



RESEARCH ARTICLE

# Sensory Integration Ability and Social Adjustment in Elementary School Students

Elsy Junilia<sup>1\*)</sup>, Akhmad Kheru Dharmawan<sup>2</sup>

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**Abstract:** This study aimed to determine the relationship between the sensory integration ability with social adjustment in elementary school students. The hypothesis used in this study was there a relationship between sensory integration ability with social adjustment in elementary school students. The subject in this study were 23 student at class IV Ubadah in SDIT X Bandar Lampung. The data of this study is taken by sensory integration and social adjustment scale with data analysis using Pearson product moment correlation analysis. The result showed that there was a significant relationship between sensory integration with social adjustment in elementary school students in SDIT X Bandar Lampung at class IV Ubadah ( $r=0,676$  with  $p>0,05$ ). The relationship between the two variables is high, the higher the sensory integration ability, the higher social adjustment ability would be.

**Keywords:** Sensory Integration, Social Adjustment, Elementary School

**Abstrak:** Penelitian ini bertujuan untuk mengetahui hubungan antara kemampuan sensori integrasi dengan penyesuaian sosial pada siswa sekolah dasar. Hipotesis yang digunakan adalah ada hubungan antara kemampuan sensori integrasi dengan penyesuaian sosial pada siswa sekolah dasar. Subyek dalam penelitian ini adalah siswa SDIT X Bandar Lampung kelas IV Ubadah yang berjumlah 23 orang. Data penelitian ini diambil dengan menggunakan skala sensori integrasi dan skala penyesuaian sosial dengan analisis data menggunakan analisis korelasi product moment Pearson. Hasil analisis menunjukkan bahwa ada hubungan yang signifikan antara sensori integrasi dengan penyesuaian sosial pada siswa sekolah dasar di SDIT X kelas IV Ubadah ( $r=0,676$  dengan  $p>0,05$ ). Hubungan kedua variabel adalah tinggi, maka semakin tinggi kemampuan sensori integrasi maka semakin tinggi kemampuan penyesuaian sosial.

**Keywords:** Sensori Integrasi, Penyesuaian Sosial, Sekolah Dasar

## INTRODUCTION

Jen Ayres (Waiman, 2015) introduced sensory integration which is a process of human development by recognizing, changing and distinguishing sensations from the sensory system to then produce a response. One of the concepts of sensory integration theory is the drive for self-actualization which is then the most important part of individual development that stimulates children to explore without feeling tired and able to bring joy in facing challenges to achieve a goal. It is called internal motivation,

but this is not found in children with sensory integration disorders (Benso, 20015).

According to the results of research by Van Den Oord et al (2002), states that the state of self, class, and school affects the social adjustment of children in their school. Children's adjustment at school includes how the child makes friends with peers, how the child obeys school rules, respects teachers, and others. This is related to whether the child will be accepted or rejected by their peers. The purpose of this study was to determine the effect of sensory integration on social adjustment in X Elementary School students in Bandar Lampung. In this study, the authors limit the variable of social adjustment of elementary school students (SD) which is defined as the ability of students to interact with other people and certain situations in the school environment.

According to Abraham (2002) in Addressing Learning Differences Sensory Integration Practical Strategies and Sensory Motor Activities for Used the Classroom describes

<sup>1),2</sup> Universitas Malahayati Lampung

\*) *corresponding author*

Elsy Junilia

Email: junilia.elsy@gmail.com

that a child at the elementary school level cannot think comprehensively without going through certain stages of stimulation related to their age development. Activities that support gradual neural maturity are needed to prepare the child's brain structure. With the implementation of this stimulation, it is expected that children will be able to have perfect executive functions. The system is the first thing that must be given to provide influence for the development of the next stage in the form of sensory motor development, perceptual motor and the next stage in the form of cognitive or intellectual children.

Pada tahun 1972, A. Jean Ayres mulai memperkenalkan suatu model perkembangan manusia yang dikenal dengan teori sensori integrasi. Menurut teori Ayres, SI terjadi akibat pengaruh *input* sensori, antara lain sensasi melihat, mendengar, taktil, vestibular, dan proprioseptif. Proses ini berawal dari dalam kandungan dan memungkinkan perkembangan respons adaptif, yang merupakan dasar berkembangnya ketrampilan yang lebih kompleks, seperti bahasa, pengendalian emosi, dan berhitung. Adanya gangguan pada ketrampilan dasar menimbulkan kesulitan mencapai ketrampilan yang lebih tinggi. Gangguan dalam pemrosesan sensori ini menimbulkan berbagai masalah fungsional dan perkembangan, yang dikenal sebagai disfungsi.

## METHODS

This research uses quantitative methods. The variables in this study are social adjustment as the dependent variable and sensory integration as the independent variable. The subjects in this study were 4th grade elementary school students at SDIT X in Bandar Lampung city. The sensory systems that become variables in this study are; movement/tactile, visual and auditory systems measured by a checklist table with direct observation and interviews. While for social adjustment is described in the way the child reacts and benefits to the child's environment which is measured using five characteristics of social adjustment in school from Schneiders, namely; Respectful and willing to accept existing rules, showing the best sense and participation in school activities, establishing good relationships with friends at school, being respectful of teachers, school leaders, and other staff and the fifth characteristic is helping the school to carry out its goals according to its function.

**Table 2**  
Validity Test of Social Adjustment Scale

No	Aspec	All Aitem	Fall Aitem	Aitem Valid	Cofisien Correlation Aitem-total
1.	Respect and acceptance of rules	6	2	4	0,710-0,792
2.	Demonstrate a sense of excellence and participation in school activities	6	0	6	0,281-0,849
3.	Establish a good relationship with friends at school	6	0	6	0,269-0,813
4.	Be respectful to teachers, school leaders and other staff.	6	1	5	0,442-0,847
5	Assist the school to carry out its objectives in accordance with its functions	6	1	5	0,504-0,867
Amount		30	4	26	0,269-0,867

Based on the item analysis table on the social adjustment scale, 4 items were found to be canceled and 26 items were declared valid. The distribution of the aitem-total correlation coefficient (Corrected Item-Total Correlation), the social adjustment scale items move from

The analysis used in this study is Pearson's product moment correlation analysis. Product moment correlation or KPM developed by Karl (Hasan, 1999) is a statistical test tool used to test the associative hypothesis (relationship test) of two variables when the data is interval or ratio scale.

The KPM value is symbolized by  $r$  (rho). The KPM value is also between  $-1 < r < 1$ . If the  $r$  value = 0, it means that there is no correlation between the independent and dependent variables. The value of  $r = -1$  means that there is a negative relationship between the independent and dependent variables. In other words, the "+" and "-" signs indicate the direction of the relationship between the variables being operationalized. In other words, the "+" and "-" signs indicate the direction of the relationship between the variables being operationalized. The following is a table of correlation values and the meaning of these values;

**Table 1.**  
Meaning of Correlation Value Product moment

score	Meaning
0,00 – 0,19	Very low
0,20 – 0,39	Low
0,40 – 0,59	Medium
0,60 – 0,79	Strong
0,80 – 1,00	Very Strong

## RESULTS AND DISCUSSIONS

Calculation of the validity of the social adjustment scale items using the Pearson Product Moment correlation technique, namely by correlating the item score with the total aitem score then the author analyzes the data using the SPSS16.0 program and if the items that have a discrimination power index equal to or greater than 0,30 the number exceeds the number of items planned to be used as a scale, then it can choose the items that have the highest discrimination power index, otherwise if the items that pass are still insufficient for the desired number, we can consider lowering the criterion limit of 0.30 to 0.25. (Azwar, 2013).

This study uses two scales, namely the sensory integration scale and the social adjustment scale. The validity test of the items can be explained in the table below:

(r<sub>bt</sub>) = 0.269 to (r<sub>bt</sub>) = 0.867 with a significance level of  $\alpha > 0.05$ .

The validity of the social adjustment scale items shows that of the 30 items tested, 5 items were found to be canceled and 25 were declared valid.

Reliability calculations on the social adjustment scale using SPSS 16.0 found that the alpha reliability coefficient (Cronbach's alpha) was 0.949. It can be said that the social adjustment scale can be said to be reliable and has a very

good reliability value, the scale reliability coefficient of less than 0.6 is considered poor, the reliability coefficient of 0.7 is acceptable and above 0.8 is good (Priyatno, 2010).

**Table 3**  
Reliability of Social Adjustment Scale

		N	%	Cronbach' s Alpha	N of Item
Cases	Valid	23	100,0	0,949	30
	Excluded	0	0		
	Total	23	100,0		

a. Predictors: (Constant), Social Adjustment

The research data can be described regarding the categorization of each research variable, the categorization used in this study is interval level categorization. Descriptive statistical data obtained empirical scores and hypothetical scores in detail.

Based on the results of the description analysis using the SPSS 23.0 application, it is known that the distribution of social adjustment scores is spread between 40 to 99.

**Table 4.**  
Descriptive Statistics

	Score Empiric				Scor Hipotetic			
	Min	Max	Mean	SD	Min	max	$\mu$	$\sigma$
Social Adjusment	40	99	70,57	19,642	26	104	65	13

Description:

- The minimum score (Xmin) is the result of multiplying the number of scale items by the lowest value of the weighting of the answer choices.
- The maximum score is the result of multiplying the number of scale items by the highest value of the weighting of the answer choices.

- Hypothetical mean ( $\mu$ ) with the formula  $\mu = \text{number of items} \times \text{center score}$ .
- The hypothetical standard deviation ( $\sigma$ ) is  $\sigma = (\text{max score} - \text{min score}) / 6$

If the distribution of scores on each scale is grouped into value intervals, each interval representing a certain category, the following results are obtained:

**Table 5.**  
Descriptive Data of Social Adjustment

Interval	Frequency	CategorY	%
$X < 52$	6	Low	26
$52 \leq X < 78$	6	Medium	26
$78 < X$	11	High	48

Based on the categorization of social adjustment scores above, it can be seen that the majority of the answers of all subjects from the social adjustment scale are in the high category, namely with a frequency of 11, a percentage of

48%, and a medium category with a frequency of 6, a percentage of 26% and low categorization which has a frequency of 6 with a percentage of 26%.

**Table 6**  
Sensory Integration Categorization

Interval	Frequency	CategorY	%
24 – 30	4	Disorder	17,4
31 – 37	8	Not Integrated	34,8
38 – 42	11	Integrated	47,8

Based on the categorization of sensory integration scores above, it can be seen that all subjects' answers from the scale are in the integrated category with a frequency of 11 and a percentage of 47.8%, the category is not integrated

with a frequency of 8 and a percentage of 34.8%, and in the category of interference with a frequency of 4 and a percentage of 17.4%.

**Table 7.**  
**Hypothesis Test**

		Social Adjustment	Sensory Integration
Social Adjustment	Correlation	1	0,676**
	Sig. (2-tailed)		0,000
	N	23	23
	Correlation	0,676**	1
	Sig. (2-tailed)	0,000	
	N	23	23

The results of the data analysis above, show a correlation coefficient value of 0.676 with a significance value of 0.000 where  $p < 0.05$ , it can be concluded that there is a significant relationship between sensory integration ability and social adjustment in SDIT X elementary school students. The correlation value of 0.676 shows that the two variables have a strong relationship.

## CONCLUSION AND RECOMMENDATION

Based on the results of research on sensory integration ability with social adjustment in elementary school students at SDIT X Bandar Lampung that has been conducted, and based on the results of the analysis and discussion previously described, it can be concluded that there is a significant relationship between sensory integration ability with social adjustment in elementary school students at SDIT X Bandar Lampung. This conclusion is based on the hypothesis test conducted, obtained a correlation coefficient value of 0.676 with a significance value of 0.000 with a significance level of  $p = .005$ , it can be concluded that there is a significant relationship between sensory integration ability and social adjustment in elementary school students at SDIT X Bandar Lampung and the relationship between the two variables can be stated as high. The results of the study conveyed that the higher the sensory ability of elementary school children at SDIT X Bandar Lampung, the higher their social adjustment ability.

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