Adaptation of the Indonesian Version of the Stanford Social Dimensions Scale (SSDS) for Individuals with Autism Spectrum Disorder (ASD)

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ABSTRACT

Adaptation involves modifying a test instrument from one language or culture to another, ensuring it remains valid and is understood to be used in a different context while maintaining its validity according to the original construct. The Stanford Social Dimensions Scale (SSDS) is a tool for measuring social skills for Individuals with Autism Spectrum Disorders (ASD) across five key dimensions: Social Motivation, Social Affiliation, Expressive Social Communication, Social Recognition, and Unusual Approach. According to DSM-5, individuals with ASD exhibit two core deficits in social communication and interaction, along with restricted, repetitive behaviors and interests. This study involved adapting the SSDS into Indonesian with a sample of 355 respondents. The findings confirmed that the Indonesian version of the SSDS is valid and reliable for measuring social skills in individuals with ASD in Indonesia. This adaptation maintains fidelity and consistency to the original construct. These findings suggest that the adapted SSDS can serve as an effective tool for assessing social dimensions in this population.

INTRODUCTION

The government has mandated the right to education for children with special needs as stipulated in article 54 of Law Number 39 of 1999 concerning Human Rights, which reads: *Every child with physical and mental disabilities has the right to receive treatment, education, training, and unique assistance at the expense of the state, to ensure their lives under human dignity, self-improvement, and the ability to participate in the life of the people and the state*.

Then, article 5, paragraph (2) of Law Number 20 of 2003 concerning the National Education system (Sisdiknas Law) mandates education for children with special needs reads: *Citizens with physical, emotional, mental, intellectual, and social disorders are entitled to special education*.

Furthermore, article 32 of the National Education System Law explains that special education is education for students who have difficulty following the learning process due to physical, emotional, mental, or social conditions and *have the potential for exceptional intelligence and talents*.

Children with special needs (ABK) are children who experience physical, mental, social, and emotional limitations or abnormalities that hinder their growth and development compared to other children of the same age. Children have a significant impact on the process. Individuals with Autism Spectrum Disorder (ASD) with complex neurological disorders and

problems characterized by problems with social communication and the presence of limited, recurrent, and stereotypic behaviors and interests (certain unusual behaviors) (APA, 2013). Autism itself is a disorder that includes cognitive, emotional, behavioral, and social areas, including the inability to interact with people around them both verbally and nonverbally (Desiningrum, 2016; Jhon, 2012). In addition, ASD individuals have deficits in social, linguistic, and communicative reciprocity, repetitive behaviors, and stereotypical interests (Gelbar & Buggey, 2012).

Individuals with ASD also show abnormal responses to sensory stress (Jhon, 2012). People with ASD vary significantly in their strengths and weaknesses. Although some individuals with ASD show significant cognitive impairment, others show relatively high levels of cognitive function despite various social deficits. Therefore, the symptoms associated with ASD are described as heterogeneous, both in the range of disorders and in terms of functional abilities that vary within each given disorder (Gelbar & Buggey, 2012).

One of the things experienced by Individuals with Autism Spectrum Disorder is a social skills deficit. Social skills are children's ability to interact with others in a social context (Suharsiwi, 2015). Social skills are behaviors that lead to positive social interactions, including necessary and effective verbal and interpersonal communication (Rao, Beidel, & Murray, 2008). Social disorders in individuals with ASD are diverse and impact language, language practice, and interpersonal relationships (Williams, Kathleen, & Scahill, 2007).

The ability to socialize and the ability to interact with others is essential in human life and requires social skills. Unfortunately, social skills disorders not only hinder a child's development but also lead to rejection and acceptance from friends, peers, and adults, as well as loneliness and isolation. Other disadvantages of poor social skills include slower academic progress, social failure, anxiety, depression, harassment, barriers in social relationships, and social isolation (Golzari & ALambdarloo, 2015).

People with ASD have several common symptoms of social problems, including difficulty adjusting to social stimuli, understanding facial expressions, and responding to the difficulties of others. People with ASD also have difficulty communicating through eye contact, initiating interactions, using appropriate greetings, establishing mutual attention, understanding traditional humor, and developing social pragmatics (conversation). They also experience difficulties with disabilities such as taking turns and understanding the interlocutor's intent, seeing, listening, poor vocal prosody (e.g., tonal ups and downs and voice connections that favor oral communication), a tendency to think about specific topics, difficulty understanding and expressing emotions, and non-literary language such as irony and metaphor difficulties in interpretation (Weiss & Harris, 2001; Williams et al., 2007).

The ability to socialize and the ability to interact with others are critical skills in life. Children with ASD are particularly disturbed in this regard. Individuals with ASD suffer from both direct and indirect impacts related to a lack of social interaction. Individuals with autism spectrum disorder often report wanting more social interaction and may also report receiving less social support and feeling lonely than their neurotypical peers (Williams et al., 2007).

Individuals with this disorder may have deficits in social skills, making it difficult for them to interact with family, coworkers, and other adults. Limited social skills can impact the ability to achieve normal developmental stages and develop satisfying relationships with family and friends (Rao et all., 2008). Individuals with ASD may be at higher risk of peer rejection and social isolation compared to their peers. There is also evidence that a lack of social skills in individuals with autism spectrum disorder contributes to academic and career success. This can lead to mood problems and anxiety later in life (Williams et all., 2007).

Developing social skills in individuals with ASD can increase self-confidence (Suharsiwi, 2015). People who can speak tend to imitate commands and learn various social skills more quickly than people who still use nonverbal language and tend to imitate commands and learn various social skills, such as shaking hands, smiling, and others. Social skills like gesturing can help them learn social behaviors (Suharsiwi, 2015). Caring for people with autism presents many challenges and requires researchers to explore different methods of education constantly. One method that has received much attention in the literature is modeling. This

method usually involves a step where the child observes another child engaging in the targeted behavior.

Based on the implementation that we encounter and do daily as individual practitioners and teachers with ASD, it is found that there are many social skills problems, and they are still broad. The phenomenon encountered by social skills has a significant influence on the development of individuals with ASD that occurs in schools and environments that involve friendships, initiation, playing together, two-way communication, providing rational giving, there is direction from teachers, there is role play, and giving feedback as well as antecedent and reinforcement strategies.

METHOD

In this study, the technique used is the Confirmatory Factor Analysis statistical analysis technique with the help of JASP software version 0.18.1.0. Henceforth, it will be called CFA. This test is a test of statistical hypotheses with various models, namely models with one factor (first order model), models with two or more factors (multidimensional model), models where there is an interrelationship between these factors, or it can be a model where there is no relationship between factors. After obtaining that the desired model is in accordance (data with fit), the next step is to determine the validity item, whether each item or indicator used has measured the existing factors or constructs. Confirmatory factor analysis is "more scientific" because it can be tested empirically with statistical methods and hypotheses regarding the model and its measurements.

RESULTS AND DISCUSSION

Dimension-Level Construction Validity

In this section, the researcher will first report the results of the construct validity test on each dimension. This is done to see if the statement items that are part of a particular dimension measure what they should measure. This is done in two stages, namely:

1. Testing a hypothesis about a theoretical model that says that items in each dimension measure only one factor. Technically, what is tested is whether there is a significant difference between the correlation matrix expected or predicted by the theory and that obtained from the data.
2. Testing the hypothesis of whether each item in the dimension provides significant information about the dimension to be measured. This second stage can be carried out if the proposed model can be declared fit (suitable) based on the criteria of 'model fit' or *'goodness of fit index'* in the previous chapter.

C*onfirmatory factor analysis* (CFA) uses a one-factor *(first-order)* model to carry out these two stages. The following are the results of the dimensional level validity test on *The Stanford Social Dimensions Scale* (SSDS):

Validity of the Construct of the Social Motivation Dimension

The social motivation dimension consisted of 14 items; the researcher tested the validity of the construct using the CFA (*confirmatory factor analysis)* first-order *model* for 355 respondents. From the results of the calculation using CFA with *the first-order model*, the fit model values are obtained as follows:

Table 1. *Goodness of Fit Index* – Social Motivation Dimension

Criteria Model Fit	*Index* generated		*Goodness of Fit Index*	Information
	Early Models	Modified Models		
P Value	0.00000	0.00000	> 0.05	Model does not fit

CFI	0.95	0.98	≥ 0.90	Model fit
GFI	0.85	0.92	≥ 0.90	Model fit
RMSEA	0.116	0.074	< 0.08	Model fit
Confidence interval	0.11 – 0.13	0.063 – 0.086		
SRMR	0.060	0.048	< 0.08	Model fit

Table 4.1 shows that the P Value is less than 0.01. This value shows that the P-value is not above 0.05. This can be interpreted as a social motivation model with 14 items that are not yet fit. The researcher uses other criteria, namely CFI (*Comparative Fit Index),* GFI *(Goodness of Fit Index),* RMSEA (*Root Mean Square Error Approximation*), and SRMR (*Standardized Root Mean Square Residual).* The researcher did not use the P-value because it was sensitive to many respondents. So, the CFI, GFI, RMSEA, and SRMR criteria are used to determine whether the model can be declared fit. Table 4.1 shows that the CFI and GFI indices are above 0.90; The RMSEA and SRMR indices are below 0.08. It can be interpreted that the social motivation model, with fourteen items, fits with the data, as shown in the image below:

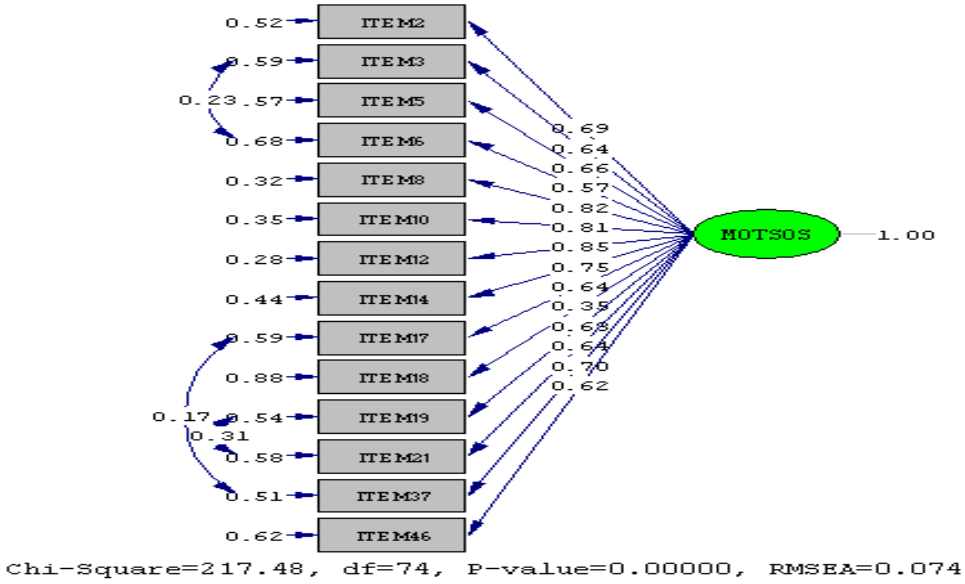

Figure 1. Fit Model – Social Motivation Dimension

The next step is to see whether the item measures the factor to be measured and whether the item needs to be dropped; then, a null hypothesis test is carried out regarding the factor charge coefficient of the item. The test is carried out by looking at *the p-value* for each factor charge coefficient. If the resulting *p-value* < 0.05, the item is significant and vice versa. In addition, the researcher also looked at the Lambda coefficient to determine the item's quality; if an item with a negative Lambda was found, it could be concluded that the item did not measure what should be measured. Finally, the researcher determined the limit on an item's index or standardized loading factor value to be declared significant, namely > 0.5. The factor charge coefficients for the social motivation dimension items are presented in the following table:

Table 2. Factor charge coefficient – Social Motivation Dimension

Item	Standardized Loading Factor	Std. Error	T-value	P-value	Information
ITEM-2	0.69	0.05	14.56	< .001	√
ITEM-3	0.64	0.05	13.17	< .001	√
ITEM-5	0.66	0.05	13.52	< .001	√
ITEM-6	0.57	0.05	11.29	< .001	√

ITEM-8	0.82	0.04	18.62	< .001	√
ITEM-10	0.81	0.04	18.11	< .001	√
ITEM-12	0.85	0.04	19.61	< .001	√
ITEM-14	0.75	0.05	16.12	< .001	√
ITEM-17	0.64	0.05	13.06	< .001	√
ITEM-18	0.35	0.05	6.63	< .001	X
ITEM-19	0.68	0.05	14.17	< .001	√
ITEM-21	0.64	0.05	13.24	< .001	√
ITEM-37	0.70	0.05	14.81	< .001	√
ITEM-46	0.62	0.05	12.57	< .001	√

Information: √ = Significant Items, X = Insignificant items

Table 4.2 shows that all items in the social motivation dimension are significant (*p-value* < 0.05), and all the coefficients of the loading factor are positively charged. However, one item with *a standardized loading factor* value of < 0.5 is item number 18. Therefore, the researcher conducted a re-analysis by excluding item number 18. The following are the results of the fit model for the social motivation dimension**:**

Table 3. *Goodness of Fit Index* – Social Motivation Dimension

Criteria Model Fit	***Index* generated**		***Goodness of Fit Index***	**Information**
	Early Models	**Modified Models**		
P Value	0.00000	0.00000	> 0.05	Model does not fit
CFI	0.96	0.98	≥ 0.90	Model fit
GFI	0.86	0.92	≥ 0.90	Model fit
RMSEA	0.117	0.080	< 0.08	Model fit
Confidence interval	0.11 – 0.13	0.068 – 0.092		
SRMR	0.058	0.046	< 0.08	Model fit

In Table 4.3, based on the results of CFI (*Comparative Fit Index*), GFI *(Goodness of Fit Index*), *confidence interval* RMSEA (*Root Mean Square Error Approximation*), and SRMR (*Standardized Root Mean Square Residual),* it can be stated that the model is fit with thirteen items, as shown in the image below:

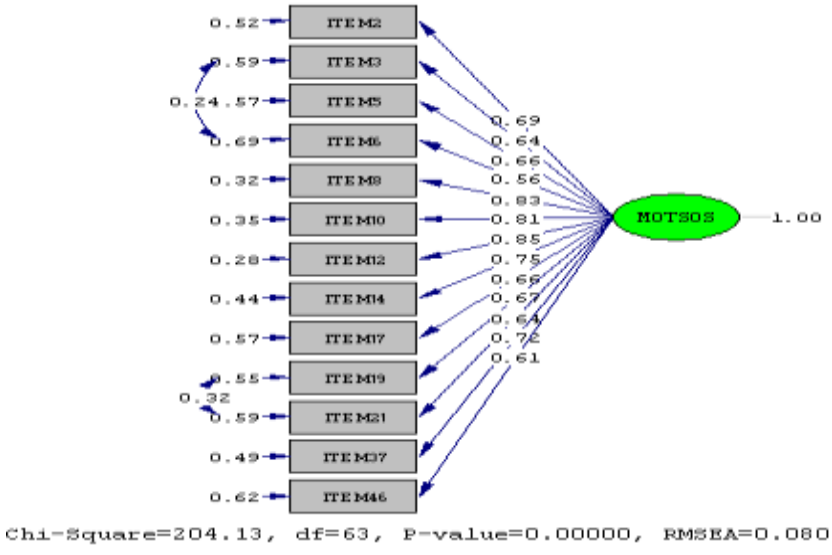

Figure 2. Fit Model – Social Motivation Dimension

After obtaining a fit model for the social motivation dimension with thirteen items, the researcher presented the results of the load coefficient of the thirteen factors in the following table:

Table 4. Factor charge coefficient – Social Motivation Dimension

Item	Standardized Loading Factor	Std. Error	T-value	P-value	Information
ITEM-2	0.69	0.05	14.60	< .001	√
ITEM-3	0.64	0.05	13.08	< .001	√
ITEM-5	0.66	0.05	13.63	< .001	√
ITEM-6	0.56	0.05	11.09	< .001	√
ITEM-8	0.83	0.04	18.72	< .001	√
ITEM-10	0.81	0.04	18.05	< .001	√
ITEM-12	0.85	0.04	19.59	< .001	√
ITEM-14	0.75	0.05	16.17	< .001	√
ITEM-17	0.66	0.05	13.60	< .001	√
ITEM-19	0.67	0.05	13.91	< .001	√
ITEM-21	0.64	0.05	13.04	< .001	√
ITEM-37	0.72	0.05	15.23	< .001	√
ITEM-46	0.61	0.05	12.43	< .001	√

Information: √ = Significant Items, X = Insignificant items

From Table 4.4, it can be seen that for all items in the significant social motivation dimension (*p-value* < 0.05), all the coefficients of the loading factor are positively charged with a value of > 0.5. Thus, the first item to the thirteenth item was declared significant in measuring the dimension of social motivation. The stages that the researcher did in the dimension of social motivation were the same as those that the researcher did in the dimension of social affiliation, expressive social communication, social recognition and unusual approach.

Validity of the Construct of the Social Affiliation Dimension

The social affiliation dimension consists of 8 items; the researcher conducted a construct validity test using the CFA (*confirmatory factor analysis)* first-order *model* for 355 respondents. From the results of the calculation using CFA with *the first-order model*, the fit model values before and after modification are obtained as follows:

Table 5. *Goodness of Fit Index* – Social Affiliation Dimension

Criteria Model Fit	Index generated		Expected Index	Information
	Before modification	After modification		
P Value	0.00000	0.00000	> 0.05	Model does not fit
CFI	0.93	0.98	≥ 0.90	Model fit
GFI	0.91	0.96	≥ 0.95	Model fit
RMSEA	0.134	0.080	< 0.08	Model fit
Confidence interval	0.11 s/d 0.16	0.057 s/d 0.10		
SRMR	0.060	0.041	< 0.08	Model fit

Table 4.5 shows that the dimensions of social affiliation with eight items do not fit the data. This can be seen in the CFI and RMSEA indices that do not meet the desired criteria. Therefore, the researcher modified the model by freeing measurement errors in certain items. So, the model is declared fit using the criteria, namely CFI (*Comparative Fit Index),* GFI *(Goodness of Fit Index),* RMSEA (*Root Mean Square Error Approximation*), and SRMR (*Standardized Root Mean Square Residual).* The researcher did not use the P-value because it was sensitive to many respondents. So, the CFI, GFI, RMSEA, and SRMR criteria are used to

determine whether the model can be declared fit. It can be interpreted that the social affiliation model, with eight items, fits with the data, as shown in the image below:

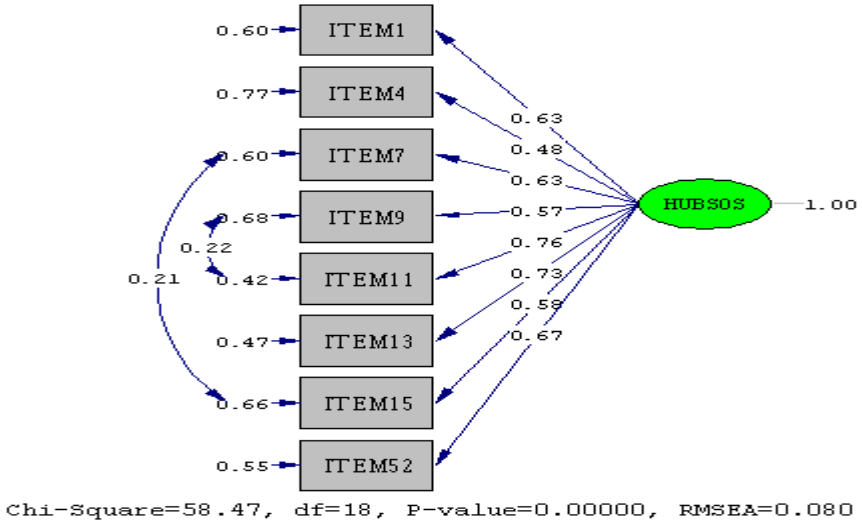

Figure 3. Fit Model – Social Affiliation Dimension

The next step is to see whether the item measures the factor to be measured and whether the item needs to be dropped; then, a null hypothesis test is carried out regarding the factor charge coefficient of the item. The test is done by looking at *the t-value* for each factor charge coefficient. If the resulting *t-value* > 1.96, the item is significant and vice versa. In addition, the researcher also looked at the Lambda coefficient to determine the item's quality; if an item with a negative Lambda was found, it could be concluded that the item did not measure what should be measured. Finally, the researcher determined the limit on an item's index or standardized loading factor value to be declared significant, namely > 0.5. The factor charge coefficients for social affiliation dimension items are presented in the following table:

Table 6. Factor charge coefficient – Social Affiliation Dimension

Item	Standardized Loading Factor	Std. Error	T-value	P-value	Information
ITEM-1	0.63	0.05	12.28	< .001	√
ITEM-4	0.48	0.05	8.79	< .001	X
ITEM-7	0.63	0.05	12.13	< .001	√
ITEM-9	0.57	0.05	10.52	< .001	√
ITEM-11	0.76	0.05	15.59	< .001	√
ITEM-13	0.73	0.05	14.60	< .001	√
ITEM-15	0.58	0.05	11.01	< .001	√
ITEM-52	0.67	0.05	13.11	< .001	√

Information: √ = Significant Items, X = Insignificant items

Table 4.6 shows that all items in the dimension of social affiliation are significant (*p-value* < 0.05), and all loading factor coefficients are positively charged. However, one item with a *standardized loading factor* value of < 0.5 is item number 4. Therefore, the researcher conducted a re-analysis by excluding item number 4. The following are the results of the fit model for the social affiliation dimension**:**

Table 7. *Goodness of Fit Index* – Social Affiliation Dimension

Criteria Model Fit	Index generated		Expected Index	Information
	Before modification	After modification		
P Value	0.00000	0.00170	> 0.05	Model does not fit

CFI	0.93	0.99	≥ 0.90	Model fit
GFI	0.91	0.98	≥ 0.95	Model fit
RMSEA	0.153	0.069	< 0.08	Model fit
Confidence interval	0.13 s/d 0.18	0.040 s/d 0.10		
SRMR	0.062	0.035	< 0.08	Model fit

In Table 4.7, based on the results of CFI (*Comparative Fit Index*), GFI *(Goodness of Fit Index),* RMSEA (*Root Mean Square Error Approximation*), and SRMR (*Standardized Root Mean Square Residual),* it can be stated that the model is fit with seven items, as shown in the image below:

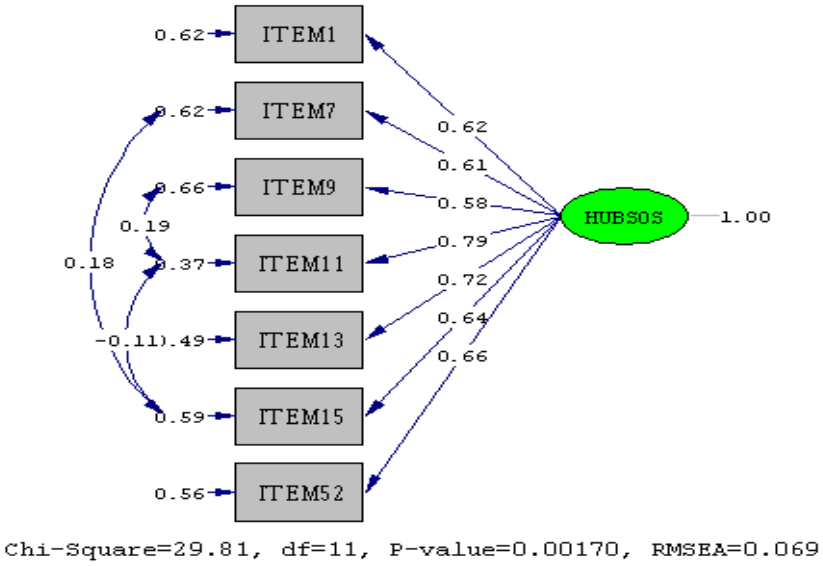

Figure 4. Fit Model – Social Affiliation Dimension

After obtaining a fit model for the social affiliation dimension with seven items, the researcher presented the results of the charge coefficient of the seven-item factor, in the following table:

Table 8. Factor charge coefficient – Social Affiliation Dimension

Item	Standardized Loading Factor	Std. Error	T-value	P-value	Information
ITEM-1	0.62	0.05	11.99	< .001	√
ITEM-7	0.61	0.05	11.69	< .001	√
ITEM-9	0.58	0.05	10.76	< .001	√
ITEM-11	0.79	0.05	16.20	< .001	√
ITEM-13	0.72	0.05	14.42	< .001	√
ITEM-15	0.64	0.05	11.86	< .001	√
ITEM-52	0.66	0.05	13.06	< .001	√

Information: √ = Significant Items, X = Insignificant items

Table 4.8 shows that for all items in the dimension of significant social affiliation (*p-value* < 0.05), all coefficients of the loading factor are positively charged with a value of > 0.5. Thus, the first item to the seventh item is stated to be significant in measuring the dimension of social affiliation.

Validity of the Construct of the Expressive Social Communication Dimension

The expressive social communication dimension consists of 7 items; the researcher conducted a construct validity test using the CFA (*confirmatory factor analysis)* first-order *model* for 355 respondents. From the results of the calculation using CFA with *the first-order model*, the values of the model before and after modification are obtained as follows:

Table 9. *Goodness of Fit Index* – Expressive Social Communication Dimension

Criteria Model Fit	Index generated		Expected Index	Information
	Before modification	After modification		
P Value	0.00000	0.00280	> 0.05	Model does not fit
CFI	0.89	0.999	≥ 0.90	Model fit
GFI	0.84	0.98	≥ 0.95	Model fit
RMSEA	0.209	0.071	< 0.08	Model fit
Confidence interval	0.19 s/d 0.23	0.039 s/d 0.10		
SRMR	0.073	0.040	< 0.08	Model fit

Table 4.9 shows that the seven-item expressive social communication dimension does not fit the data. This can be seen in the CFI and RMSEA indices that do not meet the desired criteria. Therefore, the researcher modified the model by freeing measurement errors in certain items. So, the model is declared fit using other criteria, namely CFI (*Comparative Fit Index),* GFI *(Goodness of Fit Index),* RMSEA (*Root Mean Square Error Approximation*), and SRMR (*Standardized Root Mean Square Residual).* The researcher did not use the P-value because it was sensitive to many respondents. So, the CFI, GFI, RMSEA, and SRMR criteria are used to determine whether the model can be declared fit. Table 4.7 shows that the CFI and GFI indices are above 0.90; The RMSEA and SRMR indices are below 0.08. It can be interpreted that the expressive social communication model, with seven items, fits with the data, as shown in the image below:

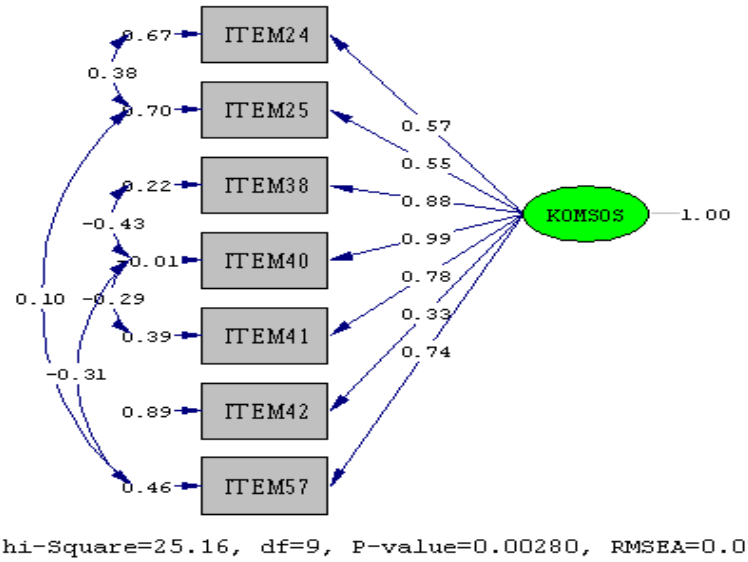

Figure 5. Fit Model – Expressive Social Communication Dimension

The next step is to see whether the item measures the factor to be measured and whether the item needs to be dropped; then, a null hypothesis test is carried out regarding the factor charge coefficient of the item. The test is done by looking at *the t-value* for each factor charge coefficient. If the resulting *t-value* > 1.96, the item is significant and vice versa. In addition, the researcher also looked at the Lambda coefficient to determine the item's quality; if an item with a negative Lambda was found, it could be concluded that the item did not measure what should be measured. Finally, the researcher determined the limit on an item's index or standardized loading factor value to be declared significant, namely > 0.5. The factor charge coefficients for expressive social communication dimension items are presented in the following table:

Table 10. Factor charge coefficient – Expressive Social Communication Dimension

Item	Standardized Loading Factor	Std. Error	T-value	P-value	Information
ITEM-24	0.57	0.05	11.63	< .001	√
ITEM-25	0.55	0.05	11.08	< .001	√
ITEM-38	0.88	0.05	19.49	< .001	√
ITEM-40	0.99	0.07	14.34	< .001	√
ITEM-41	0.78	0.05	16.38	< .001	√
ITEM-42	0.33	0.05	6.84	< .001	X
ITEM-57	0.74	0.05	15.32	< .001	√

Information: √ = Significant Items, X = Insignificant items

Table 4.10 shows that all items in the expressive social communication dimension are significant (*p-value* < 0.05), and all the coefficients of the loading factor are positively charged. However, one item with *a standardized loading factor* value of < 0.5 is item number 42. Therefore, the researcher conducted a re-analysis by excluding item number 42. The following are the results of the fit model for the expressive social communication dimension**:**

Table 11. *Goodness of Fit Index* – Dimension of Expressive Social Communication

Criteria Model Fit	Index generated		Expected Index	Information
	Model Not Fit	Model Fit		
P Value	0.00000	0.01478	> 0.05	Model does not fit
CFI	0.88	0.99	≥ 0.90	Model fit
GFI	0.83	0.99	≥ 0.95	Model fit
RMSEA	0.258	0.072	< 0.08	Model fit
Confidence interval	0.23 s/d 0.29	0.029 s/d 0.12		
SRMR	0.083	0.023	< 0.08	Model fit

In Table 4.11, based on the results of CFI (*Comparative Fit Index*), GFI *(Goodness of Fit Index*), RMSEA (*Root Mean Square Error Approximation*), and SRMR (*Standardized Root Mean Square Residual),* it can be stated that the model is fit with six items, as shown in the image below:

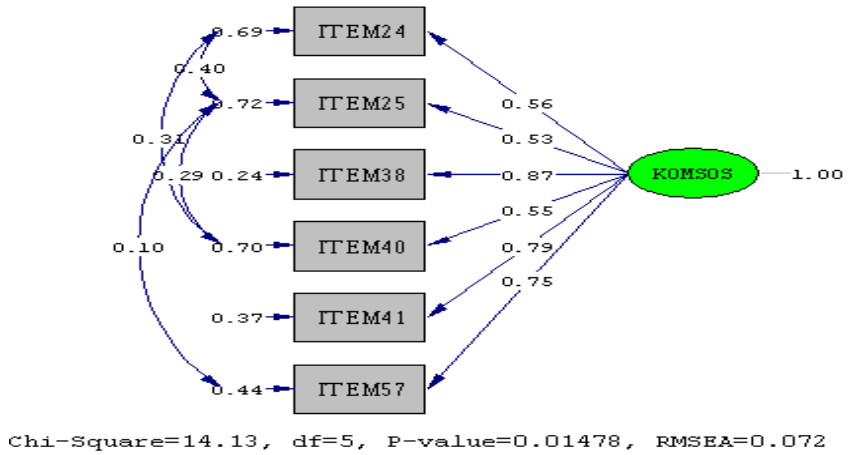

Figure 6. Fit Model – Expressive Social Communication Dimension

After obtaining a fit model for the expressive social communication dimension with six items, the researcher presented the results of the charge coefficients of the six items in the following table:

Table 12. Factor charge coefficient – Expressive Social Communication Dimension

Item	Standardized Loading Factor	Std. Error	T-value	P-value	Information
ITEM-24	0.56	0.05	10.61	< .001	√
ITEM-25	0.53	0.05	9.93	< .001	√
ITEM-38	0.87	0.05	19.00	< .001	√

ITEM-40	0.55	0.05	10.47	< .001	√
ITEM-41	0.79	0.05	16.73	< .001	√
ITEM-57	0.75	0.05	15.42	< .001	√

Information: √ = Significant Items, X = Insignificant items

From Table 4.12, it can be seen that for all items in the dimension of expressive social communication (*p-value* < 0.05), all coefficients of the loading factor are positively charged with a value of > 0.5. Thus, the first to sixth items are significant in measuring the dimensions of expressive social communication.

Validity of the Construct of the Social Recognition Dimension

The social recognition dimension consists of 7 items; the researcher conducted a construct validity test using the CFA (*confirmatory factor analysis)* first-order *model* for 355 respondents. From the results of the calculation using CFA with *the first-order model*, the fit model values are obtained as follows:

Table 13. *Goodness of Fit Index* – Social Recognition Dimension

Criteria Model Fit	Index generated		Expected Index	Information
	Model Not Fit	Model Fit		
P Value	0.00000	0.00013	> 0.05	Model does not fit
CFI	0.96	0.98	≥ 0.90	Model fit
GFI	0.95	0.97	≥ 0.95	Model fit
RMSEA	0.097	0.079	< 0.08	Model fit
Confidence interval	0.073 s/d 0.12	0.052 s/d 0.11		
SRMR	0.048	0.033	< 0.08	Model fit

Table 4.13 shows that the P Value is less than 0.01. This value shows that the P-value is not above 0.05. This can be interpreted as a social recognition model with 7 items that are not yet fit. The researcher uses other criteria, namely CFI (*Comparative Fit Index),* GFI *(Goodness of Fit Index),* RMSEA (*Root Mean Square Error Approximation*), and SRMR (*Standardized Root Mean Square Residual).* The researcher did not use the P-value because it was sensitive to many respondents. So, the CFI, GFI, RMSEA, and SRMR criteria are used to determine whether the model can be declared fit. Table 4.13 shows that the CFI and GFI indices are above 0.90; The RMSEA and SRMR indices are below 0.08. It can be interpreted that the social motivation model, with seven items, fits with the data, as shown in the image below:

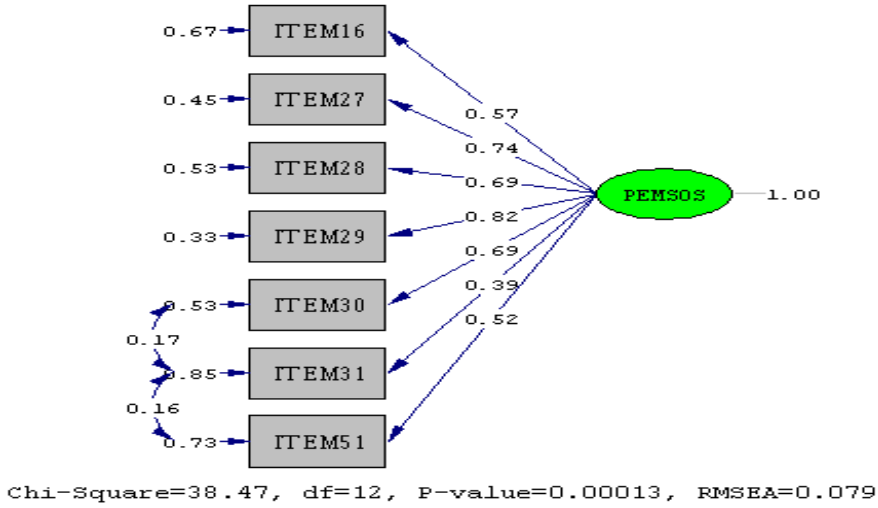

Figure 7. Fit Model – Social Recognition Dimension

The next step is to see whether the item measures the factor to be measured and whether the item needs to be dropped; then, a null hypothesis test is carried out regarding the factor charge coefficient of the item. The test is carried out by looking at *the p-value* for each factor charge coefficient. If the resulting *p-value* < 0.05, the item is significant and vice versa. In addition, the researcher also looked at the Lambda coefficient to determine the quality of the item; if an item with a negative Lambda was found, it could be concluded that the item did not measure what should be measured. Finally, the researcher determined the limit on an item's index or standardized loading factor value to be declared significant, namely > 0.5. The factor charge coefficients for the social recognition dimension items are presented in the following table:

Table 14. Factor charge coefficient – Social Recognition Dimension

Item	Standardized Loading Factor	Std. Error	T-value	P-value	Information
ITEM-16	0.57	0.05	10.98	< .001	√
ITEM-27	0.74	0.05	15.27	< .001	√
ITEM-28	0.69	0.05	13.79	< .001	√
ITEM-29	0.82	0.05	17.47	< .001	√
ITEM-30	0.69	0.05	13.76	< .001	√
ITEM-31	0.39	0.06	7.06	< .001	X
ITEM-51	0.52	0.05	9.77	< .001	√

Information: √ = Significant Items, X = Insignificant items

From Table 4.14, it can be seen that all items in the dimension of social recognition are significant (*p-value* < 0.05), and all the coefficients of the loading factor are positively charged. However, one item with *a standardized loading factor* value of < 0.5 is item number 31. Therefore, the researcher conducted a re-analysis by excluding item number 31. The following are the results of the fit model for the dimension of social recognition**:**

Table 15. *Goodness of Fit Index* – Dimension of Social Recognition

Criteria Model Fit	Index generated	Expected Index	Information
P Value	0.00437	> 0.05	Model fit
CFI	0.99	≥ 0.90	Model fit
GFI	0.98	≥ 0.95	Model fit
RMSEA	0.069	< 0.08	Model fit
Confidence interval	0.036 s/d 0.10		
SRMR	0.030	< 0.08	Model fit

In Table 4.15, based on the results of CFI (*Comparative Fit Index*), GFI *(Goodness of Fit Index),* RMSEA (*Root Mean Square Error Approximation*), and SRMR (*Standardized Root Mean Square Residual),* it can be stated that the model is fit with five items, as shown in the figure below:

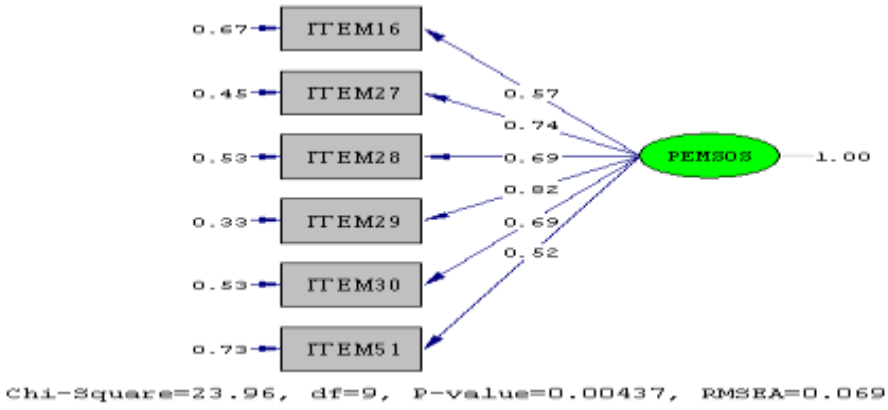

Figure 8. Fit Model – Social Recognition Dimension

After obtaining a fit model for the dimension of social recognition with five items, the researcher presented the results of the five-item factor load coefficient in the following table:

Table 16. Factor charge coefficient – Social Recognition Dimension.

Item	Standardized Loading Factor	Std. Error	Z-value	P-value	Information
ITEM-16	0.57	0.05	10.94	< .001	√
ITEM-27	0.74	0.05	15.21	< .001	√
ITEM-28	0.69	0.05	13.82	< .001	√
ITEM-29	0.82	0.05	17.53	< .001	√
ITEM-30	0.69	0.05	13.77	< .001	√
ITEM-51	0.52	0.05	9.77	< .001	√

Information: √ = Significant Items, X = Insignificant items

From Table 4.16, it can be seen that for all items in the dimension of significant social recognition (*p-value* < 0.05), all coefficients of the loading factor are positively charged with a value of > 0.5. Thus, the first item to the fifth item is declared significant in measuring the dimension of social recognition.

Construct Validity Dimension Unusual Approach

The dimension of the unusual approach consisted of 4 items; the researcher conducted a construct validity test using the CFA (*confirmatory factor analysis)* first-order *model* for 355 respondents. From the results of the calculation using CFA with *the first-order model*, the fit model values are obtained as follows:

Table 17. *Goodness of Fit Index* – Unusual Approach Dimension.

Criteria Model Fit	Index generated	Expected Index	Information
P Value	0.90151	> 0.05	Model fit
CFI	1.000	≥ 0.90	Model fit
GFI	1.000	≥ 0.95	Model fit
RMSEA	0.000	< 0.08	Model fit
Confidence interval	0.000 s/d 0.0.40		
SRMR	0.004	< 0.08	Model fit

Table 4.17 shows that the P-value is more significant than 0.05; the CFI and GFI indices are already above 0.90; The RMSEA and SRMR indices are also below 0.08. This can be interpreted as an unusual approach model with 4 items fitting with data, as shown in the image below:

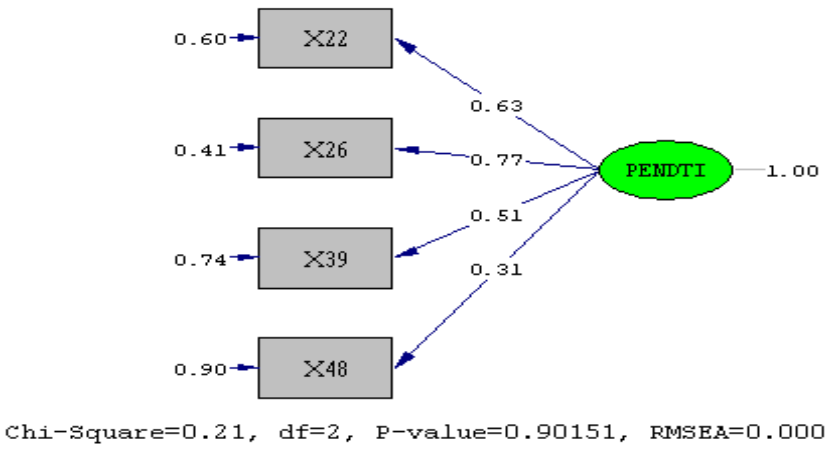

Figure 9. Fit Model – Unusual Approach Dimension

The next step is to see whether the item measures the factor to be measured and whether the item needs to be dropped; then, a null hypothesis test is carried out regarding the factor charge coefficient of the item. The test is carried out by looking at *the p-value* for each factor charge coefficient. If the resulting *p-value* < 0.05, the item is significant and vice versa. In addition, the researcher also looked at the Lambda coefficient to determine the item's quality; if an item with a negative Lambda was found, it could be concluded that the item did not measure what should be measured. The factor charge coefficients for the social recognition dimension items are presented in the following table:

Table 18. Factor charge coefficients – Unusual Approach dimension.

Item	Standardized Loading Factor	Std. Error	T-value	P-value	Information
ITEM-22	0.63	0.06	10.09	< .001	√
ITEM-26	0.77	0.07	11.68	< .001	√
ITEM-39	0.51	0.06	8.47	< .001	√
ITEM-48	0.31	0.06	5.05	< .001	X

Information: √ = Significant Items, X = Insignificant items

Table 4.18 shows that all items in the unusual approach dimension are not significant (*p-value* < 0.05), and all the coefficients of the loading factor are positively charged. However, there are two items with *a standardized loading factor* value of < 0.5, namely item 48. Therefore, the researcher conducted a re-analysis by not including the items individually. The following are the results of the fit model for the unusual approach dimension**:**

Table 19. *Goodness of Fit Index* – Unusual Approach Dimension.

Criteria Model Fit	Index generated	Expected Index	Information
P Value	0	> 0.05	Model fit
CFI	1.000	≥ 0.90	Model fit
GFI	1.000	≥ 0.95	Model fit
RMSEA	0.000	< 0.08	Model fit
Confidence interval	0.000 s/d 0.000		
SRMR	0.000	< 0.08	Model fit

In Table 4.19, based on the results of CFI (*Comparative Fit Index*), GFI *(Goodness of Fit Index*), RMSEA (*Root Mean Square Error Approximation*), and SRMR (*Standardized Root Mean Square Residual),* it can be stated that the model is fit with three items, as shown in the image below:

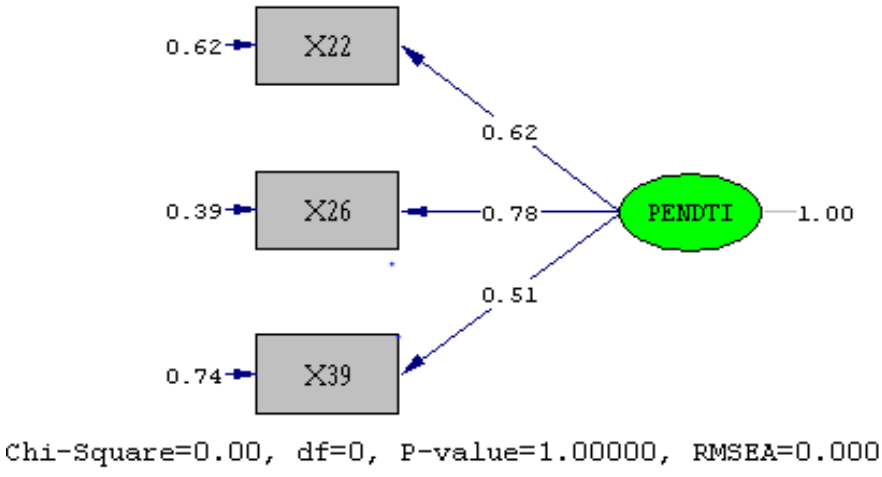

Figure 10. Fit Model – Unusual Approach Dimension

After obtaining a fit model for the dimension of an unusual approach with three items, the researcher presents the results of the charge coefficient of the three-item factor, in the following table:

Table 20. Factor charge coefficients – Unusual Approach dimension.

Item	Standardized Loading Factor	Std. Error	T-value	P-value	Information
ITEM-22	0.62	0.07	9.46	< .001	√
ITEM-26	0.78	0.07	10.86	< .001	√
ITEM-39	0.51	0.06	8.24	< .001	√

Information: √ = Significant Items, X = Insignificant items

From Table 4.20, it can be seen that all items in the unusual approach dimension are significant (p-value < 0.05), and all the coefficients of the loading factor are positively charged with a value of > 0.5. Thus, the first item to the third item is declared significant, measuring the dimensions of an unusual approach.

Validity of Multidimensional Constructs

In this section, the researcher reports the results of the construct validity test simultaneously between dimensions. This analysis model is called a multidimensional model. The stages carried out by the multidimensional model are the same as the first-order model in each dimension. There are two stages: In the first stage, the researcher conducts a hypothesis test following the multidimensional model intended by the researcher. Then, the second stage determines whether or not a set of items in each dimension is significant.

In the multidimensional model that the researcher tested, five dimensions are correlated. Where each dimension has a varying number of items. The social motivation dimension consists of 14 items; the social affiliation dimension consists of 8 items; the expressive social communication dimension consists of 7 items; the social recognition dimension consists of 7 items; and finally, the unusual approach dimension consists of 4 items. The following explains the results of the multidimensional model validity test on *The Stanford Social Dimension Scale* (SSDS) measuring instrument; the values obtained before and after modification are as follows:

Table 21. *Goodness of Fit Index – Multidimensional Model* of Social Skills Measuring Instrument SSDS.

Criteria Model Fit	Index generated		Expected Index	Information
	Before modification	After modification		
P Value	< 0.001	0.00000	> 0.05	Model tidak fit
CFI	0.814	0.902	≥ 0.90	Model tidak fit
GFI	0.938	0.958	≥ 0.95	Model fit
RMSEA	0.066	0.079	< 0.08	Model fit
Confidence interval	0.063 s/d 0.070	0.045 s/d 0.053		
SRMR	0.068	0.056	< 0.08	Model fit

Table 4.21 shows that the multidimensional model of the social skills of the SSDS measuring tool with five dimensions does not fit the data. This can be seen in the CFI index, which does not match the desired criteria. Therefore, the researcher modified the model by freeing measurement errors in certain items. So, the fit model was obtained using other criteria, namely CFI (*Comparative Fit Index),* GFI *(Goodness of Fit Index),* RMSEA (*Root Mean Square*

Error Approximation), and SRMR (*Standardized Root Mean Square Residual).* The researcher did not use the P-value because it was sensitive to many respondents. So, the CFI, GFI, RMSEA, and SRMR criteria are used to determine whether the model can be declared fit. Table 4.21 shows that the CFI and GFI indices are above 0.90; The RMSEA and SRMR indices are below 0.08. It can be interpreted that the multidimensional model of social skills SSDS measuring tool with five dimensions (social motivation, social affiliation, expressive social communication, social recognition, and unusual approach) fits with the data, as shown in the figure below:

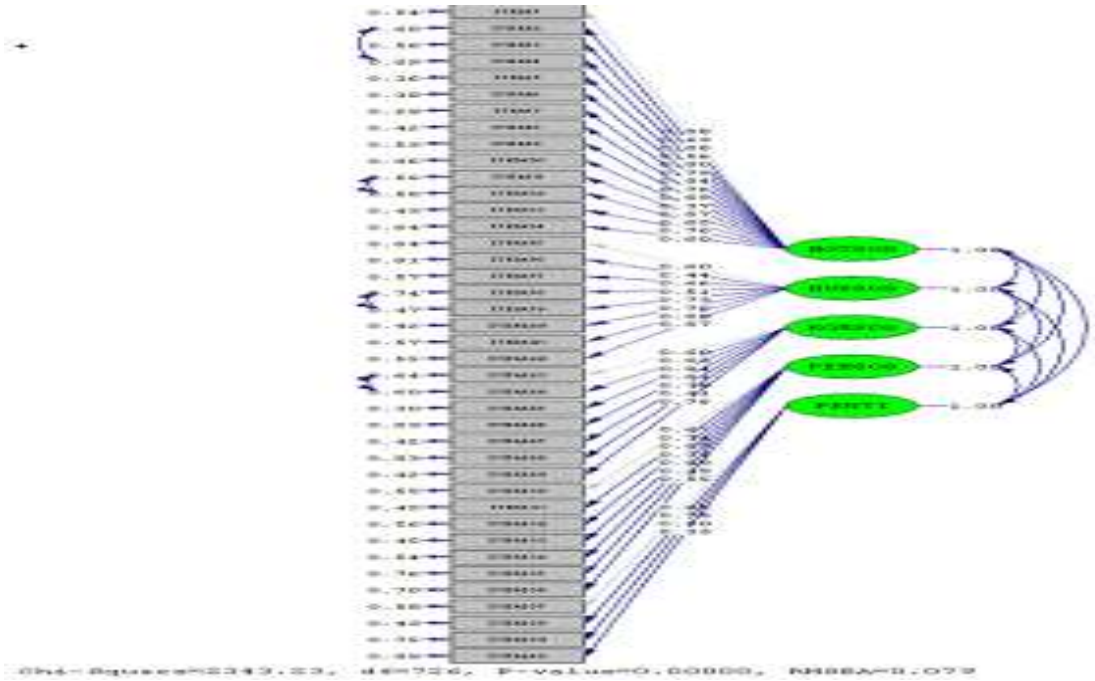

Figure 11. Fit Model – *Multidimensional Model* of Social Skills SSDS Measuring Tool

The next step is to see whether the item measures the factor to be measured and whether the item needs to be dropped; then, a null hypothesis test is carried out regarding the factor charge coefficient of the item. The test is done by looking at *the t-value* for each factor charge coefficient. If the resulting *t-value* > 1.96, the item is significant and vice versa. In addition, the researcher also looked at the Lambda coefficient to determine the item's quality; if an item with a negative Lambda was found, it could be concluded that the item did not measure what should be measured. The factor load coefficients for a set of items in each dimension contained in the SSDS gauge are presented in the following table:

Table 22. Factor charge coefficient – Social Skills Dimension of SSDS Gauge.

Dimension	Item	SLF	LF	Std. Error	T-value	P-value	Information
Social Motivation	ITEM-2	0.68	1	-	-	< .001	√
	ITEM-3	0.63	0.93	0.08	11.07	< .001	√
	ITEM-5	0.66	0.98	0.08	11.59	< .001	√
	ITEM-6	0.56	0.82	0.08	9.83	< .001	√
	ITEM-8	0.80	1.19	0.09	13.78	< .001	√
	ITEM-10	0.79	1.16	0.09	13.52	< .001	√
	ITEM-12	0.84	1.24	0.09	14.38	< .001	√
	ITEM-14	0.76	1.13	0.09	13.20	< .001	√
	ITEM-17	0.69	1.02	0.08	12.00	< .001	√
	ITEM-18	0.37	0.55	0.08	6.67	< .001	X

	ITEM-19	0.67	0.99	0.08	11.68	< .001	√
	ITEM-21	0.65	0.96	0.08	11.36	< .001	√
	ITEM-37	0.76	1.12	0.09	13.07	< .001	√
	ITEM-46	0.60	0.89	0.08	10.58	< .001	√
Social Affiliation	ITEM-1	0.60	1	-	-	< .001	√
	ITEM-4	0.44	0.72	0.10	7.19	< .001	X
	ITEM-7	0.66	1.09	0.11	10.02	< .001	√
	ITEM-9	0.51	0.85	0.10	8.23	< .001	√
	ITEM-11	0.73	1.20	0.11	10.77	< .001	√
	ITEM-13	0.76	1.26	0.11	11.11	< .001	√
	ITEM-15	0.66	1.09	0.11	10.02	< .001	√
	ITEM-52	0.67	1.11	0.11	10.17	< .001	√
Expressive Social Communication	ITEM-24	0.60	1	-	-	< .001	√
	ITEM-25	0.63	1.06	0.08	13.88	< .001	√
	ITEM-38	0.84	1.40	0.12	11.83	< .001	√
	ITEM-40	0.61	1.02	0.11	9.51	< .001	√
	ITEM-41	0.76	1.27	0.11	11.14	< .001	√
	ITEM-42	0.41	0.68	0.10	6.81	< .001	X
	ITEM-57	0.76	1.27	0.11	11.15	< .001	√
Social Recognition	ITEM-16	0.67	1	-	-	< .001	√
	ITEM-27	0.74	1.11	0.09	12.00	< .001	√
	ITEM-28	0.67	1.00	0.09	10.94	< .001	√
	ITEM-29	0.74	1.11	0.09	11.98	< .001	√
	ITEM-30	0.68	1.02	0.09	11.11	< .001	√
	ITEM-31	0.49	0.73	0.09	8.31	< .001	X
	ITEM-51	0.55	0.82	0.09	9.16	< .001	√
Unusual Approach	ITEM-22	0.65	1	-	-	< .001	√
	ITEM-26	0.76	1.17	0.15	7.92	< .001	√
	ITEM-39	0.50	0.77	0.11	7.07	< .001	√
	ITEM-48	0.33	0.51	0.10	4.95	< .001	X

Information: SLF = *standardized loading factor*; LF = *loading factor*; sign √ = significant (t>1,96), X = insignificant.

Table 4.22 shows that all items in social motivation, social affiliation, expressive social communication, social recognition, and unusual approach have a positive loading factor coefficient. However, there are items with a *standardized loading factor* value of < 0.5, namely item number 18 for the social motivation dimension, item 4 for the social affiliation dimension, item 42 for the expressive social communication dimension; item 31 and item for the social recognition dimension; and item 48 for the unusual approach dimension. Therefore, the researcher conducted a re-analysis by not including these items. Therefore, the researcher issued the five items. The following are the results of the fit model for the expressive social communication dimension**:**

Table 23. *Goodness of Fit Index* – Variable Dimension of Social Skills.

Criteria Model Fit	**Index generated**	**Expected Index**	**Information**
P Value	0.00000	> 0.05	Model does not fit
CFI	0.96	≥ 0.90	Model fit
GFI	0.78	≥ 0.95	Model does not fit
RMSEA	0.078	< 0.08	Model fit
Confidence interval	0.074 s/d 0.083		
SRMR	0.072	< 0.08	Model fit

After obtaining a fit model for all five dimensions in the social skills variable with each item in it, the researcher presented the results of the factor charge coefficient of each of these items, in the following table:

Table 24. Factor charge coefficient – Social Skills Dimension of SSDS Gauge.

Dimension	Item	SLF	LF	Std. Error	T-value	P-value	Information
Social Motivation	ITEM-2	0.68	0.85	0.06	13.87	< .001	√
	ITEM-3	0.63	0.78	0.06	12.62	< .001	√
	ITEM-5	0.66	0.83	0.06	13.50	< .001	√
	ITEM-6	0.55	0.68	0.06	10.74	< .001	√
	ITEM-8	0.80	1	-	-	< .001	√
	ITEM-10	0.79	0.98	0.06	16.80	< .001	√
	ITEM-12	0.85	1.05	0.06	18.58	< .001	√
	ITEM-14	0.76	0.95	0.06	16.14	< .001	√
	ITEM-17	0.69	0.86	0.06	14.07	< .001	√
	ITEM-19	0.66	0.83	0.06	13.46	< .001	√
	ITEM-21	0.64	0.80	0.06	12.98	< .001	√
	ITEM-37	0.76	0.94	0.06	15.88	< .001	√
	ITEM-46	0.60	0.74	0.06	11.88	< .001	√
Social Affiliation	ITEM-1	0.60	0.79	0.07	10.92	< .001	√
	ITEM-7	0.65	0.85	0.07	11.91	< .001	√
	ITEM-9	0.52	0.68	0.07	9.32	< .001	√
	ITEM-11	0.72	0.96	0.07	13.43	< .001	√
	ITEM-13	0.76	1	-	-	< .001	√
	ITEM-15	0.66	0.87	0.07	12.09	< .001	√
	ITEM-52	0.67	0.88	0.07	12.30	< .001	√
Expressive Social Communication	ITEM-24	0.55	0.64	0.06	10.80	< .001	√
	ITEM-25	0.59	0.69	0.06	11.73	< .001	√
	ITEM-38	0.86	1	-	-	< .001	√
	ITEM-40	0.55	0.64	0.06	10.78	< .001	√
	ITEM-41	0.76	0.89	0.05	16.45	< .001	√
	ITEM-57	0.78	0.91	0.05	17.00	< .001	√
Social Recognition	ITEM-16	0.67	0.89	0.07	12.15	< .001	√
	ITEM-27	0.74	0.99	0.07	13.51	< .001	√
	ITEM-28	0.68	0.91	0.07	12.38	< .001	√

	ITEM-29	0.75	1	-	-	< .001	√
	ITEM-30	0.67	0.88	0.07	12.07	< .001	√
	ITEM-51	0.53	0.70	0.07	9.51	< .001	√
Unusual Approach	ITEM-22	0.64	0.83	0.11	7.30	< .001	√
	ITEM-26	0.77	1	-	-	< .001	√
	ITEM-39	0.50	0.65	0.10	6.74	< .001	√

Information: SLF = *standardized loading factor*; LF = *loading factor*; sign √ = significant (t>1,96), X = insignificant.

From Table 4.24, it can be seen that all items in each dimension in the variable of social skills are significant (p-value < 0.05), and all coefficients of the loading factor are positively charged with a value of > 0.5. Thus, the first item to the last item is declared significant, measuring the dimensions set.

CONCLUSION

Based on the description above, it can be concluded that each item in each dimension is fit (by the one-factor model), which means that all items in a dimension measure one ability defined in the sub-test. Furthermore, each item in each dimension significantly measures or generates information regarding the social skills dimension in that dimension. Second, the five dimensions, namely social motivation, social relationships, expressive social communication, social recognition, and uncommon approaches contained in the social skills variable, are fit (following the multidimensional model); that is, all dimensions are correlated with each other in the social skills variable.

REFERENCES

Absalom, Y. (2017, Juni 25). Kesehatan: Kompasiana. Retrieved Januari 3, 2018, from https://www.kompasiana.com/yos08/anak-autismetersisih_58eb4717af7a61ec1378f3e7.

Akhgarnia, G. (2011, Mei 26). Overconnectivity in Brain Found in Autism : Findings from SDSU's Brain Development Imaging Laboratory differ from current brain connectivity theories.

Retrieved Januari 3, 2018, dari SDSU News Center: http://newscenter.sdsu.edu/sdsu_newscenter/news_story.aspx?sid=7300 Al-Salahat, M. M. (2016). Using of Video Modeling in Teaching a Simple Meal Preparation Skill for Pupils of Down Syndrome. Journal of Education and Practice, 82-90.

https://files.eric.ed.gov/fulltext/EJ1095812.pdf APA, A. P. (2013). Diagnostic and Statistical Manual of Mental Disorder Fifith Edition. Washington DC: American Psychiatric Publishing. Bandura, A. (2013, Februari 16). Self-efiicacy defined.

Retrieved Oktober 10, 2017, dari http://samples.jbpub.com/9781449689742/Chapter2.pdf Bandura, A. (1971). Social Learning Theory. New York City: General Learning Press.

http://www.asecib.ase.ro/mps/Bandura_SocialLearningTheory.pdf Beighley, J. S. (2013, 05 02). Communication Deficits in Babies and Infants with Autism and Pervasive Developmental Disorder - Not Otherwise Specified (PDD-NOS).

Retrieved 11 24, 2017, from Louisiana State University LSU Digital Commons: https://digitalcommons.lsu.edu/cgi/viewcontent.cgi?referer=https://ww google.co.id/&httpsredir=1&article=4039&context=gradschool_theses Bellini, S., & Akullian, J. (2007). A Meta-Analysis of Video Modeling and Video Self- Modeling Interventions for Children and Adolescents With Autism Spectrum Disorder. Exceptional Children , 264-287.

http://vsmproject.pbworks.com/f/videometa.pdf Birtwell, K. B., Willoughby, B., & Nowinski, L. (2016). Social, Cognitive, and Behavioral Development of Children and Adolescents with Autism Spectrum Disorder. Dalam C. J. McDougle, Primer On:Autism Spectrum Disorder (hal. 19). New York: Oxford University Press. From : https://books.google.co.id/books?hl=id&lr=&id=G1Q2CwAAQBAJ&oi=fnd& 60 pg=PP1&dq=C.+J.+McDougle,+Primer+On:Autism+Spectrum+Disorder&ot s=kCpSwdZN9G&sig=rUTJ5hMThHauE6Sc_4y43adDJiE&redir_esc=y#v= onepage&q&f=false Buggey, T. (2005).

http://vsmproject.pbworks.com/f/vsm%20in%20small%20private.pdf Cardon, T. A., & Wilcox, M. J. (2011). Promoting Imitation in Young Children with Autism : A Comparison of Reciprocal Imitation Training and Video Modeling. Journal of Autism Deviant Disorder , 654-666.

https://link.springer.com/article/10.1007/s10803-010-1086-8 Corbett, B. A., & Abdullah, M. (2005). Video Modelling: Why Does It Work for Children with Autism? JEIBI , 2-8.

https://www.researchgate.net/publication/26456245_Video_Modeling_Why _does_it_work_for_children_with_autism Dawson, G., Meltzoff, A. N., Osterling, J., & Rinaldi, J. (1998). Neuropsychological Correlates of Early Symptoms of Autism. Child Dev , 1276-1285.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4084601/ Delano, M. E. (2007). Video Modeling Interventions for Individuals with Autism. Remedial and Special Education , 33-42.

http://dx.doi.org/10.1177/07419325070280010401 Doidge, N. M. (2010). The Brain That Changes Itself. Carlton North, Vic: Scribe Publications.

https://www.google.co.id/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ve d=0ahUKEwjpw5L8ubZAhVDtI8KHYXtBhYQFggnMAA&url=http%3A%2F%2Ftaisa.si%2 Fwp%2 Fwp content%2Fuploads%2F2013%2F12%2FThe-Brain-That-ChangesItself-by-Norman-DoidgeM.D..pdf&usg=AOvVaw0f0VOQLM2UltrYlGmFFCXm Grosberg, D., & Charlop, M. (2014). Teaching Persistence in Social Initiation Bids to Children with Autism Through a Portable Video Modeling Intervention (PVMI). Journal of Development Physical Disabilities, 527-541.

https://www.researchgate.net/publication/259635152_Teaching_Persistence_in_Social_Initiat ion_Bids_to_Children_with_Autism_Through_a_Portable _Video_Modeling_Intervention_PVMI 61 Hauck, M., Fein, D., Waterhouse, L., & Feinstein, C. (1995). Social Initiations by Autistic Children to Adults and Other Children. Journal of Autism and Developmental Disorder, 25 (No.6), 579-595.

http://dx.doi.org/10.1007/BF02178189 Kabashi, L. (2012). The Efficacy of Video Self Modeling for Promoting Social Initiation Skills for Children with Autism Spectrum Disorders (ASD) to Peers. Pittsburgh: UMI Disertation Publishing.

http://dscholarship.pitt.edu/13811/1/LKabashi_Dissertation.pdf Koegel, R. L., Vernon, T. W., & Koegel, L. K. (2009). Improving Social Initiations in Young Children with Autism Using Reinforcers with Embedded Social Interactions. Journal of Autism and Developmental Disorder, 1240-1251.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2727363/ Kouo, J. L. (2016). The Effectiveness of Point-of-View Video Modeling in Teaching Social Initiation Skills to

Children with Autism Spectrum Disorders. Michigan: Proquest. From: https://drum.lib.umd.edu/bitstream/handle/1903/18226/Kouo_umd_0117E_ 16960.pdf?sequence=1 LaCava, P. (2010). Steps for Implementation : Video Modeling. National Professional Developmenter Center on Autism Spectrum Disorder, 1-6.

http://www.autisminternetmodules.org/up_doc/VideoModelingSteps.pdf Latipun. (2002). Psikologi Eksperimen. Malang: UMM Press. Litras, S., Moore, D. W., & Anderson, A. (2010). Using Video Self-Modeled Social Stories to Teach Social Skills to a Young Child with Autism. Autism Research and Treatment, 1-17.

https://www.researchgate.net/publication/230769971_Using_Video_Self Modelled_Social_Stories_to_Teach_Social_Skills_to_a_Young_Child_with _Autism Loftin, R. L., Odom, S. L., & Lantz, J. F. (2008).

Social Interaction and Repetitive Motor Behaviors. Journal of Autism and Developmental

https://www.researchgate.net/publication/5782830 Macpherson, K., & Charlop, M. H. (2014).

Using Portable Video Modeling Technology to Incrase the Compliment Behaviors of Children with Autism During Athletic Group Play. Journal of Autism and Developmental Disorder, 1-11. From : https://www.researchgate.net/publication/260395082 Margaretha, S. (2012, Juli 10).

Video Modeling Autisme Indonesia. Retrieved Januari 3, 2018, dari Google Web site: http://lib.ui.ac.id 62 Mastrangelo, S. (2009).

Play and the Child With Autism Spectrum Disorder: From Possibilities to Practice. International Journal of Play Therapy , 13-30.

https://www.researchgate.net/publication/232525127 McCoy, K., & Hermansen, E. (2007). Video Modeling for Inidviduals with Autism: A Review of Model Types and Effects. Education and Treatment of Children, 30 (4), 183-213.

http://www.freepatentsonline.com/article/Education-TreatmentChildren/172179740.html McLeod, D. S., Malatino, K. W., & Lucci, D. (2016).

Social Skills Training for Autism Spectrum Disorder. Dalam C. J. McDougle, Primer On Autism Spectrum Disorder (hal. 369). New York: Oxford University Press.

https://books.google.co.id/books?hl=id&lr=&id=G1Q2CwAAQBAJ&oi=fnd&pg=PP1&dq=C.+J.+ McDougle,+Primer+On:Autism+Spectrum+Disorder&ots=kCpSwdZN9G&sig=rUTJ5hMTh HauE6Sc_4y43adDJiE&redir_esc=y#v= onepage&q&f=false Mullen, G. (2010).

Mirror Neurons : Our Current Understanding. Student Psychology Journal Volume II.

http://psychology.tcd.ie/spj/past_issues/issue02/Reviews/(8)%20Georgina %20Mullen.pdf NHS, C. C. (2015, March 20).

Social Communication Difficulties and Autistic Spectrum Disorder. Retrieved November 24, 2016, from www.cambscommunityservices.nhs.uk: https://www.cambscommunityservices.nhs.uk/docs/default-source/leaflets--community-paediatrics/0044---social-communication-difficulties-andautistic-spectrum-disorders.pdf?sfvrsn=2 Nikopoulos, C. K., & Keenan, M. (2003).

Promoting Social Initiation in Children with Autism using Video Modelling. Behavior Intervention, 18, 87-108.

http://onlinelibrary.wiley.com/doi/10.1002/bin.129/epdf?r3_referer=wol&tracking_action=preview_click&show_checkout=1&purchase_referrer=www.google.co.id&purchase_site_license=LICENSE_DENIED Nikopoulos, C. K., & Keenan, M. (2007).

Using Video Modeling to Teach Complex Social Sequences to Children with Autism. Journal of Autism and Developmental Disorder, 678-693.

https://core.ac.uk/download/pdf/334024.pdf Nikopoulos, C. K., & Michael, K. (2004). Effects of Video Modeling on Social Initiations by Children with Autism. Journal of Applied Behavior Analysis , 63 93-96.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1284483/pdf/15154221.pdf Nikopoulos, C., & Keenan, M. (2006).

Video Modelling and Behaviour Analysis A Guide for Teaching Social Skills to Children with Autism. London: Jessica Kingsley Publishers. Otsimo. (2016, November 16).

Importance of Imitation Skills in Autism. Retrieved Februari 7, 2018, dari OTSIMO Web Site: https://otsimo.com/en/importance-imitation-skills-autism/ Reagon, K. A., Higbee, T. S., & Endicott, K. (2006).

Teaching Pretend Play Skills to a Student with Autism Using Video Modeling with a Sibling as Model and Play Partner. Education and Treatment of Children, 1-12.

http://old.sper.usu.edu/ASSERT/Higbee_Reagon_Endicott_2006.pdf Rocha, M. L. (2016, September 27). http://eresources.perpusnas.go.id:2071/docview/870025152?pq-origsite=summon.

Retrieved Juni 1, 2012, from e-resources.perpusnas.go.id: https://eresources.perpusnas.go.id:2171/docview/1018383790?accountid=25704 Samson, F., Mottron, L., Soulieres, & Zeffiro, T. A. (2012).

Enhanced Visual Functioning in Autism: An ALE Meta-Analysis. Human Brain Mapping, 1553-1581.

http://www.academia.edu/1643987/Enhanced_visual_functioning_in_autis m_An_ALE_meta-analysis Strain, P. S., & Schwartz, I. (2001).

ABA and the Development of Meaningful Social Relations for Young Children with Autism. Focus on Autism and Other Developmental Disabilities, 16, 120-128. Vaiouli, P., & Schertz, H. (2012).

Promoting Social Engagement for Young Children with Autism: a Music Therapy Approach. Proceeding of the 12th International Conference on Music Perception and Cognition and the 8th Triennial Conference of the European Society for the Cognitivve Sciences of Music (hal. 1-5). Thessaloniki, Greece: Department of Curriculum and Instruction, Special Education, Indiana University Blooington.

http://icmpcescom2012.web.auth.gr/files/papers/1044_Proc.pdf Weiss, M. J. (2012, 11 07).

Basic Components of Social Skills. Retrieved 12 14 , 2017, dari Behavior Analytic Interventions for Developing Social Skills inIndividuals with Autism http://archive.brookespublishing.com/documents/Gerhardt_social skills.pdf Widajati, W., & Alfinina, B. (2013).

Penggunaan Media Visual dalam Pembelajaran Anak Autis. Jurnal Pendidikan Luar Biasa , 26-34. 64 Zimmerman, B. J. (2000, 1 4). Self-Efficacy: An Essential Motive to Learn. Retrieved 9 29, 2017, dari Contemporary Educational Psychology: https://ac.elscdn.com/S0361476X99910160/1-s2.0-S0361476X99910160-main.pdf?_tid=d9466e63-5889-4466-94d6-642d7e06e87c&acdnat=1520951920_ce7e8251ffb90b11b3b51de2ac160

Pasal 54 Undang-Undang Nomor 39 tahun 1999

Pasal 5 ayat (2) Undang-undang Nomor 20 Tahun 2003 tentang sistem Pendidikan Nasional (UU Sisdiknas)

Pasal 32 UU Sisdiknas

Buku pintar “Etiket” Mien R Uno, PT. Gramedia Pustaka Utama Jakarta 2010.

Berdasarkan buku Ahmad Zubair : Bhuana Ilmu Populer, Jakarta 2022 Berbicara memikat orang lain, orang lain terpikat, hubungan semakin dekat.

“Ekpresi emosi anak autis dalam berinteraksi sosial di sekolah “ dan “Modivikasi untuk autisme pada Balita “ Robins, Rein, Barton & grup 2001 dan telah di perbaharui oleh Raising Children.net.au The Australian Parenting Website 25 Oktober 2022.

Asosiasi Psikiatri Amerika. (2013). Manual Diagnostik dan Statistik Gangguan Jiwa (DSM-5) . Washington, DC: Penerbitan Asosiasi Psikiatri Amerika.

Dietert, RR, Dietert, JC, Dewitt, JC (2011). Faktor Risiko Lingkungan untuk Autisme, Emerg. Ancaman Heath J. , 2011, 4:10:3402/ehtj.v4i0.7111

CDC. (2021, 29 April). Gangguan Spektrum Autisme (ASD). Diakses pada 19 Agustus 2021, dari: https://www.cdc.gov/ncbddd/autism/index.html

Höfer, J., Hoffmann, F., & Bachmann, C. (2017). Penggunaan pengobatan komplementer dan alternatif pada anak-anak dan remaja dengan gangguan spektrum autisme: Sebuah tinjauan sistematis. Autisme: Jurnal Internasional Penelitian dan Praktek , 21(4), 387–402.

Hyman, SL, Levey, SE, & Myers, SM (2020). Dewan Anak Penyandang Disabilitas, Bagian Perkembangan dan Perilaku Pediatri.

https://www.google.com/url?sa=i&url=https%3A%2F%2Fejournal.umm.ac.id%2Findex.php%2Fprocedia%2Farticle%2Fdownload%2F11964%2Fpdf&psig=AOvVaw0Bifjwplnftf9ASuldt-xR&ust=1706413891046000&source=images&cd=vfe&opi=89978449&ved=0CAgQrpoMahcKEwigmPSf1fyDAxUAAAAAHQAAAAAQBA

https://onesearch.id/Record/IOS5532.2870/Preview

https://books.google.com/books/about/Psikologi_Kepribadian.html?hl=id&id=ZuB0DwAAQBAJ

https://pubmed.ncbi.nlm.nih.gov/17195104/

https://www.researchgate.net/publication/6605887_Social_Skills_Development_in_Children_with_Autism_Spectrum_Disorders_A_Review_of_the_Intervention_Research

https://ejournal.kemensos.go.id/index.php/jpks/article/download/1340/747

https://ejournal.umm.ac.id/index.php/procedia/article/download/11964/pdf

https://journal.student.uny.ac.id/ojs/index.php/plb/article/view/6882

https://journal.paramadina.ac.id/index.php/inquiry/article/view/223

http://ji.unbari.ac.id/index.php/ilmiah/article/view/1400

https://raisingchildren.net.au/autism/communicating-relationships/communicating/paying-attention-asd

https://raisingchildren.net.au/autism/communicating-relationships

https://raisingchildren.net.au/autism/communicatingrelationships/communicating/communication-asd

https://pubmed.ncbi.nlm.nih.gov/36178180/

Whiting PF, dkk. Kelompok Pengarah QUADAS-2. Tinjauan sistematis mengklasifikasikan sumber bias dan variasi dalam studi akurasi tes diagnostik. J Klinik Epidemiol. Oktober 2013; 66(10):1093-104. Epub 2013 17 Agustus.

Eack SM dkk. Kejujuran yang dirasakan pewawancara sebagai mediator kesenjangan ras dalam diagnosis skizofrenia . Pelayanan Psikiater. 1 September 2012; 63(9):875-80.

Widyastuti, T., & Hidayat, R. (2018). Adaptasi Individual Work Performance Questionnaire (IWPQ) ke dalam bahasa Indonesia. Jurnal Internasional Studi Penelitian Psikologi, 7 (2), 101-112. DOI: 10.5861/ijrsp.2018.3020

https://ejournal.undip.ac.id/index.php/psikologi/article/view/22081

https://ejournal.umm.ac.id/index.php/jipt/article/download/19002/10332/62971

https://ejournal.upi.edu/index.php/insight/article/download/11946/7199

https://ejournal.upi.edu/index.php/insight/article/view/11946/0

https://www.academia.edu/7305505/Pengembangan_alat_ukur_minat

http://ppak.ulm.ac.id/wp-content/uploads/2020/12/DIKTAT-PERKULIAHAN-Konstruksi-Alat-Ukur-Psikologi-Ed.-Revisi-2020-fix-3.pdf

https://jurnal.unpad.ac.id/jpsp/article/view/15229

https://repository.unair.ac.id/98212/4/4.%20BAB%20IPENDAHULUAN.pdf

https://www.researchgate.net/publication/342258104_ADAPTASI_ALAT_UKUR_MINAT_MENELITI