



MANAGING TRAUMA IN TRAFFICKED CHILDREN USING A GAME INTERVENTION AT THE TOUCH A LIFE CARE CENTER

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ABSTRACT: *Studies show that, art therapy is very vital in managing children with some form of emotional or psychological disturbance. (Malchiodi, 2012). This study concentrates on art therapy in the management of trauma in children at the **Touch-a-Life-Care-Centre** in Ghana. Majority of these children have been rescued from trafficking on the Volta Lake. The main objectives of this research were: To find out the type of therapies that existed at the Touch-a-Life-Care-Centre. Also, to examine the therapies used as interventions at the Centre. And finally, to introduce and test for potency of a game-based intervention as an additional intervention for managing trauma in victims (children). The study is a case study which adopted the exploratory research approach with questionnaire, observation and interview as data collection instruments. The study also used Scratch software to design the game intervention. The results obtained from the studies showed that the use of game intervention in Art Therapy for managing traumatized children at the Touch-a-Life-Care-Centre helps to transform the lives of children by revamping their concentration and sustain their interest for a longer period in the art class. The introduction of the game-based intervention was also warmly welcomed by the children at the Touch-a-Life-Care-Centre. It is recommended that, the Game Intervention in Art therapy should be incorporated in the school curriculum. Lastly, there is the need for the recruitment of art therapy specialists in our public health facilities to promote effective intervention and improve the overall wellbeing of children who participate in clinical art therapy sessions.*

KEYWORDS: Intervention, Trauma, Psychological, Brain, Traumatize, Touch A Life Care Center, Ghana

INTRODUCTION

The introduction of Art Therapy as a tool in dealing with clients suffering from Post-Traumatic Stress Disorder (PTSD), according to number of researches conducted, has proven to be a positive intervention toward recovery in most jurisdictions. Art includes more than just plastic or visual art, but also, other art forms which include arts of literature and music. (Thistlewood, 2002). According to Fichner-Rathus (2004), art is everywhere around us and it affects everybody in our everyday lives. Art performs diverse roles and functions that are advantageous to human in our everyday lives, such roles, aside esthetics, include medicinal and financial benefits (Meyer, 1994). Involvement in arts and culture has been presented to produce positive reasoning, social and behavioral effects for human development and also for a certain high quality of life through the entire human lifespan (Community Partnership for Arts and Culture, 2014).



According to (Stuckey et al., 2010), depression and stress are part of the leading causes of certain cardiovascular (heart) diseases and certain chronic diseases. In the past decade, however, health psychologists have started research into how art could be adopted in a number of means to manage emotional wounds, improve comprehension of a person's personality, reduce symptoms of certain diseases and emotional states such as depression and stress, and adjust behaviors and thinking patterns of individuals (Stuckey et al., 2010). Four primary therapies using art forms emerged as expressive art modalities as interventions to promote health. These treatment procedures include song engagements, pictorial art therapy, effort centered inventive communication and communicative inscriptions (Stuckey et al., 2010). This research however focuses on visual art therapy, defined as the employing of materials of art which express a person's individuality and contemplation in the presence of a certified art therapist (The British Association of Art Therapist, 2013). The American Art Therapy Association, (2015) also defines Art therapy as an area of mental health whereby clientele adopt art forms, the inventive progression and the finished work to search their emotional states, settle inward struggles, raise self-will, shrink nervousness and upturn self-regard, completing the definition of the BAAT.

In an interview with Mrs. Margaret Karikari, the Chief Executive Officer of a Wellness Centre in Kumasi (2017), she indicated that art therapy is not very known among therapists in Ghana and hence, not used as an intervention in most Care Centers.

The Care Centre of the Touch a Life Foundation located at Abrankese in the Ashanti Region of Ghana, is one center which employs expressive art therapy as an intervention in managing trauma in children at the premises. Preliminary studies by the researchers showed that the younger children at the Touch a Life Care Centre lose focus during therapy sessions after an average of ten minutes after session commences and would start getting squirmy. This, therefore interrupts the sessions, and one may dare say that not all the objectives for the sessions per the day were achieved. This assertion was confirmed in an interview with Kwame Dadzie (2017), the art instructor at the Touch a Life Care Centre. These younger children confirmed by their caregivers and the Coordinators at the Touch a life Care Centre present with one or more common trait of trauma, which include, according to Perry, (2014), fearfulness, redrawing from people and activities, sleep problems, sadness, poor social functioning and loss of interest in activities. Fears and uncertainties of children with troubling experiences and the safety of others persistently occupy the thoughts of the children, and these fears and uncertainties cause interferences or loss of focus in the children when they are engaged in activities (Goldstein, 2012). Having their minds occupied with such thoughts, the younger children at the Touch a Life Care Centre, who confirmed in interviews, being troubled by experiences from the Volta Lake and their domestic violent backgrounds, have no more vacancies in their minds to accommodate other thoughts which will stem from other activities which are intended to manage trauma in these children. Goldstein (2012) opined that, indulging in active play has a puzzling effect of increasing attention span and also ameliorating the efficacy of reasoning and solving problems.



RELATED LITERATURE REVIEW

Concept of Art Therapy

Art therapy is a mental health occupation where patients, aided by art therapists, adopt art forms, the inventive procedure, and thereafter, the final art piece to search their state of mind, resolve emotional clashes, boost knowing of oneself, manage behaviour and obsessions, nurture communal abilities, expand authentic coordination, lessen uneasiness, and upsurge self-worth. An aim of this area is to rally for or restore the mental and general well-being of the patient. The area of Art therapy necessitates the knowledge of pictorial art (drawings, paintings, sculptures, and other several forms of art) and also the inventive process of making the art, and also of personal advancement, psychosomatic, and counselling philosophies and skills (American Art Therapy Association, 2013).

Art therapy is a blended discipline involving two basic fields which are art and psychology, combining features from each source to form a complete unit. Malchiodi, (2007) states that there are two general definitions of art therapy, and they are the process of art as therapy, and the symbolic communication in art psychotherapy. The process of making art can provide inherent benefits of relaxation, be self-soothing, and fun for the artist therefore; the action itself is therapeutic (Malchiodi, 2007). The second definition proposed by Malchiodi (2007) is fixed on the impression that art is a source of symbolic statements. The method, which is usually known as art psychotherapy highlights– art languages, pictures and paintings. These greatly aids in express matters, emotions, and struggles. Therapy is very vital, and the art forms develop substantial oral discussion between the patient and the art therapist.

Trauma

Trauma connotes a highly stressful event (Giller, 1999). Psychological trauma then again, is the special individual experience of an occasion or continuing conditions, in which a person's capacity to coordinate his/her enthusiastic experience is overpowered or an individual encounters (subjectively) a risk to life, real honesty or rational soundness (Pearlman & Saakvitne, 1995). In this manner an awful mishap or circumstance makes mental injury when it overpowers the person's capacity to adapt and leaves that individual dreading demise, obliteration, mutilation, or psychosis. The individual may feel inwardly, psychologically and physically overpowered. The conditions of the occasion generally incorporate manhandle of energy, selling out of put stock in, capture, vulnerability, agony, disarray, or potentially misfortune (Giller, 1999).

Childhood Trauma in Mental Health

Cerebral health counsellors are cautious to give a diagnosis for mental disorders involving trauma because of the related humiliations that disturb young children. At times, when a youngster is determined to have dysfunctional behaviour, society concentrates on the analysis and not the child (Zeanah & Zeanah, 2009). According to the Child Trauma Academy (2002), its research focuses on a chain of command of brain work. The human brain is organized from the least complex (mind stem) to the most intricate (frontal cortex). Capacities from the easiest and unconstrained (control of body temperature) to the most mind boggling (theoretical idea) are intervened in parallel with these territories.

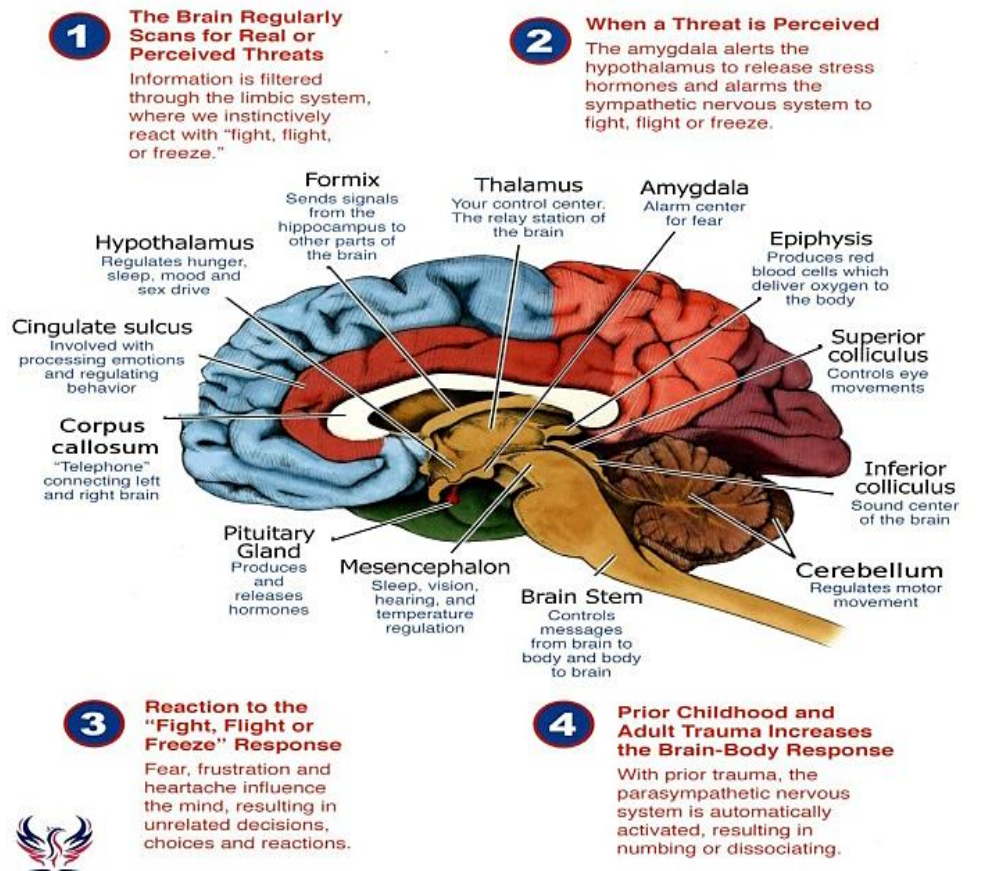


Fig 1: Trauma Brain Processing

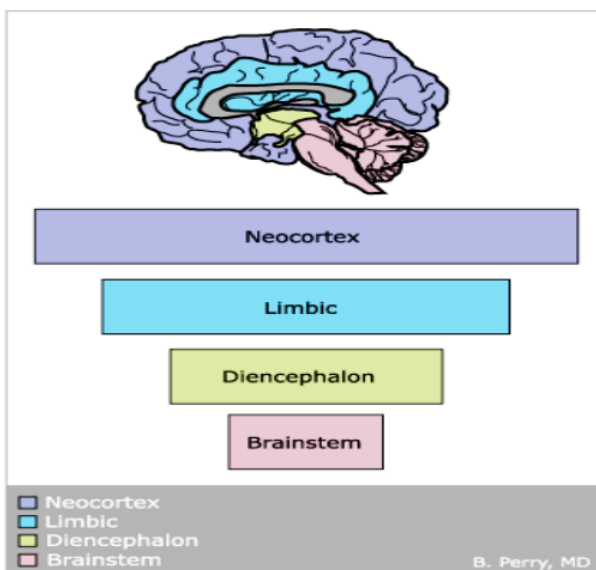


Fig: 2 The Human Brain

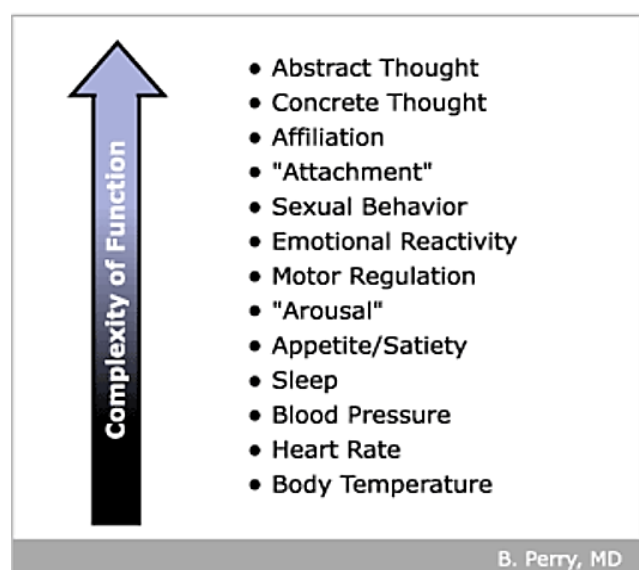


Fig: 3 The Human Brain



METHODOLOGY

This study adopted an exploratory research approach. Exploratory research is set simply to search the research questions. It may not suggest ultimate and irrefutable solutions to current hitches. Contrary to conclusive evidence, this type of research is conducted to help give an insightful understanding of a situation.

Research Setting

The Touch a Life Care Centre is where the activities of this study took place. In November, 1999, the Touch a Life Foundation was started by Pam and Randy Cope after they lost their oldest son. The Care Centre of the Touch a Life Foundation is located at Abrankese in the Bosomtwe District of the Ashanti Region. Other art therapies that are available at the center were art therapy, music therapy, psychotherapy and play (sports) therapy.

Population

The target population for the study was the total number of traumatized children aged between the ages of 6 and 13 in Kumasi at the Touch a Life Care Center.

A simple random sampling method was used in selecting 26 children aged 6 to 13 years from the approximately 86 children at the centre who were observed closely. The simple random sampling technique was preferred since it gave every child an equal chance of being chosen to form the sample size, hence, scientific. It also provided relatively accurate results compared to other sampling methods.

Instrumentation

The observation method was used in gathering data from the sampled children for the study. However, questionnaire was used in testing the potency of the game. The interview guide contained between seven (7) to seventeen (17) questions with some sub questions, which were simple and clear. The researchers used SCRATCH, software from Massachusetts Institute of Technology (MIT) lab, to develop the game-based intervention. Emo Testa, an emotion testing instrument was derived from PrEmo by Pieter M.A. Destmet. This instrument was used to test for the potency of the game with accompanying computerized elements and questionnaire designed by the researcher.

Data Collection

The researchers used both primary and secondary data for this study. Observation of the traumatized children aged between 6 and 13 at the Touch a Life Care Centre was done. A structured interview guide was used to gather the primary data. Secondary data, on the other hand, was gathered from relevant books, journal, newsletters, articles which were primarily sought from the internet.

The game intervention

Youngsters or children learn to be inventive, do teamwork and also think critically when designing and programming or playing any other educational game (Perry, 2014). The researchers developed a game called Freedom Game from software called SCRATCH. SCRATCH is the software from the Massachusetts Institute of Technology (MIT) laboratory,

used to develop the game-based intervention. Scratch is a semantic word for programming and also an online society that allows one to invent personal collaborative animations, stories, and games which can be shared with the world.

The game has three levels, the first level is a **Maze** with the starting point being the lakeside and ending at their home. The second level is **catching of items** and the third and final level is **Catching of Careers**. The researchers had in mind to help these traumatized children forget about the past and move on in life, this goes to explain the choice of this game. The game intervention was inspired by the states of mind of the children at the Touch a Life Care Centre and the stories they related through their therapy sessions.

Rules of the game

The game basically runs on scores, but not time. If the player is bitten five (5) times by the snakes, then the game is over. If a player also runs into a hedge, he/she cannot move anymore as the hedge will prevent him/ her from moving forward. When this level is over, the player (child) then moves on to the next level which is the catching of items and then catching the career fruit. It is only if the player completes the preceding level that he can move on to the next level. The game is played and regulated by keys **A S D F** on a computer keyboard.

The Maze

The maze is a winding road with obstacles of hedges and snakes trying to prevent the children from getting home. This depicts the challenges they faced in their past and helps them to overcome these challenges, not only in the game but also in their minds. The starting point is from the lake side and it ends in their homes. Upon overcoming the challenges, the child has a sense of fulfillment and accomplishment.



Fig. 4. The Maze Level Interface of Freedom Game

Catching of Items

Catching of items is made up of four circles in which food items appear simultaneously. Like the maze, this game is to help the children have a sense of accomplishment after finishing successfully. This boosts their self-worth and self-esteem. This level particularly is to help the child concentrate better as they lose scores anytime they miss an item. They must therefore focus on the items and make sure they move fast enough to catch the item before it disappears. The items that appear are mainly food items ranging from bananas, juices and sandwiches. Upon losing this level, the child will have to go back to the maze and start the game all over again. In an attempt to avoid starting the game all over again, the player (child) will have to pay rapt attention to the game and make sure he catches as many items as possible to be able to move on to the next level (career catching).

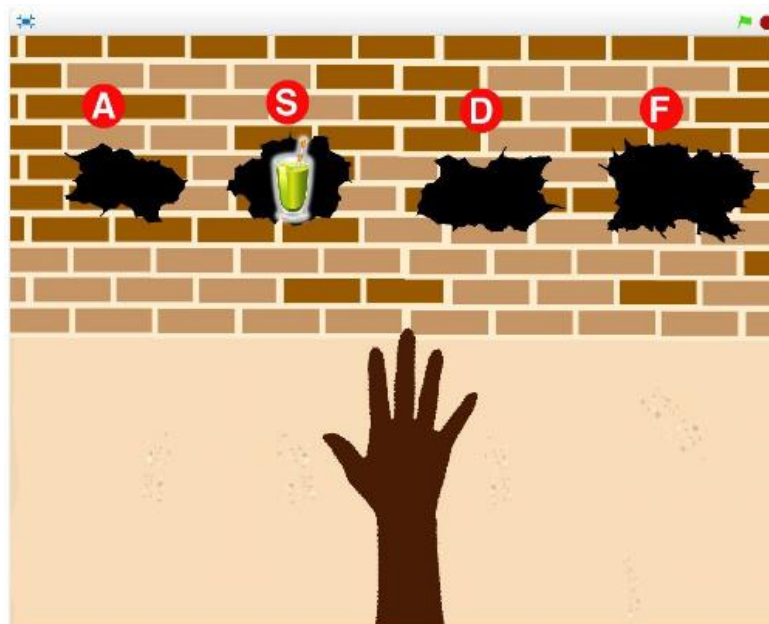


Fig: 5 Catching of Items Interface of the Freedom Game

Career Catching

This section of the game educates the children on careers out there and helps them to envision a more beautiful future and help build their hopes. This game has an overview of a tree with fruits tagged with careers, the child only moves a bowl under the tree to catch the tagged fruits. Catching the career fruits will help build a certain kind of mind-set and determination in the children to revamp their visualization. This also educates the children on careers that they can aspire for when they are adults.



Fig: 6 Career Catching Interface of the Freedom Game

1
What do you feel about this?



Fig. 7 – 16: The Emotional Testing Tools: (Emotional images 1- 10)

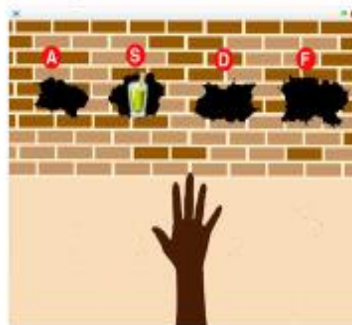
2

What do you feel about this?



3

What do you feel about this?



4

What do you feel about this?



1



2



3



4

5

What do you feel about this?



1



2



3



4

6

What do you feel about this?



1



2



3



4

7

What do you feel about this?



1



2



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4

8

What do you feel about this?



1



2



3



4

9

What do you feel about this?



1



2



3



4



Fig. 7 – 16: The emotional testing tools: (Emotional images 1- 10)

Table 1: Elements Under Images 1-10 in the Emotional Testing Tool (Emo Testa)

Serial Number	Items
1	Image of Game Interface (Maze)
2	Image of the Game Interface (career catching)
3	Image of Game Interface (catching of item)
4	Image of the Lakeside
5	Image of Game Interface (catching Of item)
6	Image of the Lakeside
7	Image of a Snake in Water
8	Image of the Lakeside
9	Image of Game Interface (catching of item)
10	Image of the Lakeside

Table 2: Facial Expression to Show Emotions

1	2	3	4
(HAPPY)	(SAD)	(SCARED)	(ANGRY)



RESULTS AND DISCUSSION OF FINDINGS

The game-based therapy was introduced to the 26 children randomly selected for the research. It was observed that out of the 26 children, 18 representing 69% of them had a great understanding of the game and played with great excitement. 2 children representing 8% had a fairly good understanding and played with fairly high excitement. 6 children representing 23% were totally indifferent about the game and were found to be defenseless with snakes in the maze game. This, they left unfinished not bothered about the outcome of the game. In total, 20 children representing 77% were excited about the game and wanted a chance at playing it again, while 6 children representing 23% showed no or little enthusiasm towards the game and had to be called out to come and try their hands at it again.

Table 3: Representations of Answers to the Emotion Testing Tool (Emo Testa) with Their Means

S. N	Name	image 1	image 2	image 3	image 4	image 5	image 6	image 7	image 8	image 9	image 10
1	Boy 1	1	3	4	3	1	3	4	4	1	4
2	Girl 1	1	4	4	3	1	4	4	3	1	4
3	Girl 2	1	4	3	4	1	4	4	4	1	4
4	Girl 3	1	2	3	4	1	4	4	4	1	4
5	Girl 4	1	2	3	4	1	4	4	4	1	4
6	Girl 5	1	3	4	3	1	1	3	3	1	3
7	Girl 6	1	3	3	4	1	3	4	3	1	3
8	Boy 2	1	4	4	3	1	3	4	3	1	3
9	Boy 3	1	3	4	3	1	3	4	3	1	3
10	Girl 7	1	3	4	3	1	3	4	3	1	3
11	Boy 4	1	2	3	3	1	3	4	3	1	3
12	Boy 5	1	2	3	3	1	3	4	3	1	3
13	Boy 6	1	2	3	3	1	3	4	3	1	3
14	Boy 7	1	2	3	3	1	3	4	3	1	3
15	Girl 8	1	4	3	2	1	3	3	4	1	3
16	Girl 9	1	2	4	2	1	2	4	2	1	2
17	Girl 10	1	2	4	2	1	2	4	2	1	2
18	Boy 8	1	3	3	4	1	3	4	3	1	2
19	Girl 11	1	2	3	4	1	2	4	3	1	3
20	Girl 12	1	4	3	4	1	4	3	2	1	4
21	Girl 13	1	2	3	4	1	4	3	2	1	4
22	Girl 14	1	4	2	1	1	4	4	2	1	4
23	Boy 9	1	2	4	4	1	2	4	3	1	4
24	Girl 15(DV)	1	2	3	1	1	1	3	1	1	1
25	Girl 16 (DV)	1	4	3	2	1	1	3	1	1	1
26	Boy 10	1	3	4	3	1	3	4	1	3	2
Mean		1	2.808	3.346	3.038	1	2.885	3.769	2.769	1.077	3.0385

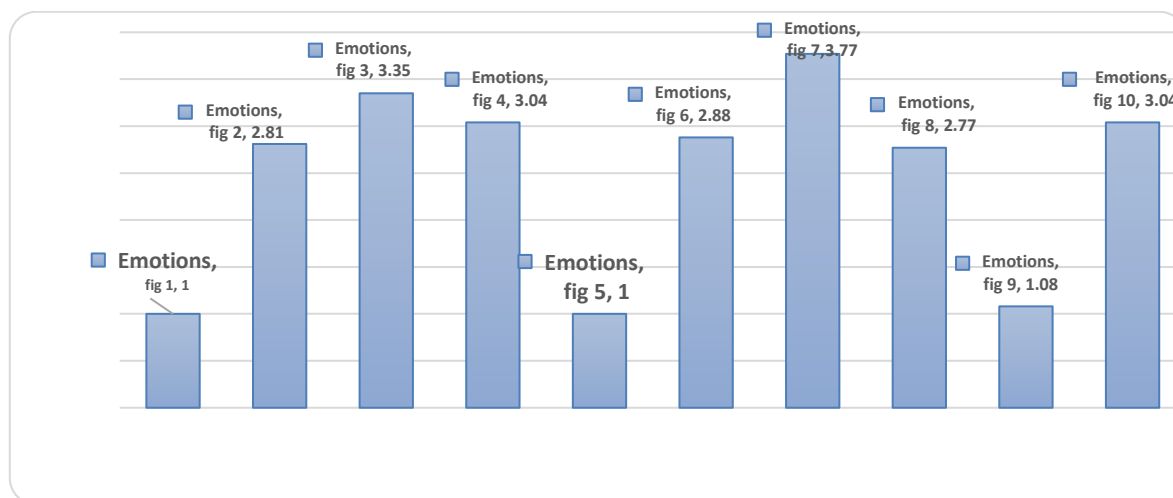


Table 4: Graphical Representation of Mean Calculated

During the time of the game, few of the children were indifferent about playing the game or having their hands on the game. Majority of the children, however, were very interested in the game and could not wait to have a turn in playing it. Some of the children who were interested in the game however could not catch the concept of the game easily. This could be due to the differences in the level of mental development of the children. A few of them figured the game out after a few attempts however, and could play it with much more ease. About 9 of these children caught the concept of the game the moment they saw it and had a great time playing it. The game acted as a revamping agent as majority of the children went on with their therapy sessions with better focus and enthusiasm. In personal conversations with the children, they mentioned that they felt refreshed and excited after playing the game. Some of the children also mentioned that they sometimes felt absent minded during the therapy sessions, but after playing the game they felt more attentive and focused.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The Freedom Game intervention which was developed and introduced to the children at the TLCC by the researchers was greatly welcomed by the children. Even though developmental differences and other factors such traumatic experience influenced the understanding level of the children and their assimilation, all the children gave positive feedbacks after playing the game.

Majority of the children at the TLCC, after playing the Freedom Game, expressed their excitement and feelings of refreshment. They were charged up and fully prepared to continue with their therapy session.

As children basically tell and show their emotions and views in their art works, experts and



patrons should be able to detect and help manage emotional and/or psychological troubles that children may have, based on the information the child may put across in his art and the details he gives about the art work over time. According to Enti (2008, p. 235) Article 13 clause (1) of the United Nation's Convention on the Rights of the Child states that "the child should have the right to the freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontier, either orally, in writing or in print, in the form of art, or through any other media of the child's choice". This implies that it is the right of every child, and not a privilege to express him or herself through art forms of all kinds of their choice.

Suggestions for Future Research and Stakeholders

1. The study recommends that thorough research into other causes of trauma and its effects on children is done and develop a solution to remedy them. These traumatic experiences may result from divorce from parents, losing parents or caretaker, molestation, witnessing or experiencing fatal accidents or tragic events, which are ignored or unnoticed and cause lasting effects on children as they grow
2. More areas under art therapy for managing trauma in children in other areas can also be investigated. Some of these areas include drama as therapy, play therapy, music therapy, dance therapy among others. New therapies can also be proposed by researchers to improve and update the therapies in Art Therapy that are already in practice.
3. Art therapy should be introduced into our training colleges and tertiary institution, for more art therapists to be trained and absorbed into the system, giving the role of Art in Therapies.
4. Lastly, the Ministry of Women, Children and Social Protection could enforce a policy to protect children who have gone through some sort of molestation and sexual abuse from the stigma in the society, this will encourage them report such abuses so that they can be helped by professionals to manage the trauma they may experience from such bad experiences to help them develop better emotionally and psychologically.

REFERENCES

- Aldridge, D. (2003), The therapeutic effects of music, in Jonas W, Crawford C. C (eds): Healing, Intention and Energy Medicine, London: Churchill Livingstone
- Allen, J. G. (2001) Traumatic relationships and serious mental disorders: Chichester, UK: John Wiley & Sons
- American Art Theory Association (2013) Diagnostic and statistical manual of mental disorders (8th ed., text rev.): Washington, DC: Author
- American Psychiatric Association (2013) Annual Report
- American Psychological Association (2008) Presidential Task Force on post-traumatic stress disorder and Trauma in Children and Adolescents
- Avrahami, D. (2005) Visual art therapy's unique contribution in the treatment of post-traumatic stress disorders: *Journal of Trauma & Dissociation*. 6(4), 5-38. doi:



10.1300/J229v06n04_02

- Bowden, A., Fox-Rushby, J. A., Nyandieka L. and Wanjau, J. (2002) Methods for pre-testing and piloting survey questions: Illustrations from the KENAOL survey of health-related quality of life.
- Bowers, J. J. (1992). Therapy through art: Facilitating treatment of sexual abuse. *Journal of Psychosocial Nursing*, 30(6), 15-24.
- Child Trauma Academy (2001) Bonding and attachment in maltreated children: Consequences of emotional neglect in childhood: In Perry, B.D. (Ed.), *Caregiver Educational Series* (pp. 3-5). New York: W.W. Norton & Company
- Child Trauma Academy (2002)
- Child Trauma Academy (2014) *Helping Traumatized Children: A Brief Overview for Caregivers*: In Perry, B.D. (MD, PhD), *Caregiver Educational Series* (pp 2-3). New York: W.W. Norton & Company
- Coates, S. and Gaensbauer, T. J. (2009) Event trauma in early childhood: symptoms, assessment, intervention
- Coholic, D., Lougheed, S. and Lebreton, J. (2009), The helpfulness of holistic arts-based group work with children living in foster care: *Social Work with Groups*, 32:1-2, 29-46.
- Cole, S. F., O'Brien, J. G. and Gadd, M. G. (2005) *Helping Traumatized Children Learn: Massachusetts Advocate for Children*
- Coleman, V. D. and Farris-Dufrene, P. (1996) *Art therapy & psychotherapy: Blending two therapeutic approaches*: Washington, DC: England Accelerated Development
- Davis, W. B., Gfeller, K. E. and Thaut, M. H. (1999) *An Introduction to Music Therapy* 2nd edition: Boston, McGraw-Hill Companies, Inc,
- Edwards, D. (2004) *Art therapy: creative therapies in practice*: Series Editor: Paul Wikins. Livroconsultado a, 24
- Emory, W. and Cooper, D. R. (2003) *Business Research Methods*
- Enti, M. (2008) The influence of temperaments on the artwork of children
- Ettcoff, N. L. and Magee, J. J. (1992) Categorical perception of facial expressions: *Cognition*, 44, 227-240.
- Frisch, M. J., Herzog, D. B. and Franko, D. L. (2006) Residential treatment for eating disorders: Manuscript submitted for publication.
- Gardner, J. E. (1991) Can the Mario Bros. help? Nintendo games as an adjunct in psychotherapy with children, *Psychotherapy: Theory, Research, Practice, Training*, 28, 667-670
- Goldstein, J. (2012) Play in Children's Development, Health and Well- Being *Health Policy and Planning*. 2002; 17:322-330. Retrieved from <http://dx.doi.org/10.1093/heapol/17.3.322>. [PubMed]