# Association Of Sexual Behaviors And Premature Ejaculation

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**Abstract**

**Introduction:** Premature ejaculation is the most common reported sexual complaint in men. It is believed that premature ejaculation is associated with sexual behavior such as early sexual experience, novelty of partners or frequency of intercourse. **The aim** was to examine the association of premature ejaculation and sexual behaviors in men.

**Materials and Methods:** A case-control study was conducted with a total of 418 patients. Subjects were interviewed for general health status, sexual behaviors, IELT and requested to complete the premature ejaculation diagnostic tool (PEDT). DSM-IV-TR criteria were applied for the diagnosis of premature ejaculation (PE). Those who diagnosed with PE(+) and PEDT score ≥11 belonged to the PE group; those diagnosed with PE(-) and PEDT <11 belonged to the non-PE group.

**Results:** No significant difference was noted regarding demographic features in the 2 group. Normal men had a more frequent sexual life compared with PE patients (9.71±6.09 and 6.62±5.44 episodes of sexual intercourses per month, respectively with p<0.001. Subjects who were single or circumcised had higher prevalence of PE than married or uncircumcised men. Multivariable logistic analysis elucidated that circumcision, number of lifetime sexual partner and sexual frequency were associated factors of PE.

**Conclusion:** PE is a common sexual dysfunction in men. It was found to be significantly associated with circumcision and frequency of sexual intercourse. Medical history taking of PE patients should include these sexual behavior factors.

## 1. Introduction

Premature ejaculation (PE) is one of the most common sexual dysfunction in men. Although the epidemiologic data of PE varies between different cultural and geographic populations, the prevalence of PE is estimated to be 16-31% in multinational surveys [1, 2]. PE is not only associated with emotional and relationship distress, interpersonal difficulties and dissatisfaction in sexual life of the man but also his partner [3].

In 2014, the International Society of Sexual Medicine (ISSM) committee had agreed on an evidence based definition of PE [4], in which PE is characterized by: (i) ejaculation that always or nearly always occurs prior to or about within 1 minute of vaginal penetration (lifelong PE) or a significant and bothersome reduction in latency time, often to about 3 minutes or less (acquired PE), (ii) the inability to delay ejaculation on all or nearly all vaginal penetrations and (iii) negative personal consequences, such as distress, bother, frustration and/or avoidance of sexual intimacy. Clinicians were advised to take into account other associated factors in the diagnosis of PE such as age, lifestyle and sexual behaviors. However, the mechanism of the correlation remained unknown.

Previous studies had implied that marital status, frequency of sexual intercourse and early sexual experience can affect the duration of the excitement phase of a man [5]. On the other hand, the distress and frustration feedback from PE can lead to diminished self-esteem and confidence in sexual performance which further impair the ability to control ejaculation. Nevertheless, to our best knowledge, their relations with PE were only mentioned in demographic data without detailed investigation. Furthermore, the majority of the studies were conducted in Western community, which was fundamentally different from Asian countries regarding sensitive problem such as PE. Therefore, the aim of our study was to examine the association of sexual behaviors and PE.

## 2. Materials and Methods

### 2.1. Study design

This case-control study was carried out at Outpatient Department of Hanoi Medical University Hospital from October 2018 to October 2019. All patients who visit the department were invited and explained the purpose of the study and who agreed to participated in this study and signed the inform consent. Eligible subjects were interviewed for PE condition based on DSM-IV-TR criteria and the translated premature ejaculation diagnostic tool (PEDT), a self-administered questionnaire which was developed and validated by Symond et al. Subsequently, 210 subjects who diagnosed with PE (+) with

PEDT score equal to or greater than 11 were selected into the PE group and 208 subjects diagnosed with PE (-) with PEDT less than 11 were selected into the control group. All subjects were heterosexual men aged 16-64 years who had a stable relationship with one or more female partners and had at least one sexual intercourse per month over the last 6 months.

Participants were also requested to answer a questionnaire about general health status, marital status, comorbidities and sexual behaviors such as frequency of sexual intercourse, frequency of masturbation, number of sexual partners and time of the first sexual experience. Men with concomitant erectile dysfunction, alcohol or drug abuse and mental illness were excluded from the study.

**2.2. Data analysis**

Descriptive analyses were used to summarize characteristics. The results were demonstrated as mean ± standard deviation, median, min, max or number (percentage). Difference between 2 groups was calculated using independent T-student test for variables with standard normal distribution or Wilcoxon sign rank test for asymmetrical variables. The chi-square test was used to compare categorical data.

Correlations between variables were evaluated with logistic regression model for categorical variables.

All hypothesis testing was considered statistically significant if $p<0.05$. Data was processed and analyzed using the R software version 3.6.0 software.

**3. Results**

The mean age of the PE group and the control group was similar (30.83 ± 6.76 and 30.61 ± 8 years, respectively). Although there were significant differences in BMI, penile length (stretched) and mean testosterone level between the two group ($p<0.05$); however the differences in the mean value of the aforementioned factors were negligible. No difference was found regarding smoking status and average testicular volume in PE men compared with normal men (Table 1).

The number of episodes of sexual intercourse in one month of the PE group and the control group were 6.66±4.87 and 9.58±6.19, respectively, $p<0.001$ (Table 2). Significant differences were found regarding marital status and the condition of the prepuce. Single or circumcised subjects were more likely to suffer from PE than married or uncircumcised men. The data also demonstrated that the number of sexual partners of both group were 3.04 ± 2.47 and 2.69 ± 2.34 female partners, respectively.

In single logistic regression model, PE was found to be significantly associated with marital status, circumcision, number of sexual partner and frequency of sexual intercourse(Table 3). Single men and fewer intercourses per month were risk factors for PE. Particularly, subjects with less than 4 sexual intercourses per month were 4.09 times more likely to suffer from PE than the group of more than 12

intercourses per month (p<0.001). We also found that the condition of the prepuce was associated with PE where circumcised men were more likely to have PE than men with intact prepuce (OR=3.62, p<0.001, 95%CI 1.78-7.34). However in multivariable logistic regression model, only circumcision status and sexual intercourse frequency were associated factors of PE. Masturbation and the age of first sexual experience did not contribute to PE.

## 4. Discussion

The etiology of rapid and uncontrolled ejaculation in PE men remained largely unknown. Postulated explanations included lack of awareness in physical arousal due to early experience or infrequent sexual activity [5]. However, data from previous studies were conflicted and the matter remained controversial [6, 7]. In this study, subjects in PE group and control group were similar in age. Subjects in each group had identical period of sexual experience which were also identical which was appropriate to further compare the sexual behavior effect to PE.

In a large community based survey in Korea, men with PE showed lower libido and frequency of sexual intercourse compared with non-PE men [8]. Similar results were noted in an observational epidemiological study of PE among Italian men where PE patients had significantly decreased attempts of sexual intercourse [9]. In our study, the mean episode of sexual intercourse per month in PE group was 6.48 ± 5.4 episodes, which is significantly lower than in control group (9.71 ± 6.09 episodes per month, p<0.001). Logistic regression analysis also demonstrated that subjects with infrequent sexual activity report higher chance of PE. Men with less sexual intercourses (<12 episodes per month) were more likely to suffer from PE compare to the group who had regular coitus. This effect was most transparent in sub-group with less than 4 sexual intercourses in a month (OR=4.09, p<0.01, 95%CI 1.83-6.52). Our results were consistent a previous study which also noted that infrequent sexual intercourse contributed to PE [6, 10]. In PE patients, the deficient sexual performance in return resulted in low self-confidence and anxious anticipation of a possible failure. In consequences, these men tended to avoid sex with their partner and therefore worsen their ejaculatory control. This process was described as the "Vicious cycle" by Jannini et al.[11]

Marital status was also found to be significantly associated with PE in single logistic regression model. In contrast to data from Verze et al study [9], our study suggested that single men were more likely to have PE than married men. It is understandable that patients who had a stable relationship found it easier to share their problem more often with their partners. Similar finding was also illustrated in Son et al where the rate of PE was lower in couple who openly discuss about their sexual life [10]. However, in multivariable logistic regression model, this association was diminished. Therefore, the result

implied that the effect of marital status on PE was confounded by other factors. Further studies are needed to confirm this.

In addition, we also found that the number of sexual partner had a relation with PE. The result indicated that subjects with 2 or less sexual partner had a greater odds of PE (OR=1.61, 95%CI=1.05-2.5). It was probably the result of PE rather than the cause of PE due to the fact that men with short ejaculatory time tended to have diminished self-confidence in establishing a new relationship. It can be implied that a man sexual function was refected by the number of his partner.

Further more, our result demonstrated that the condition of the prepuce was associated factor of PE. This finding was in agreement with a study of Kim et al where uncircumcised men had slightly longer IELT than in circumcised men [12]. The loss of fine-touch neuroreceptor in the removed skin is assumed to be responsible for the absence of ejaculatory trigger. Therefore, circumcised men were unable to voluntarily control the moment of ejaculation [13]. In a multinational study to assess the ejaculatory latency time in general male population, Waldinger et al also concluded that no difference in the median of IELT between cirucmcised and uncircumcised men[14].  In our study, circumcised men were 3.04 times more susceptible to PE than uncircumcised men (p<0.001, 95% CI= 1.33-6.9). This evidence suggested that circumcision was unable to improve PE condition. This result is consisted with a study of Tang et al. where circumciced men reported higher rate of PE (OR=2.56, 95%CI=1.43-4.54)[6].

 In Eastern countries, masturbation is considered a risk factor for PE. A national survey in Korea showed that masturbation had an association with PE (OR=1.48, 95%CI=1.08-2.03)[15]. The majority of men who complained of PE believed they had excessive masturbation at a younger age. However, in our study, masturbation frequency did not differ between control group and PE group. No significant difference was found in the risk of PE in subjects who have masturbated. In fact, clinicians had utilized masturbation as a therapeutic treatment to help the man familiarize with the sensation of sexual arousal.

There were few limitations in our study. First, our results were unable to determine whether the subject had lifelong PE or acquired PE. Because different sub-types of PE sometimes require different strategies of treatment [16], further evaluation was needed in order to achieve the optimal outcome for each patient. Second, despite the proof that relational and marital problems were both the cause and the consequence of PE [11], the female partner was not included in the study.


**5. Conclusion**

PE is a common sexual dysfunction in men. It was found to be significantly associated with circumcision, number of lifetime sexual partner and frequency of sexual intercourse. Medical history taking of PE patients should include these sexual behavior factors.

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**Table 1**: Demographics of recruited subjects

| Tested Parameters | Control, (n=208) | Premature ejaculation, (n=210) | p |
|---|---|---|---|
| Age (year) | 30.83 ± 6.76 | 30.61 ± 8 | 0.57 |
| 16-29 | 100(48.08%) | 110(50.24%) | 0.61 |
| 30-40 | 88(42.31%) | 79(37.62%) | |
| >40 | 20(9.62%) | 21(9.81%) | |
| Body Mass Index (kg/m2) | 23.04 ± 2.41 | 22.28 ± 2.25 | 0.0035 |
| Smoking | | | |
| Yes | 163(78.37%) | 155(73.81%) | 0.275 |
| No | 45(21.63%) | 55(26.19%) | |
| Penile length (stretched), cm | 13.69 ± 1.16 | 13.27 ± 1.28 | 0.0005 |
| Average testicular volume, mL | 13.45 ± 3.95 | 13.67 ± 3.65 | 0.84 |
| Testosterone level | 16.05 ± 6.01 | 17.69 ± 5.87 | 0.0026 |
| Low (<8nmol/L) | 11(5.29%) | 6(2.86%) | 0.208 |
| Normal (≥8nmol/L) | 197(94.71%) | 204(97.14%) | |

**Table 2:** Sexual characteristics of subjects

| Tested Parameters | Control (n=208) | PE (n=210) | p |
|---|---|---|---|
| Marital status | | | |
| Yes | 149(54.78%) | 123(45.22%) | 0.005 |

| | | | |
|---|---|---|---|
| No | 59(40.41%) | 87(59.59%) | |
| Period of sexual experience (year) | 9.26 ± 6.71 | 9.19 ± 6.47 | 0.9 |
| Masturbation | | | |
| Yes | 23(43.4%) | 30(56.6%) | 0.321 |
| No | 185(50.68%) | 180(49.32%) | |
| Masturbation frequency (episodes per month)* | 3.32±2.16 | 3.35±2.53 | 0.5 |
| Circumcised | | | |
| Yes | 9(27.27) | 24(72.73) | 0.007 |
| No | 199(51.69%) | 186(48.31) | |
| Number of sexual partner | 3.04 ± 2.47 | 2.69 ± 2.34 | 0.026 |
| 1 | 58(42.34%) | 79(57.66%) | 0.034 |
| >1 | 150(53.38%) | 131(46.62%) | |
| Sexual intercourse frequency (episodes per a month) | 9.58±6.19 | 6.66±4.87 | <0.001 |
| *Excluding men who have never masturbated | | | |

**Table 3:** Associated factors of PE

| Associated factors | Univariable | | | Multivariable | | |
|---|---|---|---|---|---|---|
| | OR | p | 95%CI | OR | p | 95%CI |
| **Age** | | | | | | |
| 16-30 | Reference | | | Reference | | |
| 30-40 | 0.81 | 0.33 | 0.54-1.22 | 0.96 | 0.88 | 0.58-1.59 |
| >40 | 0.95 | 0.89 | 0.48-1.86 | 1.13 | 0.75 | 0.51-2.49 |
| **Marital status** | | | | | | |
| Single | Reference | | | Reference | | |
| Married | 0.56 | 0.005 | 0.38-0.81 | 0.71 | 0.2 | 0.42-1.2 |
| **Masturbation** | | | | | | |
| Yes | 1.34 | 0.323 | 0.75-2.39 | 1.44 | 0.26 | 0.76-2.75 |
| No | Reference | | | Reference | | |
| **Circumcised** | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Yes | 2.85 | 0.009 | 0.15-0.77 | 3.04 | 0.008 | 1.33-6.9 |
| No | Reference | | | Reference | | |
| **Sexual Partner** | | | | | | |
| ≤2 | 1.72 | 0.006 | 1.17-2.57 | 1.61 | 0.03 | 1.05-2.5 |
| >2 | Reference | | | Reference | | |
| **Age of first sexual experience** | | | | | | |
| ≤21 | Reference | | | Reference | | |
| >21 | 0.99 | 0.82 | 0.96-1.02 | 0.87 | 0.535 | 0.55-1.35 |
| **Frequency of sexual intercourse / month** | | | | | | |
| More than 12 | Reference | | | Reference | | |
| 8-11 | 2.14 | 0.005 | 1.25-3.68 | 1.92 | 0.023 | 1.09-3.38 |
| 4-7 | 2.65 | 0.001 | 1.51-4.65 | 2.4 | 0.004 | 1.32-4.37 |
| Less than 4 | 4.09 | <0.001 | 2.28-7.32 | 3.46 | <0.001 | 1.83-6.52 |