ORIGINAL ARTICLE



Exploring the impact of sexual positions on ejaculation: Insights from a survey study by the Andrology Working Group of the Society of Urological Surgery in Turkey

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Abstract

Background: Sexual position is one of the several aspects that affects ejaculation control, which is essential for sexual pleasure. Still little is known, nevertheless, about the connection between sexual positions and ejaculation duration.

Objective: To investigate the impact of various sexual positions on the duration of ejaculation and gain a deeper understanding of the elements that influence the ability to control ejaculation.

Method: An online survey was carried out on a sample of 1904 heterosexual men between the ages of 18–65 years. Premature ejaculation (PE) diagnostic tool was used to define PE. Demographic, behavioral, and physiological traits that are linked to PE and non-PE groups were collected. The participants listed their preferred sexual

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positions and the ones they changed to during ejaculating. Also, analyses were performed between male/female active or deep/shallow thrust positions and PE status. Results: Although there were no appreciable variations in age or circumcision between PE and non-PE groups, the age of first sexual experience was associated with PE status. Groups also varied in the number of weekly ejaculations, the duration of the favored ejaculations, and the characteristics of the erection. The most preferred sexual posture was the doggy style regardless of the group. When the non-PE group felt to ejaculate, they preferred to change the position significantly more than the PE group (74% vs 67.2%; p < 0.05). However, when participants felt ejaculate, non-PE participants tended to switch to shallow thrusting positions significantly more than PE participants, who preferred deeper positions (27.1% vs. 18%; p < 0.05).

Conclusion: This study underlines the relevance of considering sexual positions in controlling PE. Modifying positions during sexual intercourse may offer a non-pharmacological therapeutic alternative for improving ejaculation control. Future studies in this field might help to create tailored PE treatment strategies.

KEYWORDS

deep, premature ejaculation, sexual position, shallow, thrust

1 | INTRODUCTION

Ejaculation is a complex physiological response influenced by various factors such as physiologic and psychological conditions. A thorough understanding of these factors is essential for achieving sexual satisfaction and dealing effectively with problems such as premature ejaculation (PE). An unrecognized aspect of ejaculation control is the possible influence of the sexual position during intercourse.

The exact causes of PE remain largely unclear, with only limited evidence available to support the proposed biological and psychological theories, such as anxiety, penile hypersensitivity, and dysfunction of 5-hydroxytryptamine (HT) receptors. Previous studies have extensively investigated the physiological and psychological factors that influence ejaculation,³⁻⁶ but the influence of the sexual position on this process is not well understood. Although there is a study examining the changes in sexual positions in women after bariatric surgery, no study currently exists that explores how sexual positions in men change and vary due to sexual dysfunction, comorbid conditions, various surgeries, or psychosexual factors. There is anecdotal evidence suggesting that certain sexual positions may provide greater stimulation to the glans penis, potentially resulting in a faster ejaculation. In contrast, alternative positions may provide less immediate stimulation, allowing for better regulation and potentially delayed ejaculation.

This study aimed to examine the effect of different sexual positions on ejaculation duration. We hypothesize that there is no significant difference in ejaculation duration between different sexual positions (null hypothesis). By examining this hypothesis, our secondary aim is to provide a better scientific understanding of the factors influencing

ejaculation control and to offer potentially important information for enhancing sexual satisfaction between couples.

2 | MATERIALS AND METHODS

2.1 | Ethics statement

Ethical approval for this study was obtained from Selçuk University School of Medicine Ethics Committee (No: 2023/186).

2.2 | Survey sample and procedure

The open survey, titled "The Relationship Between Ejaculation and Sexual Position," was created in May–June 2023 by authors from 10 different cities and 12 clinics, who possess expertise in urology and andrology. The study protocol was reviewed and received approval from Selcuk University, School of Medicine ethics committee. Sexology practitioners also provided additional input.

The survey was modified after consulting with the Andrology Working Group of the Society of Urological Surgery in Turkey (SUST) in June-July 2023, consisting of a total of 25 questions including both closed-ended and open-ended items The survey was designed to be concise and easy to understand, with an estimated completion time of approximately 10–15 min. The inclusion criteria encompassed heterosexual men aged between 18 and 65 years and participants were required to be fluent in Turkish to ensure comprehension of the survey questions.



The survey was disseminated via Google Forms from August 5 to December 26, 2023, utilizing both a survey provided direct outreach to people who distributed the survey to individuals within their networks via QR code banner (direct link to Google Forms) or through a unique link provided in the social media advertisements. The participants did not receive any incentives. Randomization of the items was not utilized. Respondents were able to review and change their answers during the survev.

Upon accessing the survey, participants were presented with an informed consent form outlining the purpose of the study, confidentiality measures, and their rights as participants (first page of the study). Only participants who provided informed consent were allowed to proceed with the survey. Survey participants had the option to leave the survey and bypass certain questions at any point. Participants were informed that their participation was voluntary and all respondents provided informed consent.

Questionnaire for participants

Part 1: demographic and descriptive data

We collected the data on respondents' age, age at circumcision, sexual orientation, age at first sexual intercourse, and characteristics of their sexual life (Table 1).

2.3.2 | Part 2: sexual positions and premature ejaculation diagnostic tool

In the second phase of the survey, we presented a diagram illustrating 12 distinct sexual positions for intercourse. We also asked participants questions related to their preferred sexual position and the position they adopted when they anticipated ejaculation. Table 1 displays all relevant inquiries. In this part, the validated version of The Premature Ejaculation Evaluation Questionnaire (PEDT) was included in the questionnaire. 8 A score of 8 or lower indicated the presence of PE, while a score of 9 or 10 suggested potential PE, and a score of 11 or higher indicated the absence of PE.

2.3.3 Part 3: emerging novel parameters from raw data

In this section, we extracted four novel features (NF) from the raw data in order to facilitate the comparison between participants with PE and those without PE. For this, the authors classified positions 1-9 as male active positions and positions 10-12 as female active positions (Table 1, NF1 and NF3). In addition, to investigate the relationship between deep-thrust and shallow-thrust positions and PE status, the authors identified deep-thrust positions (positions 3, 4, 6-8, and 10-12) and shallow-thrust positions (positions 1, 2, 5, and



| TABLE 1 | Questionnaire (Q) and analysis (A) lists. | | | | |
|---|---|--|--|--|--|
| Questionnaire (Q) of participants: Part I | | | | | |
| Q1. | With whom did you have your first sexual experience? | | | | |
| Q2. | Do you have an ongoing relationship? | | | | |
| Q3. | Do you have more than one partner? | | | | |
| Q4. | How many times a week do you ejaculate with a partner or through masturbation (please give an average value)? | | | | |
| Q5. | What should be the normal ejaculation time according to you? | | | | |
| Q6. | Do you think you have the problem of "premature ejaculation"? | | | | |
| Q7. | Do you think that the brightness of the environment in which you have intercourse has an effect on your ejaculation time? | | | | |
| Q8. | Do you think that the darkness of the environment in which you have intercourse has an effect on your ejaculation time? | | | | |
| Q9. | Do you think that talking sexually and slang during intercourse has an effect on your ejaculation time? | | | | |
| Q10. | Where do you find the sexiest part of your mate/partner or a woman? | | | | |
| Q11. | Does thinking about the place you find the sexiest in your mate/partner or a woman have an effect on ejaculation time? | | | | |
| Q12. | Do you use lubricant gel during masturbation? | | | | |
| Q13 | What is the frequency of watching pornographic videos per week? | | | | |
| Q14 | What is the frequency of masturbating per week? | | | | |
| Q15. | What is the average duration of foreplay before sexual intercourse? | | | | |
| Q16. | How do you evaluate your erection time before intercourse? | | | | |
| Q17. | How would you rate the time it takes for the penis to return to its original (detumescence) state after ejaculation? | | | | |
| Questions a | aire (Q) participants: Part II (sexual-position orientated and PEDT) | | | | |
| Q18 | Which of the positions in Figure 1. is your favorite position? | | | | |
| Q19. | Do you change position when you feel you are going to ejaculate? | | | | |
| Q20. | If you change position when you feel you are going to ejaculate, which of the positions in Figure 1. is your favorite position? | | | | |
| PEDT I. | How difficult is it for you to delay ejaculation? | | | | |
| PEDT II. | Do you ejaculate before you want to? | | | | |
| PEDT III. | Do you ejaculate with very little stimulation? | | | | |
| PEDT IV. | Do you feel frustrated because you ejaculate before you want to? | | | | |
| PEDT V. | How concerned are you that that your time to ejaculation leaves your sexually unfulfilled? | | | | |

(Continues)





TABLE 1 (Continued)

Novel features (NF) of participants: Part III (NF, new features obtained from raw data)

| NF1. | Distribution of favorite positions of PE and non-PE |
|------|---|
| | participants according to male and female active positions. |

| NF2. | Distribution of favorite positions of PE and non-PE |
|------|--|
| | participants according to deep-thrust and shallow-thrust |
| | positions. |

NF3. Distribution of participants' switching to male and female active positions when they feel that they will ejaculate.

NF4. Distribution of switching to deep-thrust and shallow-thrust positions when participants feel that they will ejaculate.

Note: The questions (Q) posed to the participants and the analyses (A) conducted from the dataset obtained. Abbreviation: PEDT, Premature Ejaculation Diagnostic Tool.

9) (Table 1, NF2 and NF4). Thereafter, the following NFs were created and analyzed accordingly: (I) distribution of favorite positions of PE and non-PE participants according to male and female active positions. (II) Distribution of PE and non-PE participants' favorite positions according to deep-thrust and shallow-thrust positions. (III) Distribution of switching to male and female active positions when participants feel that they will ejaculate. (IV) Distribution of switching to deep-thrust and shallow-thrust positions when participants feel that they will ejaculate.

2.4 | Statistics

Frequencies and percentages were calculated for categorical data. Mean and standard deviation were calculated for metric data. The Chisquare test was used for statistical testing of categorical data. The Bonferroni post hoc test was used to determine the significant difference between groups for categorical data and a significant difference was evaluated according to adjusted p-value. For significant differences between metric data, first, the Kolmogorov–Smirnov test was used for the distribution analysis of the data. Student t-test was used to analyze the data showing the homogeneous distribution. The Mann–Whitney U-test was used for the analysis of non-homogeneously distributed data. SPSS v.24 (IBM Corp., Armonk, NY, USA) and DATAtab (Graz, Austria: DATAtab) were used for statistical tests, with a significance level set at p < 0.05.

3 | RESULTS

3.1 | Participant characteristics and survey completion

Two thousand one hundred twenty-six participants took part in the survey. Incomplete and inappropriate results (such as suspected bots), and results of homosexual and transgender individuals were not included in the analyses. After excluding 222 responses, 1904 responses were retained for analysis. The median time to complete the survey was 12.30 (Inter Quantile Range 10–28) provided by an ad-on software to Google Forms.

Of the 1904 participants, we identified 1277 (67.07%) as non-PE (PEDT score; 3.9 ± 2.65), 258 (13.55%) as possible PE (PEDT score; 9.53 ± 0.5), and 369 (19.38%) as having PE (13.6 \pm 2.65). Possible cases of PE (PEDT scores 9 and 10) were excluded from the analyses. There was no significant difference in age and age at circumcision between PE and non-PE (Table 2).

3.2 | Comparison of sexual experience and premature ejaculation status

The age at first sexual experience was significantly higher in the PE group than in the non-PE group (20.58 \pm 3.88 vs. 19.76 \pm 3.8; p < 0.001). There was a significant relationship between the PE status of the participants and the first sexual experience (partner, wife, and sex worker) (Table 2, Q1). The first sexual experience with a sex worker was statistically higher in the PE group compared to the non-PE group (27.91 vs. 19.9; p < 0.001). However, the first sexual experience with a partner was statistically higher in the non-PE group than in the PE group (56.69 vs. 42.27; p < 0.001). There was no significant association between PE and non-PE status and having an ongoing relationship and multiple partners (Table 2, Q2).

3.3 | Frequency and duration of ejaculation

There is a significant relationship between the mean number of weekly ejaculations (0–1, 2–3, 4–5, and > 5) between PE and non-PE groups (Table 2 Q4; p < 0.001). The mean number of weekly ejaculations in the PE group was significantly lower than in the non-PE group (Table 2). When participants were asked what the mean duration of ejaculation should be (Q5), surprisingly, the PE group preferred shorter durations (< 1 min: 3. 52% vs. 0.86%; p < 0.001 and 1–3 min: 13.0% vs. 6.97%; p < 0.001), while the group with non-PE (7–10 min: 31.26% vs. 22.23%; p < 0.001 and > 10 min: 35.23% vs. 30.63%; ns) preferred longer ejaculation times. Besides, according to the responses to Q6, 89.43% of the PE group thought that they had ejaculation problems, while 18.48% of the non-PE group thought that they had ejaculation problems (Table 2, Q6; p < 0.001).

3.4 | Impact of environmental and behavioral factors on premature ejaculation

A significant relationship exists between the PE status and the lighting conditions of the environment, specifically whether it is light (Q7) or dark (Q8). In post hoc analysis, darkness did not cause a significant difference between PE and non-PE groups. However, the PE group was more likely than the non-PE group to say that the lightness of the



TABLE 2 Descriptive characteristics of participants.

| Features | | Non-PE (n, %) | PE (n, %) | Adjusted p-value | p-value |
|----------------|--|---------------|---------------|------------------|---------|
| Age (year) | | 36.33 ± 11.18 | 37.43 ± 10.12 | - | ns |
| Age of circui | mcision (year) | 6.04 ± 3.45 | 6.26 ± 3.23 | - | ns |
| Age of first s | exual experience (year) | 19.76 ± 3.8 | 20.58 ± 3.88 | - | <0.001 |
| Q1 | My partner | 724 (56.69) | 156 (42.27) | <0.001 | <0.00 |
| | My wife | 299 (23.41) | 110 (29.82) | Ns | |
| | Sex worker | 254 (19.9) | 103 (27.91) | <0.001 | |
| Q2 | No | 327 (25.61) | 94 (25.47) | Ns | ns |
| | Yes, < 6 mo | 167 (13.07) | 51 (13.82) | Ns | |
| | Yes, > 6 mo | 783 (61.32) | 224 (60.71) | Ns | |
| Q 3 | No | 1004 (78.64) | 307 (83.2) | - | ns |
| | Yes | 273 (21.36) | 62 (16.8) | - | |
| Q4 | 0-1 | 165 (12.92) | 80 (21.67) | <0.001 | <0.00 |
| | 2-3 | 648 (50.71) | 209 (56.6) | Ns | |
| | 4–5 | 271 (21.23) | 44 (11.93) | <0.001 | |
| | >5 | 193 (15.14) | 36 (9.75) | Ns | |
| Q5 | <1 min | 11 (0.86) | 13 (3.52) | <0.001 | <0.00 |
| | 1–3 min | 89 (6.97) | 48 (13.0) | <0.001 | |
| | 3–7 min | 328 (25.68) | 113 (30.63) | Ns | |
| | 7–10 min | 399 (31.26) | 82 (22.23) | <0.001 | |
| | >10 min | 450 (35.23) | 113 (30.63) | Ns | |
| Q 6 | No | 1041 (81.52) | 39 (10.57) | - | <0.00 |
| | Yes | 236 (18.48) | 330 (89.43) | - | |
| 27 | No | 679 (53.2) | 229 (62.09) | <0.001 | <0.00 |
| | Yes, it extends the time | 257 (20.12) | 55 (14.91) | Ns | |
| | Yes, it shortens the time | 341 (26.68) | 85 (23.00) | Ns | |
| Q 8 | No | 685 (53.65) | 226 (61.25) | Ns | <0.05 |
| | Yes, it extends the time | 367 (28.75) | 82 (22.23) | Ns | |
| | Yes, it shortens the time | 225 (17.6) | 61 (16.52) | Ns | |
| Q9 | No | 580 (45.42) | 176 (47.69) | Ns | ns |
| | Yes, it extends the time | 171 (13.38) | 40 (10.84) | Ns | |
| | Yes, it shortens the time | 526 (41.2) | 153 (41.47) | Ns | |
| Q10 | Abdomen | 20 (1.57) | 6 (1.63) | Ns | <0.05 |
| | Face | 111 (8.69) | 24 (6.50) | Ns | |
| | Foot/toe | 26 (2.04) | 5 (1.35) | Ns | |
| | Hip/butt | 559 (43.76) | 131 (35.51) | <0.001 | |
| | Other | 52 (4.07) | 14 (3.79) | Ns | |
| | Sexual organ | 178 (13.94) | 76 (20.59) | <0.001 | |
| | Tit | 331 (25.93) | 113 (30.63) | Ns | |
| Q11 | No | 354 (27.71) | 95 (25.75) | Ns | ns |
| | Yes, it extends the time | 149 (11.66) | 38 (10.3) | Ns | |
| | Yes, it shortens the time | 774 (60.63) | 236 (63.95) | Ns | |
| Q12 | I do not masturbate | 428 (33.5) | 117 (31.71) | Ns | <0.05 |
| | No, it is always without the use of lubricants | 365 (28.61) | 137 (37.14) | <0.001 | |
| | Yes, sometime | 348 (27.24) | 77 (20.86) | Ns | |
| | Yes, always | 136 (10.65) | 38 (10.3) | Ns | |

(Continues)



TABLE 2 (Continued)

| Features | | Non-PE (n, %) | PE (n, %) | Adjusted p-value | p-value |
|----------|---|---------------|-----------------|------------------|---------|
| Q13 | What is the frequency of watching pornographic videos per week? | 1.71 ± 2.48 | 1.66 ± 2.47 | - | ns |
| Q14 | What is the frequency of masturbating per week? | 1.77 ± 2.1 | 1.92 ± 2.43 | - | ns |
| Q15 | <3 min | 161 (12.6) | 128 (34.7) | <0.001 | <0.001 |
| | 3–7 min | 438 (34.3) | 141 (38.18) | Ns | |
| | >7 min | 678 (53.1) | 100 (27.12) | <0.001 | |
| Q16 | I get hard very fast/suddenly | 427 (33.45) | 181 (49.05) | <0.001 | <0.001 |
| | I get hard in normal time | 748 (58.56) | 130 (35.26) | <0.001 | |
| | I am slowly getting harder | 102 (7.99) | 58 (15.69) | <0.001 | |
| Q17 | I am slowly softening | 228 (17.86) | 51 (13.82) | Ns | <0.001 |
| | It softens in normal time | 857 (67.11) | 148 (40.12) | <0.001 | |
| | Very quickly/suddenly softens | 192 (15.03) | 170 (46.06) | <0.001 | |

Note: The descriptive characteristics of the PE and non-PE groups, as well as the results of their sexual and masturbation habits from Part-1 of the survey. The bolded p-values represent those that are statistically significant, defined as p < 0.05.

Abbreviations: PE, Premature ejaculation; n: number; ns, non-significant; Q, question; mo, month; min, minute.

environment did not affect ejaculation time (Table 2, Q7). There was a significant relationship between the use of slang and swearing during intercourse (Q9) and PE status, but the effect of slang and swearing on ejaculation time did not differ significantly between the groups in post hoc analyses.

3.5 | Sexual preferences and their correlation with premature ejaculation

When the participants were queried about the region they find most alluring in the opposite sex (Q10), a notable correlation was observed with their PE status (Table 2). Upon analyzing the significant differences between the groups, it was observed that the non-PE group found the hip/butt region to be more sexually appealing compared to the PE group (43.76% vs. 35.51%; p < 0.001). Conversely, the PE group found sexual organs to be more sexually appealing than the non-PE group (20.59% vs. 13.94%; p < 0.001). Nevertheless, when examining the impact of one's preferred region for sexual attraction in the opposite sex on the duration of ejaculation (Q11), no correlation was observed with PE (Table 2).

3.6 | Foreplay and erection duration

There was a significant association between participants' masturbation habits and PE status (Table 2, Q12; p < 0.05). The PE group masturbated without use of lubricants more often than the non-PE group (37.14% vs. 28.61%; p < 0.001). However, there was no statistically significant difference between PE and non-PE in weekly consumption of pornographic content and number of masturbations (Table 2, Q13 and Q14).

There is a significant association between the mean duration of fore-play before intercourse and PE (Table 2, Q15; p < 0.001). A foreplay duration of less than 3 min was significantly more frequent in the PE group than in the non-PE group (34.7% vs. 12.6%; p < 0.001). Foreplay duration longer than 7 min was significantly more frequent in the non-PE group than in the PE group (53.1% vs. 27.12%; p < 0.001).

There is a statistically significant relationship between the duration of erection before intercourse and PE (Table 2, Q16; p < 0.001). In the non-PE group, erection in the normal duration before intercourse is observed more frequently than in the PE group (58.56% vs. 35.26%; p < 0.001). However, the PE group had abnormal (slower or faster) erection durations than the non-PE group before sexual intercourse. There is a significant correlation between PE and the time it takes for the penis to return to its flaccid state after ejaculation (Table 2, Q17; p < 0.001). In the non-PE group, the penis returned to a flaccid state more frequently in normal time than in the PE group (67.11% vs. 40.12%; p < 0.001), while in the PE group, the penis returned to a flaccid state very rapidly compared to the non-PE group (46.06% vs. 15.03%; p < 0.001).

3.7 | Preferred sexual positions and their relationship with premature ejaculation

In the second phase of the questionnaire, participants were asked about their favorite sex positions, whether they change positions when they feel they are about to ejaculate, and if so, which position they switch to as shown in Figure 1. The overall favorite position of the participants was position number 3 (28.98%) and the least favorite position was position number 12 (1.28%). According to the PEDT scoring, the favorite position of the non-PE group was position 3 (27.8%) and the least favorite position was position 12 (1.64%). In the PE



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FIGURE 1 Sex positions. The sex positions used to determine participants' favorite positions and the positions they transitioned to when they would feel to ejaculate in the survey.

group, like the non-PE group, the most favorite position was position 3 (33.06%) and the least favorite position was position 12 (0%).

Participants in the PE group showed a higher preference for positions 2, 3, 5, 6, and 8 compared to the non-PE group. Conversely, participants in the non-PE group exhibited a higher preference for positions 1, 4, 7, 9, 10, 11, and 12 compared to the PE group (Table 3). Although a significant relationship was found between the preferred sexual positions of participants and their PE status (p = 0.037), the post hoc analyses did not reveal any statistically significant relationship between preferred positions and the presence or the absence of PE (Table S1).

The majority of participants (82.62%) selected male active positions (1-9), while 17.38% preferred female active positions (10-12). Male active positions were more favored in the non-PE group (84.3% vs. 76.6%) and female active roles in the PE group (15.7% vs. 23.4%) (Table 4, NF1). This comparison reveals that the partner activity significantly affects PE (p < 0.001, Table S2).

After categorizing the sexual positions as either deep thrust or shallow thrust, 81% of the participants preferred deep thrust positions, while 19% preferred shallow thrust positions. The PE group preferred deep thrust positions more than the non-PE group (83.1% vs. 80.4%).

TABLE 3 Participants' favorite sexual positions.

| Favorite positions | PE (n, %) | Non-PE (n, %) | p-value ^α |
|--------------------|--------------|---------------|----------------------|
| 1 | 16 (4.34%) | 109 (8.54%) | 0.037 |
| 2 | 19 (5.15%) | 51 (3.99%) | |
| 3 | 122 (33.06%) | 355 (27.8%) | |
| 4 | 23 (6.23%) | 86 (6.73%) | |
| 5 | 17 (4.61%) | 42 (3.29%) | |
| 6 | 76 (20.6%) | 236 (18.48%) | |
| 7 | 26 (7.05%) | 92 (7.2%) | |
| 8 | 17 (4.61%) | 58 (4.54%) | |
| 9 | 10 (2.71%) | 48 (3.76%) | |
| 10 | 25 (6.78%) | 102 (7.99%) | |
| 11 | 18 (4.88%) | 77 (6.03%) | |
| 12 | 0 (0%) | 21 (1.64%) | |

Note: The distribution table of positions for PE and non-PE groups. The bolded p-values represent those that are statistically significant, defined as p < 0.05.

Abbreviations: PE, Premature ejaculation; α , Chi-square p-value.



TABLE 4 The distribution of participants' favorite positions and transition positions by type of position.

| Features | PE (n, %) | non-PE (n, %) | p-value |
|----------|------------|---------------|---------|
| NF1 | | | <0.001 |
| Male | 283 (76.6) | 1077 (84.3) | |
| Women | 86 (23.4) | 200 (15.7) | |
| NF2 | | | ns |
| Deep | 307 (83.1) | 1027 (80.4) | |
| Shallow | 62 (16.9) | 250 (19.6) | |
| Q17 | | | <0.001 |
| Yes | 248 (67.2) | 945 (74) | |
| No | 121 (32.8) | 332 (26) | |
| NF3 | | | ns |
| Male | 676 (71.5) | 169 (68.15) | |
| Women | 269 (28.5) | 79 (31.85) | |
| NF4 | | | <0.05 |
| Deep | 689 (72.9) | 202 (81.5) | |
| Shallow | 256 (27.1) | 46 (18.5) | |

Note: When the positions in Figure 1 are evaluated as male and female active; deep and shallow thrust, the distribution of data.

The bolded p-values represent those that are statistically significant, defined as p < 0.05.

Abbreviations: ns, non-significant; NF: new feature; PE, premature ejaculation.

Conversely, the non-PE group favored shallow thrust positions more than the PE group (19.6% vs. 16.9%) (Table 4, NF2). Nevertheless, no notable association was observed between the participants' preferred deep thrust or shallow thrust positions and PE status (ns, Table S3).

3.8 | Position changes during the sexual activity and their effect on premature ejaculation

While 72.4% (n=1193) of the participants changed the position when they felt that they would ejaculate, 27.6% (n=453) did not change the position. The non-PE group preferred to change the position when they felt they were going to ejaculate significantly more than the PE group (74% vs. 67.2%; p<0.05), while the PE group preferred to change theposition less when they felt they were going to ejaculate (26% vs. 32.8%; p<0.05) (Q18, Table 4 and NF4).

Upon analyzing the data from the 1193 participants who reported changing positions before ejaculation, position number 3 was the most commonly chosen (206, 17.3%), while position number 2 was the least frequently selected (42, 3.5%). Within the PE group, position number 3 was swapped most frequently (47 times, accounting for 18.95% of all switches), while position number 8 was switched least frequently (6 times, accounting for 2.42% of all switches). Within the non-PE group, position number 3 was the most commonly changed position, accounting for 159 switches (16.83%), whereas position number 2 was the least frequently changed, with only 35 switches (3.7%). There was no

TABLE 5 Participants' position changes.

| Position change | PE (n, %) | Non-PE (n, %) | <i>p</i> -value ^α |
|-----------------|-------------|---------------|------------------------------|
| 1 | 7 (2.82%) | 68 (7.2%) | ns |
| 2 | 7 (2.82%) | 35 (3.7%) | |
| 3 | 47 (18.95%) | 159 (16.83%) | |
| 4 | 21 (8.47%) | 65 (6.88%) | |
| 5 | 19 (7.66%) | 79 (8.36%) | |
| 6 | 29 (11.69%) | 90 (9.52%) | |
| 7 | 20 (8.06%) | 61 (6.46%) | |
| 8 | 6 (2.42%) | 43 (4.53%) | |
| 9 | 13 (5.24%) | 74 (7.83%) | |
| 10 | 21 (8.47%) | 76 (8.04%) | |
| 11 | 45 (18.15%) | 157 (16.61%) | |
| 12 | 13 (5.24%) | 38 (4.02%) | |

Note: The distribution of positions participants transition to when they feel they are about to ejaculate in the PE and non-PE groups.

Abbreviations: PE, Premature ejaculation; n: number; ns: non-significant; α : Chi-square p-value).

statistically significant correlation observed between the PE and the transition between sexual positions (ns, Table 5 and Table S5).

When the participants felt that they would ejaculate, 70.8% of them preferred to switch to male active positions, while 29.2% preferred to switch to female active positions. The group without PE prefers male active positions more frequently than the group with PE (71.5% vs. 68.15%). However, there is no significant relationship between PE status and switching to male or female active positions during ejaculation (ns, NF3, Table 4 and Table S6).

In addition, 74.7% of the participants preferred to switch to deep thrust positions when they felt that they would ejaculate, while 25.3% preferred to switch to shallow thrust positions. The percentage of participants with PE who preferred to switch to deep thrust positions when ejaculating was higher than participants without PE (81.5% vs. 72.9%). When the participants feel that they will ejaculate, the non-PE group prefers shallow thrust positions more than the PE group (27.1% vs. 18.%) (Table 4). There is a statistically significant relationship between deep thrust or shallow thrust position when the participants feel that they will ejaculate (p < 0.05, NF4, Table 4 and Table S7).

4 | DISCUSSION AND CONCLUSION

This study investigated the correlation between sexual positions and ejaculation duration among heterosexual men between the ages of 18 and 65 years. We sought to gain a deeper understanding of the factors that affect the ability to control ejaculation, with a specific focus on the potential influence of different sexual positions. The findings provide insight into the demographic, behavioral, and physiological characteristics associated with both PE and non-PE groups.

The survey revealed several noteworthy findings regarding demographic characteristics and ejaculation behavior. First, age and age at



circumcision did not exhibit significant differences between PE and non-PE groups, suggesting that these factors may not directly influence ejaculation duration. This finding is consistent with the current literature as several studies also demonstrated no significant relationship between the age of circumcision and PE, suggesting that it is not a risk factor for PE. 9.10 However, the age at first sexual experience demonstrated a significant association with PE status, with individuals in the PE group reporting a later age at first sexual intercourse compared to the non-PE group. Although the studies demonstrate no link between PE and the age of first sexual experience, 11 this topic is less established in the literature. Moreover, the type of first sexual experience, particularly whether it occurred with a partner or a sex worker, significantly correlated with PE status.

There was a significant relationship between the type of partner of first sexual experience and PE (p < 0.001). Non-PE men had their first sexual experience with their partner, while PE men had their first sexual experience with sex worker. The possible explanation for this situation is that men who had their initial sexual encounter with a sex worker may encounter elevated feelings of anxiety, pressure, and performance expectations. The transactional nature of the interaction may prioritize swift completion over longer intimacy, predisposing these individuals to ejaculate expeditiously. On the other hand, men who engaged in sexual activity for the first time with a partner probably encountered a more calm and emotionally nurturing setting. This environment can promote a slower and more regulated sexual reaction, hence decreasing the probability of experiencing PE. 12,13

We also demonstrated a significant relationship between PE and the frequency of weekly ejaculations, with individuals in the PE group reporting fewer ejaculations per week compared to the non-PE group. This finding is in line with the literature that a low frequency of sexual intercourse per month was related to PE.^{14,15} The psychological consequences of PE may diminish one's sexual drive and inclination to participate in sexual activities, thus resulting in a decrease in the frequency of ejaculations per week.

When participants were surveyed regarding their preferred average ejaculation time, the group with PE expressed a preference for shorter durations, specifically <1 min and 1-3 min. In contrast, the non-PE group indicated a preference for longer durations, specifically 7–10 min. Furthermore, a total of 10.57% of individuals in the PE group reported not experiencing any issues with ejaculation, while 18.48% of individuals in the non-PE group claimed they had problems with ejaculation. The majority of men with lifelong PE prefer daily drug treatment over on-demand treatment to delay ejaculation time. ¹⁶ This indicates that men with PE desire longer ejaculation latency times and prefer treatments that can help them last longer during sex, which is opposite to our finding. However, according to the literature the overall rate of men with PE seeking treatment appears to be relatively low compared to the prevalence of PE. The prevalence rates of PE reported in various studies range from 2.3% to 31%, and the actual number of men who seek medical help for PE is much lower than the high prevalence rates, 17,18 suggesting that most men with PE do not seek treatment, suggesting most men suffering from PE may have modified their expectations to match their actual experiences, thereby considering shorter

ejaculation times as normal. This cognitive adaptation can function as a coping strategy to alleviate sensations of inadequacy or frustration. By establishing lesser expectations, individuals alleviate the psychological weight of not achieving higher standards. This could also be an explanation for a finding that the PE group had a shorter duration of foreplay than the non-PE group.

Participants in the group with PE reported significantly faster erections (erectio praecox/premature erection) and faster detumescence of the penis (detumescentia praecox) after ejaculation than those without PE. According to Waldinger, supporting these findings, men with lifelong PE get an erection "too early¹⁹" and, a significant proportion of men with lifelong PE quickly and completely lose their erection following ejaculation,²⁰ which denotating hypertonic state proposed by Schapiro.²¹

Most favorite sexual position, whether in patients with PE or the non-PE group, was doggy style by far. There could be a few points to explain this finding. First, sexual preferences and behaviors are frequently influenced by cultural norms and media portrayals. The "doggy style" position is often portrayed in pornography and popular culture as an appealing and thrilling posture, which might impact individuals' choices and views of the sexual activity. Another explanation might be the "doggy style" position delivers deep penetration and heightened sensation. For numerous individuals, this can result in increased sexual pleasure and arousal, which could account for its widespread appeal. Nevertheless, the heightened stimulation can also lead to quicker ejaculation, which could present a difficulty for individuals with PE. In our cohort, when participants' favorite positions were classified as deep and shallow thrust, there was no statistically significant relationship between thrust class and non-PE/PE.

While there is no direct evidence to support this, it is hypothesized that deeper penetration might result in quicker ejaculation, whereas shallower penetration could help delay climax. However, in our study, participants with PE tended to switch to deep thrusting positions more often when they felt they were about to ejaculate. Conversely, non-PE participants switched to shallow positions more frequently. A possible reason may be that the act of deep thrusting elicits a heightened sensation, which individuals may seek in order to either rapidly achieve orgasm (when postponing is no longer feasible) or ironically alleviate excessive stimulation by modifying the pace and intensity (counterintuitive attempt to manage arousal). Individuals who do not have PE and choose to engage in shallow thrusting positions may employ this technique to decrease stimulation and extend the duration of sexual intercourse. Superficial penetrations generally result in less powerful stimulation of the penile glans and the frenulum, which are extremely sensitive regions and play a vital role in initiating ejaculation.²² Based on these findings, we propose that individuals with PE might benefit from switching to shallow thrusting positions to delay ejaculation and switching positions may be one of the behavioral therapies for PE.

In the non-PE group, male active positions were more favored than female active positions. In addition, when the positions to which the participants switched were evaluated as male and female active, there was no statistical difference although the non-PE group switched to male active positions more frequently than the



PE group. The fact that male active positions are more favored and more frequently to be switched during the sexual intercourse in the non-PE group may provide a more comfortable ejaculation control by having control in the male during sexual intercourse and preventing PE.

The limitations of our study are the use of an online survey. While this approach helps reduce potential embarrassment and encourages more open responses from participants, it also presents challenges. Specifically, it can be difficult to ensure that participants fully understand and correctly interpret the questions without the guidance of a physician-led interview. Additionally, the nature of an online survey means we lack comprehensive medical data on the participants, which may limit our ability to fully account for the impact of potential sexual or psychological comorbidities on the results. Moreover, although we did not include a dedicated erectile function questionnaire, we did consider erection characteristics to some extent (Q16). However, we recognize that this does not fully capture the quality of erection, which is a limitation of this study. Also, the observed differences in erection duration could indeed suggest the presence of loss of control over both erection and ejaculation (LCEE), representing another limitation in our study. Future research should incorporate assessments that differentiate between lifelong PE, acquired PE, and LCEE for a more comprehensive understanding.

Another limitation is the absence of detailed demographic information, such as socioeconomic status, education level, and cultural background, which could affect the generalizability of our findings. However, the cultural and regional diversity within Turkey provides some degree of variation that may partially address these concerns, although it does not completely compensate for the lack of comprehensive demographic data.

Last but not the least, we did not use some metrics such as face validity, reliability metrics, or pre-testing to provide the reliability and validity of the questionnaire used in this paper. However, we believe that extensive steps were taken to ensure the questionnaire's reliability and validity. The involvement of experts in survey design, and rigorous quality control measures collectively contribute to the robustness of the data collected.

In conclusion, we assessed sexual behavior, preferred sex positions, and the positions participants switched to during ejaculation through a survey. Our findings reflect different strategies in managing sexual arousal and ejaculation and may contribute to the development of position-based techniques, which would be a non-pharmacological option for treating PE.

AUTHOR CONTRIBUTIONS

Gül was responsible for study supervision. Gül M and Gül Ü were responsible for study conception and design. Dogan, Ceker, Altıntaş, Deliktaş, Demir, Yavuz, Altunkol, Değer, Kaynar, Duran, Toprak, Bahçeci, and Gül M were responsible for the acquisition of data. Şahin and Gül M. were responsible for statistical analysis and data interpretation. Şahin and Gül M. were responsible for manuscript drafting. Gül M. was responsible for critical revision of the manuscript.

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The authors have nothing to report.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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