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Psychometric Evaluation of the Persian Striving to Avoid Inferiority Scale in University Students

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ABSTRACT

Objective: The present study aimed to examine the psychometric properties of the Persian version of the Striving to Avoid Inferiority Scale (SAIS) among university students.

Methods and Materials: This descriptive cross-sectional study was conducted among 319 students (190 females, 129 males; M = 23.8, SD = 2.7) at Kermanshah University of Medical Sciences during the 2023–2024 academic year. A convenience sampling method was used. Participants completed the SAIS, the Pathological Narcissism Inventory (PNI), and the Eysenck Self-Esteem Scale (ESES). Data were analyzed using confirmatory factor analysis (CFA), convergent and discriminant validity tests, and Cronbach's alpha coefficients. Research data were analyzed using SPSS version 25 and AMOS version 24 software.

Findings: CFA supported the original two-factor structure (insecure striving and secure non-striving) with good model fit ($\chi^2/df = 1.22$, CFI = .99, GFI = .90, RMSEA = .02 [90% CI = .015–.035]). Cronbach's α coefficients indicated high internal consistency (α = .93 for Insecure Striving, α = .86 for Secure Non-Striving, and α = .89 for the total score). Test–retest correlations ranged from .82 to .88. The SAIS correlated positively with pathological narcissism (r = .38–.70) and negatively with self-esteem (r = –.29–.45), supporting its convergent and discriminant validity.

Conclusion: The Persian SAIS demonstrated strong factorial validity, reliability, and construct validity among university students. However, findings should be interpreted in light of the convenience student sample, and further validation across more diverse or clinical populations is recommended.

Keywords: Striving to Avoid Inferiority, Factor Analysis, Reliability, Validity, University Students.

Introduction

In recent years, psychological difficulties related to competitiveness, self-evaluation, and social comparison have gained increasing attention among researchers and clinicians (Haugan, 2023). Modern societies place a strong emphasis on success, performance, and social approval, which can intensify feelings of inadequacy and fear of rejection (Merino et al., 2024). Within this context, the concept of striving to avoid inferiority (SAI) has emerged as a key psychological construct that bridges the gap between cultural pressures, social behavior, and vulnerability to psychopathology (Nagae et al., 2022). It reflects an individual's belief that acceptance, respect, and love from others are conditional on avoiding mistakes, outperforming peers, and maintaining a favorable social image (Ozimek et al., 2023).

According to Adler's theory of individual psychology, the sense of inferiority is a universal human experience that motivates people to grow, achieve, and connect with others (Jamiyl et al., 2025). However, when this striving becomes excessive or defensive—driven by fear rather than growth—it may lead to maladaptive emotional and interpersonal patterns (Gilbert, 2016). Such individuals tend to overinvest in social comparison, perceive others as critical or rejecting, and experience chronic insecurity about their social standing (Zhao et al., 2024). Consequently, the persistent effort to avoid inferiority can create vulnerability to anxiety, depression, stress, and self-criticism (Gilbert et al., 2009; Nagae et al., 2022).

The literature suggests that SAI is conceptually linked to several personality and emotional variables. For example, people with low self-esteem often feel easily devalued by others and thus become overly sensitive to signs of criticism or exclusion (To et al., 2021). Likewise, individuals with pathological narcissistic traits may use grandiosity and self-enhancement to defend against feelings of inferiority and shame (Campbell & Miller, 2011; Şen-Pakyürek & Barışkın, 2022). Although such individuals might appear confident, they often struggle with fragile self-worth and unstable interpersonal relationships (Reis et al., 2021). Therefore, the effort to avoid inferiority may represent an important defensive and motivational mechanism that contributes to both self-regulation and social functioning (Gilbert et al., 2007).

To accurately assess this phenomenon, the Striving to Avoid Inferiority Scale (SAIS) was developed by (Gilbert et al., 2009). The SAIS measures two complementary dimensions: insecure striving, which involves fear of rejection and social comparison, and secure non-striving, which reflects a sense of self-acceptance regardless of success or failure. The scale has demonstrated strong psychometric properties across several cultures, including the United Kingdom and Portugal (Duarte et al., 2017; Ferreira et al., 2011). However, to date, no validation study has been conducted in Iran, where cultural factors such as collectivism, achievement orientation, and social hierarchy may influence how individuals experience and regulate inferiority-related concerns.

Establishing the psychometric validity and reliability of the Persian version of the SAIS is therefore essential to ensure that it accurately measures this construct within the Iranian context. A validated Persian version would allow researchers and clinicians to better understand how SAI relates to self-esteem, narcissism, and emotional well-being in Iranian populations.

Accordingly, the present study aimed to examine the factorial structure, internal consistency, and convergent and discriminant validity of the Persian version of the SAIS among university students in Iran.

Methods and Materials

The present study employed a descriptive cross-sectional design, which is appropriate for assessing the psychometric properties of psychological instruments at a single point in time without experimental manipulation (Kline, 2023). This design allows researchers to examine the factorial structure, reliability, and validity of the scale efficiently within a naturalistic setting.

The statistical population consisted of all students enrolled at Kermanshah University of Medical Sciences during the first semester of the 2023–2024 academic year. Participants were selected using a convenience sampling method, which was suitable for preliminary validation but may limit the generalizability of the findings to broader populations. The final sample included 319 students (129 males and 190 females).

Before data collection, formal permission was obtained from the university authorities, and ethical approval was granted by the Ethics Committee of

Kermanshah University of Medical Sciences. All participants provided informed consent and were assured of confidentiality and voluntary participation.

Sample Size

The sample size was determined according to recommendations for confirmatory factor analysis, which suggest 5 to 20 participants per item (Kline, 2023). Given that the SAIS includes 31 items, the minimum required sample size was approximately 310 participants. To account for potential missing data, the final sample comprised 319 respondents. Participants ranged in age from 18 to 32 years (M = 23.75, SD = 2.75), with 190 females (59.6%) and 129 males (40.4%). The majority were single (n = 289, 90.6%), while 30 (9.4%) were married. Questionnaires were administered online through a secure survey link distributed in coordination with faculty members and official university communication channels.

Instruments

Striving to Avoid Inferiority Scale (SAIS): This 31-item questionnaire was developed by Gilbert et al. (2007) to assess efforts to avoid feelings of inferiority. It is scored on a 5-point Likert scale ranging from 0 (Never) to 4 (Always). The total score can therefore range from 0 to 124, with higher scores indicating stronger tendencies to avoid inferiority and greater concern about others' evaluations. The scale comprises two sections. The first assesses the individual's beliefs about SAI and their perceived acceptance by others in cases of success or failure. The second section focuses on the reasons and insecurities experienced under pressure to compete and avoid inferiority. The scale includes two subscales: *insecure striving* and *secure non-striving*. Gilbert et al. (2007) reported Cronbach's alpha coefficients of .92 for insecure striving and .87 for secure non-striving, with an overall reliability of .91. The scale has demonstrated good convergent and divergent validity.

Pathological Narcissism Inventory (PNI): The Pathological Narcissism Inventory (PNI) developed by Pincus et al. (2009) consists of 52 items scored on a 6-point Likert scale ranging from "Not at all like me" to "Very much like me." Thus, total scores can range from 0 to 260, with higher scores reflecting greater levels of pathological narcissism. This instrument includes seven dimensions or subscales: contingent self-esteem, exploitation, self-sacrificing self-enhancement, hiding the self, grandiose fantasy, devaluation, and entitlement rage. These seven subscales are categorized into two higher-order dimensions: grandiose narcissism, comprising grandiose fantasy, exploitation, and self-sacrificing self-enhancement; and vulnerable narcissism, comprising contingent self-esteem, hiding the self, devaluation, and entitlement rage. All of these dimensions fall under the broader construct of pathological narcissism. The PNI has shown a positive correlation with the Narcissistic Personality Inventory, indicating good convergent validity. Cronbach's alpha coefficients for the subscales ranged from .78 to .93, and the overall Cronbach's alpha for the total scale was reported as .95 (Pincus et al., 2009). In a study by Soleimani et al., the 15-day test–retest reliability coefficients for the PNI subscales were above .70, suggesting stability of the scores over the mentioned period. Regarding construct validity, results from exploratory factor analysis using principal components analysis and parallel analysis indicated that a seven-factor model was the most appropriate (Soleimani et al., 2015).

The Eysenck Self-Esteem Scale (ESES): Was designed by Eysenck and Eysenck (1975) to measure individuals' global sense of self-worth and confidence. This 30-item dichotomous (Yes/No) questionnaire evaluates self-perceptions of adequacy, competence, and personal value. Each "self-affirming" response is scored as 1, and each "self-deprecating" response as 0, producing a total score between 0 and 30, where higher scores indicate higher levels of self-esteem. It should be noted that there is no separate article published under the title "Eysenck Self-Esteem Inventory". Rather, this scale originates from the broader Eysenck Personality Scales and Eysenck Personality Questionnaire (EPQ) framework developed by Eysenck in the 1970s. The self-esteem subscale was later adapted and used as an independent measure in various studies, though its psychometric basis stems from Eysenck's general theory of personality (Eysenck & Eysenck, 1975, 1976). The ESES has shown acceptable internal consistency and test–retest reliability in different cultural contexts. In an Iranian validation study among students at Shahid Chamran University of Ahvaz, construct validity coefficients were reported as .74 for female students and .79 for male students. In the same study, concurrent validity was established by correlating ESES scores with those of the Ahvaz Self-Esteem Scale, yielding significant correlations

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of r = .79 (females) and r = .74 (males) (p < .001). These findings demonstrate that the Persian version of the ESES has satisfactory psychometric properties (Hormozi Nezhad et al., 2000).

Analysis

Data were analyzed using SPSS version 25 and AMOS version 24. To assess the validity of the questionnaire, confirmatory factor analysis (CFA), convergent validity, and divergent validity were used. CFA was conducted using the Maximum Likelihood (ML) estimation method. Model respecifications were guided by modification indices (MIs) greater than 10, provided that each modification was theoretically justified. Internal consistency reliability was evaluated using Cronbach's alpha, where values above .70 indicate acceptable reliability. Convergent validity was assessed through both correlation-based analyses and the calculation of Average Variance Extracted (AVE) and Composite Reliability (CR). An AVE value of .50 or higher and a CR value above .70 were considered indicative of adequate convergent validity. Divergent validity was examined by comparing the square root of AVE for each construct with its inter-construct correlations (Fornell & Larcker, 1981). Model fit was assessed using a comprehensive set of indices, including the Comparative Fit Index (CFI), Adjusted Goodness-of-Fit Index (AGFI), Relative Fit Index (RFI), Incremental Fit Index (IFI), Root Mean Square Error of Approximation (RMSEA), and the normed chi-square (χ^2/df).

Ethics

This study was approved by the Ethics Committee of Kermanshah University of Medical Sciences (Code: IR.KUMS.MED.REC.1403.016). Written informed consent was obtained from all participants prior to participation.

Findings and Results

Confirmatory Factor Analysis (CFA)

To assess the construct validity of the SAIS, confirmatory factor analysis (CFA) was conducted using the Maximum Likelihood (ML) estimation method. Model modification was guided by modification indices (MIs > 10) only when theoretically justified. The model fit was evaluated using several indices, including SRMR, GFI, IFI, CFI, AGFI, NFI, and RMSEA. According to established standards, RMSEA values below 0.08, SRMR below 0.10, and fit indices such as CFI, GFI, AGFI, IFI, RFI, NFI, and NNFI above 0.90 (AGFI > 0.85) indicate an acceptable fit (Anthoine et al., 2014). The CFA results showed that the two-factor structure of the SAIS achieved good model fit.

Table 1 presents the overall fit indices of the two-factor model. It also includes the 90% confidence interval (CI) for the RMSEA value to provide a more precise estimate of fit.

Table 1

Fit indices of the two-factor model of the SAIS

Model	χ^2	df	*p*	χ^2/df	SRMR	GFI	IFI	CFI	AGFI	NFI	RMSEA	90% CI (RMSEA)
SAIS	531.03	433	.001	1.22	.04	.90	.99	.99	.89	.96	.02	[.015, .035]

All standardized factor loadings for the 31 items ranged from .56 to .84 and were statistically significant (p < .001), indicating that each item contributed meaningfully to its intended latent factor.

To evaluate the contribution of each item to its corresponding latent construct, standardized factor loadings for all 31 items of the SAIS were examined. Table 2 displays the standardized loadings for both latent factors—insecure striving and secure non-striving. All loadings were statistically significant (p < .001), indicating that each item meaningfully contributes to its respective subscale.

Table 2

Standardized factor loadings for the SAIS items

Item	Factor	Standardized Loading
SAIS1	insecure striving	0.68
SAIS3	insecure striving	0.65
SAIS5	insecure striving	0.59
SAIS7	insecure striving	0.56
SAIS9	insecure striving	0.68
SAIS11	insecure striving	0.63
SAIS13	insecure striving	0.69
SAIS14	insecure striving	0.70
SAIS15	insecure striving	0.70
SAIS17	insecure striving	0.66
SAIS18	insecure striving	0.65
SAIS19	insecure striving	0.71
SAIS20	insecure striving	0.69
SAIS22	insecure striving	0.68
SAIS23	insecure striving	0.69
SAIS25	insecure striving	0.78
SAIS27	insecure striving	0.51
SAIS30	insecure striving	0.61
SAIS31	insecure striving	0.56
SAIS2	secure non-striving	0.58
SAIS4	secure non-striving	0.55
SAIS6	secure non-striving	0.56
SAIS8	secure non-striving	0.58
SAIS10	secure non-striving	0.54
SAIS12	secure non-striving	0.58
SAIS16	secure non-striving	0.56
SAIS21	secure non-striving	0.49
SAIS24	secure non-striving	0.61
SAIS26	secure non-striving	0.65
SAIS28	secure non-striving	0.62
SAIS29	secure non-striving	0.64

As shown in Table 2, standardized factor loadings for the insecure striving subscale ranged from .51 to .78, reflecting strong relationships between items and their latent construct. The highest loadings (e.g., SAIS25 = .78, SAIS19 = .71, and SAIS14–15 = .70) demonstrate that these items capture the core aspects of insecurity-driven motivation to avoid inferiority. For the secure non-striving subscale, factor loadings ranged from .49 to .65, indicating adequate representation of the acceptance-based, non-defensive component of the construct. Although the loadings for this factor were slightly lower than those for insecure striving, they remained well within the acceptable psychometric range (Hair Jr et al., 2019). All loadings were significant and exceeded the recommended threshold of .50 for practical significance, confirming that the Persian version of the SAIS demonstrates sound factorial validity. These results, together with the excellent model fit indices ($\chi^2 = 623.03$, $df = 433$, $p < .001$, RMSEA = .037, CFI = .99), provide robust support for the adequacy of the two-factor structure of the SAIS in the Iranian context. Two-factor structure of the SAIS is presented in Figure 1.

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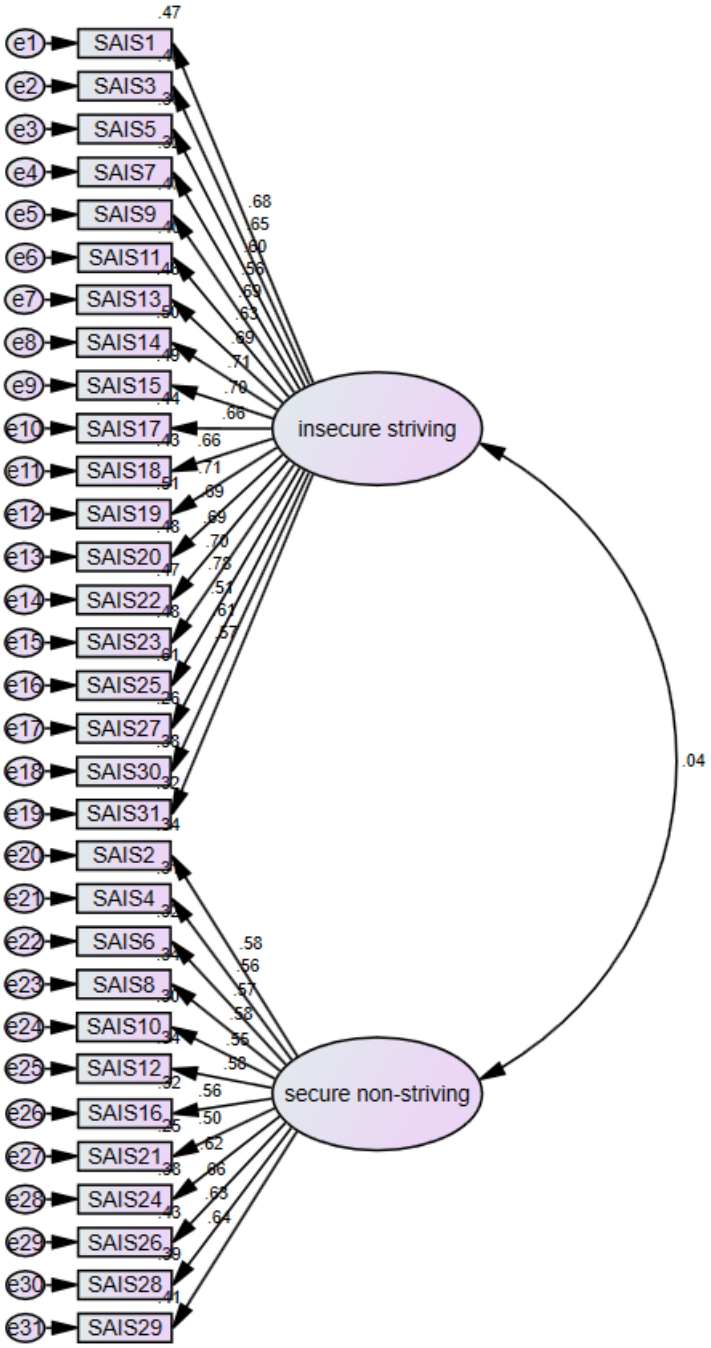

Figure 1

Two-factor structure of the SAIS

Cronbach's alpha coefficients were calculated to assess internal consistency. The results indicated high reliability: α = .93 for Insecure Striving, α = .86 for Secure Non-Striving, and α = .89 for the total SAIS score. Additionally, test–retest reliability was examined in a subsample of 40 participants over a two-week interval. Correlations between Time 1 and Time 2 were .88 (Insecure Striving), .82 (Secure Non-Striving), and .85 (Total SAIS), confirming good temporal stability.

Convergent validity was assessed via correlations between the SAIS and Pathological Narcissism, while discriminant validity was assessed via correlations with Self-Esteem. Table 2 summarizes all correlation

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coefficients and clearly separates the evidence for convergent and discriminant validity.

Table 3

Pearson correlations among SAIS, Self-Esteem, and Pathological Narcissism

Variable	1	2	3	4	5
1. Striving to Avoid Inferiority	–				
2. Secure Non-Striving	.54	–			
3. Insecure Striving	.86	.47	–		
4. Self-Esteem (*Discriminant Validity*)	−.45	−.29	−.36	–	
5. Pathological Narcissism (*Convergent Validity*)	.70	.38	.59	−.75	–

Note: p < .01 for all correlations.

As shown in Table 3, the total SAIS score and its subscales were significantly and negatively correlated with self-esteem (r = −.29 to −.45, p < .01), demonstrating good discriminant validity. The SAIS also showed significant positive correlations with pathological narcissism (r = .38 to .70, p < .01), confirming convergent validity. However, the very high correlation between Insecure Striving and the total SAIS score (r = .86) may suggest partial redundancy between this subscale and the overall construct. This pattern should be interpreted cautiously, and future research is encouraged to examine whether the total score offers incremental validity beyond the subscale scores.

Discussion and Conclusion

The present study aimed to examine the psychometric properties of the SAIS. Findings revealed that the SAIS comprises two subscales: insecure striving and secure non-striving, which aligns with the original two-factor structure reported by Gilbert et al. (2007). Similarly, Ferreira et al. also confirmed the two-factor structure of the SAIS in their study conducted in Portugal.

The construct of SAI is rooted in fears of being ignored, rejected, losing opportunities for advancement, and experiencing active exclusion (Nagae et al., 2022). It refers to the pressure individuals may feel in social contexts due to perceived insecurity, leading them to strive to prevent inferiority experiences associated with criticism, neglect, or rejection (Gilbert, 2016). The two-factor model includes: *Insecure striving*, which involves fears of being ignored, rejected, or excluded, and is associated with low social rank and diminished self-esteem Duarte et al., (2017), and Secure non-striving, which reflects a sense of acceptance by oneself and others, regardless of performance, success, or failure (Gilbert et al., 2007).

Additionally, the results showed that the SAIS has satisfactory internal consistency, with Cronbach's alpha coefficients above the acceptable threshold for both subscales and the total score. These findings are consistent with the original version of the scale (Gilbert et al., 2007) and the study by Ferreira et al., who reported Cronbach's alpha values above .70. The present study also examined test–retest reliability, and the results indicated good temporal stability over a two-week interval.

The study also found that the total SAIS score and its subscales were positively and significantly correlated with pathological narcissism, and negatively correlated with self-esteem. These findings provide evidence for both convergent and discriminant validity. This aligns with the findings of Şen-Pakyürek and Barışkın (2022), who suggested that narcissism can function as a defense against feelings of inferiority. Although narcissistic individuals often display an arrogant façade, they tend to suffer from low self-confidence. They feel superior to others, are intolerant of criticism, and may harbor deep-seated feelings of insecurity, shame, and fear of being exposed as failures. As such, SAI may serve as a defensive mechanism in these individuals (Campbell & Miller, 2011).

Pathological narcissists may employ both intrapersonal and interpersonal strategies to regulate their fragile self-esteem. These include manipulation, distrust—especially of close others—and exploitative behavior. Their inner sense of inferiority often manifests in socially inappropriate responses, aggression, and reduced empathy, all of which contribute to

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interpersonal difficulties and flawed social interactions (Reis et al., 2021).

Moreover, the results indicated a significant association between the effort to avoid feelings of inferiority and low self-esteem (To et al., 2021). This finding can be explained by the notion that individuals who lack a sense of self-worth tend to show little motivation or effort and exhibit indifference toward tasks. Feelings of inadequacy and inferiority lead to a stagnation of thought and mental inactivity. This emotional state prevents the individual from engaging their cognitive abilities, leaving them unprepared for understanding, decision-making, and action. As a result, they lose both the ability and the willingness to complete tasks and responsibilities (Gilbert et al., 2009).

From a psychometric perspective, although the two-factor model demonstrated acceptable fit, the relatively high correlation between the insecure striving subscale and the total score (r = .86) may suggest partial redundancy between the dimensions. Future studies could explore this issue further using bifactor or hierarchical models. Moreover, beyond correlation-based approaches, additional psychometric indices such as Average Variance Extracted (AVE) and Composite Reliability (CR) are recommended to strengthen evidence for convergent and discriminant validity.

Given the novelty of the topic, particularly as this is the first application of the SAIS in Iran, it is recommended that future research replicate these findings in other regions and in clinical populations known to exhibit high levels of inferiority avoidance. Furthermore, since the current sample consisted solely of university students selected through convenience sampling, the findings should not be generalized to the broader population. Future research should include more diverse and representative samples to enhance external validity.

Like other behavioral science studies, the present research had some limitations. First, data were collected through online questionnaires, which may introduce bias. Second, the sample consisted of university students, not clinical populations. Third, the findings rely solely on self-report measures, which are inherently susceptible to bias. Therefore, it is recommended that future studies include both clinical and non-clinical samples and incorporate interviews alongside self-report instruments.

Overall, the findings indicate that the SAIS demonstrates satisfactory reliability and validity, suggesting it is a useful tool for assessing inferiority avoidance in general populations. The use of this scale can help identify inferiority avoidance as a potentially important psychological construct, bridging research on cultural pressures, social behavior, personal vulnerabilities, and psychopathology. As such, the SAIS may be beneficial for psychologists and mental health professionals working in the field of psychological trauma and clinical intervention.

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Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Ethical considerations in this study were that participation was entirely optional.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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Authors' Contributions

All authors equally contribute to this study.

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