



# Erectile dysfunction among male adult entertainers: a survey

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**Background:** Erectile dysfunction (ED) has not been evaluated among male adult entertainers. Our goal was to evaluate the prevalence of ED and use of erectile aids among men working in the adult entertainment industry.

**Methods:** An online survey was distributed to male adult entertainers through collaboration with the Free Speech Coalition (FSC), the North American Trade Association of the Adult Industry. Surveys were sent via email to those who met the criteria of being non-transgender men with biological penises and have experience as adult entertainers. The survey acquired baseline characteristics, use and frequency of erectile aids, and assessed erectile function using the International Index of Erectile Function (IIEF) survey. Statistical analysis was performed in Microsoft Excel.

**Results:** Of the 98 respondents, 62 met inclusion criteria. The median age was 36 (IQR 28.25–45) years. Of those included, 69.4% (43/62) used erectile aids. In men who used erectile aids, 58.1% (25/43) used for both work and personal reasons. Erectile aids were used most among young men aged 20–29 (84.2%). Overall, 38.7% (24/62) of men had ED as defined by the IIEF survey. Of note, 26.3% (5/19) of men aged 20–29 had moderate to severe ED.

**Conclusions:** This is the first study to evaluate ED among adult male entertainers. Male entertainers between the ages of 20–29 had both the highest prevalence of moderate to severe ED and the highest erectile aid usage among all male adult entertainers.

**Keywords:** Adult entertainers; erectile aids; erectile dysfunction (ED); PDE5 inhibitors; sexual dysfunction

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## Introduction

Erectile dysfunction (ED) is the commonest form of sexual dysfunction in men, defined as the inability to obtain or maintain an erection sufficient for satisfactory sexual performance (1). The prevalence of ED increases with age: ED is seen in 15% of men 40 to 50 years old, 45% of men in their 60s, and 70% of men >70 years old (2). More recently, however, ED in younger men between the ages of 18–40 has been on the rise, with one recent study finding ED prevalence as high as 30.8% in this population (3).

While high-risk populations have been identified based on comorbidities such as diabetes, hypertension and cardiovascular disease, male adult entertainers are an unstudied population whose occupational behavior may pose a risk to normal sexual function. Unpublished surveys indicate that male adult entertainers employ a variety of pharmacologic means of maintaining an erect phallus for prolonged periods of time including phosphodiesterase-5 (PDE5) inhibitors, penile constriction devices, and intracavernosal injection therapies. It is possible that frequent occupational use/abuse of these agents designed

for the treatment of ED may ultimately cause ED as a result of corporal fibrosis, tachyphylaxis or psychosocial mechanisms (4,5). We hypothesized that increased use of ED therapies in male adult entertainers is associated with an increased risk of developing ED. Our objective was to survey a population of male adult entertainers to provide demographic information regarding their occupational behaviors and their sexual function outside of the working environment by means of the International Index of Erectile Function (IIEF) questionnaire. We wanted to evaluate ED prevalence and use of erectile aids among men in the adult entertainment industry.

## Methods

Our institution's IRB approved the protocol for our cross-sectional study. A 40-question online survey was distributed to male adult entertainers via email through collaboration with the Free Speech Coalition (FSC), the North American Trade Association of the Adult Industry. Surveys were sent by the FSC to those within the Performer Availability Screening Services (PASS) database who met the inclusion criteria of being at least 20 years old, having biological penises and having experience as adult entertainers. Exclusion criteria included subjects under 20, those without biological penises, and those who had no experience in the adult entertainment industry. Exclusion criteria also included having a biological penis but identifying as transgender. The survey acquired baseline characteristics, use and frequency of various erectile aids, anabolic steroids, and assessed erectile function using the IIEF survey. We used IIEF scores to classify men as the following: no ED [26–30], mild ED [22–25], moderate ED [11–21], and severe ED [1–10] (6–8). The surveys were answered anonymously. Statistical analysis was performed in Microsoft Excel.

## Results

An estimated total of 2,700 male adult entertainers were sent the survey by the FSC, and a total of 98 responded (3.6% response rate). Of the 98 respondents, 62 met inclusion criteria of being non-transgender men with biological penises who have experience as adult entertainers. The median age was 36 (IQR 28.25–45) years. Of the 62 men, 69.4% (43/62) used erectile aids: 50% (31/62) pills only, 16.1% (10/62) pills and injections, 3.2% (2/62) injections only, and none had penile implants (Table 1). Of the 43 men who used erectile aids, 41.9% (18/43) used

them for work only and 58.1% (25/43) used for both work and personal reasons (Table 2). The anabolic steroid use was noted to be 19.4% (12/62).

Overall, 38.7% (24/62) of men had ED as defined by the IIEF survey. By age groups, 42.1% (8/19) of men between ages of 20–29, 43.8% (7/16) of men between 30–39, and 33.3% (9/27) of men 40 or older suffered from at least mild ED. Of note, 26.3% (5/19) of men between ages of 20–29, 6.3% (1/16) of men between 30–39, and 18.5% (5/27) of men 40 or older had moderate to severe ED (Table 3). Erectile aids were used most among men between the age of 20–29 with 84.2% (16/19) men using them (Table 4).

## Discussion

This is the first study to evaluate a population of male adult entertainers for ED. Through our anonymous survey we were able to identify the prevalence of ED and erectile aid usage within the male adult entertainer community. Of the entertainers surveyed, 38.7% suffered from ED. Male entertainers between the ages of 20–29 had both the highest prevalence of moderate to severe ED and the highest erectile aid usage out of all male adult entertainers.

Male adult entertainers represent a unique population of men in whom sexual dysfunction has not been evaluated. When reviewing the scientific literature with regards to adult films, one finds nearly all publications on the subject is focused on social perceptions of the adult entertainment industry and entertainers, high-risk behaviors and sexually transmitted infection amongst entertainers, and the effect that consumption of adult films has on sexual satisfaction in the general population (9). With the help of the FSC, we successfully evaluated the sexual health of a population that had never been studied before.

In comparison to the general population, our study shows that ED prevalence is significantly higher in male adult entertainers. In a cross-sectional analysis by Selvin *et al.*, 5.1% of men between 20–39 suffer from ED and the overall prevalence of ED in men  $\geq 20$  years old was 18.4% (10). Overall, the male adult entertainer prevalence of ED was 38.7%, about twice the prevalence of ED as compared to the general population. Even more concerning, the prevalence of ED in male adult entertainers between the ages of 20–29 was 42.1%, almost 10 times the prevalence observed in Selvin's study.

Our study also shows very high erectile aid usage prevalence in the male adult entertainment population. We hypothesized that this overuse could be correlated

**Table 1** Baseline characteristics

Characteristics	Data
Total respondents (n)	98
Included	62
Excluded	36
Age, year	
Mean ± SD	38.1±11.7
Range	20–70
Anabolic steroid use, n (%)	12 (19.4)
Chronic conditions, n (%)	
Diabetes	2 (3.2)
Heart disease	1 (1.6)
Intercourse with, n (%)	
Men	9 (14.5)
Women	42 (67.7)
Both	11 (17.7)
Adult scenes, n (%)	
Solo	22 (35.5)
Oral	48 (77.4)
Vaginal—insertive	48 (77.4)
Anal—insertive	51 (82.3)
Anal—receptive	13 (21)
Group	37 (59.7)
Fetish	32 (51.6)
Erectile aids, n (%)	43 (69.4)
Pills only	31 (50)
Injections only	2 (3.2)
Pills & injections	10 (16.1)
None	19 (30.6)
IIEF-6 scores, n (%)	
No ED [26–30]	38 (61.3)
Mild [22–25]	13 (21)
Moderate [11–21]	10 (16.1)
Severe [1–10]	1 (1.6)

ED, erectile dysfunction; IIEF, the International Index of Erectile Function.

with, and a direct cause of, the high prevalence of ED seen in this population. Based on the literature, there is questionable association of tachyphylaxis with PDE5 inhibitor use, but anecdotally we have observed that men who use ED aids for prolonged periods of time complain of eventual lack of adequate response (5,11). When comparing ED prevalence in active versus former male adult entertainers our data shows that there is no significant difference in the prevalence of ED in active performers versus former performers (40% vs. 35.3%, respectively Chi squared =0.7343). Although we cannot definitively conclude that there is a relationship between prolonged erectile aid usage and increased ED prevalence, our results lead us to believe that over/prolonged usage could be a cause of this population's higher prevalence of ED.

When evaluating ED prevalence within the male adult entertainment population, it must be noted that male entertainers between the ages of 20–29 had the highest ED aid usage with 84.2% using and the second highest ED prevalence with 42.1% of them suffering from mild to severe ED. Why usage and ED rates within this younger male population are so high cannot be confirmed, but recent literature has suggested the phenomenon of increased ED rates in younger populations. A study by Landripet *et al.* reported ED higher rates of 14.2–28.3% and 30.8% of men between the ages of 18–40 in two separate study groups (3). With increasing rates of ED amongst young men, many are starting to speculate over the cause. Unfortunately, our study does not shed any light on the reasons for these increasing rates, but it is consistent with other studies in showing that ED rates in younger men is on the rise.

One of the major strengths of our study is the anonymity of the questionnaire—the adult industry is a very private industry in which most entertainers would not openly discuss their ED. By providing an anonymous survey, we were able to illicit truthful answers. To our knowledge, this is the first study that evaluates the novel group of male adult entertainers. It is the first study to provide insight into the possible medical issues that come with the lifestyle that male adult entertainers are accustomed to. There are several limitations to our study. Although this is a novel population, our study size is still rather small and is therefore susceptible to response bias. The IIEF is a validated score for sexual attempts with vaginal intromission with heterosexual partners. In our population of male adult entertainers, a large percentage of subjects performed solo work as well as anal insertion, which is not considered to

**Table 2** ED vs. no ED characteristics

Characteristic	IIEF <26 (N=24)	No ED (N=38)	P value
Age (mean ± SD)	37.3±12.8	38.6±11.1	0.6870 (F test =0.4335)
Erectile aid use n (%)	19 (79.1)	24 (63.2)	
Erectile aids for work only, n (%)	6 [25]	12 (31.6)	
Pills for work only, n (%)	5 (20.8)	11 (28.9)	
Injections, n (%)	6 [25]	6 (15.8)	
Anabolic steroid use, n (%)	5 (20.8)	7 (18.4)	
Heart disease, n (%)	0 (0)	1 (3.6)	
Diabetes mellitus, n (%)	0 (0)	2 (5.3)	
Active performer	18/45 [40]	27/45 [60]	Chi square: 0.7343
Former performer	6/17 (35.3)	11/17 (64.7)	

ED, erectile dysfunction; IIEF, the International Index of Erectile Function.

**Table 3** IIEF-6 scores by age

IIEF-6 score	Age 20–29 (N=19)	Age 30–39 (N=16)	Age 40+ (N=27)	All ages (N=62)
IIEF 26–30	11 (57.9)	9 (56.3)	18 (66.7)	38 (61.3)
IIEF 22–25	3 (15.8)	6 (37.5)	4 (14.8)	13 (21.0)
IIEF 11–21	5 (26.3)	1 (6.3)	4 (14.8)	10 (16.1)
IIEF <11	0 (0)	0 (0)	1 (3.7)	1 (1.6)
Total with ED	8 (42.1)	7 (43.8)	9 (33.3)	24 (38.7)

All data are presented as n (%). IIEF, the International Index of Erectile Function; ED, erectile dysfunction.

**Table 4** Erectile aid use by age and IIEF-6 score

IIEF-6 score	Age 20–29	Age 30–39	Age 40+	All ages
IIEF 26–30	9 (81.8)	3 (33.3)	12 (66.7)	24 (63.2)
IIEF 22–25	2 (66.7)	4 (66.7)	2 [50]	8 (61.5)
IIEF 11–21	5 [100]	1 [100]	4 [100]	10 [100]
IIEF <11	0 (0)	0 (0)	1 [100]	1 [100]
Total erectile aid use	16 (84.2)	8 [50]	19 (70.4)	43 (69.4)

All data are presented as n (%). IIEF, the International Index of Erectile Function.

be validated with the IIEF. Despite this, a majority of our subjects did participate in vaginal intercourse (77.4%) and we felt the IIEF was the most accurate survey to acquire ED prevalence in this novel population. We did not assess sexual orientation, condom use or hormone replacement as factors in ED. They can be assessed in future projects. We

acknowledge the low response rate of 3.6% but this low response rate can be attributed to many factors including the sensitive nature of the profession as well as the constant turnover, which means that although the surveys were sent, the entertainers receiving them may not be actively involved with the FSC, the advocacy group. It also must be noted

that the amount of male adult entertainers that received the email with the survey is an estimate. The FSC emailed the survey to a total of 9,257 performers in their PASS system, as they were unable to identify gender via email addresses alone. In an attempt to discern how many of these entertainers were male, we performed a vigorous literature search. Since there is no data in scientific literature on male entertainers, we estimated that 30% of adult entertainers are male based on a blog post (12). Using 30%, we estimated that approximately 2,700 male entertainers could have received our survey. The low response rate makes it difficult to generalize this data as the results could potentially be skewed, but despite the low estimated response rate, this study still successfully collected data on a novel population and provides valuable insight into the sexual health of male adult entertainers. Since this is a cross-sectional study, we cannot confirm the prevalence of ED in male adult entertainers who have left the industry.

## Conclusions

This is the first study to utilize a novel population of male adult entertainers in the evaluation of ED. Male adult entertainers were found to have very high erectile aid usage as well as significantly higher ED rates than the general population, especially amongst entertainers younger than 30 years old. Men working in the adult entertainment industry who feel the need to enhance erectile function for work alone should seek the help of a physician or Urologist prior to using erectile aids.

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## Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

*Ethical statement:* Our institution's IRB approved the protocol for our cross-sectional study (No. 20170799 at The University of Miami's IRB). It is an expedited IRB with no consents as the surveys are anonymous and were administered by a third party. By completing the survey, the subjects consented to being part of the study. There was no official consent.

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