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Prevalence Of Erectile Dysfunction Among Regular Smokers

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ABSTRACT

Background: Insufficient erection development or maintenance for sexual performance is known as erectile dysfunction (ED). Globally, the incidence and prevalence of ED are rising. Recent epidemiological research indicate that approximately 10% of males between the ages of 40 and 70 suffer from severe or total erectile dysfunction. Another quarter of men in this age range suffer from moderate or intermittent erectile dysfunction. There is sample evidence in the literature that smoking impairs penile function regardless of age or comorbidities.

Objective: This study aimed to evaluate the prevalence of erectile dysfunction among regular smokers according to age, physical activity involved or not involved, alcohol consumption

Methods: Over a period of 3 months, it is a cross-sectional study was conducted a period of three month that recruit 50 male participants aged between 25-50 who had smoked at least 10 cigarettes per day for the past 2 years. The International Index of Erectile Function-5 questionnaire was used for assessed of sexual function. Based on their points, participants were categorised into , mild, moderate, severe ,and no erectile dysfunction .

Results: The mean ± standard deviation (SD) of erectile dysfunction among regular smokers Categories by Mild ED34.47368421±6.1857221,Moderate ED 38.64285714±6.823118426, Severe ED39.1±6.674162453, No ED 35.57142857±4.928053803.

Conclusion: This study disclose a high prevalence of erectile dysfunction in regular smokers, with older men (31-45 years) at higher risk. Physical activity seems to have a protective effect, while increased alcohol consumption elevate the risk. The results highlight the importance of smoking cessation, early screening, and lifestyle modifications in lowering the prevalence and severity of ED.

Keywords: erectile dysfunction, smoking, prevalence, international index of erectile function-5, male sexual health.

1. INTRODUCTION

A prevalent but little-discussed medical condition that has a significant impact on men's and their spouses' physical and mental health is erectile dysfunction (ED). According to their definition, The inability to achieve and maintain an erection strong enough to justify socially acceptable sexual activity is known as erectile dysfunction (ED) [1]. It raises the question of whether it is a public health issue with underlying systemic consequences or if it is a personal health issue. ED is frequently linked to the existence of lifestyle variables, diabetes, obesity, cardiovascular disease, and age[2] .Smoking is a significant modifiable risk factor among all of these. Smoking has many negative impacts on vascular and cardiovascular health, including reduced blood flow, decreased nitric oxide generation, and endothelial dysfunction[2].Although there is a lot of data linking smoking to a number of vascular illnesses, ED is becoming a common medical disorder with rising incidence and prevalence worldwide[1]. About 10% of males between the ages of 40 and 70 have severe or total ED, while another 25% have mild or sporadic ED, according recent epidemiological research . It is estimated that between 20 and 30 million men in the US suffer from erectile dysfunction[8]. It is possible for erectile dysfunction to be brought on by a combination of psychosocial, neurologic, hormonal, vascular, or cavernosal insufficiencies[6].The cumulative prevalence of mild to complete ED increases with age, from about 22% at age 40 to 49% by Age of 50 Five to ten percent of males under 40 suffer from ED. The results of this study indicate that ED significantly affects mood and interpersonal functioning[3] .

ED is strongly associated with both psychological and physical well-being.the cancer, smoking also affects one's quality of life and causes sexual dysfunction. Many cases of ED go undetected and, as a result, untreated because of the stigma or lack of readiness to discuss sexual health issues. Consequently, the effects of ED extend beyond the individual. There is growing worry about relational strain, emotional suffering, and altered quality of life for these individuals.The long-term effects of smoking can easily aggravate the emergent issues. Notably, understanding the incidence of ED in this population can assist highlight the need of smoking cessation efforts within larger health campaigns and provide some insight into the scope of the issue. The goal of the current study is to close a research gap regarding the frequency and severity of ED in regular smokers. The goal of identifying this group of high-risk individuals is to perhaps gather information for clinical procedures, public health regulations, and awareness initiatives. Specifically, linking smoking duration and intensity to erectile dysfunction disorders in smokers may be a strong incentive to reconsider smoking and get treatment.

2. METHODOLOGY

To find out how common erectile dysfunction among regular smokers, the study used a cross-sectional observational methodology. This method makes it possible to gather information at one particular moment in time and conduct a comprehensive analysis of the connection between smoking behaviours and erectile dysfunction disorders in a particular population. Over the course of three months, the study was conducted in community health centres as well as clinical settings. These sites were specifically picked to represent a range of lifestyle and economic backgrounds. Adult male smokers between the ages of 25 and 50 are part of the target population. This age range was chosen on purpose because men 51 and older are more prone to experience erectile dysfunction as a result of aging or age-related coexisting conditions.In order to guarantee that smoking is the primary variable of interest, several other variables are eliminated. There were fifty people who signed up.

In order to represent significant connections between smoking behaviour and erectile dysfunction , Convenience sampling was used to recruit the participants. At the study locations, flyers and ads were handed out to tell medical professionals about the study so that qualified patients may take part. Before being enrolled, interested subjects were assessed for inclusion and exclusion criteria.Participants had to be men between the ages of 25 and 50, be regular smokers who had smoked at least 10 cigarettes a day for at least two years, be able to comprehend and complete the IIEF-5 (International Index of Erectile Function-5) questionnaire, and be willing to sign an informed consent form in order to be included. Those who were nonsmokers or occasional smokers, had systemic conditions such as diabetes mellitus, hypertension, cardiovascular diseases, or treatments that can affect erectile function, were dealing with pelvic injuries or surgeries, or had mental health conditions that prevented accurate data reporting were all purposefully excluded from the study. The IIEF-5 questionnaire, a validated instrument frequently used to evaluate erectile function and disability severity, was utilized to gather data. Each of the five items on the survey is scored on a 5-point scale, for a total score ranging from 5 to 25.On the ED scale, scores were interpreted as follows: mild ED was scored 17–21, moderate ED was scored 12–16, severe ED was scored 5–11, and no ED was scored 22–25. Participants were asked to describe how many cigarettes they smoked each day, how long they had been smoking, and whether they had tried to quit. The participants were also asked to provide other demographic and lifestyle information on a standardised form, such as their age, marital status, occupation, education, alcohol consumption, and degree of physical activity. The participating institutions' Institutional Review Boards gave their approval to the study. Following a thorough description of the study's goals, specifics, and confidentiality, all participants were asked to provide signed informed permission. Participants were free to leave the study at any moment without incurring any fees because participation was entirely voluntary.The rate of erectile dysfunction among regular smokers, as determined by the IIEF-5 questionnaire, was therefore the outcome measure of interest. The evaluation's overall scores were used to classify the degree of erectile dysfunction , and secondary goals included determining the relationship between smoking duration, intensity, and ED severity. Prior to the major data collection, a pilot research was carried out with ten participants to ensure that the procedures and methods used for data collection were clear, pertinent, and culturally suitable. In response to feedback from this pilot study, the questions were slightly reworded to improve clarity. The final analysis did not incorporate data from the pilot research.

3. RESULT

1.ERECTILE DISFUNCTION CATEGORIES BY AGE GROUP:

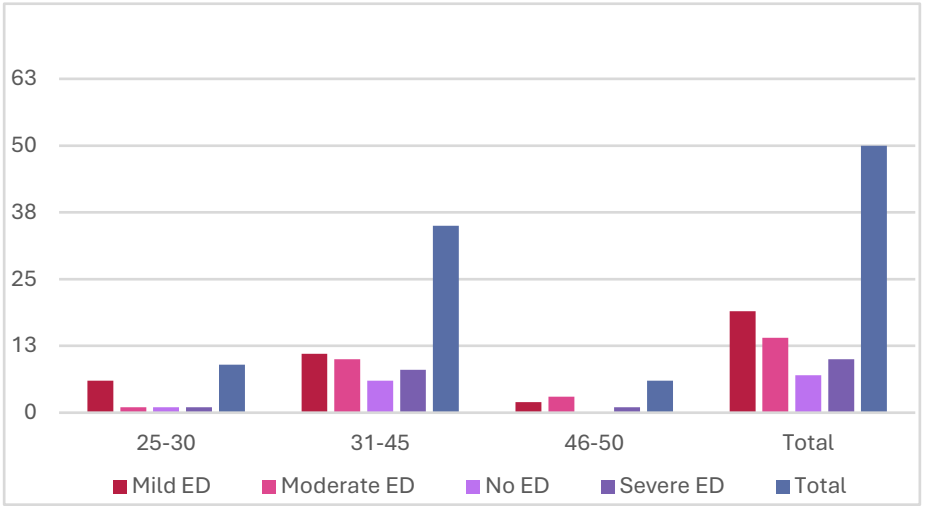

Table1:

ED category	25-30	31-45	46-50	Total
Mild ED	6	11	2	19
Moderate ED	1	10	3	14
No ED	1	6	0	7
Severe ED	1	8	1	10
Total	9	35	6	50

The mean ± standard deviation (SD) of erectile dysfunction among regular smokers Categories by

Mild ED(34.47368421±6.1857221),Moderate ED (38.64285714±6.823118426),Severe ED(39.1±6.674162453), No ED(35.57142857±4.928053803)

The study recruited 50 male participants between the ages of 25 and 50. The participants were divided into three age stratified groups: those between the ages of 25 and 30; 31 and 45; 46 and 50. The majority of study participants (19, or 38%) had mild erectile dysfunction, with the highest frequency rest in the age range from 31 to 45 years, where 11 persons reported mild erectile dysfunction. 14 participants (28%), mostly in the age category of 31 to 45, had moderate ED (10 participants). 10 participants (20%) had severe erectile dysfunction, and the age group of 31 to 45 years old had a higher incidence (8 participants).7 participants (14%) reported not having erectile dysfunction, 6 of them were between the ages of 31 and 45. The age group of 31 to 45 years old had the highest prevalence of ED (mild, moderate, and severe), indicating a strong relationship between age and ED severity among regular smokers.

In order to reduce the risk of erectile dysfunction in this population, these findings highlight the necessity of early

screening and modifying lifestyle

2.ERECTILE DISFUNCTION CATEGORIES BY PHYSICAL ACTIVITY:

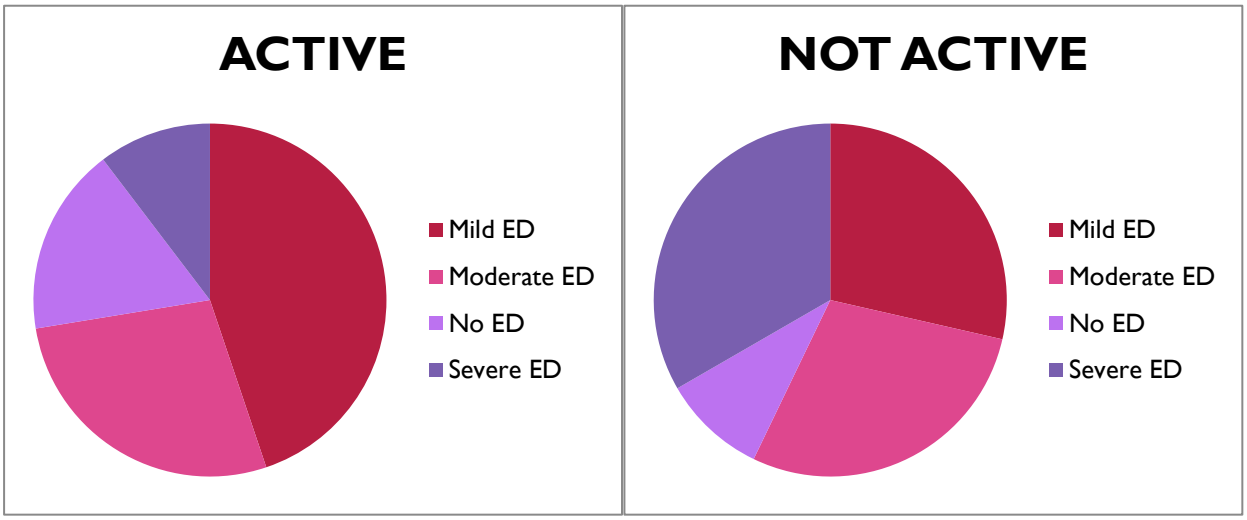

Table 2:

ED category	Active	Not Active	Total
Mild ED	13	6	19
Moderate ED	8	6	14
No ED	5	2	7
Severe ED	3	7	10
Total	29	21	50

ED category physical activity (yes/no) Mean ±SD

Mild ED Active(32.61538462 ±4.770367937) Not Active(38.5 ±7.395944835),

Moderate ED Active (39.125 ±7.100050302) Not Active(38± 7.042726745),

No ED Active(35 ±5.522680509)Not Active(37 ±4.242640687),

Severe ED Active(34.66666667± 5.773502692) Not Active(41 ±6.454972244),

The study recruited 50 male participants between the ages of 25 and 50. The participants were divided into two groups based on their degree of activity: Active (n = 29) and Not Active (n = 21). Four categories—Mild, Moderate, Severe, and No ED. 19 participants (38%), mostly active people (13 participants), reported having mild ED. 14 participants (28%), 8 of whom were in the active group and 6 of whom were in the not-active group, had moderate erectile dysfunction. 10 participants (20%) had severe ED, while 7 more were in the inactive group.Seven participants (14%), with a larger percentage among active individuals (5 participants), reported not having an erectile dysfunction. The study concluded that individuals who engage in physical activity may be less susceptible to severe erectile dysfunction relative to the not active group, which exhibited a significantly higher prevalence of severe ED. Based on the results, one may wish to consider an active lifestyle as a potential way to avoid erectile dysfunction or mitigate its severity among regular smokers.

3.ERECTILE DISFUNCTION CATEGORIES BY ALCOHOL CONSUMPTION

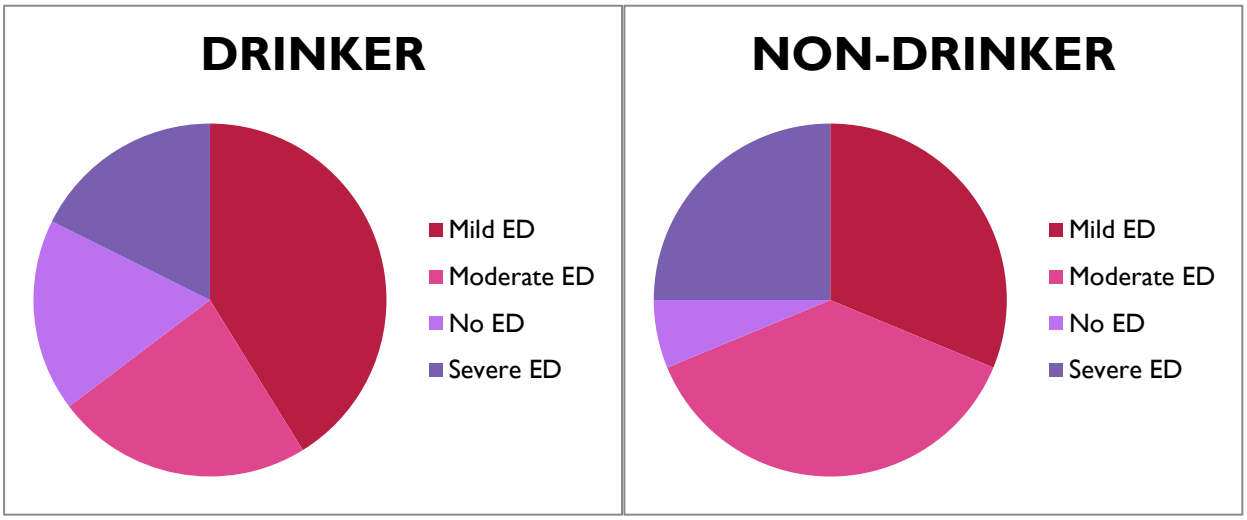

Table 3:

ED category	Drinker	Non-Drinker	Total
Mild ED	14	5	19
Moderate ED	8	6	14
No ED	6	1	7
Severe ED	6	4	10
Total	34	16	50

ED category alcohol consumption (yes/no) Mean SD

Mild ED Drinker(34.5 ±5.801193511)Non-Drinker (34.4± 7.924645102),Moderate ED Drinker (37.25 ±7.401737248) Non-Drinker(40.5 ±6.090976933) No ED Drinker(34.5 ±4.415880433) Non-Drinker (42±4.624669291),Severe ED Drinker(36.5± 6.565059025) Non-Drinker (43 ±5.291502622),

The study recruited 50 male participants between the ages of 25 and 50. The participants were divided into two groups :drinkers (n=34) and non-drinkers (n=16). The majority, 19 participants (38%) had mild ED, especially those who drank (14 participants). 14 participants (28%) had a moderate erectile dysfunction, especially those who drank(participants). 10 participants (20%) reported having severe ED, especially those who drank (6participants).people (14%), six of whom drank, had no ED. The results disclose that erectile dysfunction is more common among drinkers than in non-drinkers, especially in the severe and moderate sub-scores. This suggests a potential link between drinking alcohol and the risk of erectile disfunction in regular smokers.

4. DISCUSSION

The current study on the prevalence of erectile dysfunction among regular smokers supports earlier findings and indicates that smoking has a significant impact on male sexual health. The prevalence of erectile dysfunction increased overall, with mild ED being the most common, followed by moderate to severe ED. These findings allow for the deduction of several significant conclusions. Our findings suggest that ED is highly prevalent in regular smokers, with the majority exhibiting mild to moderate symptoms. Previous research has demonstrated a strong correlation between smoking and erectile dysfunction. Smoking reduces nitric oxide availability and impairs endothelial function, both of which are necessary for erection to occur and be maintained (Kodak et al., 2015). This finding supports research by Alarm et al. (2022), which also discovered a significant prevalence of ED among smokers in south-western Saudi Arabia. During their analysis, the authors

also discovered a higher prevalence of ED in the age range of 31 to 45, which they ascribed to cumulative exposure from years of smoking and the resulting blood vessel damage. Given that physically active participants in our study had a lower risk of experiencing severe ED than their sedentary peers, the preventive effect of physical activity is remarkable. This bolsters the claim that exercise mitigates some of the detrimental vascular effects of smoking (Feldman et al., 2000). Regular exercise has been shown to enhance cardiovascular health and endothelial function, which may help reduce ED

symptoms.Additionally, ED was shown to be more common in drinkers than in non-drinkers. This supports earlier studies, such as the Zhao et al. (2019) met analysis, which found that drinking alcohol increases the incidence of erectile dysfunction , particularly among smokers. Male vascularity may be exacerbated by the combined effects of alcohol and smoking, which could result in more severe forms of ED.In order to reduce the severity and risk of ED, the study highlights the need of screening as well as lifestyle modifications including quitting smoking and increasing physical exercise. Information about the harmful effects of smoking on one's sexual health should be included in health initiatives targeting male smokers as an additional motivator to stop.

5. CONCLUSION

According to the current study, erectile dysfunction is quite common in regular smokers, with those between the ages of 31 and 45 being the most afflicted. According to the study, mild ED is more common than moderate or severe forms, suggesting that smoking duration and intensity are linearly related to risk. The findings indicate that while drinking further raises a man's risk, physical activity has a protective effect on ED cases. The link between smoking and ED is further supported by these findings. The results point to the need for early screening, smoking cessation programs, and lifestyle modifications that impact vascular health and erectile dysfunction incidence. Smokers should be made more aware of the direct links between smoking and male sexual health through public health programs.

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