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ANALYSIS OF THE INFLUENCE OF COGNITIVE BEHAVIOURAL MENTORING OF YOUNGSTERS WITH CEREBRAL PALSY

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ABSTRACT

The purpose of this study is to determine the impact of CBTP on mothers of Youngsters with cerebral palsy and to determine the most efficient and supportive method for dealing with their stress management. The researcher performed research focused on quantitative data to achieve the above study objectives. This study involved a quasi-experimental research methodology, in which the researchers obtained quantitative data to infer the results of the research. The Mann-Witney results for CBTP showed that there is a substantial difference in the pre-experimental and pre-control groups of pre-distribution specifically mothers of cerebral disabled Youngsters ($U = 33.11$, $z = -2.778$, $p = 0.000$, $r = 0.445$), the experimental and control Post-experimental and Post-control groups ($U = 20.21$, $z = -4.888$, $p = 0.000$, $r = 0.782$), and the Delay-experimental and Delay-control group of the immediate-distribution of questionnaires during the program ($U = 16.22$, $z = -6.003$, $p = 0.000$, $r = -0.961$). These clearly demonstrated that the mothers in the study group of Youngsters with cerebral palsy performed much better than those in the control group. The paper on new child 's birth with cerebral palsy problem is the first quasi-experiment of many researches on this topic (concerning comparable variables and procedures) in numerous centuries. It highlights vital ways of sustaining the initiative is a successful intervention in Youngsters with cerebral palsy to cope with behavioral issues. The government is also suggested to have further training sessions, employ the collaborative operation as an out-of-class task, and track the process carefully.

INTRODUCTION

Cerebral palsy, a non-progressive but incurable condition caused by damage to the immature brain during infancy, Cerebral palsy (CP) is an umbrella term

that describes a group of disorders on motor dysfunction due to a permanent and non-progressive lesion in a developing brain (Basavanthappa, 2015). The motor dysfunction of Youngsters with CP is further complicated by the development of secondary impairments such as joint deformities, muscle contractures, hip dislocation, and scoliosis (Norsuhaily Abu Bakar et al., 2020, Neergård, 2016; Wright et al., 2018; Fosdahl et al., 2019; Peters et al., 2019). Secondary impairments have a significant impact on restricting the participation of Youngsters with CP in daily living activities (Lorentzen, et al., 2019). Moreover, upbringing child is one of the most sacred gifts and a tasking endeavor that every parent face (Norsuhaily Abu Bakar & Al-Smadi, 2019; Doucet et al., 2019). Attributing the relationships, emotions of raising a child can be stress-driven most times, but dissociating the cons from the blessings, it is most rewarding. Additionally, stress is the unconditioned reaction to stimuli as a result of alteration in one's physical, emotional, and psychological balance. These factors could be due to family instability and tension, work place imbalance, financial jumbo, and excitements, health and diseases, among others. Numerous kids with CP don't get care of extreme debilitations, for example, discourse and taking care of challenges, and most guardians have demonstrated that psychological and social issues are not being tended to. It is eminent that youngsters with CP don't have youth training and treatment (Norsuhaily Abu Bakar et al., 2020). It is usually defined in a different context and domain. According to Webster's dictionary, stress is "a constraining force or influence such as a physical, chemical, or emotional factor that causes bodily or mental tension and may be a factor in disease causation". Parental instability is the first point of effect once a child is born with a deformity or disability. In this case, the disability being CP as it affects the mothers. A study conducted by Minners (1988) is seen as a foundational study of in the 1980s; in the study, 60 mothers of Youngsters born with disabilities were investigated to identify the effects of stress on the sample mothers. The study mediated stress as to facilitate the degree of coping using the external family influences, resources, and child characteristics. The study was carried out in Toronto with the most influencing variables being resources, child degree of disability and manageability attempts that aid child's daily activities, social supports, religiosity, marital status of the mother and the professional engagements through the supports received.

Conversely, cognitive behaviors have been very helpful in introspecting different forms of depression, anxiety, and stresses. These refers to a Behavioral Cognitive Mentoring Program in reducing Cognitive and psychological problems of the child among Mothers (CBTP) and Behavioral Cognitive Mentoring Program in reducing the Feelings of despair and frustration among Mothers (CBTFD), which includes the inculcation of several forms of behavioral and pre-listed approaches that are borrowed from some principles (Puka et al., 2019). Hence, the task of raising Youngsters with disability brings great stress and uncommon changes (Rodrigues et al., 2019, Norsuhaily Abu Bakar & Al-Smadi, 2020). According to the submission by Hill et al. (1949), raising Youngsters with such disabilities affects parenting in regards to psychological, emotional, physical and financial stress due to

medications and consultations (Biondic et al., 2019). Therefore, with these large reports and summing the high number at Youngsters with disabilities, mothers have been identified to be the ones on the receiving end. The effect of this disability procreates stress, nagging, temperaments, and other forms of stress (Miranda et al., 2019). Mothers bond through birth and nurturing of the kids make stress an embodiment. Recently, cerebral palsy (CP) is a form of disability that affects the functionality of the kids by the non-progressive development of the motor neurons and other brain functions (Nuara et al., 2019). It is defined as "a non-progressive motor impairment syndrome caused by a problem in the developing brain." This is one of the most common disabilities found in newly born kids

COGNITIVE BEHAVIORAL THEORY

The cognitive-behavioral theory is researched and submitted as one of the most critically and agreed model of depression and stress management. It is believed that negative and maladaptive thoughts accumulated by irrational or dysfunctional beliefs are the central phenomenon to stress. Its choice of this research is due to its wide reach ability and added holistic approach to depression. This has the vital incorporation of learning and behavioral ingredients to cognitive theories (Wilde & Dozois, 2019). It has recorded successes which are evident for the past two centuries to the management of stress and depression. The crises on stress handling through depression were prominently described from the learning or cognitive-behavioral models (Farrington, 2019). These models unanimously approached the problem of the over-generalized response of the depressed person to aversive conditions.

Furthermore, researchers in line with reinforcement contingencies indicated that daily mood is positively correlated with pleasant events and negatively correlated with unpleasant events (Lennard et al., 2019; van der Stouwe et al., 2019; Rubin, 2019). Deficiency in social ability and skill reinforcement also produce depression (Rehm, 1977). However, the cognitive-behavioral theory is one of the highest influential models of addressing depression, which believed that negative and maladaptive thoughts generated by irrational or dysfunctional beliefs are the central phenomenon that leads to depression. It is chosen in this research because of its holistic approach to depression that incorporated learning, behavior, and cognitive theories. It has been documented that, for the past two centuries, the phenomena of depression were prominently described from the learning or cognitive-behavioral models. Both the models unanimously approached the problem of the overgeneralized response of the depressed person to aversive conditions. The target of cognitive-behavioral therapy for the treatment of depression is to replace irrational thoughts in hopes of encouraging a balanced and the actual perspective for stress patient. In this way, the patient can attack problems tactically and prevent further depressive relapses. Studies have been conducted to evaluate cognitive-behavioral therapy for stress (PPD) either alone or in combination with drugs and psychotherapy (Li & Ashkanasy, 2019).

METHODOLOGY

Research design

Exploratory and experimental examination was utilized in this investigation. An exploratory design considered the most suitable methodology in context of the method of the issue being investigated (Creswell, 2012). Construes that, the purpose of the exploratory methods design is to collect data and use the results to understand a research problem.

Target population, sample size and sampling techniques of the study

The target population of this study comprised all Youngsters with disability from Irbid City in Jordan. The total number of Youngsters with disability from Irbid City in Jordan is 100. Similarly, researchers used various procedures in sampling populations. It is the conditions of the study and the crucial nature of participants that determine which procedures are to be employed in the sampling population (Drew et al., 2008). The sample size comprised 40 Youngsters with disability from Irbid City in Jordan. The group consisted of female and male Youngsters. All of the participants are Youngsters with disability from Irbid City in Jordan. Moreover, the participants of this study were selected based on convenience sampling technique. All the participants were Youngsters with disability.

Method of data collection

This investigation directed in Jordan, and the information gathered through a self-controlled poll where the respondents requested to finish the overview all alone. The reason for picking a self-directed poll in this investigation is that it decreases cost by killing the questioner gadget and things, for example, computer software (Kirkpatrick et al., 2019).

Quasi-experimental study

The data of the quantitative of this study collected from the quasi-experimental study, which has three sections, pre distribution of the questionnaire, intervention or training, and delay. A quasi-experiment employed in the present study to investigate the effectiveness of CBT of the mothers of Youngsters with cerebral palsy. In this non-equivalent controls group quasi-experimental design used. This is a common quasi-experiment design that a pre and post and delay and control group (Joan, 2006).

Design of the Quasi-Experimental Study

Three sections of non-equivalent quasi-experimental study will be designed in this study as presented in the diagram below:



Figure 1 Quasi-Experimental Design Diagram

This diagram represents the flow of the quasi-experimental design employed in this study. It shows the three stages of conducting the experimental studies, pre-test, intervention training, and post-test. Exp. stands for “experimental group” and Contr. stands for “control group.”

Pre-Test and post-tests

First test directed to all controlled and exploratory gatherings in the primary seven day stretch of the investigation. This is the principal phase of the semi test study. However, before the beginning of the actual study, a pilot study led to determine the legitimacy and dependability of the instrument and approve the overall method of the examination as introduced in sub-segment below. The questionnaires were given to all groups. Meanwhile, after distributing the pre questionnaires, a six-week intervention programme followed. At the middle of the training period, second distributions (immediate post questionnaire) were distributed, followed by the delayed post-distribution at the end of the training. Post-distribution is the test administered to the groups after the treatment to determine the effect of the treatment on the experimental groups and to observe the causes or changes among the variables being observed (Mertens, 2014). The post-distribution administered twice at the middle (immediate post-distribution) and at the end of the training session (delayed post-distribution) the rationale was to ascertain the reliability of the instrument by correlating the gain scores of the participants.

Validation and reliability of the research instrument

According to Fraenkel et al. (2015), the term validity was characterized as the level of accuracy and suitability of surmising's gathered by a scientist. It quantifies the circumstance where the instrument is intended to gauge. To meet all requirements for factor investigation, Pallant (2011) proposed that the value of correlation matrix must be 0.3 or above with KMO of 0.6 or more and Bartlett's test must be noteworthy at $p < .05$. Likewise, the specialist utilized Cronbach's Alpha to decide the unwavering quality of the exploration instrument for the quantitative perspective. Cronbach's Alpha empowers the analyst to decide how well the things identify with the build and measure the

develops properly. Moreover, the researcher sent the overhauled poll to exactly 20 haphazardly chose respondents to accumulate the Pilot Study information. Utilizing the information from the Pilot Study, the scientist utilized the Exploratory Factor Analysis (EFA) to investigate and survey the dimensionality of things estimating each develops in the examination. Numerous specialists, for instance (Hoque et al., 2017; 2018; Noor et al. 2015; Yahaya et al., 2018) stress that the researcher needs to utilize Exploratory Factor Analysis (EFA) strategy for each build to decide whether the dimensionality of things has transformed from the past investigation where the measurements were created.

Method of data analysis

Data analysis procedure simply refers to the process and techniques employed by the researcher to scrutinize the collected data in order to extract the information from the data and give a summary description of the results based on the analysis of the data (Nwana, 1981). The test for normality of data distribution skewness and kurtosis were performed using SPSS to double-check if a distribution of scores significantly differed from a normal distribution. The data were sampled from a Gaussian distribution, i.e., not normally distributed data; the no-parametric test of Man Witney was used to analyze the data collected through the questionnaire.

RESULTS AND ANALYSIS

Descriptive statistics and assessment of normality

In light of the estimation model, the investigation has analyzed the ordinariness for the things so as to survey the circulation for each thing or variable associated with the estimation model. In addition, the data characteristics of variables under study were investigated through estimation of focal inclination (mean), and estimation of scattering (standard deviation) in order to find the information qualities. In addition, using the Statistical Package for Social Science (SPSS) version 24.0, the mean and standard deviation were examined. Table 1 outlines the mean and standard deviation for all indicators. Generally, the mean values for all pointers were well above 3.5. This worth showed that lion's share of the respondents in this examination were in concurrence with the inquiries. Moreover, Table 1 showed that the measures of Skewness and Kurtosis on most of the items involved in the measurement model exceeding the threshold of -2.58 and $+2.58$ which indicated that the data is not normally distributed as recommended by Hair et al. (2014). This reflects that the data has not satisfied the cut-off value of multivariate normality distribution. Therefore, the study can proceed for further analysis with Mann-Whitney.

Table 1 Descriptive Statistics

Statistics	Mean	Std. Deviation	Skewness	Kurtosis
CBTPPRTE	3.46	0.782	2.887	-3.876
CBTPPTE	3.89	0.723	-1.334	2.110
CBTPITE	4.23	0.662	2.335	-4.321
CBTPPRTC	4.76	0.367	-3.132	-2.543
CBTPPTC	3.22	0.892	-1.205	-3.700
CBTPITC	3.12	0.790	0.456	-1.432

Mann-Whitney results of CBTP

The results presented in Table 2, the Mann-Whitney (U) result from the response has uncovered there is a noteworthy contrast in the Pre-test and Pre-control CBTP of the pre-circulation explicitly moms of Youngsters with CP as the present study used. The $U = 33.11$, $z = -2.778$, $p = 0.000$, $r = 0.445$. By comparing the two mean ranks of experimental and control groups, it was evident also that the mean rank value of experimental group (mean rank = 66.18) was greater than the mean rank value of control group (mean rank=32.40). This clearly showed a significance difference between the two groups. The effect size of $r = -0.445$ represents a medium to large effect, thus indicating that the effect of the program was a substantive among experimental and control groups.

Table 2: Between-Group among Pre-Experimental and Pre-Control CBTP

Program	N	Mean Rank	U value	z value	p value	r value
Pre-Experimental	40	66.18	33.11	-2.778	0.000	-0.445*
Pre-Control	40	32.40				

Keywords: U value (Mann-Whitney), p value (positive value) r value (rate value) and z value (), Note: Significant at $*p < 0.001$.

In Table 3, the Mann-Whitney (U) result from the response has revealed there is a significant difference in the Post-experimental and Post-control CBTP of the post-distribution explicitly mothers of Youngsters with cerebral palsy as the current study used. The $U = 20.21$, $z = -3.888$, $p = 0.000$, $r = 0.782$. The two mean ranks of Post-experimental and Post-control CBTP groups, also indicated that the mean rank value of Post-experimental group (mean rank = 71.32) was higher than the mean rank value of Post- CBTP group (mean rank = 44.89). This confirmed that there is a significant difference between Post-experimental and Post-control CBTP groups. The effect size of $r = -0.782$ represents a large effect, hence signifying that the effect of the program was essential between Post-experimental and Post-control CBTP.

Table 3: Between-Group among Post-experimental and Post-control CBTP

Program	N	Mean Rank	U value	z value	p value	r value
Post-Experimental	40	71.32	20.21	-4.888	0.000	0.782*
Post-Control	40	44.89				

Keywords: U value (Mann-Whitney), p-value (positive value) r-value (rate value) and z value (), Note: Significant at * $p < 0.001$.

Moreover, in Table 4, the Mann-Whitney U test has indicated that there was a significant difference in the Delay-experimental and Delay-control CBTP of the immediate-distribution of questionnaires during the program ($U = 16.22$, $z = -5.003$, $p = 0.000$, $r = -0.961$). By contrasting the two-mean rank of the program, it was additionally apparent that the mean rank estimation of the trial program (mean rank = 88.40) was more prominent than the mean rank estimation of control program (mean rank = 53.19). This clearly exposed that the difference between groups was statistical significance. The effect size of $r = -0.961$ represents a very large effect; therefore, demonstrating that of the program was substantive between Delay-experimental and Delay-control CBTP.

Table 4: Between-Group between Delay-experimental and Delay-control CBTP

Group	N	Mean Rank	U value	z value	p-value	r value
Delay-Experimental	40	88.40	16.22	-6.003	0.000	0.961*
Delay-Control	40	53.19				

Keywords: U value (Mann-Whitney), p value (positive value) r value (rate value) and z value (), Note: Significant at ** $p < 0.001$.

DISCUSSION

Youngsters with CP are at expanded danger of social and enthusiastic issues, with 1 of every 4 building up a conduct issue. This research showed that parental intervention, especially CBTP and CBTFD, is effective in addressing behavioral and emotional issues in Youngsters with CP. EBT alone has been correlated with decreases in the behavioral and emotional issues reported by parents in accordance with prior studies. In addition, RE was associated with dysfunctional parenting styles reduction. The effect sizes obtained for both pre, post and delay distribution of the questionnaires showed that the approach in increasing the Mothers' of Youngsters with CP knowledge of both CBTP and RE were a substantive effect. This showed the government's pressing need to tackle behavioral and emotional issues in Youngsters with CP, as well as

the good fit between the requirements of education and support services and the effectiveness of parenting intervention. Ideally, parenting interventions, especially CBTP, can be translated. CBTP is intended for population-level dissemination, is readily implemented in educational or support services, is accessible in high- and low-resource areas and is accessible in many nations. Therefore, parenting interventions, such as CBTFD, should be a component of standard care for Youngsters with CP families. The findings indicated an extra contribution to CBTFD, with specific advantages for parenting and child hyperactivity. The combined intervention of CBTP and CBTFD, but not CBTP alone, was connected with reduced CBTP-scale child hyperactivity, parental over-reactivity, parental verbosity, and child behavioral issues. At six weeks of follow-up, mothers who received the combined CBTP and CBTFD intervention showed reduced childhood hyperactivity, parental laxity, and parental verbosity compared to mothers who did not receive the training.

CONCLUSION

This examination expects to design Youngsters to be facilitated into standard schools after fifth grade; regardless, it has all the earmarks of being that very few understudies with CP in Jordan are being given the appropriate informational and solid organizations. For example, various Youngsters with CP don't get treatment for noteworthy handicaps, for instance, talk and dealing with issues, and moreover, learning and direct issues have been represented by most watchmen as not being managed. It is of note that custom educational plan and psychotherapy are not open for youths with CP. In any case, gatekeepers nitty gritty a nonattendance of general information concerning the organizations open for their Youngsters. Likewise, early intercession organizations in Jordan are confined in the present. At the point when everything is said in done, understudies with physical impairments, joining adolescents with CP, and their people are not given satisfactory organizations and support over a wide extent of zones, including clinical, informational, excited, social, physical, and insightful perspectives.

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