Gadjah Mada Journal of Professional Psychology (GamaJPP), Volume 9, Number 1, 2023: (page 126-145)
E-ISSN 2407-7801
https://jurnal.ugm.ac.id/gamajpp
DOI: 10.22146/gamajpp.82438

Applied Gratitude Therapy in Cerebral Palsy's Caregiver to Reduce Subjective Burden: A Single-Case Design

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Submission 20 February 2023 **Accepted 29 May 2023** **Published 31 May 2023**

Abstract. The task of being a caregiver could potentially cause one to have an experience that produces negative emotions within themselves. The negative emotions will ultimately have their own set of consequences, one of them being creating a subjective burden on caregivers. This study aims to determine the effect of gratitude therapy on reducing the subjective burden on cerebral palsy caregivers. Participants recruited in this study were 3 caregivers of cerebral palsy whose children had motor skills at 3-5 GMFCS levels and had subjective burden based on the Zarit Caregiver Burden Scale (ZCBS). The experimental design uses small n single-case type A-B-A. Hypothesis testing is done quantitatively by using visual inspection technique followed by descriptive analysis. The result of this study shows a decrease of subjective burden in all participants.

Keywords: gratitude therapy; subjective burden; caregiver; single case

Problems of growth and development in children are often encountered, one of which is cerebral palsy (CP). The rate of CP cases differs across countries. It is estimated that occurrence of CP in western countries is 2.0-2.5 per 1000 live births (Marrón et al., 2013), with the highest incidence in males rather than females (Strauss et al., 2008). In the United States, the case of CP reaches up to 3.6 percent of the 1000 child births (Moreau et al., 2016). The data published by Indonesian Ministry of Health (2014), shows that the number of Cerebral palsy (CP) patients in Indonesia from 2010 is 0.09% in children aged 24-59 months. The prevalence of CP cases occurs variously, some 20% after birth, 5% during labor, and 70% before birth (Pharoah, 2007).

Cerebral palsy (CP) is characterized by impaired motor function, but many children also experience sensory, communication, and intellectual impairment (Raina et al., 2004). Cerebral palsy (CP) is a form of brain damage that affects the motor system or a neuromuscular disease caused by developmental disorders or damaged parts of the brain associated with controlling motor function (Somantri, 2012). The limitations possessed by CP children lead to demands and the need for long-term care that exceeds normal children at the same level of development (Raina et al., 2004). CP children need special care ranging from basic help to daily life activities to more complex healthcare services (Domenech et al., 2016), such treatment is usually performed by family members (Domenech et al., 2016) as

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*Corresponding author: st.rahmahba@gmail.com primary caregiver (Caqueo-Urízar et al., 2009) and is usually performed by mother (Raina et al., 2004).

One of the main challenges for caregivers is to manage the child's chronic health problems effectively and sustain the needs of everyday life (King et al. in Raina et al., 2005). These conditions often resulted in physical health problems, caregiver psychological distress, family economic impact, family functions and adjustments to relatives in care (Abayomi et al., 2015; Jonker & Greeff, 2009; Raina et al., 2005); lack of self and social activities (Bayoumi, 2014). Therefore, continuous psychological pressure on caregivers can lead to negative psychological effects.

The literature shows that this psychological pressure is associated with stress (Bayoumi, 2014), anxiety (10% -35%) and depression (10%-34%) (Cooper et al., 2007). The symptom of anxiety is in the form of anxiety, feelings of tension and symptoms of depression are in the form of loss of interest, sadness, loss of hope and despair (Brouwer et al., 2004; Raj et al., 2016). The caregiver's psychological problem has a negative impact on the physical condition of somatic symptoms such as insomnia, headache, reduced energy (Bayoumi, 2014; Raj et al., 2016; Schulz & Sherwood, 2008), fatigue, pain and heart problems (Bayoumi, 2014). There are other health problems, such as heart disease, hypertension, stomach problems, mood changes, weight loss, workplace concentration problems and suicidal ideas over time (Kumar et al., 2017). Psychological stress causes anxiety, depression and somatic symptoms in the caregiver, usually arising from prolonged and excessive treatment.

Research shows that a high psychological burden is shown by mothers as caregivers who have children with developmental disorders (Manor-Binyamini, 2011). This burden is due to the large number of daily tasks that must be done in order to assist and raise the children with developmental disorders (Manor-Binyamini, 2011). This is also experienced by the parents of CP children. Perceptions arising in CP caregivers are usually related to the characteristics and behaviors of the child, including childhood disability problems (Landry et al., 2015; Maloni et al., 2010; Yuker, 1988). Mothers' perceptions tend to be selective and subjective rather than objective (Yuker, 1988). The perceptions will influence mothers in providing care to children (Maloni et al., 2010).

Subjective burdens arise from negative perceptions of care-tasks performed by someone or one's reaction to the behavior of the person being treated (Chou, 2000). Subjective burden has been shown to be a predictor of the strongest psychological pressure on families and the strongest predictors of distress than symptomatology or other objective burdens. Therefore, the subjective burden on the caregiver cannot be separated from the stress conditions (Jones, 1996). Thus, there is a need for coping strategies to deal with stressful situations (Lau & Cheng, 2015). Gratitude can improve the ability to deal with problems like coping (Emmons, 2007). The Chinese caregiver pointed out that gratitude has a great relationship in dealing with emotional coping issues, positive reframing, acceptance, humor, seeking social support, and religious coping (Lau & Cheng, 2015). Being grateful also can lower the symptoms of depression (Ruini & Vescovelli, 2013), anxiety (McCullough et al., 2002), fatigue, disappointment and anger (DeWall et al., 2011) and lower the burden on caregivers (Lau & Cheng, 2015). Other literature suggests that coping strategies can be a mediator in linking gratitude and reducing burden (Emmons & Stern, 2013; Wood et al., 2010). Raina et al., (2004) states that factors which can decrease the negative effects of caregiver conditions are increased social support, family functioning and coping strategy ability in response to the situation.

Emmons & McCullough, (2003) argue that being grateful means allowing yourself to be placed in a recipient's position even in unfavorable conditions. Gratitude provides many positive benefits in the individual. Positive gains are the emergence of positive perceptions of self and others, increased activity and socialization, increasing compatibility and cooperation with others, social behavior, coping, and problem-solving and creativity abilities (Lyubomirsky et al., 2005).

Gratitude requires thoughtful thought and a process of contemplation as well as reflection (Emmons, 2007). Gratitude is also a key factor for subjective well-being through major religious approaches (for example, Christianity, Buddhism, Muslims) and different cultural philosophies (Wood et al., 2010). Therefore, grateful people are related to cognitive abilities in recognizing, acknowledging, and appreciating gratitude. The cognitive process of behavior will be more effective and strengthen gratitude interventions (Parks & Schueller, 2014)

Based on the above description, the experience of being a caregiver could potentially lead to stressful situations. This situation generates negative emotional reactions such as shame, guilt or anger. These conditions need to be overcome with interventions that can reduce negative impact and increase the positive effect on caregivers (Pousada et al., 2013). Intervention of gratitude can be a solution in handling that condition by the caregiver.

Subjective Burden on Caregiver of Cerebral Palsy

Caregiver burden is described as an implication of tension or a burden (Dambi et al., 2016; Kuipers & Bebbington, 2006; Marrón et al., 2013) which can be viewed as a multidimensional response too (Oh & Lee, 2009). Subjective burden of cerebral palsy (CP) caregiver is as a result of the interpretation and evaluation by a caregiver (Scott, 2013) from the perceptions that arise (Kuipers & Bebbington, 2006) in treating patients with CP (Gutiérrez-Maldonado & Caqueo-Urízar, 2007; Kheng, 2005; Kuipers & Bebbington, 2006; Scott, 2013). Subjective burden is a psychological (Kheng, 2005; Raj et al., 2016) and emotional response experienced by caregivers, (Gutiérrez-Maldonado & Caqueo-Urízar, 2007) in the form of the feeling of loss and sadness for patients with CP (Kheng, 2005; Raj et al., 2016). Subjective burdens can also appear in the form of stress, anxiety and shame and feelings of stress or frustration that are caused by disruptive behavior and the changing relationships with CP children (Raj et al., 2016). Subjective burdens also cause mental and physical stress effects, such as feelings of stigmatization, inability to make or fulfill personal plans, empathic suffering for CP sufferers, worry about the future of CP sufferers especially if they are young, and guilt because they feel that they have not contribute enough in treating CP patients (Kheng, 2005).

Subjective burdens arise from negative perceptions of the performed care-tasks or reactions to the behavior of the person being treated (Chou, 2000). The emergence of perceptions for CP caregivers is usually related to the characteristics and problems of children, including child disability problems (Yuker, 1988). This is related to the level of severity of the child's disability (Yuker, 1988) and mothers view and evaluate their expectations and children’s attribution (Landry et al., 2015; Yuker, 1988). Perception mothers tend to be selective and subjective rather than objective (Yuker, 1988). These perceptions influence mothers to care for children (Landry et al., 2015).

Research shows that caregivers experience stress with CP medium -high categories which can be marked by the difficulty of parents to spend some time in the hobby, lack of sleep, disturbed by nightmares, loss of sense of humor and irritability (Mahanani, 2016). These results are similar to Kumari & Singh, (2013) study which indicates that stress experienced by CP children caregivers is mostly in the category of medium (80%) to high (20%). The stress level of caregivers in caring for children with ADHD, developmental disorders, asthma and children with HIV infection is higher than the stress of caregivers who do not have children with disabilities (Gupta, 2007). This is influenced by the characteristics of the child and the dysfunctional relationship between children and parents (Gupta, 2007). In addition, the adjustment of caregivers to children's disabilities will also contribute to stress levels and social support (Felizardo et al., 2016).

Families who become caregivers of CP children also develop stressful conditions in their daily activities because of the many tasks that reduce their own time (Raina et al., 2004). Research by Kannan et al. (2011) shows that severe stress can worsen the physical health of the caregiver. These conditions can increase the susceptibility of the disease and reduce life expectancy (Von Känel et al., 2003). This finding is also confirmed by data from a study by Aschbacher et al., (2006) who stated that a large sample of US caregivers, which indicates a high prevalence of hypertension among caregivers, is associated with an increased risk of cardiovascular disease. Unfortunately, research in various countries shows that the situation is not balanced by the availability of sufficient information and guidance so that families can carry out their roles properly (Cohen et al., 2011). Stressed mothers have a negative relationship in satisfaction and self-efficacy, they often feel dissatisfied in the role of parenthood and feel unable to handle child behavior problems. whereas depressed mothers experience reduced energy, low self-esteem, and feel unappreciated. Thus, the higher stress felt by the mother in the caregiving role, will increase the condition of depression in the future (Wanamaker & Glenwick, 1998).

Snell and Rosen, (1997) in his research stated that families who are successful in caring for children with special needs / disabilities exhibit the following characteristics: a) acceptance of the child's condition, b) acceptance of different caring roles that are influenced by the child's condition, c) cognitive coping skills (including empowerment and efficacy self) which affects the ability to adapt to changing children's needs. Therefore, this study aims to provide cognitive and emotional coping skills to parents in order to influence the ability of adaptation in CP children.

Gratitude Therapy

Gratitude comes from the Latin word "Gratia". According to Pruyser, the word has the meaning of grace, pleasure, or gratitude. All of these original words are "related to kindness, generosity, giving, the beauty of giving and receiving or getting things that are normally obtained" (Emmons & McCullough, 2003). Scientists explain gratitude as a result of positive recognition originating from external sources (Emmons & McCullough, 2003) such as wonder (Emmons & McCullough, 2003), thankful (Emmons & McCullough, 2003; Peterson & Seligman, 2005) and pleasure (Peterson & Seligman, 2005). Pleasure arises as a response to receiving grace or a response toward peaceful events (Peterson & Seligman, 2005). Gratitude is also a form of personal characteristics that utilize positive thinking and living a positive life Dewanto & Retnowati, (2015); Wood et al., 2008).

Gratitude is argued as a cognitive, emotional and behavioral construction (Emmons, 2007). Cognitive construction of gratitude is shown by acknowledging the generosity and kindness of the blessings that have been received as well as focusing on the positive things from within (McCullough *et al.*, 2002). Gratitude in terms of emotional construction is characterized by the ability to change the emotional response into a meaningful event. The emotional state of gratitude involves feelings of wonder, thankfulness, appreciation and happiness for the life that is lived (Emmons & McCullough, 2003). The cognitive process of giving thanks has two steps, namely: a) recognizing something as a positive result, b) recognizing that there is an external source for that positive result. Behavioral construction in gratitude is related to “giving back” to others for the benefits and grace that have been received (Dewanto & Retnowati, 2015; Emmons & McCullough, 2003). Gratitude requires cognitive processes in order to produce an affection for something or after receiving the good intentions of others personally and accidentally (Emmons & Stern, 2013). The cognitive process of gratitude forms three interrelated parts, which are recognize, acknowledge and appreciate (Emmons, 2007), thus requiring wishful thinking, contemplation and reflection (Emmons, 2007).

Literature shows the object of gratitude can usually be addressed to others (Rash et al., 2011; Teigen, 1997) or nature or to non-humans, like God, animals, the universe (Teigen, 1997). For Indonesians, the expression gratitude is addressed to God and rarely addressed to others, so giving thanks is not only grateful but also feels tremendous pleasure when saying it (Listiyandini et al., 2015). Research by (Cahyandari, et al., 2015) showed that lung disease patients demonstrated awareness and confidence toward another power that is more powerful and they return everything to God. Gratitude is also close to wisdom that can be taken from an event or a small thing that happens in life (Listiyandini et al., 2015).

Gratitude played a major role in the ability to recover from trauma in earthquake survivors in Padang (Lies et al., 2014), and in the Merapi eruption survivors, gratitude emerges by realizing the need to worship properly according to religious guidance (Subandi et al., 2014). Gratefulness makes someone surrender to life but still try their best to live their lives (Listiyandini et al., 2015). In poor communities in Surakarta, gratitude is expressed in the form of satisfaction in life and the goodness of God, so they always pray and do good deeds (Anggarani et al., 2010). Therefore, gratitude is expressed through worship, prayer, saying thanks and doing your best (Listiyandini et al., 2015).

Research conducted by Emmons & McCullough, (2003) with the participation of a group of patients with neuromuscular diseases, show that gratitude could increase positive emotions and create happiness while also having an effect on improving sleep quality of patients which could affect their health. Grateful interventions have also been shown to reduce stress characterized by a decrease in cortisol stress hormone and heart rate variability (McCraty et al., 1998). Through gratitude, one would be happy, energetic, caring, passionate, determined and tougher than if one were ungrateful (Bono & McCullough, 2006). On the caregiver, gratitude intervention has an impact in developing emotional coping abilities (Lau & Cheng, 2015).

Based on the description above, the situations experienced by companions in caring for sufferers are stressful situations. This situation creates various negative emotional reactions such as shame, guilt or anger and becomes a subjective burden in itself in carrying out assistance tasks. Conditions that occur in caregivers need to be addressed with interventions that can reduce negative impacts and increase positive caregiver effects (Pousada et al., 2013). An intervention regarding gratitude based on CBT can be a solution in dealing with the subjective burden felt by caregivers because it has been proven empirically to increase positive emotions in individuals. However, so far there has been no research on gratitude that reduces the subjective burden on caregivers. The research that will be conducted regarding Gratitude-Cognitive Behavior Therapy (G-CBT) aims to make individuals able to think more positively through cognitive processes so that they are able to change behavior and feelings to be positive.

Method

Data Collection

This study uses a small experiment method with single-case experimental design (C. Barker et al., 2015). The single case experimental design is a manifestation of behavioral approaches that prioritize behavior modification (Todman & Dugard, 2009). In a single-case study, data can be collected from one or more participants (J. Barker et al., 2011). This study aims to explore what changes occur as a response to the manipulation of one or more variables (J. Barker et al., 2011). This experiment is used to examine the effectiveness of gratitude therapy in reducing the subjective burden of cerebral palsy caregivers.

Participants

Participants of this study were 3 mothers who are also caregivers of CP children aged 8-15 years old. They have two children, one of them is CP and the CP children with motor skill at the levels of 3-5 based on the Gross Motor Function Classification System (GMFCS). They had a subjective burden based on the Zarit Caregiver Burden Scale (ZCBS), and were also able to read and write.

Measurement

The instrument used to measure subjective burden is the Zarit Caregiver Burden Scale (ZCBS) which was developed by (Gutiérrez-Maldonado & Caqueo-Urízar, 2007) and has been tested by researchers (n = 64, α = 0.881). Aspects of subjective burden based on (Gutiérrez-Maldonado & Caqueo-Urízar, 2007) consists of three aspects, including; a) Burden; a negative evaluation of the consequences for the companion of the treatment given to the patient, overwhelmed, depressed, feeling stressed, anxious and embarrassed. b) Rejection; the ambivalent feelings, feeling annoyed or rejected by the patient such as reduced time for themselves, feeling guilty, miserable, not happy and feeling unappreciated. c) Incompetence; the perception of a companion that he/she is unable to treat sufferers due to lack of personal and economic limitation, for example the feeling of not being able, not doing the best, feeling sad and failing.

Gratitude-Cognitive Behavior Therapy* (G- CBT) *Module

The G-CBT module is composed of (Utami et al., 2017) with Z=-2.092, p=0.036. This module is based on Miller (1996), which outlines four simple steps to conduct gratitude therapy based on cognitive-behavioral approaches, which are: 1) identifying the wrong thoughts (flaws, weaknesses or regrets of fate), 2) formulating and supporting thoughts of gratitude, 3) replacing the wrong thoughts (deficiencies, weaknesses or regrets of fate) towards thoughts of gratitude, and 4) applying gratitude in inner-self and real actions.

Watkins (2014) states that there are four things that can be done in gratitude intervention. Firstly, recounting is an action that refers to "*grateful recounting*" or "*grateful list*". Gratitude is an act of appreciation for simple happiness which is then lived as a great pleasure. This intervention is in the form of giving instructions to the participant to write down the little things he was grateful for in his life (Emmons and McCullough, 2003). Secondly, reflection, it is an action that refers to grateful reflection or grateful contemplation. It is an act of reflection on what we are grateful for and look at how it could be without gratitude. The third is expression, the experience of being grateful without the act of expressing gratitude is less able to be adaptive in someone. Hence, there is a need to increase gratitude. Research by Peterson and Seligman (2005) offering a "gratitude visit", which is an act of participants being asked to write a gratitude letter to someone and then sent it. Lastly, reappraisal; grateful people have a good ability to reassess negative events, and being able to deal with the problems he faces. Gratitude allows someone to reassess negative events and lead to acceptance of negative experiences and reduce negative emotions.

Procedure

Recruitment and Training. Before the research was conducted, the researcher went through a process to obtain permission from SLB N 1, which is a special needs school in Sleman, Yogyakarta. Once the research is permitted, the researcher socializes the purpose of the study and the actions to be taken. The researcher also prepared a facilitator to be a companion in the intervention activities by providing training through activity simulations. The qualification of trainers is a licensed psychologist, has basic psychological skills and has experience as a caregiver companion. The facilitator was given knowledge about therapeutic techniques, goals and targets of individuals who will participate in the experiment.

Baseline

Each participant received a pretest in the form of a subjective burden scale for about 3 times a week. During the baseline process, the researcher also conducted interviews with the participants to match the criteria of the study and in this process the informed consent given before the interview was conducted.

Intervention

Intervention procedures performed by using A-B-Adesign. The Gratitude Therapy is carried out four times with a duration of 100-120 minutes per meeting for a three week period. The event was held in the auditorium of SLB N 1 Sleman. During the activity, participants were asked to continue to fill the scale of subjective burden as much as two times. Participants were also asked to fill in a gratitude diary as part of the intervention process in the gratitude therapy module.

Follow up

The follow-up process is carried out on the client for one week by doing the same measurement, which is filling the subjective burden scale.

Results

Participant 1: Hani

Hani is a 34-year-old woman and has been divorced since last year. Hani has two daughters and her first child has cerebral palsy and is now 14 years old. Hani claimed to be quite capable in caring for her child, but sometimes she felt anxious and afraid when remembering the complications of the illness experienced by her child. Hani also claimed to have experienced economic problems and so often felt difficulties in caring for children because she had to make a living.

Participant 2: Widya

Widya is a 38-year-old woman who is married and has two sons. His first child is a 15-year-old cerebral palsy child. Widya accepted his son's condition and got a diagnosis of cerebral palsy. However, Widya felt unable to deal with the behavior of cerebral palsy children who tended to be lazy, often argue and disobedient.

Participant 3: Retno

Retno is a 33-year-old woman who is married and has two children. One of her sons suffers cerebral palsy and is now 13 years old. The condition of having CP children is still not acceptable for extended families and her husband. These conditions make Retno often feel sad and tired because she has to take care of CP children without any help from others, especially their partners.

Subjective Burden Analysis

Analysis of subjective burden is shown at Figure 1 and Table 1. Overall, the trend shows a decrease of subjective burden in all participants based on a scale of Zarit Caregiver Burden Scale (ZCBS). In the baseline phase, all participants showed an increase in subjective burden scores. The highest score was shown by participant H with a change in level (+6), whereas the other participants showed different levels of changes, namely W (+2) and R (+4). The increased level of subjective burden occurred after the initial interview process which causes each participant to be aware of the conditions they face and its effect on their psychological condition.

According to table 1 for the means, standard deviations, standard error and slope for each participant by phase. Three participants had an increased trend in baseline (range +0.07 to +0.43) and showed decreased trend in intervention (-0.11 to -0.50). Widya had a slightly increasing trend in baseline (+0.43) and intervention (-0.50), but we still chose to begin intervention after three data points for the aforementioned reasons and because all other participants had an increasing trend and intervention was offered in the group session. Three participants had a decrease in the mean number of story elements from baseline, intervention and follow up. The second participant, Widya, showed an increase of subjective burden at the follow -up phase. In terms of variability within phase, Retno's standard error and standard deviation decreased during intervention as compared with baseline. Hani's standard error and standard deviation also decreased during intervention.

In the intervention phase, all participants showed a trend direction and a downward trend. In the intervention phase, Retno has a stability level of 50%, which indicates a condition of instability. This happened because in the intervention phase, participants were busy caring for her children and parents-in-law who came home on the first day of the intervention until the follow-up phase.

Figure 1.

Ratings for Participants for Subjective Burden

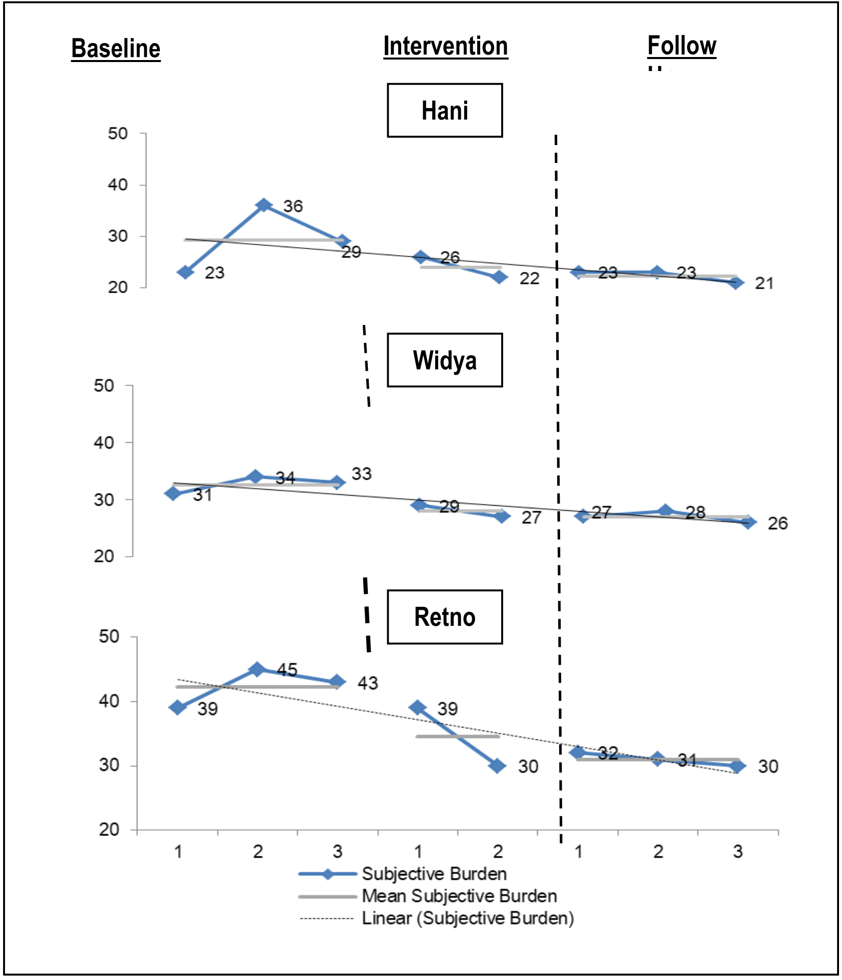

Table 1.

Visual Analysis of Subjective Burden of Participants

Participant	Phase	*M (SD)*	*SE*$_{yx}$	Slope
Hani	Baseline	28.33 (6.51)	3.76	+ 0.07
	Intervention	24.00 (2.83)	2.83	- 0.25
	Follow Up	22.33 (1.15)	1.15	- 0.75
Widya	Baseline	32.67 (1.53)	0.88	+ 0.43
	Intervention	28.00 (1.41)	1.00	- 0.50
	Follow Up	32.33 (1.53)	0.88	- 0.21
Retno	Baseline	42.33 (3.06)	1.76	+ 0.21
	Intervention	34.50 (6.36)	4.50	- 0.11
	Follow Up	31.00 (1.00)	0.58	- 1.00

*Note. SE*yx = standard error

Discussion

Based on the data that has been presented, it can be seen that the score of caregivers' subjective burden on all participants of the intervention decreased after the treatment was given in the form of Gratitude Therapy. Changes in subjective burden scores for participants occurred differently, some participants experienced a decrease in the intervention phase and the follow-up phase.

Subjective burden as a negative impact from the role of being a caregiver who treats patients for a long period of time. Ivanov and Blue (2008) (cited in Suprobo et al., 2010) explained that there are several conditions that can be predictors for a caregiver experiencing subjective burdens including reduced social relationships, limited social support, lack of information about sufferers of the disease, and lack of communication between caregivers and sufferers. Some of the conditions mentioned above were found in this study.

The first condition is the reduction in social relations. Some participants experienced changes in social relations with the community. Widya finally decided to quit college even though she had entered her final semester. Retno and Hani showed an increase in social relations when associated with communities who care about children with disabilities. Research shows that positive experiences and social support will arise in mothers if they are part of a community or get support from other systems (Landry et al., 2015; Maloni et al., 2010).

In addition, limited social support creates a subjective burden on participants. All participants felt a lack of social support from families, especially husbands and extended families. These conditions made participants feel that they have more responsibility than other family members. Besides having to take care of CP children, participants also have to take care of other things such as taking care of the house and other family members, as well as replacing the husband's role to make a living. In addition, the lack of information about patient illness is also one predictor in the emergence of subjective burden on CP caregivers. In addition, Widya showed a lack of knowledge about how important physiotherapy is in helping to cure her child. This shows that knowledge can determine caregiver adjustments with children's disabilities and will also contribute to stress levels and social support (Felizardo et al., 2016).

Mothers who do not have emotional support from family and partners show negative emotional effects (Landry et al., 2015). This can lead to feelings of anxiety about the future of children, low expectations and aspirations about the child's future (Landry et al., 2015). This condition seems to have manifested in all participants in the study. Participants are concerned about the problems of CP children in the future as well as who will take care of the children.

There is also a perception that the CP child is a sin because of past mistakes (Landry et al., 2015). This can be seen in Hani who felt guilty for her actions that violated religion in the past and caused feelings of guilt. In addition, all participants also felt able to survive in the situation and continue to care for CP children because of the values of religiosity and closeness to God. Research shows that spirituality and religiosity have an important role in the lives of mothers who have children with disabilities which help in coping with the child's future and ability to care for children (Landry et al., 2015). Research conducted on Christianity, found that those who have spirituality or high religiosity show a stronger disposition in gratitude (Emmons & Kneezel, 2005). The more feelings of gratitude to God, will improve personal health and reduce symptoms of depression (Krause et al., 2014).

Meanwhile, gratitude therapy in this study uses the method of discussion, sharing, training and video presentations with the aim of helping caregivers and dealing with conditions of subjective burden. This form of research also applies to a form of group therapy that provides opportunities for all group members to learn from other members and increases stress coping abilities. This is in accordance with the explanation of (Prawitasari, 2002) that the process of group therapy allows the interaction of group members whose processes help one another, provide support and show healthy behavior models. Group members will also be encouraged to try more effective behaviors, cognitions and emotions in learning new coping through group learning experiences (Corey, 2012). In this intervention, participants received mutual social support from fellow caregivers, researchers and professionals. The sharing of experiences allows the participants to have experience and knowledge about how to overcome the conditions of the burden they face so as to increase the ability of participants to care for CP children.

Each session on gratitude therapy helps participants to overcome the subjective burden they experience while being a caregiver. This is evident from the verbal and non-verbal responses that arise from participants. Gratitude therapy intervention shows the awareness of the participants to continue to take the act of counting blessings as much as three-five. This creates gratitude, happiness, pleasure, positive feelings and feels increasingly able to care for children. This is consistent with research conducted (Bono and McCullough (2006) which states that through gratitude, a person will feel happier, more energetic, caring, energetic, determined and more determined. Retno continued to write down the blessings she had, even though the intervention process had been completed. The process of writing letters of gratitude was made by participants who showed their influence in improving relations with others, increasing the feeling of gratitude to the Lord, giving rise to feelings of relief and increasingly wanting to remind others. In this case, the purpose of the gratitude letter is to bring positive emotions and strengthen interpersonal relationships (Emmons and McCullough, 2003).

The results also showed that Retno increased ability to solve problems. Meanwhile, other participants stated that they become more able to feel lighter when confronted by a variety of stressful situations. This shows that this intervention also has an impact on developing emotional coping abilities (Lau and Cheng, 2015).

This intervention also gives rise to a sense of patience in the participants. Al-Jauziyyah (2015) explained that patience and gratitude are two things that show the same conditions. This was explained by Umar bin Khattab who said "if patience and gratitude are two camels then I don't care which one I ride" (Al-Jauziyyah, 2015). One concept of patience shows the attitude of accepting bitter truth with sincerity and gratitude (Subandi, 2011).

Participants also experience changes by being grateful for the things they get in their daily lives. Both the pleasant and the unpleasant. In Retno, even though she experienced difficult times since her mother in-laws were at home, she felt grateful for her blessings. Likewise with other participants, who remain grateful when faced with work problems, rain, busyness and failed efforts. Al Jauziyyah (2015) states that people who are grateful are those who are grateful for gifts, while people who are very grateful are grateful for the disaster. This also corresponds to Emmons (2007) who explained that the condition of gratitude can also be the acceptance of events that are suppressed or negative.

Conclusion

This research aimed to identify the effectiveness of Gratitude-Cognitive Behavior Therapy (G-CBT) in reducing subjective burden on cerebral palsy caregivers. The research participants are three mothers with ages ranging from 33-38 years old, all of them are parents and caregiver of children with cerebral palsy. As this is a single case experiment, participants were given G-CBT intervention. As a result, participants experienced various changes such as increased problem-solving ability, increased stress coping mechanism ability and became more grateful.

Therefore, it is concluded that the G-CBT intervention is shown to be an effective therapy when applied to cerebral palsy caregivers by reducing their subjective burden significantly.

Recommendations

It is suggested that research participants will continue to practice the relaxation techniques taught through this intervention so that the benefits can be felt in supporting daily life. Besides that, participants are also expected to be able to apply the G-CBT technique such as counting blessings, engaging in prosocial behavior, appreciating self-strength and expressing gratitude to others in order to maintain a state of gratitude that appears cognitively and emotionally, so that eventually it can become a behavior of gratitude. Future research could further examine the effectiveness of using G-CBT intervention on other psychological conditions.

Declaration

Acknowledgement

The authors would like to thank those who assisted in this process, starting from mentors, participants, discussion partners and others who had assisted during the research process in developing psychology.

Funding

The cost of this research is fully paid by the researcher

Author Contributions

SR and the team designed the study. SR collected data and analyzed data along with MSU. MSU read, edited, and approved the final manuscript.

Conflict of Interest

The authors declare that there is no conflict of interest in the research, writing, and/or publication of this article.

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