

# The Relationship Between Exercise Stages of Change and Time Management Skills

Egzersiz Davranış Değişim Evreleri ile Zaman Yönetimi Becerileri Arasındaki İlişki

## Abstract

**Objective:** Regular exercise is associated with numerous health benefits. Time management-related behaviors may be relevant to the adoption and maintenance of exercise; however, their relationship with exercise stages has not been clearly established. This study aimed to examine the associations between exercise stages of change and six self-reported time management-related behaviors among individuals aged 18–25 years.

**Materials and Methods:** This cross-sectional study included 202 university students from Süleyman Demirel University in Türkiye. Data were collected using a sociodemographic information form, the Exercise Stages of Change Questionnaire, and six researcher-developed items assessing specific time management-related behaviors. Each item was analyzed separately. Spearman's rank-order correlation and separate ordinal logistic regression analyses were used to examine associations between exercise stage and the individual behavior items.

**Results:** Among the six time management-related behaviors, only the item "I make plans to use my time efficiently" was significantly associated with exercise stage. This item showed a positive correlation with exercise stage ( $\rho = 0.248$ ,  $p < 0.001$ ). In ordinal logistic regression, each one-point increase in agreement with this statement was associated with 59% higher odds of being classified in a more advanced exercise stage (OR = 1.59, 95% CI: (1.23–2.04),  $p < 0.001$ ).

**Discussion:** The findings suggest that planning to use time efficiently may be more closely related to exercise behavior than other time management-related behaviors examined in this study. However, the cross-sectional design does not allow causal inferences regarding whether planning promotes progression through exercise stages.

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**Conclusion:** Planning to use time efficiently was the only time management-related behavior associated with exercise stage. Future longitudinal studies using validated multidimensional instruments are needed to clarify the role of time management-related behaviors in exercise participation.

**Keywords:** Exercise, Time Management, Physical Activity.

## Introduction

Physical activity is recognized as one of the most important components of a healthy life. Previous studies have provided evidence for the benefits of physical activity and exercise. Physical activity (PA) reduces all-cause, cardiovascular, and cancer-related mortality risk across adulthood and improves key health outcomes, including glycemic control, blood pressure, and resting heart rate (Ahmadi et al., 2024; Garcia et al., 2025; Guo & Wang, 2025; Martínez-Gómez et al., 2024; Rezende et al., 2018; Yu et al., 2025).

Physical activity and exercise improve mental health across the lifespan, reducing depression and anxiety symptoms through various modalities, including resistance and mind-body exercises. These effects depend on factors such as exercise dose, individual characteristics, and adherence, and can complement standard treatments like antidepressants and psychotherapy (Bizzozero-Peroni et al., 2024; Dong et al., 2024; Lin et al., 2024; Noetel et al., 2024; Singh et al., 2023).

Time management has been associated with several health-related outcomes. Time management behaviors have been linked to sleep quality (Knowlden & Naher, 2023), while time management and resilience training have been shown to reduce work-family conflict (Peykar et al., 2023). In university students, time management-related constructs, including procrastination and time management disposition, have also been associated with physical activity (Kundakcı et al., 2024; Zhang et al., 2024).

Exercise behavior is influenced by individual and environmental factors beyond knowledge and intention. The transtheoretical model conceptualizes

behavior change across five stages and provides a framework for stage-matched interventions (Prochaska & DiClemente, 1983). Accordingly, this exploratory study examines whether exercise stages are associated with six self-reported time management-related behaviors, including efficient use of time, implementation of daily plans, work-rest balance, avoidance of unnecessary activities, procrastination, and timely completion of planned tasks.

## Materials and Methods

### Study design and participants

This cross-sectional descriptive study examined the associations between exercise stages and selected self-reported time management-related behaviors among university students. Ethical approval was obtained from the Health Sciences Ethics Committee of Süleyman Demirel University (June 27, 2025; No. 98/18). The study was conducted in accordance with the Declaration of Helsinki, and participant confidentiality was maintained throughout the research process.

The inclusion criteria were being 18–25 years of age, being enrolled at a university, and voluntarily agreeing to participate. Individuals who reported a health condition that substantially limited their ability to participate safely in exercise were excluded. Data were collected through an online questionnaire administered via Google Forms in July 2025.

### Assessment instruments

Data were collected using a sociodemographic information form, the Exercise Stages of Change Questionnaire, and six researcher-developed items addressing time management-related behaviors. The sociodemographic form included questions on age, gender, academic department, year of study, employment status, height, weight, and other relevant

participant characteristics.

**Exercise Stages of Change Questionnaire:** The Exercise Stages of Change Questionnaire is based on the Transtheoretical Model and classifies individuals into five stages of exercise behavior: precontemplation, contemplation, preparation, action, and maintenance (Prochaska & DiClemente, 1983; Marcus et al., 1992). Participants selected the statement that best represented their current exercise behavior.

The stages were defined as follows:

**Precontemplation:** not currently exercising and not intending to begin within the next six months.

**Contemplation:** not currently exercising but intending to begin within the next six months.

**Preparation:** not exercising regularly but intending to begin regular exercise within the next month.

**Action:** engaging in regular exercise for less than six months.

**Maintenance:** engaging in regular exercise for six months or longer.

The validated Turkish version of the questionnaire was used. Regular exercise was defined as exercise lasting 20–60 minutes on at least three days per week (Ay & Bayık Temel, 2015).

In addition to this survey, participants were asked additional questions about the frequency, duration,

and type of exercise to better understand their current exercise habits, thereby providing a clearer picture of their exercise patterns. Participants who did not exercise were asked about barriers to exercise using multiple-choice items, with an “Other” option allowing participants to report additional barriers in free text.

**Time management-related behavior items:** Six researcher-developed items were used to assess selected behaviors related to time management. The items were developed after reviewing the literature and existing instruments related to time management and addressed planning the efficient use of time, implementation of daily plans, balance between work and rest, avoidance of unnecessary activities, procrastination, and timely completion of planned tasks. They were intended to assess these specific behaviors individually rather than to constitute a validated multidimensional time management scale.

Responses were recorded on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Because the items were not derived from a previously validated multidimensional scale, they were not treated as subscales or combined into a total time management score. Instead, each item was analyzed separately as an indicator of a specific self-reported time management-related behavior. The negative worded procrastination item was retained in its original direction for item-level analyses, with higher scores indicating greater agreement with procrastination behavior (Table 1).

**Table 1** Researcher-developed items assessing time management-related behaviors

| Item No.                                                                                                                | Item                                              |
|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| 1                                                                                                                       | I make plans to use my time efficiently.          |
| 2                                                                                                                       | I can easily implement my daily plans.            |
| 3                                                                                                                       | I balance my work and rest periods.               |
| 4                                                                                                                       | I avoid unnecessary activities.                   |
| 5                                                                                                                       | I generally leave my tasks until the last minute. |
| 6                                                                                                                       | I complete my planned tasks on time.              |
| <b>Response options: 1: Strongly disagree, 2: Disagree, 3: Neither agree nor disagree, 4: Agree, 5: Strongly agree.</b> |                                                   |

## Data analysis

Statistical analyses were performed using IBM SPSS Statistics for Windows, Version 26.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics were calculated for participant characteristics, exercise stages, and the six time management-related behaviors. Because exercise stage was treated as an ordinal variable and the questionnaire items were measured on a five-point Likert-type scale, Spearman's rank-order correlation coefficients were used to examine bivariate associations between exercise stage and each item. Correlation coefficients were interpreted according to Cohen's criteria (Cohen, 1988).

Separate ordinal logistic regression models were then conducted for each time management-related behavior item, with exercise stage entered as the ordered dependent variable and the relevant item score entered as a continuous predictor. Regression coefficients, odds ratios (OR; Exp[B]), and 95% confidence intervals were reported. The proportional odds assumption was evaluated using the test of parallel lines. To account for multiple testing across the six item-level analyses, a Bonferroni-adjusted significance threshold of  $p < 0.0083$  ( $0.05/6$ ) was applied.

## Results

A total of 202 university students participated in the study, of whom 79.7% were women. Participants' age

ranged from 18 to 25, with an average age of  $20.06 \pm 1.65$  years, an average height of  $168.36 \pm 9.47$  cm, and an average weight of  $65.30 \pm 14.69$  kg. Forty-eight percent of the participants were first-year students, and 15.3% were actively employed (Table 2).

Participants' weekly exercise frequency ranged from 3 to 7 days, with a mean of 4.3 days. Exercise duration varied between 20 and 180 minutes, with an average of approximately 80 minutes (Table 2).

Participants' exercise stages were distributed as follows: 20.8% in the precontemplation stage, 34.7% in the contemplation stage, 27.7% in the preparation stage, 11.4% in the action stage, and 5.4% in the maintenance stage. This distribution indicates that most participants were in the early stages of exercise behavior change (precontemplation, contemplation, and preparation), whereas only a small proportion (16.8%) had progressed to regular exercise or the maintenance stage (Table 2).

Participants' preferred exercises were analyzed, and more than one type of exercise was generally reported. Brisk walking/jogging was the most common type (50%), followed by flexibility-based exercises such as yoga and pilates (29.4%). Zumba/aerobic/dance also constituted a notable proportion (23.5%), while team sports and cycling were reported at moderate levels (17–24%). Swimming was the least preferred type of exercise (11.8%) (Table 2).

**Table 2** Demographic information of the participants

| Variables                 | Min | Max   | $\bar{X} \pm S$                |
|---------------------------|-----|-------|--------------------------------|
| Age (years)               | 18  | 25    | $20.06 \pm 1.65$               |
| Height (cm)               | 152 | 200   | $168.36 \pm 9.47$              |
| Weight (kg)               | 43  | 114   | $65.30 \pm 14.69$              |
| <b>Exercise variables</b> |     |       |                                |
| Days (per week)           | 3   | 7     | $4.3 \pm 1.29$                 |
| Duration (min)            | 20  | 180   | $80.6 \pm 41.8$                |
| Exercise stages           | n   | %     | Exercise Type n Percentage (%) |
| Precontemplation          | 42  | 20.80 | Brisk Walking / 17 50.00       |
|                           |     |       | Jogging 10 29.40               |
| Contemplation             | 70  | 34.70 | Yoga 10 29.40                  |
| Preparation               | 56  | 27.70 | Pilates 8 23.50                |
| Action                    | 23  | 11.40 | Zumba / 8 23.50                |
|                           |     |       | Aerobics / 6 17.60             |
| Maintenance               | 11  | 5.40  | Dance 6 17.60                  |
| Total (N)                 | 202 | 100   | Team Sports 6 17.60            |
|                           |     |       | Cycling 4 11.80                |
|                           |     |       | Swimming 4 11.80               |

Exercise frequency, duration, and exercise type are reported for participants in the action and maintenance stages (n = 34). Participants could report more than one exercise type. Min: Minimum, Max: Maximum,  $\bar{X}$ : Mean, S: Standard Deviation, N: Number of Participants

Table 3 summarizes the bivariate associations between exercise stage and each of the six time management-related behaviors. A significant positive correlation was observed only for the item assessing planning to use time efficiently, whereas no significant associations were found for the remaining items (Table 3).

**Table 3** Spearman correlations between exercise stage and time management-related behavior items

| Time management-related behavior item                    | Spearman's $\rho$ | $p$ value |
|----------------------------------------------------------|-------------------|-----------|
| <b>I make plans to use my time efficiently.</b>          | 0.248             | <0.001    |
| <b>I can easily implement my daily plans.</b>            | 0.055             | 0.436     |
| <b>I balance my work and rest periods.</b>               | 0.135             | 0.055     |
| <b>I avoid unnecessary activities.</b>                   | 0.101             | 0.152     |
| <b>I generally leave my tasks until the last minute.</b> | 0.044             | 0.533     |
| <b>I complete my planned tasks on time.</b>              | 0.008             | 0.910     |

Table 4 presents the results of the separate ordinal logistic regression analyses examining the association between each time management-related behavior item and exercise stage. Among the six items, only “I make plans to use my time efficiently” was significantly associated with exercise stage (OR = 1.59, 95% CI: (1.23–2.04),  $p < 0.001$ ). Each one-point increase in agreement with this statement was associated with 59% higher odds of being in a more advanced exercise stage. This association remained statistically

significant after Bonferroni correction ( $p < 0.001$ ). No significant associations were observed for the remaining five-time management-related behavior items (Table 4). The proportional odds assumption was satisfied for all six ordinal logistic regression models. The tests of parallel lines were non-significant for each item ( $p = 0.612, 0.197, 0.172, 0.052, 0.177$ , and  $0.628$ , respectively).

**Table 4** Ordinal logistic regression analyses examining the association between exercise stage and time management-related behavior items

| Time management-related behavior                         | $\beta$ | SE    | OR (95% CI)      | <i>p</i> |
|----------------------------------------------------------|---------|-------|------------------|----------|
| <b>I make plans to use my time efficiently.</b>          | 0.461   | 0.128 | 1.59 (1.23–2.04) | <0.001   |
| <b>I can easily implement my daily plans.</b>            | 0.070   | 0.106 | 1.07 (0.88–1.30) | 0.508    |
| <b>I balance my work and rest periods.</b>               | 0.224   | 0.131 | 1.25 (0.97–1.62) | 0.087    |
| <b>I avoid unnecessary activities.</b>                   | 0.168   | 0.116 | 1.18 (0.94–1.48) | 0.150    |
| <b>I generally leave my tasks until the last minute.</b> | 0.064   | 0.134 | 1.07 (0.82–1.40) | 0.633    |
| <b>I complete my planned tasks on time.</b>              | 0.025   | 0.117 | 1.03 (0.82–1.30) | 0.833    |

Among the participants, 168 (83.17%) were in one of the precontemplation, contemplation, or preparation stages and were not actively exercising. This group was asked about barriers to exercise behavior, and participants in the three stages—Precontemplation ( $n = 42$ ), Contemplation ( $n = 70$ ), and Preparation ( $n = 56$ ) were evaluated separately. The most frequently reported barrier was “low desire or motivation to exercise.” This barrier was reported by 28 (66.7%) participants in the Precontemplation stage, 33 (47.1%) in the Contemplation stage, and 14 (25.0%) in the Preparation stage (Table 5).

“Physical or mental fatigue” was reported by 11 (26.2%) participants in the precontemplation stage, 28 (40.0%) in the contemplation stage, and 21 (37.5%) in the preparation stage (Table 5). “I don’t have time to exercise” barrier was reported by 8 (19.0%) participants in the pre-contemplation stage, 16 (22.9%) in the contemplation stage, and 8 (14.3%) in the preparation stage. “I spend my time on my phone, watching TV series, or playing games” barrier was reported by 9 (21.4%) participants in the pre-

contemplation stage, 15 (21.4%) in the contemplation stage, and 10 (17.9%) in the preparation stage. “No suitable space or equipment” barrier was reported by 8 participants (19.0%) in the pre-contemplation stage, 23 participants (32.9%) in the contemplation stage, and 16 participants (28.6%) in the preparation stage (Table 5). “I don’t have time due to the intensity of my classes or homework” barrier was reported by 3 (7.1%) participants in the pre-contemplation stage, 13 (18.6%) in the contemplation stage, and 8 (14.3%) in the preparation stage. “I don’t know how to exercise” was reported by 5 participants (11.9%) in the pre-contemplation stage, 16 participants (22.9%) in the contemplation stage, and 9 (16.1%) in the preparation stage, while the number of those who selected the statement “I don’t have a supportive circle of friends” was 5 (11.9%) in the pre-contemplation stage, 13 (18.6%) in the contemplation stage, and 5 (8.9%) in the preparation stage. Finally, the barrier “I don’t want to exercise alone” was reported at rates of 6 (14.3%) in the pre-contemplation stage, 7 (10.0%) in the contemplation stage, and 8 (14.3%) in the preparation stage (Table 5).

**Table 5** Participants' exercise barriers

| Barriers                                                                 | Precontemplation (%) | Contemplation (%) | Preparation (%) |
|--------------------------------------------------------------------------|----------------------|-------------------|-----------------|
| My desire to exercise is low                                             | 66.70                | 47.10             | 25.00           |
| I feel physically or mentally tired                                      | 26.20                | 40.00             | 37.50           |
| I don't have time to exercise                                            | 19.00                | 22.90             | 14.30           |
| I usually spend my time on my phone. watching TV shows. or playing games | 21.40                | 21.40             | 17.90           |
| I don't have a suitable space or equipment                               | 19.00                | 32.90             | 28.60           |
| I don't have time due to my heavy course/homework load                   | 7.10                 | 18.60             | 14.30           |
| I don't know how to exercise                                             | 11.90                | 22.90             | 16.10           |
| I don't have a supportive group of friends                               | 11.90                | 18.60             | 8.90            |
| I don't enjoy exercising alone                                           | 14.30                | 10.00             | 14.30           |
| n (Number of Participants): 168                                          |                      |                   |                 |

## Discussion

This study found that, among the six time management-related behaviors examined, only planning to use time efficiently was significantly associated with exercise stage. Participants who reported greater agreement with this behavior had higher odds of being classified in a more advanced exercise stage. However, because the study was cross-sectional, this finding should not be interpreted as evidence that planning causes progression between exercise stages. Rather, it suggests that planning the efficient use of time may be one behavioral characteristic associated with more established exercise participation.

The World Health Organization recommends that adults perform 150–300 minutes of moderate-intensity aerobic physical activity, 75–150 minutes of vigorous-intensity aerobic physical activity, or an equivalent combination per week, together with muscle-strengthening activities on at least two days per week (World Health Organization, 2020). In the present study, regular exercise was defined according to the criterion used in the Turkish version of the Exercise Stages of Change Questionnaire: exercise

lasting 20–60 minutes on at least three days per week. This operational definition differs from the current WHO recommendations because it emphasizes weekly frequency rather than total weekly duration, intensity, and muscle-strengthening activity. Therefore, participants classified in the action or maintenance stages cannot necessarily be assumed to have met all WHO physical activity recommendations. Conversely, individuals who exercised consistently but fewer than three days per week, including those exercising two days ( $n = 6$ ) or one day ( $n = 2$ ) per week, could not be classified beyond the preparation stage. This classification issue should be considered when interpreting the distribution of exercise stages. Evidence suggests that even lower-frequency aerobic exercise may provide health benefits (Ren et al., 2025; dos Santos et al., 2022), highlighting a limitation of the transtheoretical model in this context. Furthermore, the distinction between Action and Maintenance stages relies solely on duration, which may not adequately capture habit formation. For individuals exercising 3–5 days/week, initiation may be a more informative indicator than weekly frequency. These findings suggest that staging criteria should be refined to better capture low dose but consistent exercise patterns. Given the flexibility of the model, stage definitions

may be adapted by practitioners; in this study, the aerobic focus may have led to underclassification of regular but low-frequency participants.

Previous studies conducted among university students have reported varying stage distributions. Kim et al. (2021) reported 12.9% PC, 18.4% CO, 36.1% PR, 11.7% AC, and 20.9% MA for physical activity stages. In a study examining transtheoretical model-based sedentary behavior and physical activity, Özdemir and Erol (2024) reported stage distributions of 15.7% PC, 20.2% CO, 27.8% PR, 25.6% AC, and 10.7% MA. In the present study, 20.8% of participants were in PC, 34.7% in CO, 27.7% in PR, 11.4% in AC, and 5.4% in MA. Notably, the proportion of participants in the maintenance stage was lower than that reported in both previous studies. Furthermore, only 16.8% of participants in the present study were classified in the action or maintenance stages, suggesting that established regular exercise behavior was less common in this sample than in the populations examined in previous studies.

Participants primarily preferred exercises requiring minimal equipment, which is expected to be given the student sample. Consistent with previous findings, brisk walking was the most common activity (Soliva et al., 2022).

Among the six time management-related behaviors examined, only planning to use time efficiently was positively associated with exercise stage. Students who reported greater agreement with this behavior had higher odds of being classified in a more advanced exercise stage. However, this finding should not be interpreted as evidence of progression or causality, because the study was cross-sectional and the items were analyzed individually rather than as a comprehensive measure of time management. The result is broadly consistent with previous findings showing better time management among physically active university students (Kiran et al., 2019). Time management has also been associated with other health-related outcomes, including dietary patterns (Indreica et al., 2022), sleep quality (Knowlden & Naher, 2023), and physical activity-related behaviors (Kundakcı et al., 2024; Zhang et al., 2024). Nevertheless, these comparisons should be interpreted cautiously because previous studies may have used validated multidimensional time management instruments, whereas the present study assessed six

specific self-reported behaviors separately.

Participants reported barriers to exercise through multiple-choice items that included an “Other” free-text response option. The most frequently reported barriers were lack of motivation, fatigue, inadequate facilities or equipment, time constraints, and excessive screen time. Overall, internal barriers were the most prominent, followed by behavioral or cognitive and environmental barriers. These findings suggest that interventions aimed at increasing exercise participation among university students should address not only environmental access but also motivation, fatigue management, daily planning, and social support. In line with this interpretation, perceived competence has previously been identified as an important correlate of exercise behavior among female participants (Martínez et al., 2013). In this study, those in the precontemplation stage largely selected the statement “I have low desire or urge to exercise” (66.7%), indicating that individuals do not consider exercise part of their lives. Although this rate decreased in the contemplation stage (47.1%), it remained high; therefore, increasing intrinsic motivation should be the main approach for both stages.

Physical and mental fatigue were more frequently reported in the contemplation (40.0%) and preparation (37.5%) stages, suggesting increased awareness but insufficient energy to initiate exercise. Although some participants were ready for action, fatigue appeared to hinder initiation. Environmental barriers, such as lack of space or equipment (32.9% and 28.6%), indicate the growing importance of practical constraints at these stages.

Similar rates of “lack of knowledge” across stages highlight the need for informational support, while limited social support (e.g., lack of peers or preference against exercising alone) underscores the importance of social context. Overall, barrier profiles appear to vary by stage, with internal factors dominating early stages and environmental and social factors becoming more influential in later stages.

Perceived time insufficiency highlights the importance of time management, even among non-exercisers. Beyond academic demands, students’ preferences—particularly high screen time—appear to contribute to this constraint. Evidence indicates that increased

physical activity is associated with reduced screen use and lower mobile phone addiction, while initiating regular exercise decreases time spent watching TV and playing games (Brooker et al., 2023; Shi et al., 2021). Similarly, higher smartphone use (>4 hours/day) was associated with earlier exercise stages, particularly the contemplation/preparation stages (Öztürk & Temel Aksu, 2023). These findings suggest that participants recognize excessive screen time as a barrier to exercise.

Fatigue emerged as a common barrier to exercise among students, particularly those with low physical activity levels (Özkul, 2021). Consistent evidence indicates that higher physical activity is associated with lower fatigue and anxiety (Baran & Yılmaz, 2025; Hanif et al., 2024). As fatigue was primarily reported by non-exercising participants, this barrier appears expected. Reported barriers such as inadequate equipment, limited space, and lack of knowledge further highlight the need for exercise counseling.

This study has several limitations. Firstly, the number of participants in the maintenance stage was low; therefore, the findings for this stage should be interpreted with caution. Secondly, the cross-sectional design does not allow causal inferences and limits the generalizability of the findings. Thirdly, women constituted most of the sample (79.7%), which may limit the generalizability of the findings across genders. Fourthly, participants were recruited voluntarily from a single university through an online survey, which may have introduced selection bias and may limit the generalizability of the findings to other university student populations. Fifthly, all data were self-reported and may therefore be subject to recall and response biases. Sixthly, the six time management-related behaviors were researcher-developed and were not derived from a validated multidimensional instrument; therefore, the findings should be interpreted at the individual-item level rather than as representing overall time management ability. Finally, the ordinal logistic regression models were not adjusted for potential confounding variables such as age, sex, or employment status; therefore, residual confounding cannot be excluded.

## Conclusion and Recommendations

University students showed limited engagement in regular exercise, with non-participation more commonly attributed to internal barriers, particularly low motivation, than to external constraints. Among participants who exercised, brisk walking and running were the most frequently reported activities. Of the six time management-related behaviors examined, only planning to use time efficiently was significantly associated with exercise stage. Greater agreement with this behavior was associated with higher odds of being classified in a more advanced exercise stage; however, the cross-sectional design does not allow conclusions regarding causality or actual progression between stages. Future studies should investigate exercise barriers together with individual characteristics, including personality traits, motivation, and daily routine patterns, to support the development of more tailored interventions.

### *Ethical Statement*

Ethical approval for this study was obtained from the Health Sciences Ethics Committee of Süleyman Demirel University (Decision No: 98/18, dated 06/27/2025).

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### *Conflict of Interest*

None

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### *Author Contributions*

Conceptualization: ÇPÖ; Methodology: ÇPÖ; Data Collection: ÇPÖ; Data Analysis: ÇPÖ; Writing – Original Draft Preparation: ÇPÖ; Writing – Review & Editing: ÇPÖ; Supervision: ÇPÖ.

### *Use of Artificial Intelligence*

In this study, artificial intelligence tools (ChatGPT, DeepL) were used for research and language support purposes.

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