

A confirmatory factor analysis of Social Anxiety Scale for Adolescence (SAS-A) in Indonesian form

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Abstract

Social anxiety in adolescence can interfere with the development process. Detecting of social anxiety is very important to preventive strategy. Purpose of this study is knowing fit criteria of the SAS-A in the Indonesian version. SAS-A in Indonesian version is tool to detect social anxiety in Indonesian adolescence. This study used quantitative research. Total of participants is 172 with 74 male and 98 female. Data collected by excel in google form and was analysis using the CFA approach. CFA is used for evaluation and constructs validation of SAS-A in Indonesian version using Amos 20. The Results of this study is SAS-A in Indonesian version after being analysis factor confirmatory, it known that fit of 11 item and 7 item have been removed because it is not fit to measure construct factor. These findings suggest that the Indonesia version of the SAS-A is a developmentally appropriate instrument that can be used to examine adolescent social anxiety development. Limitations and suggestions for future research are discussed.

Keywords: Social anxiety, Indonesia, confirmatory factor analysis

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Introduction

Symptoms of social anxiety that occur in adolescents are often not detected because this is seen as a developmental process (Beesdo, Knappe, & Pine, 2009; Veed, McGinley, & Crockett, 2019). However, several previous studies, it is known that social anxiety or social phobia occurs in adolescents (Albano, 1995; Essau, Conrardt, & Petermann, 1999; Young et al., 2017). (Association, 2013) explains that social anxiety is a form of fear that occurs continuously from one or several social situations. The new social environment is one form of social situations that can cause anxiety (Miers, Blöte, De Rooij, Bokhorst, & Westenberg, 2013). In this case, how the ability of adolescents in a social situation will affect various aspects of their development.

In education process, social anxiety is known to interfere with academic achievement (Brook & Willoughby, 2015; Piray, Ly, Roelofs, Cools, & Toni, 2019) and is considered a factor related to school refusal (de Lijster et al., 2018). This social anxiety also tends to avoid the social interaction of adolescents with their peers (O'Connor & Fitzgerald, 2018). For that reason, detecting social anxiety is very important to do as an effort to prevent social relations. Participating well with the surrounding environment will give a positive value to the development period. Therefore, social anxiety should be known early on to themselves to provide appropriate services (Morrison et al., 2019).

There are various social anxiety scales developed by psychometrics experts. One social anxiety scale that has fit standards is the Social Anxiety Scale for Adolescence (SAS-A) by La Greca and Lopez (1998) (Nelemans et al., 2019). SAS-S is constructed by 3 factors namely Fear of Negative Evaluation (FNE), Social Avoidance and Distress-New (SAD-New) and Social Avoidance and Distress-General (SAD-G). To be able to be used in Indonesia, of course strategic steps are needed in adapting the SAS-A so that it can

produce a fit social anxiety scale. Of course this Indonesian SAS-A can measure what should be measured according to the original SAS-A (Inderbitzen-Nolan & Walters, 2000; Nelemans et al., 2019).

Various studies have found that this scale provides a valid and reliable social anxiety measure for either clinical or community samples (Ronchi, Banerjee, & Lecce, 2019). Although the SAS-A has shown good test-retest reliability and construct validity for English there are no data to support the psychometric properties and factor structure of this instrument for measuring social anxiety in an adolescent Indonesia Form (Delgado et al., 2019; Hayajneh, 2019). The objective of this instrumental study was to carry out a cross-cultural study to determine the SAS-A psychometric properties for Indonesian adolescents. Confirmatory factor analysis was used to confirm the factorial structure proposed by La Greca and Lopez (1998) (Oliveras et al., 2005).

Before the Indonesian version of SAS-A can be used to measure social anxiety especially for students in vocational schools, certainly needs to be Analysis. In this study, SAS-A in the Indonesian version was analysis using the CFA approach. Purpose of doing this step is knowing fit criteria of the SAS-A in the Indonesian version.

Method

Participant

Total of participant in this study is 172 adolescence completed SAS-A Indonesian version via internet (google form) as part of a larger study collecting data of social anxiety. Participants were comprised of 74 male and 98 female. Participants were recruited via leader students in each class of vocational high school (SMK) Prshanti Nilayam Kuta-Indonesia with Ten (X) grade. They responded of the SAS-A Indonesian version in the class when learning break by heandphone via link page internet (Link: www.gg.gg/SASA-Prastyam). Only data from participants who completed all item in the SAS-A Indonesian version were include in the sample.

Social Anxiety Scale for Adolescence (SAS-A)

Social Anxiety Scale for Adolescence (SAS-A) by La Greca and Lopez (1998) is using in this study. The SAS-A consists of 3 factors namely: First Factor is Fear of Negative Evaluation (FNE), Second Factor is Social Avoidance and Distress-New (SAD-New) and Third Factor is Social Avoidance and Distress-General (SAD-G). Total of item is 18 with 8 item in FNE, 6 item in SAD-New and 4 Item in SAD-G. The SAS-A is using likert scale with 5-point according to how much the item "is true for you" (1 = *not at all*, 5 = *all the time*).

In Indonesian form, Social Anxiety Scale for Adolescence (SAS-A) by La Greca and Lopez (1998) is translated into Indonesian without reducing the meaning in each item (table 1). The SAS-A in Indonesian form consists of 18 item with 8 item in FNE, 6 item in SAD-New and 4 Item in SAD-G. Each item "is true for you" choose in 5-point by Brown (2010) namely: 5 = always, 4 = very often, 3 = sometimes, 2 = rarely and 1 = never. Maximum scor is 90 and minimum score is 18.

Design and Analysis

Data of SAS-A Indonesian version was collected by excel in google form. Next step, data was open in the SPSS 16.0 and format data was save in SPSS document for requirement CFA. CFA can be used for a variety of purposes, such as psychometric evaluation, construct validation, the detection of method effects, and the evaluation of measurement invariance (Brown & Moore, 2012). In this study, CFA is used for evaluation and construct validation of SAS-A in Indonesian version using Amos 20.

The result of CFA in SAS-A Indonesian version was fit criteria (Parry, 2017) recommended fit criteria of CFA namely: 1) Model Chi-Square, p-value > 0.05, 2) (Adjusted) Goodness of Fit (GFI \geq 0.95 and AGFI \geq 0.90), 3) (Non) Normed Fit Index, (NFI \geq 0.95 and NNFI \geq 0.95), 4) Comparative Fit Index (CFI \geq 0.90), 5) Root Mean Squared Error of Approximation (RMSEA < 0.08), 6) Standardized Root Mean-Square Residual (SRMR < 0.08), and 7) Average Value Explained (AVE > 0.5). If some of CFA result is not fit, minimum the following indices should be reported is 1) The Model Chi-Square, p-value > 0.05, RMSEA < 0.08, CFI \geq 0.90 and SRMR < 0.08, it can be fit criteria.

Table 1. Translated Item SAS-A with English Version to Indonesian Version

Item	English Version	Indonesian Version
Fear of Negative Evaluation (FNE)		
1	I worry about what others say about me	<i>Saya khawatir terhadap perkataan teman tentang saya</i>
2	I worry that others don't like me	<i>Saya khawatir orang lain tidak menyukai saya *</i>
3	I'm afraid that others will not like me	<i>Saya takut orang lain tidak akan menyukai saya</i>
4	I worry about what others think of me	<i>Saya khawatir tentang apa yang orang lain pikirkan tentang saya *</i>
5	I feel that others make fun of me	<i>Saya merasa orang lain mengolok-olok saya</i>
6	I worry about being teased	<i>Saya khawatir digoda *</i>
7	I feel that peers talk about me behind my back	<i>Saya merasa bahwa teman-teman berbicara tentang saya di belakang saya</i>
8	If I get into an argument, I worry that the other person will not like me	<i>Jika saya bertengkar, saya khawatir orang lain tidak akan menyukai saya</i>
Social Avoidance and Distress-New (SAD-News)		
9	I get nervous when I meet new people	<i>Saya merasa gugup ketika bertemu orang baru</i>
10	I feel shy around people I don't know	<i>Saya merasa malu pada orang yang tidak saya kenal</i>
11	I get nervous when I talk to peers I don't know very well	<i>Saya merasa gugup ketika berbicara dengan teman sebaya yang tidak saya kenal dengan baik</i>
12	I feel nervous when I'm around certain people	<i>Saya merasa gugup ketika berada di dekat orang-orang tertentu *</i>
13	I only talk to people I know really well	<i>Saya hanya berbicara dengan orang yang saya kenal dengan sangat baik *</i>
14	I worry about doing something new in front of others	<i>Saya khawatir melakukan sesuatu yang baru di depan orang lain</i>
Social Avoidance and Distress-General (SAD-G)		
15	It's hard for me to ask others to do things with me	<i>Sulit bagi saya untuk meminta bantuan kepada orang lain *</i>
16	I'm afraid to invite others to do things with me because they might say no	<i>Saya takut untuk meminta bantuan kepada orang lain karena mereka mungkin akan mengatakan tidak</i>
17	I am quite when I'm with group of people	<i>Saya diam ketika saya bersama sekelompok orang *</i>
18	I feel shy even with peers I know very well	<i>Saya merasa malu bahkan dengan teman sebaya yang saya kenal baik *</i>

*) Note: this item is not fit to measure variable construct (factor)

Results and Discussion

The purpose of this study is knowing that fit of SAS-A in Indonesian version. First results of analysis factor confirmatory using Amos 16.0, SAS-A in Indonesian version is not fit. Result of analysis data show that Chi-Square is 335,267 (df = 132) with p-value < 0,05. Value of RMSEA is 0.095 > 0,08, CFI is 0.839 < 0.90, SRMR is 0.104 > 0.08. All of value result analysis is not fit criteria, so doing modification. This modification is done by considering "modification indices" from Amos 16.0.

Table 2. Fit Criteria of SAS-A in Indonesian version

Chi-Square		Fit Criteria				
		RMSEA	CFI	SRMR	Exp	
42.272	df 37 p = 0.254	0.029	0.992	0.051	Sig	

Table 2 show that fit criteria of SAS-A in Indonesian version namely 1) The Model Chi-Square, p-value > 0.05 (0.254 > 0.05), Root Mean Squared Error of Approximation < 0.08 (0.02 < 0.08), Comparative Fit Index \geq 0.90 (0.99 \geq 0.90) and Standardized Root Mean-Square Residual < 0.08 (0.05 <

0,08). Impact of modifying namely several item in each item “delete” because the item is not fit to measure construct factor. Total of item that fit to measure construct factor namely Factor of Fear of Negative Evaluation (FNE) is 5 item, Factor of Social Avoidance and Distress-New (SAD-New) is 4 item and Factor of Social Avoidance and Distress-General (SAD-G) is 2 item (Table 3).

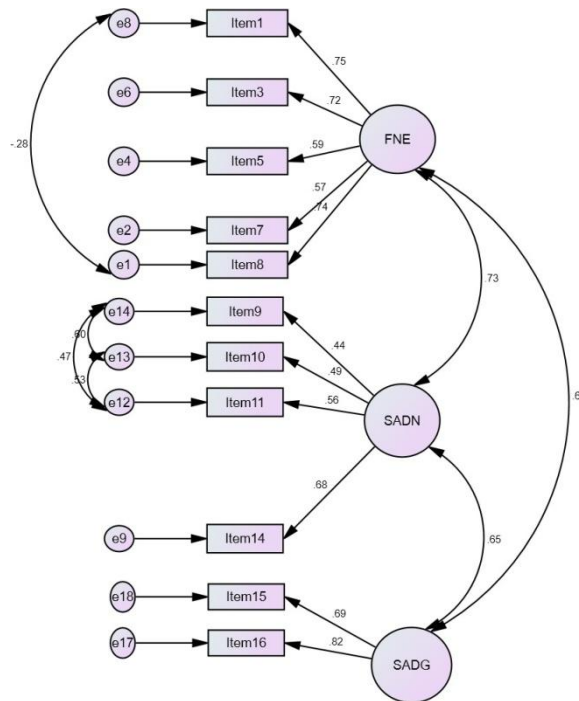


Figure 1. Final Factor Structure of Item in the SAS-A in Indonesian Version

Figure 1 is final factor structure of item in the SAS-A in Indonesian version. Result of modification, total of item is delete namely 7 item, because the item measured others factor (not fit). After doing modification, the model is fit criteria and then doing validation final factor and item.

Table 3. Validation factor and item of SAS-A in Indonesian version

Fact	Estimate	S.E	C.R.	P	Exp	Item	Estimate	S.E.	C.R.	P	Exp
FNE	.882	.177	4.981	***	Sig	e1	.735	.116	6.347	***	Sig
						e2	.852	.100	8.500	***	Sig
						e4	.622	.074	8.413	***	Sig
						e6	.633	.086	7.392	***	Sig
						e8	.472	.076	6.221	***	Sig
SADN	.422	.111	3.820	***	Sig	e9	.494	.090	5.491	***	Sig
						e12	.840	.115	7.290	***	Sig
						e13	1.080	.138	7.845	***	Sig
						e14	1.108	.135	8.180	***	Sig
SADG	.672	.136	4.932	***	Sig	e17	.325	.097	3.347	***	Sig
						e18	.465	.076	6.124	***	Sig

Table 3 show that validation factor and item of SAS-A Indonesian version. All of item in SAS-A Indonesian version significant (p-value < 0,01) measure of each factor. Next 3 factors construct also significant (p-value < 0,01) measure of SAS-A Indonesian version. Then, standard regression among factor and item that show in table 4.

Table 3. Standardized Regression Weights

			Estimate	P	Exp
Item8	<---	FNE	.739	***	Sig
Item7	<---	FNE	.567	***	Sig
Item5	<---	FNE	.587	***	Sig
Item3	<---	FNE	.720	***	Sig
Item1	<---	FNE	.749	***	Sig
Item14	<---	SADN	.679	***	Sig
Item11	<---	SADN	.565	***	Sig
Item10	<---	SADN	.492	***	Sig
Item9	<---	SADN	.438	***	Sig
Item16	<---	SADG	.821	***	Sig
Item15	<---	SADG	.690	***	Sig

Total of 11 item significant measured of 3 factor construct of SAS-A in Indonesian version (table 4). Item number 1, 3, 5, 7 and 8 significant measured Fear of Negative Evaluation (FNE). Then, item number 9, 10, 11 and 14 significant measured Social Avoidance and Distress-New (SAD-New). Item number 15 and 16 significant measured Social Avoidance and Distress-General (SAD-G).

The findings show that the social anxiety scale for adolescence (SAS-A) instrument after conversion to Indonesian has a good measurement significance. The instruments in Indonesian Repeated Word who were developed can be used for the context of the Indonesian Repeated Word territory and are in accordance with the rules, norms and culture of the Indonesian region..

The testing of this instrument in the Indonesian version is very necessary in the disclosure of social anxiety conditions among adolescents in Indonesia. As the phenomenon found in Indonesia that tends to social anxiety in adolescents is in high condition (Hofmann & DiBartolo, 2014; Prawoto, 2010; Untari, Bahri, & Fajriani, 2017). The disclosure of anxiety conditions requires instruments that have good validity and reliability and are in accordance with the culture of the respondent. Existing instruments were developed from theory and have not been tested extensively and in accordance with certain regional cultures. So this instrument is developed and validated the instrument so that it can be used for research in Indonesia.

Conclusion

The results of CFA against SAS-A in Indonesian version show that the minimum fit criteria are accepted. The SAS model was modified to meet these criteria. Some of items are deleted and need to be revised. SAS-A in Indonesian version after being analysis factor confirmatory, it known that fit of 11 item and 7 item have been removed because it is not fit to measure construct factor. These findings suggest that the Indonesia version of the SAS-A is a developmentally appropriate instrument that can be used to examine adolescent social anxiety development. Thus, it will be important for future research to be revised Some criteria and items of the SAS-A in the Indonesian version instrument that can be used more effectively to examine adolescent social anxiety development in Indonesian Adolescent.

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