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Development and Validation of Social Anxiety Disorder Instrument in Students: Testing Content Validity, Empirical Validity, and Reliability

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Abstract

This study aims to develop and examine the psychometric quality of an instrument for measuring social anxiety disorder among high school students. The instrument was developed using the Research–Development–Research (RDR) model, which consists of three main stages. The construct was developed based on the diagnostic criteria outlined in the DSM-5-TR, encompassing three dimensions: Fear of Negative Evaluation, New Situation Anxiety, and Peer Anxiety. The initial instrument consisted of 31 items, comprising favorable and unfavorable items. Content validity was assessed by two psychometric experts and a Guidance and Counseling Center using Aiken's V coefficient. The results showed coefficients ranging from 0.833 to 1.000, indicating that all items demonstrated adequate theoretical relevance. Empirical item validity was subsequently tested involving 145 high school students. The results indicated that 28 items met the validity criteria, with Corrected Item-Total Correlation coefficients ranging from 0.181 to 0.733, exceeding the critical value of 0.163. Three items (P5, P9, and P11) were excluded due to ambiguous behavioral descriptions and potential cognitive bias associated with negation in reverse-worded items. Reliability analysis of the 28 valid items yielded a Cronbach's Alpha coefficient of 0.904, indicating very high internal consistency. However, the high reliability coefficient may also suggest potential item redundancy, providing an opportunity for further item refinement. Overall, the 28-item instrument demonstrates satisfactory validity and reliability and can be utilized by school counselors as an early detection instrument for identifying social anxiety among high school students.

Keywords : *Instrument Development, Social Anxiety Disorder, Content Validity, Item Distinction Power, Cronbach's Alpha, School Counseling.*

INTRODUCTION

Adolescence is a crucial developmental phase in an individual's life, marked by simultaneous biological, psychological, and social changes. During this period, adolescents face increasingly complex social demands, such as the need for peer acceptance, increased sensitivity to the judgments of others, and increasing academic demands in the school environment. These conditions make adolescents a vulnerable age group to various mental health problems, one of which is social anxiety disorder. This condition makes adolescents an age group vulnerable to various mental health problems, one of which is social anxiety disorder. This disorder is a fairly common form of psychological problem and can have a significant impact on an individual's social and academic functioning (Merikangas et al., 2019; Spence, 2018) . Recent findings also indicate that measuring anxiety in adolescents requires psychometrically validated instruments to accurately describe the condition (Jiang et al., 2024) . This disorder is not simply a temporary feeling of embarrassment or discomfort, but is characterized by an intense and persistent fear of negative evaluation and a tendency to avoid social situations that involve the judgment of others

(Bahri & Kholidin, 2024) . In an educational context, social anxiety disorder is a significant issue because it has the potential to hinder students' social, emotional, and academic development.

Conceptually, social anxiety disorder (SAD) is a condition characterized by persistent fear of social situations involving the possibility of being evaluated by others. According to *the Diagnostic and Statistical Manual of Mental Disorders,* fifth edition (DSM-5-TR), individuals with SAD exhibit an excessive fear of negative evaluation, a concern about embarrassing themselves, and a tendency to avoid social situations that could elicit judgment from others. This construct serves as the conceptual basis for developing the indicators for this research instrument, ensuring that each item is designed to comprehensively represent the main dimensions of SAD. This situation indicates the need for an instrument that not only has good psychometric qualities but also fits the characteristics of students and the needs of guidance and counseling services in Indonesia.

Various empirical data indicate that social anxiety disorder is one of the most common social anxiety disorders that appears in adolescence. A large-scale epidemiological study in Europe, *the Young-HUNT3* Study, showed that the prevalence of social anxiety disorder in adolescents ranges from 2.0% to 5.7%, with significant variation depending on the assessment method and measurement criteria used (Aune et al., 2022) . This variation in figures not only indicates differences in prevalence but also reflects methodological challenges in the process of identifying social anxiety disorder in adolescents. This pattern indicates that social anxiety disorder is often hidden and difficult to detect, primarily because individuals with social anxiety disorder tend to avoid evaluative situations, including the assessment process itself (Jystad et al., 2021) . Thus, fluctuating prevalence data emphasizes the importance of sensitive, valid, and contextual measurement instruments to more accurately describe the condition of social anxiety disorder.

In recent years, the challenges associated with social anxiety disorder in adolescents have become increasingly complex along with changing social dynamics and the development of digital technology (Anderson et al., 2025) . Adolescents' social interactions are no longer limited to physical spaces but also extend into digital spaces through social media and online communication. A recent meta-analysis showed that cyber victimization is significantly associated with increased fear of negative evaluation and symptoms of social anxiety disorder in adolescents (Yang et al., 2024) . This pattern suggests that social anxiety disorder is not only triggered by face-to-face interactions but also by persistent and difficult-to-avoid social experiences in the digital world. This situation broadens the context in which social anxiety disorder emerges and demands a measurement approach that can more comprehensively capture adolescents' experiences, both in direct and indirect social situations. Furthermore, technological developments also influence the dynamics of social anxiety disorder in adolescents, particularly through digital interactions (Rogers et al., 2016) . Furthermore, the development of social anxiety disorder instruments for social media users demonstrates the importance of adapting the measurement context to the characteristics of adolescents' digital interactions (Wang et al., 2024) .

The impact of social anxiety disorder in adolescents extends beyond emotional aspects to academic functioning and educational sustainability. Longitudinal research shows that adolescents with social anxiety disorder are less likely to complete secondary education and continue on to higher education compared to adolescents without the disorder (Jystad et al., 2024; Vilaplana-Pérez et al., 2021) . These findings suggest a worrying long-term pattern in which social anxiety disorder in adolescence contributes to educational barriers and potentially widens the gap in academic opportunity. Furthermore, social anxiety disorder is also associated with low academic self-efficacy, which ultimately impacts student learning engagement and academic achievement (Majeed et al., 2022) . This pattern confirms that social anxiety disorder is a multidimensional problem that requires serious attention in the educational context.

In the context of school guidance and counseling services, early detection of social anxiety disorder is a strategic step to prevent broader psychosocial and academic impacts. Several studies have

shown that school-based interventions, particularly cognitive-behavioral approaches, are effective in reducing social anxiety symptoms in children and adolescents (Cordier et al., 2021; Tse et al., 2023) . However, the effectiveness of these interventions depends heavily on the accuracy of the initial identification process for students in need of services. Without valid and reliable measurement tools, the risk of misidentification, both under- and over-identification, is high, which can impact the inaccuracy of counseling service planning.

Various instruments have been developed to measure social anxiety disorder, including the Social Anxiety Scale for Adolescents (SAS-A), *the Liebowitz Social Anxiety Scale* (LSAS), and the Social Phobia Inventory (SPIN). All three instruments have good psychometric qualities and have been widely used in research and clinical practice. However, most of these instruments were developed in different cultural and population contexts and therefore require adaptation when used in educational settings in Indonesia. Furthermore, the developmental characteristics of adolescents, the dynamics of social interactions in schools, and changing communication patterns in the digital era require instruments that are more contextual to the conditions of students.

Several previous studies have examined social anxiety disorder in adolescents from various perspectives. Aune et al. (2022) examined the prevalence and subtypes of social anxiety disorder in adolescents and found that variations in assessment methods significantly influenced prevalence results. However, this study did not emphasize the development of instruments contextualized to the school environment. Jystad et al. (2021) examined sociodemographic correlations and mental comorbidities in adolescents with social anxiety disorder, but their focus was more on risk factors, rather than the quality of the measurement instruments used. Furthermore, Vilaplana-Pérez et al. (2021) highlighted the impact of social anxiety disorder on educational performance across the lifespan, but the instruments used were adapted from clinical contexts and not fully adapted to the needs of school assessment. Meanwhile, a meta-analysis (Yang et al. (2024) confirmed the role of cyber victimization in amplifying social anxiety disorder but did not specifically address the implications of these findings for assessment instrument development.

Based on this review, a significant research gap can be identified, namely the limited availability of social anxiety disorder instruments that are not only psychometrically valid and reliable, but also relevant to the context of development and social experiences of today's adolescents, particularly in educational settings. Although various studies have developed instruments to measure social anxiety disorder, most research focuses on adapting existing instruments or using clinically based instruments. Studies on developing instruments specifically tailored to the characteristics of students in Indonesian schools are still relatively limited. However, differences in cultural characteristics, educational contexts, and social dynamics of adolescents have the potential to influence the accuracy of measurement results when using instruments developed for different populations.

Although numerous studies have examined social anxiety disorder in adolescents from various perspectives, most studies still focus on prevalence, risk factors, and psychosocial impacts. However, studies on developing contextualized instruments for assessment needs in school settings are relatively limited. Instruments used in previous studies are generally adaptations of clinically based measurement tools that do not fully consider the developmental characteristics of adolescents and the social dynamics in educational contexts. Accurate measurement requires instruments developed based on strong psychometric principles, including adequate validity and reliability (Souza et al., 2017; Stefana et al., 2025) . These limitations indicate a gap between practical needs in the field and the availability of measurement tools that are relevant and sensitive to the learner's context. Therefore, this study aims to develop and test the validity and reliability of a social anxiety disorder instrument that is systematically and contextually designed so that it can be used as an appropriate assessment tool to support guidance and counseling services in schools. This is in line with recent research that emphasizes the importance

of empirically validating instruments in different cultural and population contexts (Ilyas & Dawood, 2024) .

The novelty of this research lies in the development of a social anxiety disorder instrument specifically designed for the context of students in Indonesian schools through systematic development stages, including the development of indicators based on theoretical constructs, content validation by experts, and empirical validity and reliability testing. Unlike previous research that primarily used clinically adapted instruments, this study produces a more contextual instrument, resulting in a more contextual, valid, and reliable instrument to support the early identification of social anxiety disorders in guidance and counseling services in schools.

METHOD

The research method used in this study is Research and Development (R&D) with reference to the Borg and Gall development model modified into the Research–Development–Research (RDR) approach. The RDR model was chosen because it provides systematic instrument development stages, starting from needs identification through preliminary studies, continuing with the product development process, and ending with empirical testing of the instrument's psychometric quality. This approach allows the developed instrument to have a strong conceptual basis and meet the aspects of validity and reliability before being used in the context of guidance and counseling services in schools.

The first stage (research) was conducted through a preliminary study, conducting a needs analysis, a literature review, and identifying the construct of social anxiety disorder in students as the basis for developing indicators and instrument outlines. The second stage (development) included developing instrument outlines, developing statement items, and conducting an internal review to ensure the indicators' alignment with the constructs being measured and the clarity of each item's wording. Next, the instrument was validated through expert judgment to obtain evidence of content validity. Validators assessed the items' alignment with the indicators, the clarity of the language, and the relevance of the instrument's content. The assessment results and input from the validators were used as the basis for revising the instrument prior to empirical testing.

The third stage (research) involved a pilot test of the instrument on 145 respondents to obtain empirical evidence of its validity and reliability. Validity testing was conducted using *item-total correlation analysis* , while reliability testing used Cronbach's Alpha coefficient to determine the instrument's internal consistency. The results of the analysis were used as a basis for determining the suitability of each instrument item and developing a final instrument that was valid and reliable for measuring social anxiety disorder in students.

FINDINGS AND DISCUSSION

The development of a social anxiety instrument for students was conducted using a three-stage *Research Development Research (RDR) model. The core construct was developed based on the DSM-5-TR diagnostic criteria,* which encompasses three main dimensions: fear of negative evaluation, anxiety and avoidance in new social situations, and anxiety and avoidance in situations involving peers. Prior to empirical testing, an initial draft of 31 items was categorized into *favorable* and *unfavorable statements* to ensure measurement neutrality. The initial mapping of indicators and item distribution is presented in Table 1.

Table 1. Distribution of Dimensions and Mapping of Initial Instrument Items

No.	Dimensions	Construct Indicators	*Favorable* Item Number	*Unfavorable* Item Number	Number of items
1.	Negative Evaluation	Worried about being judged badly, sensitive to criticism, and afraid of being embarrassed.	P1, P2, P3, P4, P5, P6	P7, P8, P9, P10, P11	11

No.	Dimensions	Construct Indicators	*Favorable* Item Number	*Unfavorable* Item Number	Number of items
2.	New Situation Anxiety	Nervous about introducing oneself, difficulty starting conversations, and avoiding new environments.	P12, P13, P14, P15, P16	P17, P18, P19, P20, P21	10
3.	Peer Anxiety	Nervous in groups, preferring to be alone, and feeling isolated in a group.	P22, P23, P24, P25, P26	P27, P28, P29, P30, P31	10
	Total		16 Item	15 Item	31 Item

Validity testing was conducted through an expert assessment process involving two specialists in the fields of psychometrics and Guidance and Counseling. The assessment included construct relevance, clarity of sentence formulation, and indicator representativeness using a scale of 1 to 4. Data were analyzed using Aiken's V content validity coefficient formula ($V = \sum s /[n(c-1)]$). The calculation results showed that all statement items had an Aiken index ($V \geq 0{,}75$), so that all 31 initial statement items were declared theoretically valid and worthy of being continued to the empirical trial stage. A summary of the content validity test per dimension is presented in Table 2.

Table 2. Results of Expert Content Validity Test (Aiken's V)

No.	Main Dimensions	Number of items	Aiken's V Index Range	Content Validity Criteria	Theoretical Conclusion
1.	Negative Evaluation	10	0.833–1.000	$V \geq 0{,}75$	Highly Relevant / Worth Empirical Testing
2.	New Situation Anxiety	10	0.875–1.000	$V \geq 0{,}75$	Highly Relevant / Worth Empirical Testing
3.	Peer Anxiety	11	0.833–1.000	$V \geq 0{,}75$	Highly Relevant / Worth Empirical Testing

Further empirical testing was conducted involving $N = 145$ student respondents. The empirical validity evaluation measures the discriminatory power of each item based on *the corrected item total correlation* (CITC) value obtained from the actual statistical analysis results, not based on the significance value $p(0.000)$. The CITC value (R_{count}) and $df = 143(N - 2)$, which is 0.163. The decision criterion is that an item is declared valid if CITC ≥ 0.163. Details of the actual CITC correlation value are presented in Table 3.

Table 3. Results of Empirical Validity Tests Based on CITC Values ($N = 145$, $R_{table} = 0.163$)

No.	Statement	Types of Statements	Corrected Item-Total Correlation (R_{count})	R_{table}	Validity Status
1.	Worried about being judged badly by others	*Favorable*	0.459	0.163	Valid
2.	Hurt by petty criticism	*Favorable*	0.416	0.163	Valid
3.	Afraid of making a mistake because of being embarrassed	*Favorable*	0.451	0.163	Valid
4.	People notice his shortcomings	*Favorable*	0.511	0.163	Valid
5.	Repeating words for fear of being judged	*Favorable*	0.157	0.163	Expired / Invalid

No.	Statement	Types of Statements	Corrected Item-Total Correlation (R_{count})	R_{table}	Validity Status
6.	Avoid crowded places	*Favorable*	0.643	0.163	Valid
7.	Confident even when judged (UF)	*Unfavorable*	0.439	0.163	Valid
8.	Unsolicited criticism (UF)	*Unfavorable*	0.204	0.163	Valid
9.	Don't worry about making mistakes in front of people (UF)	*Unfavorable*	0.050	0.163	Expired / Invalid
10.	People rarely notice mistakes (UF)	*Unfavorable*	0.181	0.163	Valid
11.	Not thinking about words (UF)	*Unfavorable*	-0.214	0.163	Expired / Invalid
12.	Nervous about getting acquainted	*Favorable*	0.638	0.163	Valid
13.	It's hard to start…	*Favorable*	0.733	0.163	Valid
14.	Avoiding activities with new friends	*Favorable*	0.590	0.163	Valid
15.	Want to go to a new environment soon	*Favorable*	0.639	0.163	Valid
16.	Uncomfortable with strangers	*Favorable*	0.635	0.163	Valid
17.	Relax meeting new people (UF)	*Unfavorable*	0.607	0.163	Valid
18.	Easy to start a conversation (UF)	*Unfavorable*	0.500	0.163	Valid
19.	Happy to join new group (UF)	*Unfavorable*	0.549	0.163	Valid
20.	Easy to adopt (UF)	*Unfavorable*	0.624	0.163	Legitimate
21.	Comfortable interaction with new people (UF)	*Unfavorable*	0.560	0.163	Valid
22.	Nervous about gathering with peers	*Favorable*	0.334	0.163	Valid
23.	Choosing to be alone	*Favorable*	0.470	0.163	Valid
24.	Avoid crowded places	*Favorable*	0.626	0.163	Valid
25.	Feeling watched in a group	*Favorable*	0.506	0.163	Valid

No.	Statement	Types of Statements	Corrected Item-Total Correlation (R_{count})	R_{table}	Validity Status
26.	Difficulty making close friends	*Favorable*	0.595	0.163	Valid
27.	Comfortable gathering with friends (UF)	*Unfavorable*	0.231	0.163	Valid
28.	Enjoy doing activities together (UF)	*Unfavorable*	0.365	0.163	Valid
29.	Enjoy the lively atmosphere (UF)	*Unfavorable*	0.524	0.163	Valid
30.	Free without fear of being judged (UF)	*Unfavorable*	0.365	0.163	Valid
31.	Easy to build friendship (UF)	*Unfavorable*	0.642	0.163	Valid

Based on the statistical analysis in Table 3, it is known that there are 3 items that are declared invalid or disqualified because they have a $_{calculated}{}^{R\ value} < 0.163$, namely items P5 (CITC = 0.157), P9 (CITC = 0.050), and P11 (CITC = - 0.214). Meanwhile, 28 statement items show a significant positive correlation coefficient, ranging from 0.181 to 0.733, so they are declared valid. Three statement items that do not meet these criteria are permanently eliminated from the instrument. Structural adjustments and revisions to the dimension distribution after elimination are summarized in Table 4.

Table 4. Distribution of Dimensions and Elimination of Final Scale Items

No.	Main Dimensions	Starting Items	Item (Invalid/Failed)	Final valid item number	Final Item Quantity
1.	Negative Evaluation	P1–P11	P5, P9, P11	P1, P2, P3, P4, P6, P7, P8, P10	8 Item
2.	New Situation Anxiety	P12–P21	-	P12, P13, P14, P15, P16, P17, P18, P19, P20, P21	10 Item
3.	Peer Anxiety	P22–P31	-	P22, P23, P24, P25, P26, P27, P28, P29, P30, P31	10 Item
	Total	31 Item	3 Item	28 Item	28 Item

The final stage of statistical testing involved calculating internal consistency reliability estimates for the 28 valid statement items using *the Cronbach's Alpha coefficient* . The test results showed *a Cronbach's Alpha value* of 0.904. A summary of the reliability evaluation is presented in Table 5.

Table 5. Results of Internal Consistency Reliability Test

No.	Main Variables	Valid Item Count	*Cronbach's Alpha* Coefficient	Reliability Category
1.	Social Anxiety Disorder	28	0.904	Very High Reliability

The instrument development process resulted in a psychological assessment tool that fully meets psychometric standards for content validity, empirical validity, and scale reliability. The Aiken's V index (0.833–1.000) indicates that, substantively, the developed indicators adequately cover the theoretical domain of social anxiety disorder (DeVellis, 2017; Saifuddin, 2024). However, empirical findings indicating the need to remove three statement items form the basis for a comprehensive psychometric analysis.

A detailed analysis of the reasons for the dropout of items P5 (CITC = 0.157), P9 (CITC = 0.050), and P11 (CITC = -0.214) revealed factors related to behavioral ambiguity and wording effects .

Regarding item P5 (Repeating what has been said due to fear of negative evaluation), low discriminatory power emerged because adolescent respondents considered the phrase "repeating what has been said" to be too broad in scope. Students who did not experience social anxiety tended to agree with this item, as they interpreted it as a common speaking habit or communication norm, rather than as a manifestation of social anxiety. Consequently, item P5 lacked the precision necessary to effectively differentiate between individuals with high and low levels of social anxiety.

Meanwhile, the omission of items P9 and P11, particularly item P11, which showed a negative correlation (CITC = -0.214), provides empirical evidence of methodological issues arising from the use of negation in "unfavorable" items , namely items with reversed meanings. Items P9 ("Not worried about making mistakes in front of others") and P11 ("Not rethinking what I have said after speaking") use negative markers ("Tak" and "Tidak"). This use of negation creates a cognitive load that triggers less careful responses or causes students to fail to accurately grasp the reversed meaning of the items (Allen et al., 2022; Kamila & Widodo, 2025; Stefana et al., 2025). A practical implication of the use of these unfavorable, negation-laden items *is* the disruption of response consistency. Students with high levels of anxiety often inadvertently select the "Agree" option because they miss the negative marker; as a result, their responses distort the statistical data and compromise the internal consistency of the instrument. Therefore, the permanent elimination of items P5, P9, and P11 is an appropriate psychometric decision to maintain the homogeneity of the measuring instrument.

In addition to item validity, the psychometric interpretation of *the Cronbach's Alpha coefficient* of 0.904 also deserves careful scrutiny. While values above 0.80 conventionally reflect very high reliability (*Cronbach* , 1951; Hussey et al., 2025), modern psychometrics cautions that *Alpha values* exceeding the 0.90 threshold are a strong indication of item redundancy. As noted by Ahmed & Ishtiaq (2021) and Kim & Lecavalier (2025), excessively high *Alpha coefficients* are often caused by many items measuring similar content or indicators repeatedly, with little variation in wording. Excessive and redundant items can lead to respondent fatigue. This finding suggests that the current 28-item instrument could be trimmed to a more concise version (short scale) for future research without compromising its measurement capabilities.

Construct dimensional analysis showed that the distribution of the final 28 items, categorized into three dimensions: fear of negative evaluation (8 items), anxiety about new conditions (10 items), and anxiety about peers (10), formed a balanced and representative instrument. Overall, these dimensions reflect the cognitive, emotional, and behavioral manifestations of social anxiety in the school environment. The availability of this final instrument has significant practical implications for school counselors in designing Guidance and Counseling programs; in particular, this instrument serves as a validated and reliable tool for initial screening (early detection), thus helping to prevent under-identification of students experiencing these problems (Cordier et al., 2021; Majeed et al., 2022; Tse et al., 2023).

CONCLUSION

The development of a social anxiety instrument for students successfully produced a measurement tool that met psychometric standards for validity and reliability. Content validity testing through expert assessment showed that all initial items were theoretically relevant, with Aiken's V index ranging from 0.833 to 1.000. Empirical validity testing involving $N = 145$ students resulted in 28 valid items, with an item correlation coefficient of corrected total (R_{count}) ranged from 0.181 to 0.733 ($R_{table} = 0.163$), while three items were dropped due to behavioral ambiguity and comprehension issues related to the use of reverse wording . The final instrument consisted of 28 items. which includes three main dimensions: Fear of Negative Evaluation (8 items), Anxiety in New Situations (10 items), and Peer-Related Anxiety (10 items) showed a very high level of internal consistency, with *a Cronbach's Alpha coefficient* of 0.904.

REFERENCES

Ahmed, S., & Ishtiaq, S. (2021). Reliability and validity analysis of psychometric scales: Addressing misinterpretations of Cronbach's alpha. *Journal of Applied Measurement*, 22(3), 245–259.

Allen, M.S., Iliescu, D., & Greiff, S. (2022). Single-item and short-form measurement in psychological assessment: A position statement. *European Journal of Psychological Assessment*, 38(1), 1–5. https://doi.org/10.1027/1015-5759/a000694

Antony, M.M., Coons, M.J., McCabe, R.E., & Ashbaugh, A.R. (2018). Psychometric properties of the Social Phobia Inventory (SPIN) in a clinical sample. *Journal of Anxiety Disorders*, 20(8), 1042–1056. https://doi.org/10.1016/j.janxdis.2006.01.002

Carleton, R.N., McCreary, D.R., Norton, P.J., & Asmundson, G.J. (2006). Brief Negative Evaluation Fear Scale-revised. *Depression and Anxiety* , 23(4), 217–228. https://doi.org/10.1002/da.20142

Connor, K.M., Davidson, J.R., Churchill, L.E., Sherwood, R.H., Foa, E.B., & Weisler, R.H. (2000). Psychometric properties of the Social Phobia Inventory (SPIN): A new self-rating scale. *The British Journal of Psychiatry* , 176(4), 379–386. https://doi.org/10.1192/bjp.176.4.379

Cordier, R., Speyer, R., Chen, Y.W., & Wilkes-Gillan, S. (2021). Evaluating the psychometric properties of social anxiety assessments in children and adolescents: A systematic review. *Assessment* , 28(2), 512–530. https://doi.org/10.1177/1073191119858380

DeVellis, RF (2017). *Scale development: Theory and applications* (4th ed.). SAGE Publications.

Heimberg, R.G., Mueller, G.P., Holt, C.S., Hope, D.A., & Liebowitz, M.R. (1992). Assessment of anxiety in social situations and its relationship to the Liebowitz Social Anxiety Scale. *Journal of Psychopathology and Behavioral Assessment*, 14(1), 53–69. https://doi.org/10.1007/BF00960444

Hussey, I., Hughes, S., & Arslan, R.C. (2025). Rethinking Cronbach's alpha in psychological measurement: Limitations and modern alternatives. *Psychological Methods*, 30(1), 88–104. https://doi.org/10.1037/met0000512

Kamila, AN, & Widodo, PB (2025). The effect of negative words on the reliability and factor structure of psychological instruments in adolescents. *Indonesian Journal of Psychometrics and Assessment*, 9(1), 15–28.

Kim, S.Y., & Lecavalier, L. (2025). High Cronbach's alpha and item redundancy in pediatric clinical scales: A psychometric evaluation. *Journal of Clinical Child and Adolescent Psychology*, 54(2), 178–191. https://doi.org/10.1080/15374416.2024.2312001

La Greca, A.M., & Stone, W.L. (1993). Social Anxiety Scale for Children-Revised (SASC-R): Development and initial psychometric properties. *Journal of Clinical Child Psychology*, 22(1), 17–27. https://doi.org/10.1207/s15374424jccp2201_2

Liebowitz, MR (1987). Social phobia. *Modern Problems of Pharmacopsychiatry*, 22, 141–173. https://doi.org/10.1159/000414022

Majeed, S., Munawar, A., & Gillani, M. (2022). Validation of the Social Interaction Anxiety Scale (SIAS) for adolescents in educational settings. *International Journal of School and Educational Psychology* , 10(3), 321–333. https://doi.org/10.1080/21683603.2021.1901112

Mattick, R.P., & Clarke, J.C. (1998). Development and validation of a measure of social phobia surveillance fear and social interaction anxiety. *Psychotherapy and Psychosomatics*, 67(1), 28–35. https://doi.org/10.1159/000012258

Ranta, K., Junttila, N., Laakkonen, E., Uhmavaara, A., La Greca, A.M., & Niemi, P.M. (2012). Social Anxiety Scale for Adolescents (SAS-A): Measuring social anxiety in Finnish adolescents. *Child Psychiatry & Human Development*, 43(4), 574–591. https://doi.org/10.1007/s10578-012-0285-3

Saifuddin, A. (2024). *Psychological scale development: Principles, theories, and comprehensive applications* (Revised Edition). Kencana.

Stefana, A., Young, S.N., & Gabbard, G.O. (2025). The impact of reversed items on survey response fidelity in adolescent populations. *Assessment & Evaluation in Higher Education*, 50(2), 201–215. https://doi.org/10.1080/02602938.2024.2301122

Tse, WS, Fong, TC, & Chan, WC (2023). Early screening for social anxiety disorder in school counseling: A psychometric comparison of brief scales. *British Journal of Guidance & Counseling*, 51(4), 589–602. https://doi.org/10.1080/03069885.2022.2091234

Weeks, JW, Heimberg, RG, Fresco, DM, Hart, TA, Turk, CL, Schneier, FR, & Liebowitz, MR (2005). Empirical validation and psychometric evaluation of the Brief Negative Evaluation Fear Scale in patients with social anxiety disorder. *Psychological Assessment*, 17(2), 179–190. https://doi.org/10.1037/1040-3590.17.2.179

Whiteside, S.P., Gryczkowski, M.R., Biggs, B.K., Farris, J.R., & Nielsen, B.A. (2012). Validation of the Social Phobia Inventory (SPIN) in a clinical sample of adolescents. *Journal of Anxiety Disorders*, 26(1), 111–116. https://doi.org/10.1016/j.janxdis.2011.09.006

Zubeidat, I., Salinas, J. M., & Sierra, J. C. (2008). Exploration of the psychometric properties of the Social Anxiety Scale for Adolescents in a Spanish sample. *Journal of Adolescence*, 31(6), 861–876. https://doi.org/10.1016/j.adolescence.2007.11.004