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# Stimulation Therapeutic Activity Center (STAC) in Santo Domingo, Ilocos Sur Philippines: An Impact Study

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Abstract: The Stimulation Therapeutic Activity Center (STAC) is where the Breaking Barriers for Children (BBC) project provides free comprehensive rehabilitation, pre-school education, and stimulation activities to its beneficiaries. This study was conducted during the Calendar Year 2014 to 2015 to determine the impact of the STAC in Santo Domingo, Ilocos Sur from Calendar Years 2008-2014. It utilized ten implementers and 123 mothers/caregivers of children with special needs. The study employed the descriptive correlational method of research. The main instrument is a questionnaire augmented with documentary analysis. The statistical tools used to treat and interpret the data gathered were the frequency and percentage, mean and trend analysis. The study revealed the following: 1) Out of the 123 numbers of intake, seven transferred to another place, nine died and 59 had improved condition; 2) Of the 59 who had improved condition, a substantial percentage suffered from physical disability especially cerebral palsy who can now walk without assistance, do functional activities like rolling, creeping, head and trunk control, crawling, reaching, grasping and releasing and the least suffered from cognitive disabilities specifically down syndrome who can now copy words and phrases and needs minimal assistance in functional independence measure like eating, bathing, drawing and toileting; 3) All the children with special needs regardless of condition are continuously receiving the services of the STAC. The SPED teacher takes care of all those who can walk without assistance

# 1. Introduction

Keywords: .

The Breaking Barriers for Children (BBC) according to the STAC files (2014) of Santo Domingo, Ilocos Sur, is a joint undertaking of the Katipunan ng Maykapansanan sa Pilipinas, Inc. (KAMPI) and the Danish Society of Polio Accident Victims (PAV), a non-government organization. Its primary purpose is to provide free comprehensive rehabilitation services to poor children with disabilities (CWDs) aged 0-14 years. Funds for the project comes from the Danish International Development Assistance (DANIDA). The initiative started in 1995 with the first project called the Breaking Barriers-Philippines (BBP) which was later on expanded in 1999 with the Breaking Barriers for Children (PMO, 1999).

Records show that more than 7,000 children with disabilities (CWDs) were served during the period. Moreover, because of the success of these two projects, it paved the way for the establishment of the Stimulation Therapeutic Activity Centers (STAC) and numerous satellites in the different parts of the country. The provinces of Pangasinan, Aklan, Capiz and Ilocos Sur were also beneficiaries of this project. In the province of Ilocos Sur, several satellites were established particularly in the municipalities of Candon, Cabugao, Sta. Maria, Vigan and Santo. Domingo in 2007 (STAC Files, 2014).

According to the project management office (1999), the Stimulation Therapeutic Activity Center is where the BBC project provides free comprehensive rehabilitation, pre-school special education, and stimulation activities to its beneficiaries. It serves as an informal venue for socialization for CWDS and their families. Also, it serves as a training resource for physical and occupational therapy, social work, and inclusive education. On the other hand, a

satellite is a smaller version of the STAC, which was designed to make its services more accessible to children in far-flung areas.

The satellite in the Municipality of Santo Domingo, Ilocos Sur started its operation in 2007, and after 18 months of operation, it was turned over to the local government unit in January 2010 during the impact administration of Hon. Floro "Butch" T. Tadena by a resolution. With his intention to mainstream the CWDs so that they become productive members of their communities, he allocated funds from the 20% development fund of Santo Domingo, Ilocos Sur for this purpose. The families of the beneficiaries, local government units, communities, organizational schools and other stakeholders were involved in the attainment of mission and goals of the project. From that time on, the satellite was developed into what is now the STAC (STAC Files, 2014).

Furthermore, the STAC is under the supervision of the Municipal Social Welfare and Development (MSWD) office. Four personnel man the center: a registered physical therapist, a registered nurse functioning as an occupational therapist, a special education (SPED) teacher and a social worker. The annual budget allocation of the center comes from the one percent of the total fund of the Gender and Development (GAD). For the fiscal year 2014, the total budget of the STAC amounts to P587,000.00, which was used to pay the honorariums of the personnel, the purchase of equipment and to fund other programs and activities of the center. Also, the STAC provides the following services: 1) physical therapy and occupational therapy; 2) Counseling for the parents and caregivers of the beneficiaries; 3) Home visitation. The clients who are not reporting to the center during programs and socializations are provided with periodic home visits; 4) Supplemental feedings. The CWDs are fed by nutritious foods sourced and prepared by the parents, Barangay health workers (BHWs) and other concerned groups for six months. 5) Health and Nutrition lectures. Professional speakers are invited to give lectures on health related topics and are attended by the parents, BHWs and Day Care Workers. 6) Hydrotherapy Sessions. These are basic exercises using underwater techniques like flexion, extension, abduction, adduction and rotation exercises that are taught to the clients. Parents are also taught simple exercises so that they can perform passive exercises to the CWDs while they are at home. 7) Socialization activities. These activities provide avenues for the CWDs to interact with the member beneficiaries, parents, and professionals. These activities include the following: Valentine's celebration in; Hydrotherapy sessions; Easter Day celebration; National Disability Prevention and Rehabilitation Week; Cerebral Palsy Awareness Protection Week; Children's Month Celebration; Halloween Party; and Christmas Program and gift giving sponsored by the NGOs. 8) SPED. One beneficiary who needed to be trained to read and write was given assistance by the center through the special education program. An interview with the physical therapist, the beneficiary after being evaluated for his readiness to study is now being integrated into a "regular" school at the North Central School. This strategy enables and prepares the CWD for a regular school and to freely interact with the children without disability. The center also provides related services: 1) Assistive devices. Wheelchairs and crutches are made available to children who need them; 2) Referrals, CWDs are referred to the Municipal Health Officer for a free check-up and medicines. Referral to other hospitals is given to CWDs that need urgent hospitalization and treatment.

Originally, the STAC caters to CWDs 0-14 years from Santo Domingo and the nearby towns of Magsingal and San Ildefonso. As the years passed, the center has expanded its services to the municipalities of Bantay, San Vicente, and Santa Catalina. Because of this reason, it necessitated the construction of four additional rooms of the center to provide exclusive rooms for the receiving area, physical therapy, occupational therapy, SPED, and comfort rooms. Funds for the project was through the initiative of the family of Hon. Mayor and Mrs. Amado "Lito" T. Tadena, Vice Mayor Butch Tadena, his children and grandchildren and from the donations of generous people of Santo Domingo during the 2013 town Fiesta Kapuso Night (STAC Files, 2014).

About this, the Sangguniang Bayan in its regular session held on July 27, 2015 in Santo Domingo, Ilocos Sur has approved ordinance no. 010, s 2015, otherwise known as "an

Ordinance Imposing Fees and Charges to the Services Rendered by the Stimulation Therapeutic Activity Center, Santo Domingo, Ilocos Sur." Section 2 of the said ordinance on Fees and Charges imposes P50.00 charge per session to a CWD, which is a non-resident; P100.00 for an adult with the disability residing in Santo Domingo; and P200.00 for an adult with the disability who is not a resident of Santo Domingo (LGU Santo Domingo, 2015). To date, the STAC is equipped to respond to the needs of CWDs, who require care and attention. The center is conducive to specific activities like exercises aimed to restore, maintain, and improve general physical condition; and modified activities which are aimed to attain independence, particularly on activities of daily living; SPED classes and counseling.

In this study, the researchers intended to assess the impact of the Stimulation Therapeutic Activity Center services in Santo Domingo, Ilocos Sur for Calendar Years 2008-2014. Results of this study would provide information to the Project Management Office on the effectiveness of the STAC in helping Children with special needs so they can be contributing members of the community

# 2. Research Methodology

This study aimed to determine 1) the personal-related profile of the implementers of the STAC services; 2) the personal-related profile of children with special needs; 3) the impact of the STAC to children with special needs from Calendar Year 2008-2014 in terms of the number of intake as to transfer of residence, number of clients died and number of clients improved and along the type of disability such as physical, behavioral, cognitive and sensory; and 4) the level of satisfaction of the mothers/caregivers of children with special needs on STAC services.

#### III. Methodology

This study employed the descriptive research design. All the 10 STAC implementers in Santo Domingo, Ilocos Sur which includes the MSWD officer, registered physical therapist, registered nurse acting as occupational therapist, SPED teacher, social worker, people with disability President, Chairman on Health and Social Services, and three representatives of the Arangkada STAC Parents Association in Santo Domingo (ASPASD) Ilocos Sur and all the 123 mothers/caregivers with children with special needs availing of the STAC services in said municipality were the respondents of this study during the Calendar Year 2014 to 2015. A questionnaire-checklist was the main data gathering instrument which was formulated by the researchers and content validated by a pool experts. Documentary analysis was employed in obtaining data on the impact of the STAC. The researchers secured permission from the municipal mayor and the administrator of the STAC in Santo Domingo, Ilocos Sur. After obtaining permission, the researchers distributed the questionnaire to the respondents.

The following statistical tools were used to treat and interpret the collected data: 1) Frequency and percentage to describe the personal-related profile of the implementers and children with special needs; 2) Mean to describe the level of satisfaction of the clients to the STAC services; and 3) Trend analysis to determine the impact of the STAC in Santo Domingo, Ilocos Sur from Calendar Years 2008 to 2014 in terms of the number of intakes and along the type of disability

#### 3. Result and discussion

The following were the results of the gathered data as to the impact of the Stimulation Therapeutic Activity Center in Santo Domingo, Ilocos Sur. The personal-related profile of the implementer respondents is as follows: all of the implementer – respondents (10 or 100%) are Bachelor's degree holder and had attended 1-3 training programs related to the care of children with special needs, great majority (8 or 80%) are females, majority (6 or 60%) belong to age bracket 31-40 years old and seven (70%) have served for 5-9 years, and a great percentage (4 or 40%) are physical therapists. In addition, most of the Children with special needs (47 or 38%) belong to 1-6 year old bracket, majority (75 or 60.98%) are males, 78 (63.41%) belong to a family with 4-6 members, 92 (74.80%) live in the urban area and a mark percentage of children with special needs (59 or 47097%) are first and second child

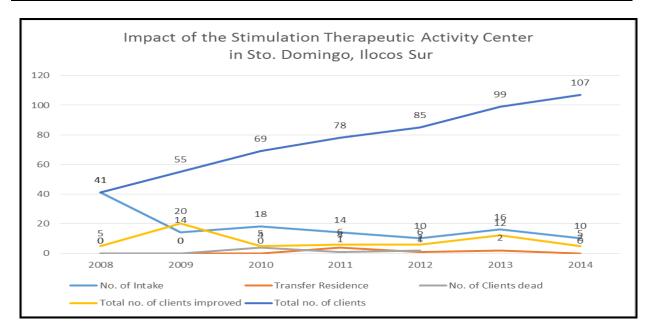
respectively and are suffering from physical disability such as cerebral palsy, dwarfism, and hydrocephalus.

# On Impact of the Stimulation Therapeutic Activity Center regarding the number of Intakes

Table 1 presents the impact of the Stimulation Therapeutic Activity Center in Santo Domingo, Ilocos Sur regarding the number of Intakes from Calendar Year 2008-2014

Impact of the Stimulation Therapeutic Activity Center in Santo Domingo, Ilocos Sur in Terms of the Number of Intakes, Calendar Years 2008-2014

Calendar Year	Number of Intake	Transfer Residence	Number of Clients dead	Total no. of Clients Improved	Total number of Clients
2008	41	_	_	5	41
2009	14	_	_	20	55
2010	18	_	4	5	69
2011	14	4	1	6	78
2012	10	1	2	6	85
2013	16	2	_	12	99
2014	10	_	2	5	107
Total	123	7	9	59	107



# On Impact of the Stimulation Therapeutic Activity Center regarding the Number of Intake

In Calendar Year 2008, there were 41 number of intakes in the STAC and five had improved condition. Fourteen additional number of intake were recorded in Calendar Year 2009 with a total of 55 number of Clients where there were 20 clients with improved condition. During Calendar Year 2010, eighteen were added as a number of intake with a total of 69 number of clients. Out of 69, four died, and five had improved condition. Seventy-eight was the total number of clients in Calendar Year 2011 with the addition of 14 number of intake. From the recorded total number of clients, four transferred to another place; one died, and six had improved condition. In Calendar Year 2012, there was 85 total number of clients with the addition of ten number of intake. There was one who transferred to another place, two died and six with improved condition. Sixteen additional number of

intake were recorded in Calendar Year 2013 with a total of 99 number of clients where two transferred to another place and 12 with improved condition. Lastly, during the Calendar Year 2014, ten were added as a number of intake with a total of 107 number of clients. According to Wildau (2011), the Stimulation and Therapeutic Activity Center (STAC) known as Breaking Barriers for Children (BBC) provides free services for children with disabilities and their families. It is designed to uplift the situation of poor Filipino children, aged 0-14, especially those who have disabilities to help them normally live like other children.

# On Impact of the Stimulation Therapeutic Activity Center along the Type of Disability

Table 2 displays the impact of the Stimulation Therapeutic Activity Center to children with special needs along the type of disabilities from Calendar Years 2008-2014

Table 2
Impact of the Stimulation Therapeutic Activity Center to children with special needs along the type of disabilities from Calendar Years 2008-2014

T	F	%	With improved condition	
Type of Disability			f	%
Physical Disability				
Cerebral Palsy	42		27	1
Dwarfism	3		1	2.5
Hydrocephalus	3		2	2.5
Total	53	43	30	50.85
Behavioral disability				
Autism Spectrum Disorder	14		6	
Attention deficit Hyperactivity Disorder	9		6	
Total	23	19	12	20.34
Cognitive Disability				
Down Syndrome	12		4	
Delayed Gross Motor Development	5		-	
Total	17	14	4	6.78
Sensory Disability				
Speech Impairment only	16		9	
Visual Impairment only	9		4	
Deaf and Mute	5		-	
Total	30	24	13	22.03
Grand total	123	100	59	100

On Type of Disability. A great percentage of the children with special needs (53 or 43%) are with physical disabilities and the least (17 or 14%) are suffering from cognitive disabilities.

<u>On Improved Condition.</u> The majority of Children with special needs (30 or 50.85%) who have improved condition suffered from the physical disability and the least (4 or 6.78%) suffered from the cognitive disability.

# **On Physical Disability**

On Cerebral Palsy. Out of the 29 with improved condition, 16 can walk without assistance, seven can do functional activities like reaching, grasping and releasing and one each can maintain head-trunk control, can do functional activities like rolling, creeping, head and trunk control and crawling, can assume and maintain a standing position, and, can walk without assistance and write read, and say words of more than two syllables.

On Dwarfism. One child with dwarfism can recite, sing, count, draw objects and can walk without assistance.

**On Hydrocephalus.** Two hydrocephalus children can identify words of more than two syllables.

# On Behavioral Disability

On Autism Spectrum Disorder (ASD). Two children with ASD are cooperative, with good attention span, able to read, write, draw and with minimal assistance in functional independence measure like eating, bathing, drawing and toileting and one each can reach and grasps objects with fair attention span and with head banging noted only sometimes, can say words of more than two syllables and can reach and grasp objects, can read, write, draw and count and can grasp manipulate objects and communicate with fair articulation, and, can reach, grasps, manipulate objects with head banging noted only sometimes and with moderate assistance in functional independence like eating, dressing and toileting.

On Attention Deficit Hyperactivity Disorder (ADHD). Two Children with ADHD can copy letters and after listening to a short story, can answer yes or no question about the story and one each can read, write, draw, cooperative with fair attention span and able to follow instructions, can write, draw shapes, quite with fair attention span and with moderate assistance in functional independence like eating, bathing, dressing and toileting, can write, read very well, draw, count and with minimal assistance in functional independence like eating, bathing, dressing, and toileting and can write, read, count, say words of more than four syllables and with moderate assistance in functional independence like eating, bathing, dressing and toileting.

# On Cognitive Disability

<u>On Down Syndrome.</u> Two children with Down Syndrome can walk without assistance and one each can walk without assistance, and copy letters of the alphabet, and, can copy words and phrases.

#### **On Syndrome Disability**

On Speech Impairment Only. Two children with speech impairment only can identify words more than two syllables and one each can express himself in writing, can copy letters, express himself and carry out simple instruction, can express herself in writing yes or no, can copy letters and uses standard signs, can copy letters and independent in activities of daily living (ADL) like grooming and bathing, can copy words and phrases, and, can say words more than two syllables and can grasps and release objects.

<u>On Visual Impairment Only.</u> One child each with visual impairment only can identify words of more than two syllables, can express herself and carry out simple instructions, can follow simple instructions, and can express herself by saying yes or no.

# LEVEL OF SATISFACTION ON STAC SERVICES

Table 3 shows the level of satisfaction of the mothers/caregivers of children with special needs on STAC Services

Table 3
Level of Satisfaction of the Mothers/Caregiver of Children with Special Needs on Stimulation
Therapeutic Activity Center Services

Type of Therapy/Service/Activities	Mean	DR	
Physical Therapy	5.00	Very Much Satisfied	
Occupational Therapy	5.00	Very Much Satisfied	

Special Education Service	5.00	Very Much Satisfied	
Socialization Activities	5.00	Very Much Satisfied	
Supplemental Feeding	5.00	Very Much Satisfied	
Referrals	5.00	Very Much Satisfied	
Discussions with parents	5.00	Very Much Satisfied	
Grand Mean	5.00	Very High	

# ON LEVEL OF SATISFACTION

The grand mean rating of 5.00 indicates a "Very High" level of satisfaction of the mother/caregiver respondents on the STAC services in Santo Domingo, Ilocos Sur.

On Physical therapy. The mother/caregiver respondents are "Very Much Satisfied" (x=5.00) with the physical therapy rendered in the STAC since the treatment are done 2-3 times a week such as a point range-of-motion, stretching exercise, muscle stretching, neuro-developmental techniques and application of modalities such as hot and cold pack and electrical stimulation.

The positive outcome of physical therapy to children with the disability, CWDs made a significant difference not only to their lives but also to their family as well. Motor function is the most affected part of the body of a child with cerebral palsy. According to evidence-based practice, several forms of physical therapy to children cerebral palsy (CP) will significantly improve their muscle strength, gait, and endurance, bone mineral density. Also, massage improves the feeling of well-being of children with CP and their parents (Franki et al., 2012). Hence, physical therapy plays an imperative role to a CP child.

On Occupational Therapy. The mother/caregivers respondents are "Very Much Satisfied" (x=5.00) with the occupational therapy services of the STAC. The findings mean that behavior modification techniques are applied to enable children with disabilities to become independent and perform self-care and proper hygiene, and basic concepts and ideas are introduced to develop their cognitive skills. An occupational therapy practitioner may assist and make some recommendation to families with CWDs to make things less complicated. For example, the modifications to a high chair for proper positioning to maximize a child's ability to self-feed or engage in play. Moreover, to promote a closer relationship among the family members of a child with Down syndrome must engage to play therapy. It promotes successful interactions between a toddler and his siblings and enables one to assess how an infant's sensory processing affects the parent-infant relationship during daily routines (Dunn, 2004). Furthermore, an occupational therapy practitioner can as well provides teachings on different feeding techniques to a child with Down syndrome to prevent possible complications (Bruni, 2001). The numerous services offered by an occupational therapy provider hasten the daily task of a family with CWD. As a result, suffering and difficulties of families with CWD's are significantly lessened thus making them very much satisfied.

On Special Education. The mother/caregiver respondents are "Very Much Satisfied" (x=5.00) with the special education program of STAC as each child is individually assessed upon intake to the project which becomes the basis for individualized educational program and SPED sessions are conducted at the STAC to prepare children with special needs for regular schools and to provide supplemental as well as remedial instruction.

Special education helps students with disabilities as well as others that require a variety of accommodations to maximize their potential. Through Individualized Education Program, approximately 16 percent stopped receiving those services each year over a two-year period because they no longer required special education services. Also, the percentage of students with disabilities who achieved at or above the basic level of proficiency rose from 22 percent in 2000 to 35 percent in 2009 (US Department of Education). It simply implies that special education programs can turn the table for CWDs. The impossible dream of a CWD before is now attainable. The cognitive improvement of the respondents' CWDs brought an unexplainable joy to their hearts (Dunn, 2004).

<u>On Socialization Activities</u>. The mean rating of 5.00 revealed that the mother/caregiver respondents are "Very Much Satisfied "with socialization activities of the STAC. The findings could imply that the social enhancement activities of the STAC are conducted to boost the children with special needs'

self-esteem and enhance community participation such as exposure trips; family days during Christmas party, Easter day celebration, Valentines celebration and Halloween celebration; and disability-related celebrations such as the national disability prevention and rehabilitation week, children mentoring and gift giving.

Socialization activities in STAC develop relationships among patients, parents, and the multidisciplinary team; it also strengthens bonds between CWD and their parents. Through their relationship with others and their growing awareness of social values and expectations, children build a sense of who they are and of the social roles available to them. Zentail et al. (2011) found out that a CWD performs better and improve faster when they are socially interacting with others. People whom CWD have daily interactions with, influence and can even modify the development of children with disabilities.

On Supplemental Feeding Program. The mother/caregiver respondents are "Very Much Satisfied" with the STAC's supplemental feeding every Friday for six months and hydrotherapy every summer at the beach or swimming pool (x=5.00).

Complementary feeding is offered by the center to improve the nutritional status of their clients. As a result, a well-nourished CWDs who are much capable of undergoing several therapies to maximize their treatment for faster achievement of their treatment goal.

Growth and nutrition disorders are common secondary health conditions in children with disability. Most differently able children are suffering from malnutrition because of their condition. Malnutrition in children with CP is often caused by poor oral-motor function, which impairs the child's ability to consume safely calories and nutrients necessary to support growth (Fung et al., 2002). Consequently, malnutrition leads to diminished immune function causing increased susceptibility to infection. Moreover, malnutrition also affects the neurological status of a child; causing a diminished cerebral growth, delayed cognitive development, and abnormal behavior (Liu et al., 2003) The delayed cognitive development and attachment behavior may also affect social-emotional development.

On Referral Activity. The mean rating of 5.00 indicates that the mother/caregiver respondents are "Very much Satisfied" with the coordinative activity of the STAC staff with local partners beneficiaries needing services other than those provided by the STAC project (x=5.00).

On Discussion with Parents. A mean rating of 5.00 revealed that the mother/caregiver respondents are "Very Much Satisfied" (x=5.00) along discussion of the STAC staff with parents. The findings imply that the STAC staff discuss the condition or progress of the child to the parents/caregivers.

Through the various information the parents and significant others gained from the discussions conducted by STAC, parents were able to handle difficult situations with grace. Furthermore, parents may also contribute much in the treatment of a CWD. Parents/significant others may gather data about the student's performance both before and after the treatment and provisions of special services.

#### V. Conclusions

The "Very High" level of satisfaction on the Stimulation Therapeutic Activity Center Services could be attributed to the claim of the respondents that they are "Very Much Satisfied" with the services rendered along physical therapy, occupational therapy, special education program, socialization activities, supplemental feeding program, referral activity and discussion with parents. Regarding the number of Intake from Calendar Years 2008-2014, half of the children with special needs had improved condition which could be related to the satisfactory services of the STAC. In terms of the type of disability, a substantial percentage suffered from physical disability specifically cerebral palsy who can now walk without assistance, do functional activities like rolling, creeping, head and trunk control, crawling, reaching, grasping and releasing and the least suffered from cognitive disability specifically down syndrome who can now copy words and phrases and needs physical assistance in functional independence measure like eating, bathing, drawing and toileting. All those who can now walk without assistance are taken cared of the SPED teacher and all children with special needs with unimproved and improved conditions are continuously receiving the services of the STAC. Truelove (n.d.) mentioned that with consistent therapy, children with disabilities may have more opportunities to be involved and interact in society. The involvement of these children in therapy appears to benefit not only their lives but also the lives of the people around. According to Wildau (2011), the STAC is

designed to uplift the situation of poor Filipino Children, age 0-14, especially those who have disabilities to help them normally live like other children.

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