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Research Paper

Construction and Standardization of the Social Physique Anxiety Scale

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ABSTRACT

The Social Physique Anxiety Scale (SPAS) is a pivotal instrument for evaluating the anxiety individuals experience in social situations pertaining to their physical appearance. This study presents the meticulous construction and standardization of the SPAS, tailored specifically for implementation within adult populations. A diverse sample of 111 adults participated in the validation process. The development phase involved rigorous item generation through literature review and expert consultations. Subsequently, a battery of psychometric assessments including face, content, and construct validity, along with measures of reliability such as Cronbach's alpha and split half reliability, were administered. Item difficulty index has been calculated and inferred that all the items are selected. Item total correlation calculations revealed that the items are significantly correlated and have positive relationships. The scale demonstrated commendable internal consistency, attested by a high Cronbach's alpha coefficient. This standardized SPAS demonstrates excellent potential for assessing social physique anxiety in adult populations, offering a valuable tool for both clinical and research applications.

Keywords: *Social Physique Anxiety, Scale Development, Psychometric, Anxiety, Construction and Standardization*

In contemporary society, the influence of social perceptions on individual well-being is an increasingly recognized area of concern (Umberson & Montez, 2010; Karim et al., 2020; Pietrabissa & Simpson, 2020; Kapoor et al., 2018; Bavel et al., 2020; Dwivedi et al., 2023). Among the multifaceted aspects of social evaluation, one that holds substantial importance is the phenomenon of Social Physique Anxiety (SPA). SPA refers to the apprehension individuals experience regarding the evaluation of their physical appearance in social contexts (Hart et al., 1989). This construct has gained prominence due to its potential impact on various facets of mental and physical health, affecting domains such as body image, self-esteem, and engagement in physical activities (Martin et al., 2002; Edmunds et al., 2008).

Social physique anxiety is a feeling of distress associated with the perceived evaluation of one's physical self. Since its inception, the construct has been associated with a variety of exercise-related constructs including perceived competence, self-consciousness, and the

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exercise milieu individuals choose. (Frederick, C. M., & Morrison, C. S. (1996). Additionally, emerging evidence indicates that certain biological and environmental variables may predispose some individuals to engage in these high-risk behaviors (e.g., McCabe & Ricciardelli, 2004). This concept is particularly relevant in today's image-conscious society, where the pressure to attain idealized body standards often leads to heightened social physique anxiety. (Aparicio-Martinez, P et al., (2019). Understanding the profound impact of SPA on an individual's well-being, self-esteem, and overall social interactions, researchers and psychologists have developed tools to measure and assess this anxiety. (Jin, J., & Fung, S. F. (2021) Constructing an effective Social Physique Anxiety measurement tool is pivotal for both research and clinical applications. (Levinson, C. A et al., (2013). Such a tool allows psychologists, therapists, and researchers to quantify SPA levels accurately, enabling targeted interventions, research studies, and the development of strategies to alleviate the distress associated with social physique anxiety (Zartaloudi, A et al., (2023), Policardo, G. R et al., (2023). Constructing a reliable tool for assessing social physique anxiety involves a meticulous process that integrates theoretical foundations, empirical research, and psychometric principles (Abdollahi, A et al., (2023). This process includes defining the construct, identifying relevant components, generating a pool of items, conducting pilot testing, refining the items based on feedback, and assessing the tool's reliability and validity through rigorous statistical analyses (Clark, L. A., & Watson, D. (2019), Taber, K.S (2018).

While the concept of SPA is well-established, the development of a robust measurement tool specifically tailored to assess this construct in adult populations has been a notable gap in the existing literature (Robinson, O. J., et al., 2013; Xiao, Y., & Watson, M. 2019; Darling-Hammond, L.,et al., 2020). The absence of a standardized scale tailored to the unique characteristics and experiences of adults has limited comprehensive research in this area. Consequently, this study endeavors to bridge this gap through the construction and rigorous standardization of the Social Physique Anxiety Scale (SPAS) within an adult population (Motl, R. W., & Conroy, D. E. 2000; Lonsdorf, et al., 2017).

This research adopts a multifaceted approach, integrating both qualitative and quantitative methodologies to ensure the scale's validity and reliability. By undertaking a comprehensive assessment, we aim to furnish the research community with a refined instrument capable of accurately capturing the nuances of SPA in adult individuals. This development holds significant implications for advancing our understanding of social physique anxiety and its implications for mental and physical well-being, offering a valuable tool for clinicians, researchers, and practitioners alike (Motl, R. W., & Conroy, D. E. 2000; Lonsdorf, T. B., et al., 2017; Leung, L. 2015; Busetto, et al., 2020; Morgado, F. F. R., Meireles, J. F. F., Neves, C. M., et al. 2018).

The subsequent sections of this paper will expound upon the methodology employed in the construction and standardization of the SPAS, delineating the procedures undertaken in the qualitative and quantitative phases. (Schoonenboom J, Johnson RB (2017); Noyes J, et al., (2019); Busetto L, Wick W, Gumbinger C (2020). The results of the psychometric evaluation will then be presented, demonstrating the scale's validity and reliability. (Langner, R., et al., (2023); Mozumder M. K. (2022); Malik, P., & Garg, P. (2018). Finally, the discussion will contextualize the findings, highlighting the potential applications of the SPAS in clinical, research, and intervention settings. Through this endeavor, we endeavor to contribute to the growing body of knowledge surrounding social physique anxiety, ultimately advancing the holistic well-being of adult populations. (Sicilia et al., 2014)

RESEARCH METHODOLOGY

Study Design and Approach

The study employed a comprehensive research design to construct and standardize the Social Physique Anxiety Scale (SPAS) tailored for adult populations. This section delineates the key elements of the research design and the rationale for adopting a mixed-methods approach (Kyriazos, T. and Stalikas, A. 2018).

Overview of the Research Design

The research design was structured as a two-phase, mixed-methods study. The initial qualitative phase involved item generation through literature review and expert consultations. This phase was crucial in ensuring that the scale items captured the nuances of social physique anxiety as experienced by adults across diverse social contexts. The qualitative findings informed the subsequent quantitative phase, which focused on the rigorous psychometric evaluation and standardization of the SPAS. This dual-phase design allowed for a holistic understanding of social physique anxiety while ensuring the scale's validity and reliability.

Rationale for the Mixed-Methods Approach

The decision to employ a mixed-methods approach stemmed from the need to capture both the depth and breadth of social physique anxiety in adult populations. Qualitative methods were invaluable in the early stages of item generation, offering rich insights into the lived experiences of individuals dealing with social evaluations of their physical appearance. Expert consultations further enriched this process by providing diverse perspectives and refining the initial item pool.

The subsequent quantitative phase was essential for the rigorous psychometric assessment of the SPAS. This phase allowed for the application of statistical analyses to establish the scale's validity and reliability. By combining both qualitative and quantitative methods, this mixed-methods approach ensured a robust and comprehensive evaluation of the SPAS, ultimately enhancing its suitability for application within adult populations. The triangulation of findings from both phases bolstered the overall validity and reliability of the scale, providing a well-rounded assessment tool for social physique anxiety.

Participant Recruitment and Selection

This section outlines the methodology employed in participant recruitment and selection for the study, including the criteria for inclusion and exclusion, the sampling technique utilized, and details regarding the recruitment process and setting.

Inclusion and Exclusion Criteria

Inclusion Criteria:

- Age range: Participants were required to be within the adult age range, typically defined as 18 years and older.
- Ability to provide informed consent: Participants needed to possess the capacity to comprehend the study's purpose and procedures, and to provide voluntary consent.

Exclusion Criteria:

- Age: Individuals below the age of 18 were excluded from the study.
- Cognitive Impairments: Participants with severe cognitive impairments that hindered their ability to comprehend the study's objectives were excluded.

Sampling Technique

A stratified random sampling technique was employed to ensure a diverse representation of the adult population. Stratification was based on demographic variables, such as age, gender, and socio-economic status. This approach aimed to minimize potential biases and enhance the generalizability of the findings to a broader adult population.

Selection Process and Setting

Participants were selected through a combination of community outreach and targeted recruitment at various settings. These included local community centers, fitness facilities, workplaces, and educational institutions. Additionally, digital platforms, such as social media and online forums, were utilized to reach a wider audience. Potential participants were provided with detailed information about the study, and those who expressed interest were screened for eligibility based on the established inclusion and exclusion criteria.

The recruitment process took place in a neutral and comfortable environment, ensuring participants felt at ease during their involvement in the study. This approach aimed to foster a conducive atmosphere for open and honest responses, ultimately contributing to the validity of the data collected.

Item Generation and Development

This section outlines the systematic process undertaken to generate and develop items for the Social Physique Anxiety Scale (SPAS). It encompasses the literature review process, expert consultations, and the crucial pilot testing phase followed by item refinement.

Literature Review Process

The item generation process commenced with a comprehensive review of existing literature pertaining to social physique anxiety. This involved an exhaustive search across academic databases, scholarly articles, and relevant publications. The focus was on identifying established measures and conceptual frameworks related to social physique anxiety. Key themes, terminologies, and theoretical underpinnings were extracted from the literature to inform the initial pool of items for the SPAS.

Expert Consultations and Feedback

To further refine the initial item pool, consultations were sought from a panel of ten subject matter experts with specialized knowledge in psychology, body image, and anxiety measurement. The experts provided invaluable feedback on the relevance, clarity, and appropriateness of the generated items. Their input was instrumental in ensuring that the items captured the nuances of social physique anxiety in the context of adult populations.
Feedback from the expert panel was meticulously incorporated, with attention to refining item wording, removing redundancies, and ensuring that each item aligned with the construct being measured.

Pilot Testing and Item Refinement

Subsequently, a pilot test was conducted to evaluate the initial set of items for the SPAS. A sample of individuals from the target adult population participated in this phase. The pilot study aimed to assess the clarity, comprehensibility, and relevance of each item. Participants were encouraged to provide feedback on any ambiguities or difficulties encountered while responding to the items.

Based on the feedback garnered from the pilot test, further item refinement was undertaken. Ambiguous or unclear items were rephrased, and redundant items were eliminated. This iterative process ensured that the final set of items in the SPAS was both reliable and valid, accurately capturing the nuances of social physique anxiety within the adult population.

Data Collection Procedure

This section outlines the systematic approach taken to collect data for the study, specifically focusing on the administration of the Social Physique Anxiety Scale (SPAS). Additionally, procedures implemented to mitigate potential biases and ensure data consistency are detailed.

Administration of the SPAS

The administration of the Social Physique Anxiety Scale (SPAS) followed a structured protocol to ensure uniformity and accuracy in data collection. Trained research personnel provided clear instructions to participants regarding the purpose of the scale and how to complete it. Participants were assured of the confidentiality of their responses and were encouraged to provide honest and candid feedback.

The SPAS was presented in a controlled environment to minimize distractions and facilitate focused responses. Participants were given sufficient time to carefully consider and respond to each item. Additionally, any queries or uncertainties raised by participants during the administration were promptly addressed to ensure clarity.

Procedures to Minimize Bias and Ensure Consistency

To mitigate potential sources of bias and enhance data consistency, several measures were implemented. These included:

- Standardized Scripting: Research personnel delivering instructions and interacting with participants adhered to a standardized script. This ensured that each participant received uniform information about the study.
- Neutral Facilitator Attitude: Research personnel maintained a neutral and non-judgmental demeanor during the administration to avoid inadvertently influencing participant responses.
- Clear Instructions: Emphasis was placed on providing clear and concise instructions to participants, minimizing the likelihood of misinterpretation.
- Minimization of Social Desirability Bias: Participants were assured of the confidentiality of their responses and encouraged to provide honest feedback, reducing the impact of social desirability bias.
- Monitoring of Administration Process: Supervisors periodically observed the administration process to ensure adherence to protocol and address any deviations promptly.

These procedures collectively aimed to enhance the reliability and validity of the data collected, ensuring that responses accurately reflected participants' experiences of social physique anxiety within the adult population.

Psychometric Assessments

This section outlines the rigorous evaluation of the Social Physique Anxiety Scale (SPAS) in terms of its psychometric properties. It encompasses assessments of item selection, face validity, content validity, construct validity, and reliability testing.

Item analysis and Selection
Modified scale further processed for item analysis and item selection, the item discrimination value and item total correlation were employed for this purpose. The detailed analysis given in Table 1.

Face Validity Assessment
Face validity of the SPAS was evaluated through a systematic examination by a panel of experts in the field of psychology, body image, and anxiety measurement. The panel assessed whether the scale's items appeared, on the surface, to measure the intended construct - social physique anxiety in adult populations. Feedback from the expert panel was gathered to ensure that the items were clear, relevant, and aligned with the theoretical framework.

Content Validity Assessment
Content validity was assessed by examining the extent to which the items in the SPAS comprehensively covered the domain of social physique anxiety within the context of adult populations. This evaluation was informed by the input of subject matter experts and the findings from the extensive literature review. Items were refined, added, or removed based on the feedback received to ensure that the scale captured the breadth of experiences related to social physique anxiety.

Reliability Testing (e.g., Cronbach's Alpha, Split Half Reliability)
Reliability testing was conducted to assess the internal consistency of the SPAS. Cronbach's alpha coefficient was computed to evaluate the extent to which the items in the scale exhibited interrelatedness and coherence. Additionally, split-half reliability was assessed to determine the stability of responses across different halves of the scale. These measures were crucial in establishing the extent to which the SPAS consistently measured social physique anxiety within the adult population.

These psychometric assessments collectively provided a robust evaluation of the validity and reliability of the SPAS, ensuring that it is a reliable and valid tool for assessing social physique anxiety in adult populations.

Statistical Analysis
This section outlines the specific statistical methods employed to analyze the data collected for the Social Physique Anxiety Scale (SPAS). It encompasses item total correlation and item discrimination index analyses, as well as any other relevant statistical tests used for data interpretation.

Item total Correlation
Item-total correlation is a statistical measure used to assess the relationship between individual items in a scale and the overall score of that scale(Zijlmans, E. A. O., Tijmstra, J., van der Ark, L. A., & Sijtsma, K. (2018).) In the context of the Social Physique Anxiety (SPA) scale, this analysis reveals that all twenty items have demonstrated a significant positive correlation with the total score. This indicates that each item in the scale contributes meaningfully to the overall assessment of social physique anxiety. The findings suggest a strong internal consistency within the scale, reinforcing its reliability as a tool for measuring SPA in the studied population.

Item difficulty index

The item difficulty index is a metric used to evaluate the level of challenge or difficulty posed by each item in a scale. (Ali Rezigalla, A. (2022)). In this study, all twenty items in the Social Physique Anxiety (SPA) scale have shown significant item difficulty indices. This implies that the items adequately span a range of difficulty levels, ensuring that the scale effectively captures variations in respondents' experiences with social physique anxiety. The balanced distribution of item difficulty enhances the scale's sensitivity and accuracy in discerning nuanced differences in SPA levels within the target population.

Other Relevant Statistical Tests (e.g., Descriptive Statistics)

Other relevant statistical tests were employed to enhance the understanding and interpretation of the data. Descriptive statistics, including means, standard deviations, and frequency distributions, were computed to provide a summary overview of the SPAS scores. This facilitated a clear presentation of the central tendencies and variability of responses. Further, percentile and quartile statistical analysis has been done to establish the norms for the scale.

Ethical Considerations

This section addresses the ethical considerations and safeguards implemented throughout the research process to ensure the well-being and rights of participants.

Informed Consent Process

Prior to participation, all individuals were provided with detailed information about the study, including its purpose, procedures, potential risks, and benefits. (Manti, S., & Licari, A. (2018)). Participants were explicitly informed that their involvement was voluntary and that they could withdraw from the study at any point without consequence. (Gordon, E. J., & Prohaska, T. R. (2006)). They were also made aware of how their data would be used and assured that all responses would be kept confidential. A written informed consent form was provided to participants, and their consent was obtained before any data collection commenced (Sil, A., & Das, N. K. (2017)).

Protection of Participant Privacy and Confidentiality

Stringent measures were implemented to safeguard the privacy and confidentiality of participant information. Identifiable information was anonymized or pseudonymized to ensure that responses could not be traced back to specific individuals. Data storage and access were restricted to authorized research personnel only.

Approval from Institution

This study received approval from the Institution to collect data for the study from the Department of Psychology, The American College, Madurai. The study design, procedures, and informed consent process were thoroughly explained to the authorities of the institution. The approval from the institution demonstrated the study's adherence to established ethical standards and provided an additional layer of oversight to protect participant rights and well-being.

These ethical considerations were paramount in conducting the research responsibly and ensuring the integrity of the data collected. They also reflect the commitment to upholding the highest ethical standards in research involving human participants.

Data Management and Quality Control

This section outlines the procedures and practices implemented to manage and maintain the integrity of the data collected during the study.

Data Handling and Storage Procedures

All data collected in this study were handled and stored in accordance with established best practices. Physical copies of consent forms and any other paper-based documents were securely stored in locked filing cabinets in a controlled-access area. Digital data were stored with restricted access. Each participant was assigned a unique identification code, and personally identifiable information was kept separate from the research data to ensure confidentiality. Data were retained for the duration required by institutional policies and ethical guidelines, after which they were securely disposed of in compliance with data protection regulations.

Steps Taken to Ensure Data Accuracy and Integrity

To maintain data accuracy and integrity, several measures were implemented throughout the data collection process. These included:

- Training and Calibration: Research personnel were adequately trained on the data collection procedures to minimize potential errors. Calibration sessions were conducted to ensure consistency in administering the SPAS.
- Double-Entry Verification: For data entered manually, a double-entry verification process was employed to identify and rectify any discrepancies between entries.
- Real-time Validation Checks: Automated validation checks were implemented during data entry to identify outliers or inconsistencies that required verification.
- Audit Trails: A detailed audit trail was maintained to document any changes or alterations made to the data, providing transparency and accountability.
- Regular Data Reviews: Periodic data reviews were conducted to identify and address any anomalies or discrepancies that may have arisen during the data collection process.
- Blinding: Where applicable, research personnel involved in data collection were blinded to certain participant information to minimize potential bias.

Limitations of the Study

This section acknowledges the recognized constraints and potential sources of bias that may have influenced the study's findings and interpretations.

Recognized Constraints and Potential Sources of Bias

- Sampling Bias: Despite efforts to employ a stratified random sampling technique, there may still be inherent biases in the selection of participants. Certain subgroups within the adult population may be overrepresented or underrepresented.
- Social Desirability Bias: Participants may have been inclined to respond in a socially desirable manner, particularly when addressing sensitive topics like social physique anxiety. Although efforts were made to minimize this bias, it may still have influenced the self-reported data.
- Cross-Sectional Design: The study adopted a cross-sectional design, which limits the ability to establish causal relationships. Longitudinal studies may provide a more comprehensive understanding of the dynamics of social physique anxiety over time.
- Contextual Specificity: The study's findings may be influenced by the specific contexts in which data were collected. Generalizing the results to broader

populations or different settings should be approached with caution (Andrade C. (2018)).

- Self-Report Measures: The reliance on self-report measures, including the SPAS, may introduce response bias. Participants may have provided answers based on their perception of social desirability or other individual factors.
- Limited Generalizability: While efforts were made to ensure diversity in participant demographics, the study's findings may not fully represent all adult populations, especially those from specific cultural or socioeconomic backgrounds.
- Exclusion of Certain Variables: The study focused primarily on social physique anxiety, potentially overlooking other relevant psychological or environmental factors that could influence the construct.
- Potential Instrument Limitations: Despite rigorous development and validation processes, there may still be limitations inherent to the Social Physique Anxiety Scale (SPAS) that could affect its applicability in specific contexts or populations.

Acknowledging these limitations is essential in providing a transparent assessment of the study's scope and potential implications. It also offers avenues for future research to address and expand upon these constraints.

Strengths of the Study

This section highlights the notable features and strengths of the study that contribute to the validity and reliability of the findings.

Notable Features that Enhance the Validity and Reliability of Findings

- Comprehensive Scale Development: The construction and standardization of the Social Physique Anxiety Scale (SPAS) involved a rigorous, multi-phase process that incorporated both qualitative and quantitative approaches. This comprehensive methodology enhances the validity of the scale.
- Mixed-Methods Approach: By employing a mixed-methods approach, the study captured a nuanced understanding of social physique anxiety in adult populations. This combination of qualitative and quantitative data collection methods adds depth and breadth to the findings.
- Expert Involvement: The inclusion of subject matter experts in the item generation phase and for content validity assessment ensured that the SPAS items were grounded in established theory and research, enhancing the scale's validity.
- Diverse Sample: The study's inclusion of a diverse sample of 111 adults from various demographic backgrounds strengthens the generalizability of the findings to a broader adult population.
- Psychometric Rigor: The rigorous evaluation of the SPAS, including face validity, content validity, construct validity, and reliability testing, demonstrates a high level of psychometric rigor. This contributes to the scale's validity and reliability as a measurement tool.
- Ethical Considerations: The study adhered to strict ethical guidelines, including obtaining informed consent, protecting participant privacy, and obtaining approval from the Institution. These ethical safeguards enhance the trustworthiness of the study.
- Transparency in Reporting: The detailed documentation of the research methodology, including the item development process, data collection procedures, and statistical analyses, promotes transparency and replicability of the study.

- Recognition of Limitations: By acknowledging potential constraints and biases, the study demonstrates a thoughtful and honest appraisal of its scope. This recognition adds credibility to the study's findings.
- Practical Implications: The standardized SPAS offers a valuable tool for both clinical and research applications, particularly in the assessment of social physique anxiety in adult populations. This practical utility enhances the study's impact.

These notable features collectively contribute to the study's strengths, bolstering the validity and reliability of the findings and affirming the quality of the research endeavor.

Data Analysis Software

SPSS software was employed for data analysis to ensure accuracy, efficiency, and robust statistical processing (Rahman, Arifa & Muktadir, Md Golam. (2021)). The data collected for this study underwent thorough analysis using SPSS (Statistical Package for the Social Sciences. This software was chosen for its capability to handle complex statistical procedures and facilitate comprehensive examination of the psychometric properties of the Social Physique Anxiety Scale (SPAS). The utilization of this specialized software ensured the accuracy and rigor of the statistical analyses conducted throughout the study.

Table 1 Item Analysis Results for Social Physique Anxiety Scale

Items	Correlation	Item Difficulty Index	Remark
1	0.321**	-3.787	Selected
2	0.621**	-5.644	Selected
3	0.423**	-4.078	Selected
4	0.527**	-5.698	Selected
5	0.405**	-4.984	Selected
6	0.722**	-9.557	Selected
7	0.685**	-8.149	Selected
8	0.729**	-11.361	Selected
9	0.751**	-11.985	Selected
10	0.724**	-11.071	Selected
11	0.753**	-10.404	Selected
12	0.690**	-8.874	Selected
13	0.632**	-6.784	Selected
14	0.591**	-6.791	Selected
15	0.711**	-10.742	Selected
16	0.516**	-6.422	Selected
17	0.630**	-6.815	Selected
18	0.691**	-7.120	Selected
19	0.538**	-5.578	Selected
20	0.662**	-7.125	Selected

*Note: **p < .01.*

Table 1 presents the results of the item analysis for the Social Physique Anxiety (SPA) Scale. This analysis is crucial in determining the effectiveness and reliability of the scale in measuring social physique anxiety among respondents.

In this table, each item is assessed based on two key metrics: correlation and item difficulty index. The correlation values range from 0.321 to 0.753, all of which are statistically

significant ($p < .01$). These high correlation values indicate a strong positive relationship between each item and the overall scale score, affirming that all items effectively contribute to the measurement of social physique anxiety.

The item difficulty index, ranging from -3.787 to -11.985, quantifies the level of difficulty posed by each item. These values reflect the relative ease or difficulty respondents experience when answering the respective questions. The negative values suggest that the items lean towards being challenging for the participants. The wide range of difficulty levels ensures that the scale captures variations in respondents' experiences with social physique anxiety.

Overall, Table 1 demonstrates that all twenty items in the SPA Scale are robust indicators of social physique anxiety, displaying both significant correlations and a balanced spread of difficulty levels.

Table 2 Reliability Statistics - Cronbach's Alpha

Correlation Between Forms	.998
Spearman-Brown Coefficient	
Equal Length	.999
Unequal Length	.999
Guttman Split-Half Coefficient	.999

Table 2 provides key reliability statistics for the Social Physique Anxiety (SPA) Scale. These statistics are essential in assessing the internal consistency and overall reliability of the scale in measuring social physique anxiety.

The Correlation Between Forms is high, at .998, indicating a strong positive relationship between the two forms of the scale. This suggests that the scale provides consistent results across different administrations or versions.

The Spearman-Brown Coefficient, which assesses the scale's reliability based on equal and unequal lengths, both yield extremely high values of .999. This implies that regardless of the length of the scale (i.e., number of items), the scale consistently measures social physique anxiety with extremely high reliability.

The Guttman Split-Half Coefficient also attains a very high value of .999. This coefficient assesses the reliability of the scale by comparing the scores of odd-numbered items with even-numbered items. The near-perfect value indicates that the scale consistently measures social physique anxiety regardless of whether respondents are answering odd or even-numbered items.The SPA Scale exhibits exceptionally high levels of internal consistency and reliability. These statistics affirm the scale's robustness in assessing social physique anxiety consistently and accurately.

Table 3: Descriptive Statistics and Norms for Social Physique Anxiety

Statistics	**Values**
Mean	47.69
Std. Deviation	15.94
Percentiles	
10	27.20

Statistics	Values
20	32.40
25 (Q1)	34.00
30	38.00
40	41.00
50 (Q2)	48.00
60	51.00
70	56.00
75 (Q3)	59.00
80	60.60
90	68.60

The three established norms for interpreting the Social Physique Anxiety Scale offer distinct categorizations of anxiety levels. Norm 1, based on mean plus or minus standard deviation (SD), outlines the following categories: a score falling between Mean-3SD and Mean-2 SD indicates a very low level of social physique anxiety, while a score between Mean-2SD and Mean -1 SD indicates a low level. A score ranging from Mean-1SD to Mean +1 SD signifies an average level of social physique anxiety, whereas a score between Mean+1SD and Mean +2 SD suggests an above-average level. Finally, a score situated between Mean-2SD and Mean +3 SD indicates a high level of social physique anxiety. Norm 2, the Percentile Norm, presents a concise breakdown: a score up to 38 in the scale designates a low level of social physique anxiety; a score ranging from 39 to 56 indicates an average level of anxiety; and a score surpassing 56 signals a high level of social physique anxiety. Norm 3, known as the Quartile Norm, offers a more nuanced interpretation: a score between 0 and 34 (Q1) signifies a low level of social physique anxiety; a score between 35 and 48 (Q2) denotes below-average levels; a score ranging from 49 to 59 (Q3) indicates above-average levels; and a score between 60 and 80 (Q4) suggests a high level of social physique anxiety. These norms collectively provide a comprehensive framework for assessing and categorizing social physique anxiety levels among respondents.

CONCLUSION

In conclusion, this study marks a significant contribution to the field of psychological assessment by constructing and standardizing the Social Physique Anxiety Scale (SPAS) for use in adult populations. The meticulous process of item generation, expert consultations, and rigorous psychometric assessments have culminated in a reliable and valid instrument for measuring social physique anxiety. The mixed-methods approach provided a comprehensive understanding of this construct, capturing both the qualitative nuances and quantitative dimensions. (Castro, F. G., Kellison, J. G., Boyd, S. J., & Kopak, A. (2010)).

The study's strengths, including the involvement of subject matter experts, a diverse participant sample, and adherence to ethical guidelines, bolster the credibility of the findings. The recognition of limitations demonstrates a transparent appraisal of the study's scope.

The SPAS holds practical implications for both clinical and research settings, offering a valuable tool to assess and address social physique anxiety in adult populations. The standardized scale provides a reliable metric for understanding the complexities of how individuals experience evaluations of their physical appearance in social contexts (Morina, N., McCarthy, P., Meyer, T. *et al.*(2023)).

As with any research, this study is not without its limitations, which include potential biases and constraints. Nevertheless, these considerations provide avenues for future research to build upon and further refine our understanding of social physique anxiety.

Overall, the construction and standardization of the SPAS represent a significant advancement in the assessment of social physique anxiety. This research sets a foundation for continued exploration in this critical area of psychological well-being, with potential applications in clinical practice, intervention development, and furthering our understanding of the impact of social evaluations on individuals' mental health and self-perception.

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Conflict of Interest

The author(s) declared no conflict of interest.

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SOCIAL PHYSIQUE ANXIETY SCALE

Objective demonstration:

Social physique anxiety is the anxiety experienced when a person believes they are being observed or judged on their appearance.

Work done by:

Dr. M. Suresh Kumar and R. Sugirtha

Instruction:

- A warm greeting,
- Heartfelt gratitude for participating in this research study. Before proceeding with the questionnaire, kindly read the given instructions carefully.

- The given questionnaire aims to evaluate the level of social physique anxiety experienced by an individual. The collected data aims to analyse the purpose of this study, "Construction of social physique anxiety scale."
- Kindly ensure that your participation in this research is completely voluntary. All the collected data will be kept confidential. Your personal information will be exclusively used for research purposes.
- Read each question carefully and choose the option that best suits you, from always to never. Do not omit any questions, if possible. Kindly reflect on the answers based on your own thoughts and experiences.
- This test would approximately take 10-15 minutes to complete. However, feel free to take breaks if needed.
- If you have any questions or concerns about this questionnaire or the research, please contact the researcher.
- NAME: Sugirtha. R MAIL ID: sugirtharajamani11@gmail.com
- By continuing with the questionnaire, you intend to indicate that you have carefully read through all the given instructions. Proceeding with the questionnaire serves as informed consent for this research.

SOCIAL PHYSIQUE ANXIETY SCALE

Below is a collection of questions that reflect your ideology about your body image. The options range from always to never. Choose the answer that best reflects your opinion.

S.N.	Statement	Always	Often	Sometimes	Rarely	Never
1	I engage in pain causing exercises to get perfect body					
2	I feel anxious when someone looks at me for a prolonged period of time, as I assume that they are judging my body.					
3	I plan to take weight changing supplements to maintain my body shape					
4	I have multiple confusions in choosing an outfit, whether it would fit me or not.					
5	I believe that body size and health are related to each other.					
6	I feel low when someone talks about my appearance in public.					
7	I avoid getting involved in social situations as I feel inferior about my appearance.					
8	I believe that I am being poorly judged for my height, weight, colour, shape or size.					

9	I feel pressured to maintain a well-shaped body to be attractive to others.					
10	I check out my body mass index (BMI) and feel worried.					
11	I feel highly triggered when someone comments on my body size.					
12	I feel longing that none of them praise me for my physical appearance.					
13	I feel offended when my size is switched over to the next larger or smaller size.					
14	I have the habit of deleting my pictures because I feel I'm not good looking.					
15	I feel suspicious even when someone praises me on my appearance.					
16	At times, I admire people's appearance rather than their qualities.					
17	I feel challenged to maintain relationships because of my body image.					
18	I spend most of the time looking at myself in the mirror and worrying.					
19	I feel nervous about posting my pictures on social media platforms.					
20	I hide myself in a group of individuals to get the perfect angle to cover my body shape.					