**Özet**

Amaç: Bu çalışmanın amacı Türkiye’deki erişkin erkek popülasyonunun seksüel performansı artırmak için kullanılan ilaçlara ve bitkisel ürünlerle ilgisi ve sonuçlarını değerlendirmek. Gereç ve Yöntem: Bu çalışma 2012 yılında yapılan kesitsel, gözlem çalışmasıdır. Katılımcılar Eurostat ve nomenclature of territorial units for statistics (NUTS) seviye-2 kriterlerine ve poz- 
ta kodu listesine göre Türkiye genelini yansıtırak 19 ilden seçildi. 18 yaş ve 
üzeri erkekler çalışmaya dahil edildi. Son bir yıl içerisinde en az bir kez erekt-
disfonksiyon (ED) ürününü kullanan 410 erkekle yüzyüze görüşüldü. Bulgular: Katılımcıların %98’inde ED saptanmadı. ED bildirmeyenlerin % 63’ünün seks-
üel performans artırmak amacıyla ilaç kullandığı saptandı. Sildenafil ve bit-
kisel ürünlerin kullanımları arasında orta ve yüksek derecede tatmin oranı si-
rasıyla %65 ve %63 olarak bulundu. Bu tip ilaçların kullanımı erkeklere part-
nerlerini farkındalığı %25 idi. Bu ilaçları partnerlerinin kullanımları farkı-
da olan kadınların tatmin oranı %63 olarak bulundu. Tartışma: Türk erkek-
er arasında seksüel performansı artırmak amacıyla PDE-5 inhibitörleri ve bit-
kisel ürünlerin kullanım oranları oldukça yüksekti. bu ilaçların genel-
de partnerlerini ilaç kullanımını hakkında bilgilendirmediği görüldü. Bilgilendi-
rilmiş partnerlerin tatmin oranlarının yüksek olmasından dolayı bu ilaçların po-
zitif psikososyal etkilerine ve tedavi planına katkı sağlayacağına inanıyoruz.

**Anahtar Kelimeler**

Erektil Disfonksiyon; Seksüel Performans; İlaçlar; Bitkisel Ürünler

**Abstract**

Aim: This study aims to evaluate the views of the adult male population in Turkey concerning the use of drugs (Phosphodiesterase type 5 inhibitors) and herbal products to increase sexual performance, and to assess the use and outcomes of these medications within the study site. Material and Method: This non-interventional, observational, sectional site study was conducted in 2012. Participants were randomly selected from 19 provinces of Turkey according to Eurostat and Nomenclature of territorial units for statistics (NUTS) Level-2 by a proportional sampling method according to postal code lists. Men aged 18 years or older were included in this study as representa-
tives of the male Turkish population. Of these, 410 men using at least one 
erectile dysfunction (ED) product within the last year were interviewed face-
to-face. Results: 98% of participants did not have ED. The rate of drug use 
for “increasing sexual performance” by those not reporting erection problems 
was 63%. Among this group of drugs, moderate to high satisfaction rates 
were observed for sildenafil and herbal products of 85% and 63% respective-
ly. Women’s awareness of their partners’ drug use was low at 25%. Satisfac-
tion among women aware of their partners’ drug use was 63%. Discussion: 
The prevalence of drug use, including PDE-5 inhibitors or herbal products, is 
high among Turkish men, who often do not inform their partners about their 
drug use. Given the high rate of satisfaction in cases where partners are 
informed, we believe that the positive psychosocial effects of these medica-
tions on partners could contribute to treatment planning.

**Keywords**

Erectile Dysfunction; Sexual Performance; Drugs; Herbal Products
Introduction

Erectile dysfunction (ED) is the most common sexual problem experienced in men [1]. Since the introduction of sildenafil in 1998, phosphodiesterase type 5 inhibitors (PDE5 inhibitors) have been used as a safe and effective drug group in the first-line treatment of ED [2]. These drugs are reportedly also used by men who do not have sexual problems but who wish to increase their sexual pleasure and performance [3]. In addition to these medications, many herbal products are used by men worldwide to increase their sexual performance [4]. In Turkey, many drugs and herbal products are used by men to increase their sexual performance regardless of whether they have ED. However, there has been no research regarding this issue that has evaluated the reasons and results behind men's use of these drugs and the perceptions of their partners.

In this study, we aim to evaluate the views of the adult male population in Turkey concerning the use of drugs and herbal products to increase sexual performance and also to assess the use and outcomes of these medications within the study site.

Material and Method

This non-interventional, observational, sectional site study was conducted in 2012. Participating males were randomly selected from 19 provinces of Turkey according to Eurostat and Nomenclature of territorial units for statistics (NUTS) Level-2 by a proportional sampling method according to postal code lists. Based on the population distribution between urban and rural geographic regions and age groups, men 18 years of age or older were included in this study as representatives of the male Turkish population. Individuals with cognitive disorders, individuals with limited Turkish language abilities, and individuals who we determined to have poor levels of insight and understanding were excluded from the study.

All participants were visited at home by health care staff who understood the questionnaire and were trained to perform the interviews. Participants were asked to fill out questionnaire forms regarding their sexual habits, existing medications, sexual and medical histories, and their demographic, socioeconomic, and sociocultural status.

Sample Size:

Of this group of men, 410 men who used at least one ED product within the last year were interviewed face-to-face. This sample size allowed the study to be completed with a confidence interval of 95% and ± 4.9% margin of error.

Before registering for the study, participants were informed about the study and their written consent was received. This study was approved by the ethical committee of the Turkish Ministry of Health.

Results

The survey results from the 410 men concerning their reasons and motivations for using PDE-5 inhibitors or herbal products are shown in Table 1. The rate of drug use for "increasing sexual performance" by those not reporting erection problems was 63%. The most common form was PDE-5 inhibitor at 78%. Among this group of drugs, the moderate to high satisfaction rate observed for sildenafil was 85%. The moderate to high satisfaction rate for herbal products was 63%. Interestingly, the average number of instances of intercourse was 2 times in one night and the average duration of intercourse was 26.7 minutes.

The International Index of Erectile Function (IIEF) scores of the men are shown in Table 2. Of the men, 98% included in the study were found not to have ED.

The frequency and distribution of the side effects are given in Table 3. The side effect ratio was 22%. The most common side effect was headaches with a rate of 42%.

The views of the men who preferred this drug and their partners’ views are presented in Table 4. Women’s awareness of their partners’ drugs use was low at 25%. Satisfaction among women who were aware of their partners’ drug use was 63%.
The Use of Drug for Increasing Sexual Performance

Table 4. Views of the men and their partners regarding the use of medication

<table>
<thead>
<tr>
<th>Does your partner know that you are using sexual performance increasing drugs?</th>
<th>No</th>
<th>54%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>Don’t know</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>What was her reaction if she knew? (n=102)</td>
<td>Satisfied</td>
<td>63%</td>
</tr>
<tr>
<td>No reaction</td>
<td>28%</td>
<td></td>
</tr>
</tbody>
</table>

Discussion

Today, PDE-5 inhibitors are a rather safe and effective drug group that is used in the first-line treatment of ED. In Turkey, the use of PDE-5 does not require the recommendation of a physician. Despite insufficient medical evidence concerning their efficacy, many herbal products are also used by men worldwide to increase sexual performance and are within the scope of traditional medical understanding [5]. These products are believed to function by increasing the levels of testosterone in the blood and by providing vasodilatation in the vascular structure of the penis [4]. Additionally, ED in men also has a direct effect on the sexual functions of women. Therefore, the effects of the medication used to treat ED should be taken into account on behalf of both men and women [6]. Pleasure plays a primary role in motivating sexual activity in people [7]. Thus, some men may prefer performance-enhancing products because of their own sexual satisfaction and that of their partners. In our study, according to IIEF scores, 98% of men had high rates of drug use although they did not experience ED, which supports this speculation. Studies have reported rates of moderate to severe ED in 56% of men over 40 years of age [8]. In this study, the rate of repeated drug use within the last 6 months was very high (77%) in men who used these drugs within the last year. These products are reportedly used by a high rate of individuals (63%) to increase sexual performance despite the fact that these individuals do not have ED. This demonstrates that they are seeking out increased quality in sexual intercourse. Some studies conducted a biochemical analysis of alternative products that are used in the treatment of ED and in increasing sexual performance; several PDE-5 inhibitors, especially sildenafil, were identified [9,10]. Similar to our study’s findings, the satisfaction rate of sexual performance was 48% for men who used PDE-5 inhibitors and 43% for men who used herbal products; these herbal products presented similar effects and side effects. However, 13% of the men included in our study preferred to use only herbal products to increase their sexual performance. This rate was significantly lower than for PDE-5 inhibitors. This may be because sufficient reliability has not yet been established for these herbal products.

The most common side effects of PDE-5 inhibitors include flushing, headache, congestion, blurred vision, muscle pain, and dyspeptic complaints; these effects are usually mild and temporary [11]. The drug-induced side effects experienced by the men in this study were consistent with results found in the literature. The most common side effects were flushing and backaches. PDE-5 inhibitors are known to significantly increase erection duration. In a study by Padma-Nathan et al. in 2003, erection time was 36 minutes in men who used sildenafil. This result was reported to be significantly higher than in men who consumed placebos [12]. In the men in our study who used performance-enhancing medication, the average number of instances of intercourse was 2 times in one night and the average duration of intercourse was 26.7 minutes.

In a study investigating the perceptions of women regarding ED medications, 46.4% of women had negative perceptions of ED medications and 43.2% of women had negative perceptions toward men who used ED medications [13]. In our study, 54% of the men had not informed their partners about their drug use. This may be due to their desire to be perceived as having natural sexual intercourse and their belief that revealing this information would provoke negative responses in their partners. Satisfaction among women who were aware of their partners’ drug use was 63%.

The limitations of our study include the parameters affecting drug use and ED including age, lifestyle, exercise habits, psychogenic status, intellectual status, and body mass index. These could not be regulated in a more standardized way. Further studies are needed with a larger number of subjects and sub-parameters. The prevalence of drug use, including PDE-5 inhibitors or herbal products, is high among Turkish men. However, these products are being used by the men to enhance sexual performance more often than as ED treatment. Also, PDE-5 inhibitors are used considerably more than herbal drugs. These men often do not inform their partners about their drug use. Given the high rate of satisfaction in cases where partners are informed, we believe that the positive psychosocial effects of these medications on both men and women could contribute to treatment planning.

Competing interests

The authors declare that they have no competing interests.

References

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