

Relationship Between Imagery and Self-Talk Levels in Elite Athletes

Elit Sporcularda İmgeleme ve İçsel Konuşma Düzeyleri Arasındaki İlişki

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Abstract

This study examined the relationship between sport imagery and self-talk in 358 elite athletes (200 female, 158 male) competing at the highest competitive tier in their respective sports. A cross-sectional relational survey used the Turkish Sport Imagery Questionnaire and Self-Talk Questionnaire. Pearson correlations were retained; their significance levels and confidence intervals were calculated from reported coefficients and sample size. Training-frequency comparisons were reconstructed from reported group summaries. Imagery and self-talk were positively associated ($r = .221, p < .001$). Sport experience was associated with imagery ($r = .257, p < .001$), but its association with self-talk was not significant ($r = .017, p = .749$). Approximate ANOVA results indicated differences in imagery across weekly training groups, $F(2, 355) = 145.005, p < .001, \eta^2 = .450$. Tukey-Kramer comparisons indicated higher imagery scores in both the 4–5-session and 6+–session groups than in the 1–3-session group; the two higher-frequency groups did not differ significantly ($p = .174$). Self-talk did not differ significantly across training groups ($p = .525$).

Keywords: Sport, Imagery, Self-Talk, Elite Athletes

ÖZ

Bu araştırmada, kendi branşının en üst müsabaka kademesinde yarışan 358 elit sporcunun (200 kadın, 158 erkek) sporda imgeleme ve içsel konuşma düzeyleri arasındaki ilişki incelenmiştir. Kesitsel ilişkisel tarama desenindeki araştırmada Sporda İmgeleme Envanteri ve Kendinle Konuşma Anketi kullanılmıştır. Bildirilen Pearson korelasyon katsayıları korunmuş; anlamlılık düzeyleri ve güven aralıkları bu katsayılar ve örneklem büyüklüğünden hesaplanmıştır. Antrenman sıklığı karşılaştırmaları bildirilen grup özetlerinden yeniden hesaplanmıştır. İmgeleme ile içsel konuşma arasında pozitif ilişki bulunmuştur ($r = .221, p < .001$). Spor deneyimi imgeleme ile ilişkili ($r = .257, p < .001$); içsel konuşma ile anlamlı ilişki bulunmamıştır ($r = .017, p = .749$). Yaklaşık ANOVA sonuçlarına göre imgeleme puanları antrenman grupları arasında farklılaşmıştır, $F(2, 355) = 145.005, p < .001, \eta^2 = .450$. Tukey-Kramer karşılaştırmalarında haftada 4–5 ve 6+ antrenman yapan grupların imgeleme puanları 1–3 antrenman yapan gruptan yüksektir; iki yüksek sıklık grubu arasında anlamlı fark yoktur ($p = .174$). İçsel konuşma puanları antrenman grupları arasında anlamlı biçimde farklılaşmamıştır ($p = .525$).

Anahtar Sözcükler: Spor, İmgeleme, İçsel Konuşma, Elit Sporcular

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INTRODUCTION

Psychological preparation has a long-standing place in sport psychology alongside physical and technical preparation (Browne & Mahoney, 1984). Applied sport psychology considers imagery, self-talk, attention, and motivation within a broader assessment of athletes and their sporting environments (Hanrahan & Andersen, 2010; Mellalieu & Hanton, 2009). Examining how psychological skills relate to one another can help describe athletes' preparation without assuming that every skill develops in the same way or contributes identically to performance.

Sport imagery involves mentally representing sport-related actions and experiences. It can be directed toward skills and strategies or toward motivational experiences such as confidence and managing arousal. Hall et al. (1998) distinguished cognitive and motivational functions in the Sport Imagery Questionnaire (SIQ). Weinberg (2008) reviewed imagery in relation to performance and mental skills, emphasizing that its effectiveness depends on factors such as task characteristics, imagery perspective, and timing. Questionnaire scores therefore need to be interpreted in relation to the functions assessed; reported imagery use is distinct from imagery ability and objectively measured performance.

Self-talk refers to verbal communication directed toward oneself. Athletes report using it for cognitive purposes, including task instructions, and motivational purposes, including sustaining effort and confidence (Hardy et al., 2001). The Self-Talk Questionnaire (S-TQ) assesses motivational and cognitive dimensions (Zervas et al., 2007). The model proposed by Van Raalte et al. (2016) places self-talk within interactions among personal characteristics, contextual influences, and behavior. Fritsch et al. (2024) further distinguished organic and strategic self-talk when reviewing affective processes. These distinctions suggest that a total score provides a broad description while leaving the content and circumstances of particular self-talk episodes less visible.

Imagery and self-talk have been considered together in work on psychological preparation and learning strategies (Anderson, 1997). Neck and Manz (1992) discussed both within a thought self-leadership framework developed in organizational behavior. Their account offers a conceptual starting point for considering how mental representations and verbal dialogue may organize goal-directed thinking. In sport, shared cognitive and motivational functions provide a rationale for examining the skills together, while their different forms leave room for athletes to use one more extensively than the other.

Early intervention research examined imagery and thought strategies in specific performance settings. Feltz and Riessinger (1990) investigated mastery imagery combined with feedback in a muscular-endurance task. Weinberg et al. (1984) studied association, dissociation, and positive self-talk in endurance tasks, whereas Rushall et al. (1988) investigated instructed thought content in elite cross-country skiers. These studies establish a history of testing particular strategies under defined task conditions. They do not imply that habitual questionnaire scores have the same meaning as exposure to a structured intervention.

Later work sharpened this distinction. Hatzigeorgiadis et al. (2004) found different performance patterns for instructional and motivational self-talk across precision and power tasks. A meta-analysis subsequently identified a positive moderate aggregate effect of self-talk interventions on task performance (Hatzigeorgiadis et al., 2011). Recent reviews of imagery practice and broader psychological interventions also report performance benefits alongside methodological variability and the need for stronger evidence (Liu et al., 2025; Reinebo et al., 2024). Observational studies of psychological skills complement this intervention literature by describing relationships within sporting populations, but they address a different research question.

Turkish research has examined imagery and self-talk in several contexts. Bayköse (2014) considered both constructs in relation to flow, while Nergiz et al. (2015) investigated self-talk among modern and folk dancers. Şahin et al. (2017) reported positive associations of motivational and cognitive self-talk with imagery in undergraduate athletes. Gökalp (2026) also reported a positive total-score correlation in a multi-sport athlete sample. Previous evidence thus supports studying the magnitude of this association in clearly defined competitive populations and examining how the two skills relate to sport experience and weekly training frequency.

Sport experience and weekly physical-training frequency may provide relevant context, but they should not be treated as equivalent exposures. Akman (2019) compared imagery and self-talk dimensions across experience groups in team-sport athletes. Yarayan and Ayan (2018) also reported differences in selected imagery dimensions across sport-experience and branch groups. In an exercise population, Gammage et al. (2000) found that more frequent exercisers reported more imagery use. These studies motivate further examination while differing in populations, instruments, and grouping criteria. Training frequency describes physical participation; it does not directly measure imagery practice or the quality of psychological preparation.

The present study examines athletes competing at the highest tier of their respective sports. Because the meaning of elite status varies across sporting contexts, competitive level needs an explicit operational definition (Swann et al., 2015). Here, elite status refers to the branch-specific competitive tier rather than remuneration or employment. The study addressed three research questions: (1) How strongly are sport imagery and self-talk total scores associated? (2) How is sport experience, expressed as years of participation, associated with these scores? (3) How do the scores differ across weekly training-frequency groups? Previous positive associations inform the first question; the experience and training-frequency comparisons are exploratory.

METHOD

Research Design

This study employed a quantitative, cross-sectional relational survey design to examine associations between sport imagery, self-talk, sport experience, and weekly training frequency. Correlational research is a nonexperimental approach for examining associations among variables (Creswell & Creswell, 2018).

Research Group

Criterion sampling included athletes competing at the highest competitive tier in their respective sports, holding an active license from the relevant sport federation, and having at least five years of sport experience. In this report, “elite” refers to that branch-specific competitive tier; it does not imply a professional contract or remuneration. The final sample comprised 358 athletes across 18 sports, including 200 female and 158 male athletes. Mean chronological age was 22.24 years ($SD = 2.51$), and mean sport experience was 9.93 years ($SD = 3.18$). Sample characteristics are presented in Table 1.

Table 1. Characteristics of the Sample (N = 358)

Characteristic	Category	n (%) or M (SD)
Gender	Female	200 (55.9)
	Male	158 (44.1)
Age (years)	—	22.24 (2.51)
Sport experience (years)	—	9.93 (3.18)
Weekly training sessions	1–3	97 (27.1)
	4–5	139 (38.8)
	6+	122 (34.1)
Sport branch	Basketball	32 (8.9)
	Volleyball	21 (5.9)
	Football	18 (5.0)
	Handball	29 (8.1)
	Wrestling	26 (7.3)
	Rugby	35 (9.8)
	Swimming	27 (7.5)
	Athletics	23 (6.4)
	Badminton	15 (4.2)
	Canoeing	19 (5.3)
	Karate	33 (9.2)
	Table tennis	7 (2.0)
	Skiing	6 (1.7)
	Archery	11 (3.1)
	Taekwondo	43 (12.0)
	Rowing	5 (1.4)
	Curling	6 (1.7)
	Weightlifting	2 (0.6)

Note. M = mean; SD = standard deviation. Percentages may not sum to 100 because of rounding.

Data Collection

Data were collected using Google Forms. The questionnaire link was shared with athletes in the sports listed in Table 1. Before completing the form, participants received information about the study’s purpose and provided consent to voluntary participation. Forms with incomplete or inconsistent responses were excluded before the final sample of 358 was established. Weekly training frequency denotes physical-training sessions and

was categorized as 1–3, 4–5, or 6+ sessions per week; it does not measure the frequency of imagery practice.

For context, an achieved-sample sensitivity calculation using Fisher's z normal approximation indicates that $n = 358$ would detect a correlation of approximately $|r| = .19$ with 95% power at a two-sided $\alpha = .05$.

Data Collection Tools

The Turkish Sport Imagery Questionnaire (SIQ) and Self-Talk Questionnaire (S-TQ) were used. The present report focuses on summed total scores as broad descriptive indices of reported psychological-skill use. The multidimensional structure of each instrument remains relevant to interpretation.

Sport Imagery Questionnaire

The SIQ was developed by Hall et al. (1998) and adapted into Turkish by Kızıldağ and Tiryaki (2012). The original instrument contains 30 items; the Turkish adaptation contains 21 items rated from 1 (completely disagree) to 7 (completely agree). Summing the 21 items gives a theoretical total-score range of 21–147. The adaptation comprises cognitive imagery (9 items), motivational specific imagery (5 items), motivational general arousal (4 items), and motivational general mastery (3 items). Kızıldağ and Tiryaki reported an overall Cronbach's alpha of .86 and subscale alphas of .81, .80, .71, and .59, respectively. These coefficients refer to the adaptation sample. In the present sample ($N = 358$), Cronbach's alpha for the SIQ total score was .90.

Self-Talk Questionnaire

The S-TQ was developed by Zervas et al. (2007) and adapted into Turkish by Engür (2011). It contains 11 items concerning motivational and cognitive self-talk, rated on a five-point scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always). Summing all items gives a theoretical total-score range of 11–55. Higher totals represent more frequently reported self-talk across the assessed functions. In the Turkish validation sample ($n = 422$), Engür (2011) reported Cronbach's alpha values of .94 for the motivational subscale and .87 for the cognitive subscale. In a separate athlete application sample ($n = 302$), the total-score alpha was .95. In the present sample ($N = 358$), Cronbach's alpha for the S-TQ total score was .91.

Data Analysis

Pearson correlation coefficients were reported for imagery, self-talk, and sport experience. For this revision, two-sided p values were calculated from the reported r and n using $t = r\sqrt{[(n - 2)/(1 - r^2)]}$ with $n - 2$ degrees of freedom; 95% confidence intervals used Fisher's z transformation. One-way ANOVA statistics for the three weekly training groups were reconstructed from their reported sample sizes, means, and standard deviations. Between-group and within-group sums of squares yielded $F(2, 355)$ and $\eta^2 = SS_{\text{between}}/(SS_{\text{between}} + SS_{\text{within}})$. Following the significant imagery ANOVA, Tukey–Kramer comparisons used the pooled within-group mean square and the studentized-

range distribution to obtain adjusted p values and simultaneous 95% confidence intervals. The .05 significance criterion was used.

FINDINGS

Imagery and self-talk were positively associated, $r = .221$, 95% CI [.120, .317], $p < .001$ (Table 2). The squared correlation was .049, corresponding to approximately 4.9% shared linear variance. This describes a small association between the total scores.

Table 2. Correlation Between Sport Imagery and Self-Talk

Variables	n	r	95% CI	p
Imagery and self-talk	358	.221	[.120, .317]	< .001

Note. The r coefficient is retained as reported. Two-sided p and Fisher- z CI are calculated from rounded r and n and are approximate.

Sport experience was positively associated with imagery, $r = .257$, 95% CI [.158, .351], $p < .001$. Its association with self-talk was close to zero, $r = .017$, 95% CI [−.087, .120], $p = .749$ (Table 3).

Table 3. Correlations of Sport Experience with Imagery and Self-Talk

Sport experience with	n	r	95% CI	p
Sport imagery	358	.257	[.158, .351]	< .001
Self-talk	358	.017	[−.087, .120]	.749

Note. Sport experience is measured in years. Coefficients are retained as reported; p values and CIs are approximate calculations from rounded r and n .

The approximate ANOVA reconstructed from the reported group summaries indicated differences in imagery across weekly training groups, $F(2, 355) = 145.005$, $p < .001$, $\eta^2 = .450$ (Table 4). Self-talk did not differ significantly, $F(2, 355) = 0.645$, $p = .525$, $\eta^2 = .004$. Tukey–Kramer comparisons indicated higher imagery scores in the 4–5-session and 6+–session groups than in the 1–3-session group (both adjusted $p < .001$). The 6+–session versus 4–5-session difference was 4.81 points, 95% simultaneous CI [−1.51, 11.13], adjusted $p = .174$ (Table 5).

Table 4. Summary-Based ANOVA by Weekly Training Frequency

Variable	1–3 sessions (n = 97) M (SD)	4–5 sessions (n = 139) M (SD)	6+ sessions (n = 122) M (SD)	F(2, 355)	p	η^2
Sport imagery	56.39 (23.48)	97.70 (18.29)	102.51 (23.53)	145.005	< .001	.450
Self-talk	45.59 (12.07)	45.64 (7.07)	44.35 (11.06)	0.645	.525	.004

Note. Group n , M , and SD are retained as reported. F , p , and η^2 were reconstructed from these rounded summaries and are approximate. The theoretical score ranges are 21–147 for imagery and 11–55 for self-talk.

Table 5. Summary-Based Tukey–Kramer Comparisons for Imagery

Comparison (sessions/week)	Mean difference	Simultaneous 95% CI	Adjusted p
4–5 minus 1–3	41.31	[34.57, 48.05]	< .001
6+ minus 1–3	46.12	[39.19, 53.05]	< .001
6+ minus 4–5	4.81	[−1.51, 11.13]	.174

Note. Tukey–Kramer calculations use the reconstructed pooled within-group mean square (467.840; $df = 355$). Intervals control the familywise error rate at .05 for the three imagery comparisons. Results are approximate because group summaries are rounded.

DISCUSSION AND CONCLUSION

This study identified a small positive association between imagery and self-talk in athletes competing at the highest tier of their respective sports. Sport experience was associated with imagery, whereas its association with self-talk was close to zero. The reported training summaries also indicated higher imagery scores in each of the two higher-frequency groups than in the lowest-frequency group, with no significant self-talk difference across groups. The pattern suggests that imagery and self-talk are related aspects of psychological preparation whose associations with participation are not identical. This contribution concerns reported psychological-skill use in a cross-sectional elite-athlete sample.

The imagery–self-talk correlation ($r = .221$, 95% CI [.120, .317]) corresponds to approximately 4.9% shared linear variance. Statistical significance therefore accompanies limited overlap between the two total scores. The direction agrees with Şahin et al. (2017), whose analyses concerned motivational and cognitive self-talk in relation to imagery, and with Gökalp (2026), who reported a larger total-score correlation ($r = .582$). The estimates should not be treated as directly interchangeable: the studies differ in samples and analytical scope. Without a formal comparison using comparable measures and populations, the difference cannot be attributed to elite status. The present result supports considering the skills jointly while assessing each separately.

A possible interpretation of their positive association is functional overlap. Hardy et al. (2001) identified cognitive and motivational purposes in athletes' accounts of self-talk, functions also represented in imagery assessment (Hall et al., 1998). An athlete might, for example, mentally rehearse a movement sequence and use a short verbal cue to direct attention during its execution. This is a conceptual illustration rather than an observed mechanism in the present data. Neck and Manz (1992) provide a broader theoretical account of imagery and internal dialogue in thought self-leadership, while Van Raalte et al. (2016) emphasize personal and contextual influences in sport. Together, these perspectives help explain possible co-use without establishing that either skill causes the other.

The association may also be situated within a wider psychological context. Kartal et al. (2017) reported relationships between imagery dimensions and achievement motivation in team-sport athletes. Tekin and Ulukan (2020) reported a weak association between imagery and attention in young archers. More recently, Ekizoğlu et al. (2024) found associations of imagery and self-talk dimensions with coping strategies in professional volleyball players. Demir et al. (2025), studying 407 elite athletes with structural equation modelling, reported positive mental-toughness–imagery and negative anxiety–imagery associations. These findings identify additional constructs for future models. Motivation, attention, coping, mental toughness, and anxiety were not measured here, so their explanatory or mediating roles remain hypotheses.

Sport experience was positively associated with imagery ($r = .257$), corresponding to approximately 6.6% shared linear variance. Akman's (2019) comparisons provide a relevant parallel: team-sport athletes with at least 11 years of experience had higher cognitive and motivational general mastery imagery scores than those with 1–10 years,

while the other imagery dimensions did not differ significantly. Yarayan and Ayan (2018) likewise reported experience-related differences in selected imagery dimensions, with patterns varying across male and female groups. These studies support examining experience in relation to specific imagery functions rather than assuming uniform development across every dimension. Group comparisons and a continuous correlation answer different questions, so their magnitudes cannot be equated.

Repeated exposure to training and competition may provide more sport-related experiences to draw upon when imagining actions and situations. The current association is compatible with that interpretation, but accumulated experience, imagery practice, and changes in imagery were not tracked over time. Chronological age, sport demands, and coaching may also contribute. Moreover, all participants had at least five years of sport experience; the finding does not describe development from novice participation. Experience accounts for only a limited proportion of imagery-score variation, leaving considerable scope for differences in preparation and individual circumstances. A longitudinal design would be needed to distinguish these possibilities.

For self-talk, the sport-experience estimate was close to zero ($r = .017$, 95% CI $[-.087, .120]$). Akman's (2019) detailed experience-group comparisons also showed no significant differences in cognitive or motivational self-talk. This agreement is informative but does not establish that every form of self-talk is unrelated to experience. Hardy et al. (2005) found that self-talk varied with practice versus competition and sport type, illustrating the importance of situational context. A broad total may combine different purposes and patterns of use. Future work should examine the content, timing, and functions of self-talk alongside participation history, rather than use years of sport experience as a substitute for psychological-skill assessment.

Training-frequency comparisons showed a different pattern for imagery. The approximate effect size from the group summaries was sizable ($\eta^2 = .450$), with the separation concentrated between the 1–3-session group and each higher-frequency group. The 6+ versus 4–5-session comparison was not significant (adjusted $p = .174$); the findings therefore do not demonstrate a consistent increase across every category. Gammage et al. (2000) similarly found greater use of appearance, energy, and technique imagery among more frequent exercisers. Their exercise sample, questionnaire, and frequency cutoffs differ from the present study, so the comparison concerns the general direction of the association rather than an equivalent effect or a common training threshold.

The sizeable imagery difference warrants careful interpretation because weekly physical-training frequency was not assigned experimentally. Sport branch, selection, coaching practices, and prior mental-skills training could differ across the groups. More frequent sessions might provide more opportunities for imagery use, but they do not establish the amount or quality of imagery practice. Weinberg (2008) emphasized several conditions affecting imagery effectiveness, including task characteristics and timing. Measuring deliberate imagery practice separately from physical-training exposure would therefore make future comparisons more informative. By contrast, the self-talk omnibus comparison was not significant and its effect size was small ($\eta^2 = .004$). This difference

reinforces the value of examining the skills separately rather than expecting a common association with training frequency.

The findings also need to be distinguished from evidence about interventions. Hatzigeorgiadis et al. (2004) found that both instructional and motivational self-talk improved precision-task performance relative to baseline, whereas only motivational self-talk significantly improved the power task. Weinberg et al. (1984) found no significant group difference in a running task, but benefits for positive self-talk and dissociation in a separate muscular-endurance task. Such variation emphasizes the task and strategy being tested. The positive aggregate evidence for self-talk (Hatzigeorgiadis et al., 2011) and imagery practice (Liu et al., 2025) does not convert the present correlations into intervention effects. Reinebo et al. (2024) further showed that significant performance effects were not stable across sensitivity analyses addressing randomization and performance-outcome type.

For applied practice, the findings favor assessing imagery and self-talk as separate but potentially complementary parts of an athlete's preparation. Imagery scenarios and verbal cues could be selected around a specific task and evaluated over repeated practice, with attention to the athlete's preferences and sporting context. This is an implication for assessment and future testing, not an intervention demonstrated by the present study. It would be premature to prescribe a weekly physical-training threshold to improve either psychological skill. The results instead suggest that participation patterns may help identify useful assessment questions, while decisions about mental-skills programs require evidence about the athlete, the strategy, and the outcome being targeted.

Several limitations constrain the conclusions. The cross-sectional design does not establish temporal order, and self-reports may share response biases. Voluntary criterion sampling limits generalizability beyond the participating athletes and their branch-specific competitive levels. The sample spans 18 sports with markedly unequal subgroup sizes, including very small branch-specific groups. Analyses were not adjusted for branch, chronological age, gender, or other potential confounders; the observed associations should therefore be interpreted as unadjusted. Future studies should recruit sufficiently sized sporting groups and examine these contextual variables in multivariable models. A non-significant test should not be interpreted as evidence of equivalence or the absence of all possible relationships.

Measurement and analytical scope also matter. The SIQ and S-TQ assess multiple dimensions, as described in their development and Turkish adaptation studies (Engür, 2011; Kızıldağ & Tiryaki, 2012; Zervas et al., 2007). The present total-score alpha coefficients of .90 and .91 describe internal consistency; they do not establish a single underlying dimension or subscale-specific reliability. The summary-based calculations are approximate and do not verify participant-level scoring or the distributional assumptions of the parametric tests. Objective performance was not measured. Future longitudinal studies and controlled interventions should combine subscale assessment with explicit measures of imagery practice and self-talk context, examine psychometric properties in the target population, and include outcomes matched to the sporting task.

In conclusion, imagery and self-talk showed a small positive association in this elite-athlete sample, while sport experience was associated with imagery but not detectably with self-talk. The training summaries indicated an imagery difference between the lowest-frequency group and each higher-frequency group, with no significant difference between the latter. These results add a contextual account of related but distinct psychological skills. Their practical value lies in informing more specific assessment and research questions; prospective studies are needed to determine how these patterns develop and whether targeted psychological practice changes sport performance.

Kısaltmalar / Abbreviations

SIQ — Sport Imagery Questionnaire;
S-TQ — Self-Talk Questionnaire;
ANOVA — Analysis of variance;
CI — Confidence interval;
M — Mean;
SD — Standard deviation;
n / N — Sample size;
r — Pearson correlation coefficient;
t — t statistic;
F — F statistic;
df — Degrees of freedom;
p — p value;
SS — Sum of squares;
 η^2 — Eta squared.

Beyanlar / Declarations

Etik Onay ve Katılım Onayı / Ethics approval and consent to participate

Atatürk Üniversitesi Spor Bilimleri Fakültesi Etik Kurulundan etik onay alınmıştır (Karar No: 2024/10-105; Onay Belgesi No: E-70400699-050.02.04-2400346295). Çalışma, Helsinki Bildirgesi'ne uygun olarak yürütülmüştür. Katılımcılara çalışma hakkında bilgi verilmiş ve gönüllü katılımlarından önce çevrim içi form aracılığıyla bilgilendirilmiş onamları alınmıştır.

Ethical approval was obtained from the Ethics Committee of the Faculty of Sports Sciences, Atatürk University (Decision No. 2024/10-105; Approval Document No. E-70400699-050.02.04-2400346295). The study was conducted in accordance with the Declaration of Helsinki. Participants received information about the study and provided informed consent through the online form before voluntary participation.

Veri Ve Materyal Erişilebilirliği / Availability of data and material

Bu çalışmada sunulan veriler, makale içerisinde yer alan tablolarda verilmiştir. Çalışmaya ait ek veri ve materyaller, sorumlu yazardan makul talep üzerine temin edilebilir.

The data presented in this study are included in the tables within the article. Additional data and materials related to this study are available from the corresponding author upon reasonable request.

Çıkar Çatışması / Competing interests

Yazarlar, bu çalışmayla ilişkili herhangi bir mali veya mali olmayan çıkar çatışması bulunmadığını beyan eder. The authors declare that there are no financial or non-financial conflicts of interest related to this study.

Yazar Katkıları / Authors' Contribution Statement

Araştırma fikri: GTD, SN; Araştırma tasarımı: GTD, SN, MÇ; Veri toplama: MÇ, HK; Veri analizi: GTD, SN; Makalenin yazımı: GTD, MÇ; Eleştirel değerlendirme: MÇ.

Research Idea: GTD, SN; Research Design: GTD, SN, MÇ; Data Collection: MÇ, HK; Data Analysis: GTD, SN; Writing: GTD, MÇ; Critical Review: MÇ.

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