psychotherapy into urdu for this study. Positive psychotherapy is provided tocaregivers of children with cerebral palsy. Positive psychotherapy group show better results ascompared to counseling group. It was concluded that positive psychotherapy is effective for mentalwellbeing of caregivers of cerebral palsy children. Study results reported positive psychotherapy group exhibited superior outcomes in comparison to the counselling group. It was determined that positive psychotherapy is useful for enhancing the mental health of parents of children withcerebral palsy. Results indicated that the caregivers' mental health was improved through positive psychotherapy-based sessions.

Limitation and Suggestions

- The sample of the present study was limited. Caregivers of CP's visit the rehabilitation unit for all type of management of their children under one roof. They have to visit many departments with the child. So due to time issues there are limited sample and there were loss of follow up sessions. There are many drop off cases too in the present study. Cerebral palsy is a complex disability with multiple medical conditions that require intense medical care and attention, making it difficult for caregivers to participate in research studies. Most of the caregivers were unavailable on regular basis (sessions). Many caregivers were reluctant to participate in the present study due to their CP child's medical issues, such as hospitalization, surgeries and intense therapies.
- In the present study, only caregivers of cerebral palsy children were included so results cannot be generalized to caregivers of children with other disabilities. For further researches it can be done on the caregivers of other physical related disabilities with larger sample size.
- Some clients left the sessions due to time issues (session with the child), travelling issue (with CP child) who were further excluded from analysis in the present study. In future through funded projects & incentives can overcome this limitation.
- The sample was taken from those caregivers who are coming for rehabilitation. In future sample can be taken from caregivers who are not taking proper rehabilitation.
- The data was taken from the rehabilitation unit of NIRM; future researchers can collect data from all physical special education centers or other child rehabilitation units of Pakistan for generalizing the findings.

Implications

- Caregiver Difficulties Scale was purely developed for Caregivers of Cerebral palsy children, so from the translated Caregiver Difficulties Scale in future it can be used for caregivers of Cerebral palsy children in Rehabilitation Units.
- Successful interventions could become part of the standard care practices for families of individuals with cerebral palsy, ensuring that caregiver support is recognized as a critical component of holistic care. Positive psychotherapy can focus on empowering individuals to take control on their lives and developing self-efficacy. It is a holistic approach and evidence based practice, which address the whole person, including their physical, emotional and social wellbeing.
- Positive psychotherapy based interventions can emphasize identifying and building individual strengths and reliance. Positive psychotherapy promote overall wellbeing, so the translated Positive Psychotherapy interventions can be used for the caregivers of other population in Pakistan.
- In clinical setup other than rehabilitation units, it can be used by clinical psychologists to enhance mental wellbeing of the persons with mental illnesses (Depression, MDD, cognitive dis, psychosis etc).
- Previously disease or illness model was followed now the trend is changing so principal of positive psychology has better outcomes. So positive psychotherapy can be used more effectively as a more productive approach.
- Positive Psychotherapy can be used as an eclectic approach with other therapies.
- Present study impart valuable knowledge to existing literature.
- As a syllabus of curriculum it can be added in the syllabus of graduation and diploma level classes and in future positive psychotherapy, based training program can help the health care providers and students of psychology.

Recommendations

- The study highlighted serious issues of caregivers who are providing care to the children with cerebral palsy. The study emphasizes the challenges and volume of feedback required to address the needs and experiences of caregivers for people with cerebral palsy. Rehabilitation of cerebral palsy is a complex process for caregivers; they should pay close attention to their own mental wellbeing also.
- The present findings provide valuable insight regarding the challenges faced by the caregivers of children with cerebral palsy, and can help the rehab professionals working in the rehabilitation units to identify these challenges. The findings of the present study will be also helpful for the policy makers to develop psychological management services based specific indigenous interventions for caregivers of cerebral palsy children.
- Rehabilitation experts and other health care professionals related to cerebral palsy must know the effective relationship of child’s disability and caregiver's mental health. Family based therapy and facilities that directly focus caregiver’s health are effective for the well-being of both caregivers and for other family members.
- In addition to the frequent need for acute medical attention, caregivers of children with CP demonstrated particular mental health difficulties. It is a severe problem that has a detrimental effect on quality of life when caregivers of CP’s experience depression, anxiety, or stress. When handling such circumstances, healthcare personnel sometimes overlook this reality. Through present study it was tried to develop some understandings for health professionals about the major issues related to caregivers of cerebral palsy and to enhance the care, given to those significant individuals in the lives of children with cerebral palsy (CP).
- According to this study in Pakistani social service and health policy need to be improved regarding care for the caregivers. Additionally, there is a need to change in the community

opinion regarding the care of closed relatives who look after the disabled in family. Every participant in the family took part in taking care the child. In order to combine family care for the care of individuals with disabilities, social policy will need to direct and encourage a shift in society's moral perspectives regarding the care of family members with impairments.

- Using a positive psychotherapy approach, healthcare professionals should organize rehabilitation based sessions for caregivers having children with cerebral palsy. Positive psychotherapy is an effective therapy, rehabilitation therapists can use this therapy in rehabilitation based educational sessions for parents of children with cerebral palsy. Through present research the future researchers and rehabilitation professionals can learn in a most workable and realistic way to enhance caregivers' well-being while staying within the constraints of available resources.
- Future researches can be planned to measure the effectiveness of positive psychotherapy for enhancing mental wellbeing, among caregivers of other disabilities. In Pakistan adapted version of positive psychotherapy needs to be tested on larger trials. This work can be repeated on caregivers of other disablities using the methodology and Urdu translated manual used in the present study.
- The positive psychotherapy can also be applied to the development of indigenous multi modal, holistic interventions that enhance the well being of caregivers of all types of disabilities. In future, researches can be done to further validate the present findings.
- By educating the techniques of positive psychotherapy to clinical psychology students and psychologists at university level can help them to effectively manage the mental wellbeing of caregivers of disabled children.

- Establishing diverse community and family support networks is crucial to alleviate the stress and fatigue experienced by caregivers. Parents who are under more stressed and those who spend a lot of time in caring for others should be the target of positive psychotherapy-based interventions.

- When it comes to treating carers with CP, rehabilitation psychologists and other rehab health professionals ought to adopt a patient-family-centred therapeutic strategy. It is imperative for policymakers to provide healthcare facilities and disability subsidies to families with children with disabilities. Psychological therapy interventions are to furnish carers with emotional support, encompassing counselling, as well as precise knowledge regarding cerebral palsy.

- It is important to create healthcare facilities that are easily accessible, and caregiver peer support groups that can provide emotional support. The establishment of caregiver's rehabilitation services is necessary in order to enhance family functioning and it provide caregivers with short-term relief. Campaigns for public awareness are required in fostering acceptance and providing emotional support to caregivers of cerebral palsy children.

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APPENDICES

Appendix A
(Informed Consent)

Appendix B
(Demographic Sheet)

Appendix C
(Permission of Using Caregiver Difficulties Scale)

Appendix D
(Permission of Using Parental Burnout Assessment)

Appendix E
(Permission of Using Orientation of Life Scale (SOC)

Appendix F
(Permission of Using Multidimensional Scale of Perceived Social Support)

Appendix G
(Permission of Using Depression Anxiety Stress Scale)

Appendix H
(Permission of Using Positive Psychotherapy Inventory, Manual & worksheets)

Appendix I
(Approval Latter For Data Collection)

Appendix J
(Caregiver Difficulties Scale)

Appendix K
(Parental Burnout Assessment)

Appendix L
(Orientation of Life Scale)

Appendix M

(Multidimensional Scale of Perceived Social Support (MSPSS)

Appendix N

(Depression, Anxiety & Stress Scale (DASS-21)

Appendix O
(Positive Psychotherapy Inventory)

Appendix P
(Positive Psychotherapy Sessions)