

## Analysis of the Degree of Erectile Dysfunction in Young Adults from Tijuana, Mexico

### *Análisis del grado de disfunción eréctil en adultos jóvenes de Tijuana, México*

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#### Summary

**Objective:** to describe the degree of erectile dysfunction in young adults from Tijuana, Mexico. **Methods:** descriptive cross-sectional study, conducted from January to December 2021. Young male adults aged 18 to 35 years with some degree of erectile dysfunction who met the selection criteria were included. The sample size was 286 participants, with a non-probabilistic convenience sampling. The presence and degree of erectile dysfunction was evaluated using the International Index of Erectile Function. The rest of the variables were obtained through structured interviews. For data analysis, we use descriptive statistics; qualitative variables were expressed in frequencies and percentages. **Results:** the most frequent degree of erectile dysfunction was in the mild category (66%). Half of the participants were without a stable partner. Most of the men were employed and had basic education. **Conclusion:** a high percentage of patients with mild erectile dysfunction was found. Establishing the magnitude of this problem will allow the creation of strategies to face erectile dysfunction in young adults.

**Keywords:** Erectile Dysfunction; Young Adult; Sexual Dysfunctions

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## Resumen

**Objetivo:** describir el grado de disfunción eréctil en adultos jóvenes de Tijuana, México. **Métodos:** estudio transversal descriptivo, se realizó de enero a diciembre de 2021. Participaron adultos jóvenes del sexo masculino de 18 a 35 años de edad con algún grado de disfunción eréctil que cumplieron con los criterios de selección. El tamaño de la muestra fue de 286 participantes, muestreo no probabilístico por conveniencia. La presencia y grado de disfunción eréctil se evaluó mediante el Índice Internacional de Función Eréctil. El resto de variables se obtuvo mediante entrevistas estructuradas. Para el análisis de datos utilizamos estadística descriptiva; las variables cualitativas se expresaron en frecuencias y porcentajes. **Resultados:** el grado más frecuente de disfunción eréctil estuvo en la categoría leve (66%). La mitad de los participantes se encontraba sin pareja estable. La mayoría de los hombres eran empleados y tenían educación básica. **Conclusión:** se encontró un alto porcentaje de pacientes con disfunción eréctil en grado leve. Valorar la magnitud de este problema permitirá establecer estrategias para abordar la disfunción eréctil en este grupo etario.

**Palabras clave:** disfunción eréctil, adulto joven, disfunción sexual

## Introduction

Sexual dysfunction is a source of concern and suffering for people who suffer from it and for their partners. In men, the most important sexual alteration is erectile dysfunction (ED), since it significantly compromises sexual performance, personal satisfaction, as well as self-esteem and commitment to

the partner.<sup>1</sup> To achieve and maintain an erection, psychological, hormonal, neurological and vascular integration is necessary, therefore, it is a symptom that presents a wide range of pathologies. This disease is classified as organic and psychogenic; in men under forty years, the origin was thought to be completely psychogenic, however, both etiologies are strongly interconnected and difficult to differentiate.<sup>2</sup>

The incidence of ED has increased during the last decades, affecting 20 to 45% of the male world population. Despite being a frequent reason for urological consultation, it is considered an underestimated entity by young patients, which translates into insufficient diagnosis and treatment.<sup>3</sup> ED is generally identified as a disease that affects men over the age of forty, but there is less information about ED among younger men. Data from different regions of the world indicate that the number of men under the age of forty who report ED can be substantial.<sup>4</sup> A study of US college students found that up to 13% of students may meet criteria for ED;<sup>5</sup> other studies have reported that up to 30% of men seeking treatment for ED are under the age of forty.<sup>6</sup> In Mexico there are approximately twenty million young adult men and ED is increasingly diagnosed in this age group.<sup>7</sup> The most frequent risk factors are diabetes mellitus, high blood pressure, obesity, smoking, hyperlipidemia, urinary tract problems and low physical activity; however, it is important to note that young adults have a lower prevalence of this type of comorbidities and other factors may become more relevant.<sup>8</sup>

ED is, globally, one of the health problems that reduce the quality of life of men. It is estimated that by 2025,

322 million men worldwide will be affected, this constitutes a public health problem.<sup>2</sup> An early diagnosis could considerably improve the quality of life in people who suffer from it. Currently there are efforts to understand the prevalence and variables associated with ED among young adult men, due to its profound effects on fundamental aspects of the identity of this population group (feelings about masculinity, confidence, self-esteem), mental health and satisfaction sexual.<sup>9</sup> Therefore, the objective of this research was to evaluate the degree of ED in young adults from a primary care medical unit in Tijuana, Mexico.

## Methods

A descriptive cross-sectional study was carried out in Tijuana, Mexico, from January to December 2021. The research was carried out in the Family Medicine Unit (FMU) number 27 of the Instituto Mexicano del Seguro Social; main health care center in the region. We included 286 male patients aged 18 to 35 years, with some degree of ED, who agreed to participate in the study through informed consent. Patients with motor disabilities and those who could not read or write were excluded from the study; Those with incomplete information were eliminated. The patients were recruited in family medicine consultories. The sample size was calculated with the formula for a finite proportion, taking as reference the prevalence value of ED in young adults (12%) according to Parazzini et al.<sup>10</sup> In this FMU, 45,000 men in that age range are assigned, a final sample of at least 210 participants should be obtained.

The collection of variables was done with a standardized data form; the variables to be studied were the following:

age (categorized in the groups of 18-23, 24-28, 29-35 years); occupation, education, marital status and erectile function. Erectile function was measured with the International Index of Erectile Function instrument in its abbreviated version (IIFE-5) to detect erectile dysfunction,<sup>11</sup> is a self-applicable scale, adapted and validated to Spanish in 2011, with a Cronbach's alpha greater than 0.8 for the five domains, it consists of five items that evaluate the presence of problems in the different phases of the human sexual response (desire, erection and orgasm), as well as satisfaction in the sexual relationship and global satisfaction, assessing the last six months. With this questionnaire, the following cut-off points are obtained: severe dysfunction (score 5-7), moderate (8-11), mild to moderate (12-16), mild (17-21), and do not suffer from erectile dysfunction (22-25).

For the statistical analysis, frequencies and percentages were reported for the qualitative variables. In the data analysis, the program SPSS v. 25 was used. The study was approved by the Local Committee of Ethics and Research in Health number 204; with registration number R-2020-204-030. The research was carried out under bioethical principles, the General Health Law on Health Research and the Declaration of Helsinki. The patients signed informed consent.

## Results

Of the 286 patients who met the inclusion criteria, the age range was 18 to 35 years; the most frequent age group was 18 to 23 years (40%). Regarding their occupation, the majority were employees (86%). In education, the groups were balanced from middle school, the group with less frequency was elementary

school (9%) and one percent reported no formal education (reading and writing). In relation to the marital status, it was found that 50% of the patients were single (n= 144); 27.3% were in cohabitation (n= 78) and 22.4% were married (n= 64). Table 1 shows the characteristics of the study population.

According to the applied instrument (IIFE-5), more than half of the participants presented mild erectile dysfunction (66%). Despite having an erection problem detected with the questionnaire, when asking the participant directly if he suffered from any degree of ED, 80% denied the existence of an erection problem. Figure 1 shows the degree of erectile dysfunction.

## Discussion

The most important finding of the research was a high frequency of mild ED in young adults, most of the participants did not relate the symptoms to this disease. Some research on the prevalence of ED shows contradictory results depending on the age group, Calderón-Benitez et al.<sup>12</sup> mention that the prevalence of sexual dysfunction in the general population is similar to young adults. Nguyen et al.<sup>13</sup> reported that the prevalence of ED is underestimated due to underreporting and could be greater than 30%. Barroso-Aguirre et al.<sup>14</sup> report that the prevalence of ED in young adults represents an important health problem and mild dysfunction is the one that widely predominates. The present investigation agrees with these findings, since 66% of the participants presented a mild degree of ED.

According to Capogrosso et al.<sup>7</sup> in patients with ED for the first time, one in four is under the age of forty and almost 50% had severe ED. The results

obtained in this work differ from that study, since we found a low frequency of severe ED (4%). The percentage of young men seeking medical attention for ED has increased from 5% to 15% in the last decade.<sup>15</sup> Calzo et al.<sup>16</sup> detected in a cross-sectional study that approximately 14% of sexually active young men between 18 and 31 years reported moderate to severe ED. This degree of ED was more frequent among men who were not married or who did not live with a partner, also in those who used antidepressants or suffered from anxiety; the findings in the study population are consistent with that study, since moderate-severe ED was similar to the population we studied (12%) and half of the participants did not have a partner.

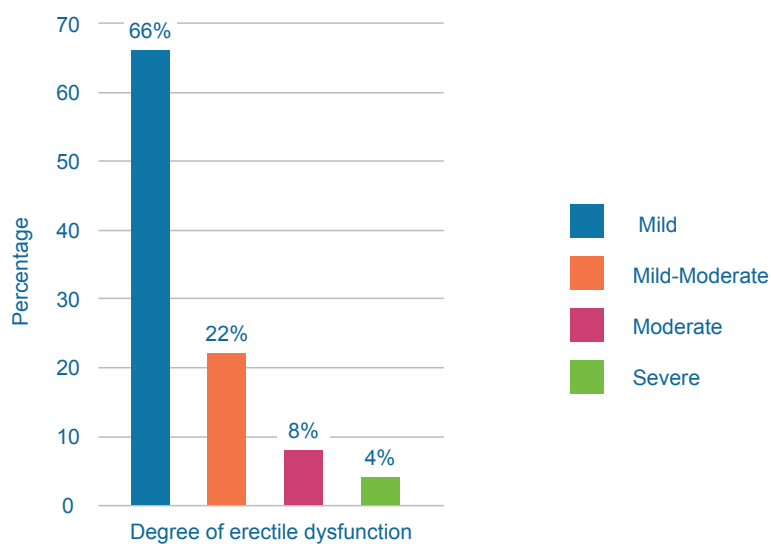
Therefore, the association between ED and the absence or deterioration of a relationship is well documented, Boddi et al.<sup>17</sup> show that men with marital conflict were characterized by a wide spectrum of sexual symptoms, including a severe degree of ED. Vance et al.<sup>18</sup> found that ED in young people has a high relationship with the absence of a stable sexual partner, in addition, women reported a significant deterioration in sexual satisfaction after the start of ED. Likewise, it is easy to understand that relationship problems cause ED, and of course, in reverse, ED causes relationship problems. It is necessary to have more studies that specifically consider the relationship between the partner and ED in young men.

Epidemiological studies on erectile function that considered the prevalence of ED according to age, consistently find a significant increase with age. Older age remains one of the most important non-modifiable risk factors for ED.<sup>19</sup> Rosen et al.<sup>20</sup> report a prevalence of ED

**Table 1. Sociodemographic characteristics of the participants**

Characteristic (n= 286)	n (%)
Age	
18-23	115 (40)
24-28	87 (31)
29-35	84 (29)
Occupation	
Employee	245 (86)
Student	37 (13)
Merchant	4 (1)
Education	
Elementary school	25 (9)
Middle school	87 (30)
High school	83 (29)
Degree	77 (27)
Postgraduate	12 (4)
No formal education	2 (1)
Marital status	
Single	144 (50)
Married	64 (22)
Cohabitation	78 (27)

**Figure 1. Degree of erectile dysfunction in young adults**



of 8% among men aged 20 to 29 years and 11% among those aged 30 to 39 years. In relation to the degree of this condition, 52% had mild ED, 36% mild-moderate, 10% moderate, and only one percent had severe ED. Our study agrees with this author, since the order of frequency of the grades was similar, although the percentages were different in each category.

Recent studies have shown an increase in the incidence of ED in men under forty years, this trend is probably underestimated by the low reporting of cases by young patients.<sup>21</sup> It has been reported that up to 87% of young men with ED also have an organic component as the primary cause, whether vascular, neurological, hormonal, fibroproliferative, or drug-induced.<sup>13</sup> As mentioned above, a high percentage of study participants did not identify a problem with their sexual performance (80%), so we agree that it is an underdiagnosed and undertreated condition in this age group, either because of the little importance attributed to it or due to lack of assistance to health services.

In the British National Sexual Attitude and Lifestyle Survey, 11% of participants were found to have mild ED and 2.9% moderate to severe.<sup>22</sup> The results of the present study differ from this research, since the frequency of the ED categories was much higher in the population studied, especially in the mild category. A multinational study (27,839 men in eight countries) showed that the prevalence of ED in septuagenarian patients was 37%, a percentage higher than 20% of patients between 20 and 30 years.<sup>20</sup> Another study found that 85% of men under the age of forty had psychogenic ED as their primary aetiology, in contrast to those over the age of forty

(40% psychogenic and 59% organic).<sup>23</sup> Our findings did not include a follow-up to determine the etiology of ED, since it is an initial study that shows us an unknown panorama in the entity, in this sense, the scrutiny of this population allows us to identify cases early to initiate the corresponding study protocol.

ED is related to decreased quality of life, damage to mental health and increased risk of depression.<sup>24</sup> Obesity is another closely related factor. Excess weight is undoubtedly a key factor in this disease. In this sense, the initial assessment of patients with ED in their primary care consultation should include the search for clinical risk factors such as the presence of obesity, since it is a modifiable factor that influences sexual performance.<sup>25,26</sup>

In treatment, 30% of men using ED medications reported misuse.<sup>16</sup> A study carried out in Costa Rica found that 35% of those who consume sildenafil are men between 25 and 35 years old.<sup>27</sup> In Mexico, the most frequent reason is to gain more confidence to achieve an erection.<sup>28</sup> In Venezuela, 62% of young men use sildenafil for non-medical recommendation and 20% on medical prescription.<sup>29</sup> It is important to highlight that 80% of the participants recruited in this study were unaware of alterations in their erectile function. We did not find users of sexual enhancers, which seems to be explained by the lack of knowledge about alterations in their sexual function and, probably, the distrust to express it during the interrogation.

Among the strengths of the study, we can highlight that it is the first study of its kind in Tijuana, and represents an important starting point in the care of ED in young adults. In addition, by identifying this problem we can

promote a care protocol that includes referral to family medicine and psychology to offer support alternatives. In the weaknesses of the present work, it is a descriptive study in which we studied a relatively small sample from a single city in northern Mexico. It is important to mention that some important variables were missing that would have provided relevant information in this study, such as the evaluation of partners, type of treatment, socioeconomic level, obesity or comorbidities.

### Conclusion

A high percentage of patients with mild erectile dysfunction was detected, these results make us question about the degree of knowledge on this disease in young men and the difficulty to accept it, as well as the factors that limit medical care. ED has consequences on the individual in relevant aspects such as their self-esteem and can generate depressive states. Assessing the magnitude of this problem in our environment, as well as studying sexuality in this population group, will allow establishing actions that mitigate the problem detected, as well as subsequent complications.

### Authors contribution

DI J-V, LC V-S, VI B-V: conceptualization, development and writing; DI J-V, DH R-L, M C-O: survey application and data analysis; MA C-M, DH R-L, M C-O: conceptualization, analysis and discussion of results and writing. All authors approve the publication of this paper.

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### Conflicts of interest

The authors declare no conflicts of interest.

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