

## The Effectiveness of Sandplay Therapy to Improve Students' Self-Esteem: A preliminary study in Brunei Darul Salam

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### Abstract

**Purpose:** This research was conducted to identify the effectiveness of sandplay therapy to improve students' self-esteem among students.

**Methods:** The sample was 16 students for experimental group, who received sandplay therapy, in comparison to the 16 students from control group who did not receive any treatment intervention. The instrument used in this research was Self-Esteem Inventory developed by Coopersmith. Data were analyzed using SPSS version 22 using Manova Repeated Measure Method, pre-test and post-test instruments.

**Results:** The results from multivariate Pillai's Trace test shows the main effect of the sandplay therapy from the post-test is significant  $F(5, 11) = 41.372, p < .05$ . The univariate shows that there is significant difference of the sandplay therapy to the general self-esteem  $F(1, 15) = 49.853, \alpha < .05$ , social self-esteem  $F(1, 15) = 63.646, \alpha < .05$ , parental self-esteem  $F(1, 15) = 82.924, \alpha < .05$  and academic self-esteem  $F(1, 15) = 80.071, \alpha < .05$ .

**Conclusions:** Sandplay therapy can be used in school to help students improve their self-esteem. Given this, one of the issues relating to adolescents is low self-esteem. Therefore, by applying sandplay therapy can minimize the issue surrounding low self-esteem among adolescents particularly in Brunei Darussalam. However, since limited study on the usage of this kind of therapy, it is suggested that further study on the applicability of this therapy should be conducted.

**Keywords:** sandplay therapy, self-esteem, effectiveness

### 1. Introduction

Children and adolescents are important assets for each country. Given this, it has become a high concern to the country in regards to younger generations in particular school students, to be able to express and present themselves confidently. Based on the new 21<sup>st</sup> Century National Curriculum Brunei Darussalam it demands student to be "confident and creative, connected, and actively involved". By the new system of education, it resorts to offer adequate learning experience that would enable and support students to incorporate their potentials to achieve higher and become successful.

Correspondingly, Director of SEAMEO VOCTECH (Vocational and Technical Education and Training) Regional Centre, Awang Haji Md. Sharifuddin bin Haji Md. Salleh stated that several measures that have been implemented before is inadequate to fulfil and meet the need for technologically literate students and the industrial demand that requires its workforce to be critically minded and creative (Abu Bakar Haji Abdul Rahman & Hajah Noor Dina Haji Abd Rahman, 2015). The statement made was based on the fact that the challenges of 21<sup>st</sup> educational system are the rapid pace of technology and globalization that requires new measures in the implementation of a curriculum.

McPherson (2008), a psychologist at Riverview Medical Clinic in Brunei asserted that counselors play important role in school as they are the "most visible and accessible professional help, being present within the school environment where children spend so much of their time.". As students spend considerable amount of their time at school, it is important for them to be attended not only by teachers who are obligated to teach them and provide them with knowledge, but also counsellors who can attend to their problems or any issues in regard to their

learning difficulties to personal issues.

## 2. Background of Research

Several studies have been conducted with regard to students' achievement and self-esteem, and most of the studies found that there is a high relationship between educational achievement and self-esteem (e.g. Pullmann and Allik, 2008; Fredricks and Eccles, 2008). Self-esteem can be generally understood as the way people feel about themselves that led them to assess or evaluate themselves either positively or negatively. There are several instances where self-esteem is concerned such as social adjustment, communication (interpersonal skill) with others and most importantly self-perception (Pullmann & Alik, 2008; Fredricks and Eccles, 2008). Self-esteem has been recognized as barriers to students that have been tackled over the past few years.

Individuals with low self-esteem have the tendency to internalize their inner voice and inner self that often filled with "belittling self, condemning and negative" (McPherson, 2008). He also argued that individuals often need to be aware of inner voice, along with its beliefs and messages in order to raise their self-esteem. By having awareness of the inner voices, beliefs and messages, it is possible then to refute and substitute the destructing and negative thoughts of self with more positive and constructive thoughts and beliefs.

Counseling, in general has received an exceptional attention in dealing with different types of children with different issues. Several studies have been conducted to investigate the effectiveness of counseling towards children with certain situations in Brunei. For example, Mundia (2011) found the importance and the need for effective counseling services for students' psychological well-being. Consequently, in his other study, Mundia (2009) also asserted that counselors need to be more skilled and with determination and effort, school counseling in Brunei can be advanced. Study by Malai Hayati Sheikh Hamid and colleagues (2013) stated that counselling efforts are needed to help at-risk and vulnerable students. Moreover, counseling has received recognition of its significance in assisting individuals, especially students with psychological needs and behavioral problems, that the Ministry of Education (MOE) has set up the Division of Counseling and Career Guidance with the intention to assist students in personal, academic problems and career development. Counseling for government schools was also made official in 2008 with the hope that it can assist and attend students so that their potentials will continue to be developed. As a result, various intervention and counseling program have been developed to cater this need.

One of the techniques of intervention that has been employed to assist children in Brunei Darussalam is sandplay therapy. This technique is a part of the counseling which has been proven to be an effective measure in dealing with students with behavioral issues. According to International Society of Sand Therapy (2018), sand therapy is characterized by 'the use of sand, water and miniatures in the creation of images within a "free and protected space" of the therapeutic relationship and the sand tray'. In other words, sand therapy is a nonverbal therapeutic intervention that uses other utilities such as sandbox, toy and water. This therapy could assist in reflecting an individual's inner thoughts, struggles, problems and concerns. Sand therapy is more applicable for families than other creative approaches such as play therapy because of its creative technique and greater flexibility for treating a much larger group (see Isom, Groves-Radomski & Mcconaha, 2015).. The study by Flahive (2005) found that sandplay therapy is an effective intervention in treating preadolescent students with behavioral difficulties. On the comparison of the effectiveness between sandplay therapy and behavior modification to students' behavioral improvement, Zarzaur (2004) found that the use of sandplay therapy is more effective than behavioral modification in improving students' behaviors.

With regard to self-esteem, Ye-Seul Yang (2014) reported the effectiveness of sandplay therapy to children's behavioral problem, self-esteem and emotional intelligence, and found that students' behavioral problem, self-esteem and emotional intelligence can be improved by the use of sandplay therapy. Likewise, Maeng & Jang (2014) also found that sandplay therapy decreased the students' anxiety, while simultaneously, and improve their self-esteem and sociality. Given this, it is apparent that sandplay therapy has significant impact in improving self-esteem of the target audience, i.e. children.

## 3. Statement of Problem

The Minister of Education, Pehin Orang Kaya Seri Lela Dato Seri Setia Hj Abdul Rahman Dato Setia Hj Mohd Taib urged for school counsellors' involvement to inculcate good values in students. This concern was raised by the Minister showed the need to improve and enhance students' self-esteem in order to achieve higher grades (The Brunei Times, 2009). In addition, Heatherton and Wyland (2003) also argued that social illnesses which included poor academic performance was caused by low self-esteem.

Moreover, in 2008, motivational camp organized by Ministry of Education (MOE), which intended to enhance the form five students' performance, of whom were identified as having low performance based on their ordinary level

results found that the students are suffering from low self-esteem as they voiced their negative perceptions about themselves during the camp. Consequently, statistics showed poor performance on the secondary school, year 11's O-level result achievement in Brunei (The Brunei Times, 2009). Therefore, due to students' poor performance, it is often associated with their low level of self-esteem.

In Brunei, sandplay therapy is one of the approaches to conduct counseling that has recently been practiced and introduced (Mahalle, Zakaria and Nawi, 2014). The use of sand therapy has also been recognized in school by the MOE. Each government schools in Brunei has been provided with items required to conduct sand therapy. Mahalle and colleagues (2014) has also proven in their study that sandplay therapy was an effective intervention for Bruneian youth who were in fear of displeasing others and have difficulties to express their feelings.

As by far, Brunei is lack on specific therapeutic interventions in dealing with children with behavioral and psychological problems. Therefore, more effective interventions are needed to meet the children's (especially school children) developmental and psychological needs. Therefore, sandplay therapy is one such intervention that could be implemented in school. However, research particularly in Brunei is very limited in studying and exploring the effectiveness of sandplay therapy.

#### **4. Purpose of the Study & Objective**

Considering that counseling in Brunei is still at young stage especially in the immediacy to attend to the school's students, it is important to test, discover and implement the effective ways to deal with students and to tackle their issues especially, their self-esteem. With the recent literatures

(Emmanuel .et .al, 2015; Erol & Orth, 2011) showing and proving the strong and high relation between self-esteem and adolescence, it is important for the school to tackle the issue and this is where, school counselors play their active role.

Therefore, the main purpose of this study is to determine the effectiveness of sandplay therapy in improving students' self-esteem, to identify whether sandplay therapy is an effective measure to assist students in increasing and enhancing their self-esteem. Several research questions were developed for this study which were:

- 1) Is there any effect of sandplay therapy towards the development of the students' self-esteem?
- 2) Is there any significant difference in the students' overall self-esteem based on their pre- and post-test results between experimental group and control group?
- 3) Is there are significant relationship among the self-esteem variables in pre-test and post-test of the experimental group?

#### **5. Methods**

This study is based on experimental design by making a comparison between control group and experimental group based on the pre and post test results. As this study is an experimental design, researchers divided the participants into two groups: experimental group and control group. Both group will be given the Self-Esteem Inventory (SEI) (pre-test) but only the experimental group will be doing the sandplay therapy and after they have done the therapy sessions, the whole class (both groups) will answer the SEI (post-test) again (as suggested by Flahive, 2005; Zarzaur, 2004; Ye-Seul Yang, 2014; Mok-Hwa & Mi-Young, 2013; Maeng & Jang, 2014). From that, the researchers are able to see the improvement of experimental group if any as well as the control group.

The researchers have also conducted summary of the sessions by using notes and forms, which was done in every sessions of each group. The summary included; the details of the session: number of session, length of time the participants in doing the therapy, picture of the sandplay the participants created, ways of how the participants make the tray and the use of any water, miniatures, figures and such. Lastly, the researchers included the note form, verbal messages or comments that could be made by the participants, as well as the researchers' own responses during the sessions.

##### *5.1 Sample and Population*

Sample can be understood as the selected section obtained from the general population (Bryman, 2004). It can be understood that sample and population are different because sample is the portion that is selected and obtained from the larger group, known as the population. Therefore, the researcher had firstly identified the population to be sampled for the purpose of this study.

The samples used are obtained from students in year 7 at one of the model schools in Brunei. The reason for selecting year 7 is to have an early intervention as possible in their secondary level thus the earliest year in secondary school is year 7, as argued by Emmanuel et al (2015) on the significant of secondary education in

developing manpower for rapid progress. Moreover, as the school is a model school, the effectiveness of this research will be firstly applicable to the Brunei's model school and can be exemplified by other schools.

The participants of this study are randomly selected; all members of the population have equal chances of being selected. Specifically, the researcher used systematic random sampling to randomly select the sample from the population. From the population of all Year 7 students, the researchers have chosen one class that consisted of 32 students. From the 32 students, the researcher then divided and extracted half of the students in the class (16 students) to undergo sandplay therapy. The randomly selected 16 students who undergone the sandplay therapy was the experimental group, whereas the remaining half of the class (16 students) was the control group who received no treatment intervention.

After the systematic random selection of the sample from the population, the participants from both experimental and control groups were asked to answer the SEI in the presence of the researcher to easily facilitate the participants for any queries and questions and they were required to return the SEI immediately after they are done.

### 5.2 Data Analysis

Based on the purpose of the research, the independent variable of the study is the sandplay therapy because it is not changed by other factors. In other words, sandplay is not affected by any other variables that the researchers intended to measure. The dependent variable of the study is the overall self-esteem and the variables of the self-esteem because self-esteem is the variable that is going to be tested and measured by using the SEI on the pretest and posttest.

The data obtained from this study was analyzed by using SPSS (Statistical Package for Statistical Analysis). In specific, the researcher used three types of data analysis: MANOVA (Multivariate Analysis of Variance), independent samples t-test and paired samples t-test. Table 1 shows the data used to analyze the research questions.

Table 1. Types of Data Analysis used according to research questions.

	Research Question	Types of Data Analysis
1	Is there any effect of sandplay therapy towards the development of the students' self-esteem?	MANOVA
2	Is there any significant difference in the students' overall self-esteem based on their pre and post-test results between experimental group and control group?	Independent samples t-test
3	Is there are significant relationship among the self-esteem variables in pretest and posttest of the experimental group?	Paired samples t-test

### 5.3 Descriptive Statistics

Apart from that, the researchers also used the descriptive statistics analysis provided by SPSS which included the mean and standard deviation. Mean was showed in the descriptive, indicated the average scores of the variables. Mean is obtained from the sum of all the scores in a distribution divided by the number of scores (Best & Kahn, 1989). According to Best and Kahn (1989), the mean is the most convenient statistical measures as it is the basis for other measures computed. Meanwhile, standard deviation is used to measure the spread and disperse of scores in a distribution (Best & Kahn, 1989). It is obtained from the square root of variance; mean of squared deviation scores.

### 5.4 Instrument

This study has been carried out by using pre and post-test design based on the self-esteem inventory (SEI) test, based on five-likert scale (strongly agree, agree, neutral, disagree, strongly disagree). SEI is a form of questionnaire provided with standardized set of questions to obtain information and answers from the participants.

The questionnaire consists of two sections: section A and section B. In section A, it consists of demographic characteristics of participants, while in section B, it consists of the statements according to the five self-esteem variables: general, social, parental, academic and lie.

### 5.5 Section A: Demographic Characteristics

This section is placed in the first part of the questionnaire form which has to be answered first by the participants. This section is divided into two parts: student's background and their parents' information (Table 2). The demographic questions collected are:

Table 2. Student's background and their parents' information

Student's background	Parents' Information
Gender	Level of education
Age	Job
Race	Salary per month
Religion	
Number of Siblings	
Birth Order	
Location	

### 5.6 Section B: Self-Esteem Variables

The self-esteem inventory test will be drawn from Coopersmith (1967). Coopersmith's SEI consists of five subscales: general, social, family, and academic and lie self-esteem items. These items are originally answered according to "like me" and "unlike me" but for the purpose and convenience of this study, the items in the SEI are to be answered according to five-likert scale (strongly agree, agree, neutral, disagree, strongly disagree). The researcher has done pilot study of the instrument in which the overall reliability obtained is .82. For the variables of the self-esteem, general was on .89, social was .8, family was .85, academic was .82; and lie was .80.

### 5.7 Procedure of Data Collection

Prior to the study, the researchers have identified the problem from the practicum school which involved the issue on self-esteem. Researcher has also identified that the issue might be able to be tackled by using experiment. Thus, the researchers have decided to test the effectiveness of sandplay therapy in tackling self-esteem in students. Further, to date, no study has been conducted about self-esteem and experiment study for sand therapy.

Therefore, prior to carry out this study, an approval letter was obtained from the Sultan Haji Hassanal Bolkiah Institute of Education, Universiti Brunei Darussalam upon conducting the experimental research. Permission from the Ministry of Education, Department of Schools was also obtained in order to conduct the research study in the selected schools. Upon receiving the letter from MOE, the researchers have applied and obtained permission from the respective school's authorities to conduct this research study.

The participants was briefed in regard to their involvement in this study especially the sandplay participants; they are being thoroughly briefed on their involvement in this study for a period of one month. Upon answering the inventory, the participants were given guidelines on answering the questions to ensure that they are well-informed, able to understand the content of the questions and were fully cooperative by completing the set of questionnaire given.

### 5.8 Experimental Procedure

The experimental group will be doing a total of four sessions (one month) with one session for each week. In one session, they will do the sandplay therapy for 45 minutes to one hour. Researchers used sandplay therapy guidelines from Homeyer and Sweeney (1998) to ensure that the collective procedure of conducting sandplay therapy will be followed: room preparation, introduction to participants, creation of sandplay, post-creation and sandplay clean-up. The researchers set up a room that was suitable and conducive for the sandplay therapy to be conducted with miniatures on the shelf and the tray in place. The researcher also provided sufficient trays filled with sands, a bottle of water and spray (to avoid over-wetting the sand), and miniatures.

An introduction session has been conducted during the first session and for the following sessions, the researcher started with summary of the previous session. During the session which was the creation of the sandplay, the researcher tried to understand the students and observe them without making any comment. This way allowed the researchers to pay attention to the emotions that were created by the participants while they created the sandplay as well as the miniature figures they choose and how they positioned them in the sandplay.

Post-creation stage was conducted in the 15 minutes before the session end. In this stage, researchers invited the participants to share the stories of their sandplay. The researchers have included questions such as "what is the title of your sand tray?" and the following questions such as "what is it doing?" or "what is this one?" while pointing to animal, people and such figures (to know what the miniature figure represent). Post-creation was basically led by the participants while the researchers only facilitated the session in order to let them in exploring their sandplay

and themselves. Researchers would only made comment, interpretation or judgment to the sandplay for the participants when necessary. In the clean-up stage, researchers would clean the sandplay in front of the participants but after the participants have left the room. The researcher would take photo of the sandplay to bring it up to the next early session for summary and for researcher's documentation of each participant.

#### 5.8.1 First Session

This first session is where the researcher would introduce the sandplay and the miniatures that they could openly use by using non-directive approach (or unstructured) by saying "here is a collection of miniatures which you can use as many or as few as you like. You may take your time to have a look at these and choose the ones that you like to put in the sand. Here is a pail of water if you need it to shape your sand or to create some view with the water. You may create any scene you picture in your head and put it in the sand. I will sit here quietly". The researcher ended the introduction by stating the duration of time by saying "you are given 45 minutes to create your world in the sand and I will warn you if we have five minutes left so you can finish up what you're doing. You may start now."

#### 5.8.2 Second and Third Session

For these sessions, the researcher will start by summarizing the sandplay the participants created a week ago. Then the researchers gave the opportunity for the participants to take charge by saying "I wonder where you're going to start today". The participants have also be warned of the time limit, before and after the sessions, following the procedure of creation and post-creation stage.

#### 5.8.3 Final Session

In this final session, it was started with summary from previous session and warned them earlier in the session that this would be the last session of the sandplay. After that, the participants would continue with the same procedure of the sandplay and ended the session with a proper termination which included a summarization of the participants' progress and outcomes.

## 6. Results

### 6.1 Demographic Background

The participants of this study are 32 in total which consisted of 16 male and 16 female students, of whom 21 participants (65.6 percent) of them are 13 years old, 10 participants (31.3 percent) are 12 years old, and one participant (3.1 percent) is 16 years old. In terms of location, 31 participants (96.9 percent) live in Brunei-Muara District, while only one participant (3.1 percent) live in Tutong District.

### 6.2 Objective (1): Effects of sandplay therapy towards the improvement of the five self-esteem variables: general, social, family, academic, and lie

The first research question is "Is there any effect of sandplay therapy towards the improvement of the students' self-esteem?" This was measured by the responds given by the participants in experimental group through the questionnaire which consists of 58 items. MANOVA repeated measure was used to understand whether there are differences between the pre and post-test of experimental group, which indicates the effectiveness of sandplay therapy by understanding the impact it has towards the variables of self-esteem. The MANOVA test analysis is shown in the Table 3.

Table 3. Multivariate measure of pre and post-test of experimental group ( $n=16$ )

Within subject effects	Value	F	Hypothesis df	Error df	Sig.
Pillai's Trace	.950	41.372	5.000	11.000	.000
Wilks' Lambda	.050	41.372	5.000	11.000	.000
Hotelling's Trace	18.805	41.372	5.000	11.000	.000
Roy's Largest Root	18.805	41.372	5.000	11.000	.000

Based on the table above, Manova multivariate test for pre-test and post-test of experimental group indicates within-subjects of self-esteem variables. The pre-test and post-test results from the findings show that the overall Pillai's Trace  $F(5, 11) = 41.372, p < .05$ . This indicates that the use of sandplay therapy, is significantly effecting the

self-esteem variables of experimental group in the pre and post test results. Pillai's Trace is being used due to its reliability in multivariate measures. It offers greatest protection against Type 1 errors with small sample size. It also sums up and calculates the variance in the dependent variables which are accounted for by the greatest separation of independent variables.

The univariate test reveals the Sphericity Assumed of the pre-test and post-test results of experimental group, as shown in Table 4. Basically, Sphericity Assumed refers to the similar one variance difference between levels of repeated measures. In other words, the analysis calculates the difference between each levels of repeated steps and then calculate the variance and the score difference Sphericity Assumed requires that the variance for each set of score are the same.

Table 4. Univariate test of pre-test and post-test of the experimental group (n=16)

Source	Measure	Type III Sum of Squares	df	Mean Square	F	Sig.	
	General	Sphericity Assumed	.435	1	.435	49.85	.000
Pretest	Social	Sphericity Assumed	4.407	1	4.40	63.64	.000
&	Parental	Sphericity Assumed	5.590	1	5.59	82.92	.000
Posttest	Academic	Sphericity Assumed	4.981	1	4.98	80.07	.000
	Lie	Sphericity Assumed	.083	1	.08	.73	.406

Results from the Sphericity Assumed to the pre-test and post-test of general self-esteem shows  $F(1, 15) = 49.85$   $\alpha < .05$ . The results towards the social self-esteem shows  $F(1, 15) = 63.64$   $\alpha < .05$ , to the parental self-esteem  $F(1, 15) = 82.92$   $\alpha < .05$ , to the academic self-esteem  $F(1, 15) = 80.07$   $\alpha < .05$ , and to lie self-esteem  $F(1, 15) = .73$   $\alpha > .05$ . This indicates that sandplay therapy gives significant effect to four of the self-esteem variables in pre-test and post-test of experimental group, except for lie self-esteem.

### 6.3 Objective (2): The Difference in the Overall Self-Esteem Between the Experimental Group and the Control Group

The second research question is "Is there any significant difference in the students' overall self-esteem based on their pre and post-test results between experimental group and control group?" The independent sample t-test table shows that the difference between experimental group and control group is not significant (See Table 5). According to the general self-esteem on the difference between both groups, it shows that there is no significant, with .28 ( $p > .05$ ). Social self-esteem also shows no significant difference between both groups with .86 ( $p > .05$ ). The parental self-esteem shows no significant as well between both groups with .39 ( $p > .05$ ), and academic self-esteem with .41 ( $p > .05$ ). Meanwhile, overall self-esteem for both groups shows no significant with .25 ( $p > .05$ ).

Table 5. Independent sample t-test of the pre-test results between the experimental group and control group (n=32)

Pre	Levene's Test for Equality of Variance	F	Sig.	t	df	Sig. (2-tailed)
<b>General</b>	Equal variances assumed	1.18	.28	-.92	30	.36
	Equal variances not assumed			-.92	28.02	.36
<b>Social</b>	Equal variances assumed	.02	.86	-1.94	30	.06
	Equal variances not assumed			-1.94	29.92	.06
<b>Parental</b>	Equal variances assumed	.73	.39	.33	30	.74
	Equal variances not assumed			.33	29.73	.74
<b>Academic</b>	Equal variances assumed	.68	.41	-2.54	30	.01
	Equal variances not assumed			-2.54	28.95	.01
<b>Lie</b>	Equal variances assumed	.00	.99	-.95	30	.34
	Equal variances not assumed			-.95	29.99	.34
<b>Overall</b>	Equal variances assumed	1.34	.25	-2.10	30	.04
	Equal variances not assumed			-2.10	25.78	.04

Table 6. Independent sample t-test of the post-test results between the experimental group and control group (n=32)

Post	Levene's Test for Equality of Variance	F	Sig.	t	df	Sig. (2-tailed)
<b>General</b>	Equal variances assumed	8.13	.00	.99	30	.32
	Equal variances not assumed			.99	21.44	.33
<b>Social</b>	Equal variances assumed	3.08	.08	3.32	30	.00
	Equal variances not assumed			3.32	22.76	.00
<b>Parental</b>	Equal variances assumed	2.09	.15	5.05	30	.00
	Equal variances not assumed			5.05	25.44	.00
<b>Academic</b>	Equal variances assumed	.01	.90	4.15	30	.00
	Equal variances not assumed			4.15	29.80	.00
<b>Lie</b>	Equal variances assumed	.75	.39	1.07	30	.28
	Equal variances not assumed			1.07	26.78	.29
<b>Overall</b>	Equal variances assumed	7.50	.01	4.90	30	.00
	Equal variances not assumed			4.90	20.77	.00

Table 6 exhibits the independent sample t-test of post-test results between experimental and control group that demonstrates the difference between experimental group and control group is not significant for all the self-esteem variables, except for general self-esteem. According to the table, the difference of both groups in general self-esteem is significant with .00 ( $p < .05$ ). However, all other self-esteem variables do not show significant difference between both groups; social self-esteem acquire .08 ( $p > .05$ ), parental self-esteem has a significant level of .15 ( $p > .05$ ), academic self-esteem obtain .90 ( $p > .05$ ) and lie self-esteem with .39 ( $p > .05$ ). Nonetheless, the overall self-esteem of both experimental group and control shows that there is significant difference with .01 ( $p < .05$ ).

#### 6.4 Objective (3): The Relationship of the Self-Esteem Variables in Pre-Test and Post-Test of the Experimental Group

The self-esteem variables are based on the five variables, namely general, social, family, academic, and lie. The third research question is "Is there any significant relationship of the self-esteem variables in pre-test and post-test

of the experimental group?" To meet the third objective and to answer the third research question, the pre-test and post-test results from experimental group are gathered by using paired t-test. The findings of the third objective and research question are shown in the tables below.

Table 7. Paired samples correlations of self-esteem variables of pre-test and post-test of experimental group

	Variables	Correlation	Significant
Pre & Post	General	.82	.00
Pre & Post	Social	.11	.66
Pre & Post	Parental	.41	.10
Pre & Post	Academic	.28	.28
Pre & Post	Lie	.48	.05

Table 7 displays the paired sample correlations of self-esteem variables of the experimental group based on the pre-test and post-test results. The result indicates that only general self-esteem in pre-test and post-test of the experimental group shows significant relationship with .000 ( $p < 0.05$ ). The other self-esteem variables shows no significant difference between the pre-test and post-test; social self-esteem acquire .66 ( $p > .05$ ), parental self-esteem acquire .10 ( $p > .05$ ), academic self-esteem acquire .28 ( $p > .05$ ), and lie self-esteem acquire .05 ( $p > .05$ ).

Table 8. Paired samples t-test of self-esteem variables of pre-test and post-test of experimental group

	Variables	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pre & Post	General	-.23	.13	.03	-7.06	15	.00
Pre & Post	Social	-.74	.37	.09	-7.97	15	.00
Pre & Post	Parental	-.83	.36	.09	-9.10	15	.00
Pre & Post	Academic	-.78	.35	.08	-8.94	15	.00
Pre & Post	Lie	-.10	.47	.11	-.85	15	.40

Table 8 presents the paired t-test results of the self-esteem variables of pre-test and post-test of experimental group that reveals that there are significant relationships between the self-esteem variables of experimental group in the pre-test and post-test results. Pre-test and post-test of general self-esteem shows  $t(15) = -7.06$ ,  $p < .05$ . Social self-esteem of the pre-test and post-test shows  $t(15) = -7.97$ ,  $p < .05$ . Whereas the parental self-esteem shows  $t(15) = -9.10$ ,  $p < .05$ , while the academic self-esteem shows  $t(15) = -8.94$ ,  $p < .05$ . Finally the lie self-esteem shows  $t(15) = -.85$ ,  $p < .05$ .

Therefore, from the sample paired correlation, only general self-esteem acquire significant relationship with .000 ( $p < 0.05$ ). Paired sample t-test further emphasize the difference between the pre-test and post-test results of the experimental group based on their self-esteem variables, which proves that there are significant differences except for lie self-esteem. Given that, there is no significant relationship between the pre-test and post-test of the self-esteem variables of the experimental group, and significant differences between the pre-test and post-test, the post-test is thus not influenced by the pre-test, and otherwise. This result proves that the difference occurred due to the existence of the sandplay therapy.

## 7. Discussion

### 7.1 Research Question 1: Is There Any Effect of Sandplay Therapy Towards the Improvement of the Students' Self-Esteem?

As a result from the findings of the research question shows that there was significant effects of sandplay therapy can be seen in the self-esteem variables between pre-test and post-test results of the experimental group. From the results and findings of the first objective, the test results showed an increase in all of the self-esteem sub-variables. Sandplay therapy has effects to all the self-esteem variables, where in the post-test, all of the self-esteem variables are higher than the pre-test. Moreover, the multivariate measure shows significant effect of the sandplay therapy to

the self-esteem variables with Pillai's Trace  $F(5, 11) = 41.37, p < .05$ . While the univariate test for each self-esteem variables, except for lie (.40,  $p > .05$ ) also shows significant effects. Therefore, the findings demonstrate that the use of sandplay therapy is effective in improving the students' self-esteem, with equal rank of the self-esteem variables between the pre-test and post-test.

The highest mean score in the post-test and highest mean difference between pre-test and post-test, among the self-esteem variables, is the parental self-esteem. It is followed by academic, social, general and lie. This shows the importance of family in developing their self-concept and thus increasing their self-esteem. According to Harter (1986), positive and high self-esteem are highly dependent on four variables namely: parent-child relationship, means used to cope with the child undesirable emotion, self-acceptance and social behaviour. Moreover, Coopersmith (1967) stated that parental rearing highly affects a child's self-esteem where a child with concern-parents is more likely showed higher self-esteem than a child's whose parents show lack of concern. From Coopersmith's study, low self-esteem children were living in physically, emotionally and intellectually impoverished environment where the parents showed little concern and at the same time reacted extremely towards the child.

The home, the first relationship the child builds with their parents highly impacted how the children view themselves, by how they were being treated by their parents. As they grow up, their relationship will also grow, and they will start to evaluate themselves on other basis such as academic, social, emotional and their physical aspects. Increased self-esteem in children is then based on their evaluations of their achievement and accomplishments in the stated areas. Therefore, family or specifically, parental factor has a strong effect on children's self-esteem as shown from the results in pre-test and post-test, higher self-esteem is associated with family or parental factor regardless of the treatment (sandplay therapy) being imposed.

The second highest mean score in the post-test and mean difference of the self-esteem variables as shown in the pre-test and post-test of the experimental group is the academic self-esteem. According to Brown and Marshall (2006), as well as Brown et al., (2001), self-esteem is the individual's self-evaluations of self which included the academic self-esteem. Baumeister et al., (2003) found that academic competency contributed to higher self-esteem. Marin and Brown (2008) also stated that peers' and teachers' supports gave significant consequences to students' wellbeing. If they feel connected and cared from the people in school, including their peers and teachers, they are more likely to be motivated, and less likely to engage in negative behaviours. Furthermore, Blanco and Ray (2011) showed the effectiveness of play therapy in academic achievement. From their study to the elementary school students, there was a statistically significant increase in the achievement of the experimental group, who received the play therapy, as compared to the control group. The findings and results of the study thus supported the use of play therapy in improving the students' academic achievement.

The third highest mean score in the post-test and mean difference of the self-esteem variables as shown in the pre-test and post-test of the experimental group is the social self-esteem. According to Heatherton and Wyland (2003), in comparison between individuals who belonged to social groups and individuals who were excluded from social groups, those who belonged to the social groups were more likely to survive and reproduce. According to Maslow (1943), in order for someone to feel good about them and acquire healthy self-esteem, one must achieve the levels of needs in terms of physiological, safety, social and esteem. By achieving each level of needs, the person will be motivated and thus their self-esteem will be increased. In line with the findings by Ryan et al., (2011), the study tried to find out various counselling approaches in increasing motivation and self-esteem in theory and practice. They found counselling approaches, specifically; outcome-oriented treatments could increase client's motivation and self-esteem.

This is further supported by the sociometer theory that high self-esteem is based on one's status and acceptance in social group (reference). Consequently, sociometer theory, developed by Leary in 1999 suggested that healthy self-esteem was measured by individual according to his/her measure of being socially accepted or socially rejected (Leary, 2005). For example, if the person feels the likelihood of being rejected as a consequence of his/her behaviour, the person may experience reduction in regards to their self-esteem.

Furthermore, Rogers (1986), in his well-known theory of client-centred therapy, argued that human needs conditional positive regards. Theoretically, conditional positive regards are gained from the external factors which are from other people around us, that gets into the internal feeling; feeling of self-worth. Based on Rogers' theory, feeling of self-worth here refers to acceptance from other people and thus develops the individual's feeling of being worthy.

According to Fillacio (2008), in exploring the impact of child-centred play therapy for children with low vision, the children are at-risk for social isolation and misunderstood for their abilities. The use of child-centred play

therapy was pursued to understand the impact it has on the children's self-confidence. The findings suggested that child-centred play therapy is beneficial to children with low vision as it showed the improvement in children's progress after play therapy. Correspondingly, Hartz and Thick (2005) conducted exploratory, quasi-experimental study comparing the impact of two art therapy approaches on self-esteem. Their study showed that the group who did art psychotherapy showed significant increase in self-esteem domains of close friendship and behavioural conduct, while the group who did art as therapy showed significant increase in self-esteem domain of social acceptance.

Meanwhile, the lowest mean score of the self-esteem variable, apart from the lie self-esteem, is the general self-esteem. The results of this study contradict to the major theories of self-esteem. General self-esteem, which generally regarded as global self-esteem, refers to the way people generally feel about themselves (as can be seen from the questions on general self-esteem) (Campbell, 1990; Setterlund & Niedenthal, 1993). Campbell (1990) suggested that individuals with higher self-esteem possessed definite and stable self-views than those with low self-esteem. The suggestion is further asserted based on several evidences from Campbell (1990) and Setterlund & Niedenthal (1993) that individuals with low self-esteem are inconsistent in their self-evaluation; as well as, hesitant and take longer time in deciding their self attributes, than individuals with higher self-esteem.

With the lie score being the least and the weakest in this study, it proves that the students are less likely to try and show the brighter and optimistic picture of themselves and they are not trying to be defensive upon themselves. As the lie scale was established and included to evaluate response validity, results from this study indicated that the participants were not responding in a socially desirable manner. In contrast, Kunda (1999) differentiated between individuals with high self-esteem and low self-esteem, in their self-enhancement. Self-enhancement is associated with lie self-esteem as the existence and purpose of the lie self-esteem is give rosier picture of self, consequently, self enhancement is a type of motivation that acts to make people feel good about themselves and thus maintain self-esteem. It is a reaction in respond to the threatening situation such as failure. According to Kunda (1999), self-enhancement occurred in both individuals with high and low self-esteem but the only different between them is the strategies that they used; those with high self-esteem improved their self-concept directly by dealing with self-concept in bias way, whereas low self-esteem individuals have indirect ways such as avoiding the situation that exerts their negative qualities.

Therefore, from the results of the findings, it could be seen that all self-esteem variables have increased upon receiving sandplay therapy. It also showed the consistency and association of Maslow's theory of hierarchy of needs in regard to self-esteem; that self-esteem is a comprehensive and collective of all the variables: general, social, academic and parental. As Maslow claimed that human's needs is central around the need and pursuit to other people's perspective and the individual's own perspective about his/her own self which makes up to the collective perception of overall self-esteem in one self.

*7.2 Research Question 2: Is There Any Significant Difference in the Students' Overall Self-Esteem Based on Their Pre and Post-Test Results Between Experimental Group and Control Group?*

**Hypothesis 2: There are no significant differences between the overall self-esteem of the control group and experimental group.**

From the results and findings of this study, there is significant difference of the overall self-esteem between the experimental group and control group. The difference is significant as the experimental group is the one that receive the treatment; sandplay therapy, whereas the control group is the group that did not receive any kind of treatment in between the pre-test and post-test.

Therefore, findings from the second objective, in relation to the hypothesis, the null hypothesis is thus rejected, while the alternative hypothesis is accepted, because there is significant difference of the overall self-esteem variables between the control group and experimental group based on their pre and posttest results. This result further supports that sandplay is effective in improving the students' overall self-esteem compare to control group who were not given the experiment (sandplay therapy).

The difference in the self-esteem variables between experimental group and control group shows that the mean score in the post-test of experimental group is higher than the post-test of control group. According to the independent sample t-test, only general self-esteem of experimental group in the post-test result is significant with .00 ( $p < .05$ ). However, the overall self-esteem based on the independent sample t-test shows that there is significant difference between the experimental group and control group with .01 ( $p < .05$ ).

Looking at the differences between the experimental group and control group which is highly apparent in the post-test (after the sandplay therapy), the difference shows that the parental acquire the highest changes between

experimental group and the control group. It is followed by social, academic, general and lie. The following discussion will focus on the three highest differences between the experimental group and control group in their post-test results.

From the results, it shows that parental self-esteem acquires the highest mean difference. These results are consistent with trends from James and Martin (2002). They conducted a study regarding the effectiveness of sandtray therapy in helping parents cope with their adolescents with substance abuse/dependency. Through their study, it is proved that the use of sandtray therapy is beneficial not only for counselor and child, but most importantly to parents in coping with their adolescents.

Consequently, as the basis of sandplay therapy can be found from the psychodynamic theorist, it is no doubt that it is more suitable in dealing with and tackling family issue with children, because psychodynamic theorists believe that early childhood is the basis of and result of the developmental state. Most importantly, from Freud, as the pioneer of Carl Jung, it is worth pointing out that Freud stated that early childhood is where the child learns to build relationship (Schultz, 1986).

Similarly, Erik Erikson (1994), in his developmental stages, the past of the childhood which as early as infancy that the child learns to trust his/her mother by feeding. Then the child learns to exercise some degree of choice, takes initiatives in activities as the child starts school, develops their abilities in task completion, forms self-identity, have intimate relationship with significant other, discovers a sense of contribution to the younger generations and finally evaluates life and looks back at the previous years with satisfaction. Therefore, Erikson suggested that with proper guidance in each stage, the child would acquire healthy development which can lead to healthy self-esteem. Furthermore, this study supported the findings by Azizi, Lee and Ku Suhaila (2015) where they found and proved that there is significant effect of sandplay therapy by allowing the children to assert control and engage in complex creative process that enhance their competency and self-worth.

The second highest mean difference from the results obtained is social self-esteem. Consistently, Maeng & Jang (2014) in their pre- and post- study to validate the effects of sandplay therapy towards anxiety, self-esteem and sociality of college students with blindness found that from the results of using anxiety self-esteem sociality scales for the blind, sandplay therapy was effective in decreasing the anxiety of blind college students and improving their self-esteem and sociality.

The third highest mean difference between the experimental group and control group is the academic self-esteem. According to Abd-Elmotalieb and Saha (2013), there was significant relationship between academic climate and academic self-efficacy with students' academic performance. They concluded and recommended that the use of counselling strategies to be implemented in enhancing student's academic self-efficacy. Moreover, Joshi and Srivastava (2014) found that that the academic self-concept and academic achievement are positively correlated. The results are obtained from the participants of their study that the adolescents who have high academic achievement would have high academic self-concept

In relation between self-esteem to social as well as academic, Yeh (2015) evaluated the use of sandplay therapy to school students who were banished from school. Yeh collected both qualitative and quantitative data of the students, and found improvements from the test scores, counselor's and teacher's ratings, attendance, behavioral and counseling status. Yeh concluded that sandplay therapy was recommended in dealing with culturally diverse children in term of their psychological state, social, emotional and academic.

*7.3 Research Question 3: Is There Are Significant Relationship of the Self-Esteem Variables Between the Pre-Test and post-Test of the Experimental Group?*

**Hypothesis 3: There is no significant relationship of the self-esteem variables of the experimental group in pre-test and post-test.**

As a result from the findings for the third objective, in relation to the hypothesis, the null hypothesis is thus accepted because there is one significant relationship among the self-esteem variables can be found; general self-esteem and the academic self-esteem of the self-esteem variables of experimental group based on their pre- and post-test results.

From the paired sample correlation, only general self-esteem acquire significant relationship with .000 ( $p < 0.05$ ). With the paired sample t-test, it further emphasized the existing difference between the pre- and post-test results of the experimental group based on their self-esteem variables, which proved that there are significant differences except for lie. Given that, there is no significant relationship between the pre and post-tests of the self-esteem variables for the experimental group, and significant differences between the pre- and post-tests the post-test was not influenced by the pre-test, and otherwise. This result indicated the difference due to the existence of sandplay

therapy. By having no relationship, it means that the variables in pre- and post-tests did not influence and impact each other. It is apparent that with the use of sandplay therapy, pre-test did not influence the post-test results, but that the existing differences between the pre-test and post-test, in which the post-test acquire high mean score, it would mean that the difference was influenced by the use of sandplay therapy. This further emphasizes the effectiveness of sandplay therapy as a treatment intervention to the experimental group.

This goes back to the basic theory on the basic use of sandplay therapy according to and based on the psychology brought forward by Carl Jung (1964); that the rationale of sandplay therapy is based on the understanding of Jungian psychology of archetype and persona that appears in the sand. These symbolic languages of knowledge create the foundation of sandplay therapy. It provides a way for the unconscious material to become visible and integrated into the consciousness. It is a direct method, in establishing connection to the inner and greater self, which is believed to be an essential step for healthier state of psychology. As the unconscious materials emerge, the materials are then integrated into individual's sense of self and can bring about to self-perception.

Furthermore, the idea of using experimental group is to show the difference between pre-test and post-test, where the post-test is expected to be higher in order to get an indication that sandplay therapy has an influence to the post-test. With the significant difference between the two groups, the means score shows gap difference in post-test than the pre-test. In addition, Shen and Armstrong (2008) who used similar design as this study, in examining the use of pre-test post-test control group with young adolescent girls using group sandtray therapy found that there was significant improvement in the adolescent girls' self-esteem in treatment group than the control group.

Furthermore, this study's findings are subsequent in regard to the effectiveness of sandplay therapy, as has been proved by Yang (2014). By using the same self-esteem inventory, sandplay therapy was effective in increasing the participants' self-esteem in all of the self-esteem sub-variables, with the family self-esteem having the highest score for both pre- and post-tests, followed by academic, social and general.

Apart from that, sandplay therapy has also been proven to be effective in other areas such as anxiety and behavioural difficulties. Shunsen, Jie and Risheng (2006) carried out sandplay therapy to school students with high anxiety and found that sandplay therapy helps improve their test anxiety levels. It was found that the use of sandplay therapy is far more effective than relaxation training. Moreover, Zarzaur (2004) determined the effectiveness of sandplay therapy and classroom behavior management in improving teachers' perceptions of students' school behavior. Zarzaur found that teachers' perception regarding students' behavioral problem has decreased upon receiving both treatment, which included sandplay therapy.

In addition, Ren, Zhou & Liu (2008) examined the effectiveness of sandplay therapy in treating depressive disorder. The depressive students were selected to undergo the sandplay treatment to treat their depressive disorder. The study found that after the treatment, their depressive treatment decreased and proved that sandplay therapy was an effective treatment for depressive disorder. In assessing the effectiveness of sandplay therapy in treating insomnia, Lin et al. (2015) found that after the sandplay therapy, the instrument used, Pittsburgh Sleep Quality Index showed the difference between the results from experimental group and control group, and that sandplay therapy was found to be effective in improvement of sleep quality of insomnia college girls.

Therefore, the effectiveness of sandplay therapy is proven due to the effects it has to all the self-esteem variables of the experimental group. Moreover, from the past research studies showed that sandplay therapy is not only effective in improving students' self-esteem (referring to this current study), but also in treating other areas such as behavioural difficulties, depression and insomnia. The results from all the studies are consistent with Jung's theory of sandplay therapy as it allows individuals (sandplayers) to connect with the unconscious through sandplaying, where the unconscious materials emerge, resurface, encounter and deal with by the individuals.

## **8. Strengths and Limitations of the Study**

The study has its strength particularly with the usage of experimental approach in examining the effectiveness of sandplay therapy in improving students' self-esteem issues. This research study gives implication especially to therapist and counselors to use sand therapy as an alternative intervention. They could combine this therapy with other interventions such as talk therapy to improve student's self-esteem. Further, Sand therapy is an expressive way to allow an individual to use sand and miniatures to express his or her interpersonal issues (Homeyer & Sweeney, 2017). In addition, there is a lack of information concerning the usage of therapy in solving everyday problem related to the students. Further, to our knowledge no study has ever applied the therapy in Brunei which make us the first to examine the suitability of the therapy in solving self-esteem issues among students.

However, the study also has several limitations. For example, as the main purpose of the study is to find out the effectiveness of sandplay therapy and considering the time-constraint in conducting this research, the study will

focus on and include one of the model schools in Brunei-Muara District. The participants are randomly selected and are limited to only those who are in Year 7. Moreover, due to the constraint of time as well as the inaccessibility and limitation of permission from the school to take the students out from their classes, the study has only been carried out for four sessions in a period of one month.

## 9. Conclusions

In conclusion, this study has focus solely on the self-esteem variables in implication of sandplay therapy. Given the significant effects of sandplay therapy to the self-esteem variables of the experimental group, as well as the significant differences in pre-and post-test results between experimental group and the control group, the results of this study shows that sandplay therapy is an effective treatment intervention that can improve the students' self-esteem.

In regard to the relationships of the self-esteem variables in the pre-and post-test, only one relationship can be found between general self-esteem in pre-test and general self-esteem in post-test. The relationships of the other self-esteem could not be found from this study. However, the researchers believe that further study and research may be able to provide better results on the effectiveness of sandplay therapy. All in all, the three objectives are related and associated with one another because all of the objectives are centered to focus on the main purpose and aim of this study; to determine the effectiveness of sandplay therapy in improving the students' self-esteem. Consequently, from the findings and data analysis for the objective, it can be concluded that sandplay therapy can be used as an effective treatment intervention in dealing with self-esteem issues among students. Along with past research and previous studies brought forward in this study, it shows that sandplay therapy is also effective in treating other issues, apart from self-esteem. Therefore, although this study has shown the effectiveness of sandplay therapy in improving the students' self-esteem, it is highly recommended for further studies to be made in terms of providing high quality research, and thus can be beneficial for other practitioners, counsellors, therapists, schools and parents to implement sandplay therapy in dealing with children and adolescences.

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