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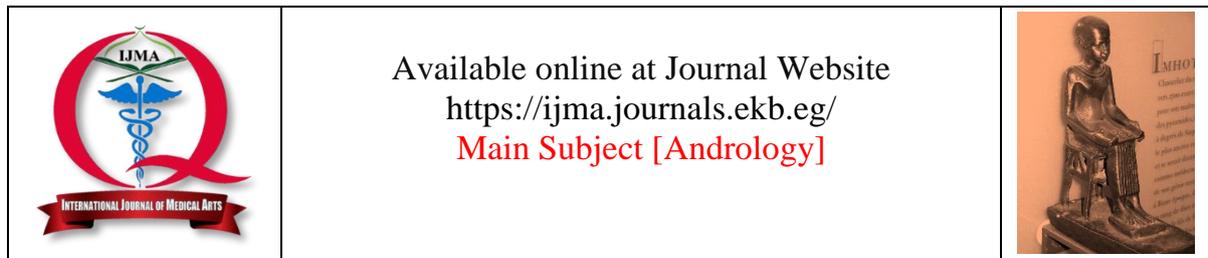


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## Original Article

### Prevalence of Ejaculatory Disorders among Post COVID-19 Egyptian Males

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## ABSTRACT

### Article information

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**Background:** Sexual activity and reproductive health are becoming more widely acknowledged as crucial indicators of good health and a high standard of living. The coronavirus disease [COVID-19] pandemic impacted sexual activity both during and after the pandemic.

**Aim of the work:** To determine whether ejaculatory disorders [EJD] were impacted in any way by the COVID-19 epidemic.

**Patients and Methods:** This research was done retrospectively on 1000 male COVID-19 patients. Patients were requested to complete the Male Sexual Health Questionnaire Ejaculatory Dysfunction [MSHQ-EJD] Short Form, the Sexual Health Inventory for Men questionnaire [SHIM], and the International Index of Erectile Function [IIEF].

**Results:** Normal ejaculation was reported by 31.2% of participants. However, 32.5% reported premature ejaculation [PE], followed by delayed ejaculation [DE] [22%] and retrograde ejaculation [14.3%]. The total score of MSHQ-EJD was significantly higher among normal individuals [4.62 ± 0.48] than in PE [2.07 ± 0.868], DE [2.21 ± 0.77], and retrograde ejaculation [2.29 ± 0.803] [P<0.001]. According to the total score of SHIM, severe EJD was detected among 78.8, 70.5, and 78.3% of PE, DE and retrograde ejaculation patients, respectively. The IIEF score was 16.74 ± 2.44. Intercourse satisfaction mean score was 5.99 ± 2.06, and orgasmic function [OF] score was 3.28 ± 1.2. The Mean of the sexual desire [SD] and overall satisfaction were 5.36 ± 1.25 and 7.07 ± 1.098, respectively. The severity of COVID-19 associated significantly with EJD [P=0.008], strength degree [P<0.001], SHIM score [P<0.001], and SD score [P=0.023]. Patient hospitalization associated significantly with EJD [P<0.001], strength [P=0.005], volume [P=0.038], SHIM score [P=0.002], and OF score [P=0.001].

**Conclusion:** The severity of COVID-19 disease was associated significantly with sexual desire among EJD patients. Due to the importance of consistent treatment, social media should be used to maintain communication with physicians and continue appropriate medications.

**Keywords:** COVID-19; Ejaculatory Disorders; Prevalence; Sexual Life; Male.



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## INTRODUCTION

A new coronavirus, presently known as SARS-CoV-2, is the cause of the extremely contagious disease COVID-19. In March 2020, the World Health Organisation [WHO] declared the disease to be a worldwide epidemic after it had spread to 100 nations and impacted over 100,000 people [1].

Common COVID-19 symptoms include fever, dry cough, exhaustion, and dyspnea; however, reports of symptoms affecting various organs or systems, including the digestive tract, urinary, and cardiovascular systems, as well as liver damage, have also been documented [2].

As of January 3, 2021, there had been about 84 million reported cases of COVID-19, and around 1.8 million fatalities. COVID-19 is regarded as a social, economic, and political disaster that will impact all nations in addition to being an urgent medical emergency. During this epidemic, numerous restrictions were put in place, such as social distance to prevent close contact, donning masks for protection while entering enclosed areas, and even lockdowns that resulted in the suspension of the majority of commercial services. While taking precautions slows the virus's spread, people must adapt their way of life. People affected by COVID-19 face significant psychological challenges as a result of their prolonged confinement at home and restricted social connections [3].

Sexual activity is a necessary component of life, and its success is becoming more widely acknowledged as a crucial sign of good health and a high standard of living. Conversely, low self-esteem and long-term health issues are linked to reduced sexual capacity, which has detrimental effects on the individual, the family, and the community [4].

There are five phases of male sexual function: ejaculation, erection, sexual intercourse [insertion of the erected penis into the vagina], orgasm, and sexual desire. Only when these phases are logically connected and manifested is male sexual activity complete and normal. Erectile dysfunction [ED] is the most commonly reported clinical problem among individuals who visit sex disorder specialists [5].

PDE5 inhibitors, PGE1 self-injections, vacuum erection devices, and low-intensity extracorporeal shockwave therapy are among the many different treatment modalities available. Similar to ED,

EjD is also rather common, however treatment for EjD develops more slowly [5].

An absolute incapacity to ejaculate, referred to as anejaculation, retrograde ejaculation, painful ejaculation, and PE or quick ejaculation are all within the broad spectrum of EjD [6].

The definition of DE, also known as ejaculatory deficiency, is the suppression of the ejaculatory reflex, accompanied by decreased or non-existent seminal emission and impaired ejaculatory contractions. It may also occur along with decreased or absent orgasm. About 4% of males who are sexually active have DE. Due to iatrogenic bladder neck incompetence in both situations, retrograde ejaculation—the most clinically serious abnormality of sperm emission—occurs in 75% of men who have had a transurethral removal of the prostate and, to a lesser extent, following bladder neck incision [7].

PE is the most typical EjD. 5–40% of men who are sexually active suffer from PE. Males from East Asia are more likely to report having the condition than males from the Middle East and Africa, and young people are more likely to report having it. Europe appears to have an incidence that is in between that of East Asian, Middle Eastern, and African nations [8]. Thus, the goal of the research was to determine whether EJD are impacted in any way by the SARS-CoV-2 pandemic.

## PATIENTS AND METHODS

This research was done retrospectively. The study's participants were those who answered an anonymous Google Forms survey measuring EJD in the context of the COVID-19 epidemic. When a respondent had demonstrated they had recovered from COVID-19 virus infection, they were invited to take part in the study through an interview and questionnaire distribution. From 2022 to 2024, this study was carried out at Al-Azhar University's Faculty of Medicine. One thousand post-COVID-19 affected male patients who had previously contracted COVID-10 and had recovered were screened for this study.

**Inclusion criteria:** Male sex, diagnosis of COVID-19, and were proven to recover, age over 18 years, active sexual life, patients who will have capability to express informed consent to participate in the current study.

**Exclusion criteria:** Females, age under 18 years, EJDs, refusal or unable to participate.

## Data Collection

Data was collected through clinical recorded data and a questionnaire. Patients were asked to fill out MSHQ-EjD Short Form, SHIM, and IIEF, regardless of known EjD or not and to assess a comprehensive sexual and reproductive anamnesis reported after the diagnosis of COVID-19. The questionnaire was performed from two weeks to three months after COVID-19 recovery and repeated as follow up every month for a period of three months. The following data were collected:

**1. Demographic and clinical data:** [Age, residence, smoking and body mass index [BMI] [determined by squarely multiplying the patient's height in metres [m] by their weight in kilogrammes [kg]].

**2. The COVID 19 history and clinical features:** Chest pain, dyspnea, myalgia, sore throat, cough, fever, and diarrhoea, the interval of days between the initial affirmative oropharyngeal swab, the recovery from COVID-19 and hospitalisation.

**3. COVID Severity:** The National Health Commission of China's publication, the New Coronavirus Pneumonia Prevention and Control Programme [7<sup>th</sup> ed.], provides guidelines for determining the severity of the illness [9]. Mild cases are those with no signs of pneumonia on imaging, and the clinical symptoms were mild. Moderate cases displaying a temperature, respiratory symptoms, and pneumonia-related radiological abnormalities. Serious or severe instances: adult cases that fit any of the following descriptions: breathing difficulty [ $\geq 30$  breaths per minute]; resting oxygen saturation [ $\leq 93\%$ ] 50% of inspired oxygen [FiO<sub>2</sub>] and the arterial partial pressure of oxygen [PaO<sub>2</sub>] are less than 300 mmHg [1 mmHg = 0.133 kPa]. Individuals with chest imaging that clearly demonstrate lesion progression within 24 to 48 hours were treated as serious instances.

**4. Type of ejaculatory disorder** [retrograde ejaculation, DE, premature ejaculation and normal ejaculation].

**5. Comorbidities:** Hyperlipidaemia, diabetes, hypogonadism, lower urinary tract symptoms and history of pelvic cancer.

**6. History of medication usage:** Antiepileptic or antipsychotic, Alpha inhibitor, Opioid.

**7. Investigations:** White blood cells [WBCs], C-reactive protein [CRP], lymphocyte count,

lymphocyte percentage, aspartate transaminase [AST], alanine transaminase [ALT], serum albumin, creatinine, urea nitrogen, D-dimer, computed tomography [CT] evidence of viral pneumonia.

**8. MSHQ-EjD short form:** The MSHQ-EjD is an ejaculatory functioning assessment that consists of four inquiries with Likert scale choices ranging from 0 to 5 [10].

**9. SHIM questionnaire:** A popular measure of erectile function is the SHIM tool, which consists of five test items with a possible score of one to twenty-five [11]. The grading criteria state that the sum of the numbers that relate to the responses for queries 1 through 5 is how the score is determined. A patient with erectile dysfunction [ED] should receive treatment if their score is 21 or lower. The individual's EJD degree is described by the SHIM score in the following way: No ED with score ranging from 22 to 25, mild ED with score ranging from 17 to 21, mild-to-moderate ED with a score ranging from 12 to 16, moderate ED with a score 8 to 11, and severe ED representing a score of 5 to 7.

**10. IIEF tool:** The IIEF was created to identify modifications in ED patients following medication [12]. Eleven elements make up this measure, which is divided into five categories: erectile function, OF, SD, satisfaction during the sexual activity, and overall satisfaction. Greater scores indicate improved erectile function. Questions were assessed on a 1–5 Likert-type scale. The combined score for all fifteen items on the IIEF-15 was calculated [13,14]. Using the Cronbach's alpha coefficient, the IIEF-15's dependability was evaluated. The coefficient of internal consistency was 0.83.

**Ethical consideration:** The checklist started with a disclaimer that made it clear that the information gathered was anonymous and would only be utilised for research. Every participant was questioned about their willingness to participate in the study. There were just those who consented to take part. Prior to beginning any study-related operations, ethical approval was acquired from the Faculty of Medicine at Al-Azhar University's Research Ethics Committee.

**Statistical analysis:** For statistical evaluation, IBM Corp., Armonk, NY, USA's SPSS 26.0 was utilised. Data was collected as means  $\pm$  standard deviations and numbers [percentages]. Significant variances have been demonstrated by a two-sided P value of less than 0.05. Categorical factors were compared between groups using chi-square, and

continuous factors were compared between groups using the Mann-Whitney U test. Two dichotomous outcomes were predicted by clinical variables, which were found using multiple logistic regression.

### RESULTS

Table 1 demonstrated the sociodemographic characteristics of the studied patients. The study included 1000 patients with a mean age of 34.07 ± 8.03 years ranging from 18 to 55 years old. The Mean ± SD of BMI was 28.61 ± 3.61. More than half of the participants [67.6%] were classified as overweight. Most participant [96.8%] comes from urban regions. More than half of the participants [58.2%] were non-smokers.

According to the study findings, the majority of patients [94.6%] suffered from fever during the infection, 52.1% of them had cough. 14.2% of patients had dyspnea and 12.6% had myalgia. 3.35% suffered from chest pain. The mean ± SD of the period between first positive oropharyngeal swab and healing from COVID-19 was 27.4 ± 3.81 ranging from 20 to 36 days. Only 23.5% of the study participants were hospitalized during their infection [Table 2].

Figure 1 shows the types of ejaculatory disorders among the study participants. Normal ejaculation was reported by 31.2% of the study participants. However, 32.5% reported premature ejaculation, followed by DE [22%] and retrograde ejaculation [14.3%]. Table 3 shows that, the total score of MSHQ-EjD was higher among normal people [4.62 ± 0.48] than in PE [2.07 ± 0.868], DE [2.21 ± 0.77], and retrograde ejaculation [2.29 ± 0.803] with a statistically significant difference [P < 0.001]. According to strength, the total score was higher among normal participants [4.43 ± 0.54] than in

PE [0.99 ± 0.96], DE [1 ± 1.04], and retrograde ejaculation [0.83 ± 1.12] with a statistically significant difference [P < 0.001]. Regarding volume, it recorded higher score among normal participants [4.37 ± 0.56] than in PE [0.92 ± 0.78], DE [1 ± 0.608] and retrograde ejaculation participants [1.16 ± 0.58] with a statistically significant difference [p < 0.001]. Normal participants were lower bothered [0.88 ± 0.65] than PE [4.3 ± 0.62], DE [4.25 ± 0.65] and retrograde participant [4.29 ± 0.635] with a statistically significant difference [p < 0.001].

Table 4 shows the total score of SHIM among participants. Severe EJD was detected among 78.8, 70.5, and 78.3% of PE, DE and retrograde ejaculation patients, respectively. However, moderate EJD was detected among 19.1, 27.7, and 21.7% of PE, DE, and retrograde ejaculation patients.

Table 5 shows the international index of erectile function score among the study participants. The mean sum erectile function score was 16.74 ± 2.44. Intercourse satisfaction represented 5.99 ± 2.06 of the mean total score. The Mean ± SD of the orgasmic function score was 3.28 ± 1.2. The Mean ± SD of the sexual desire and overall satisfaction was 5.36 ± 1.25 and 7.07 ± 1.098 respectively.

By multivariable linear regression analysis, it was found that the severity of the disease associated significantly with ejaculation disorder [EJD] [P= 0.008], strength degree [p < 0.001], SHIM score [P < 0.001], and sexual desire [SD score] [P = 0.023] [Table 6].

Table 7 shows that patient hospitalization associated significantly with EJD [p < 0.001], strength [P= 0.005], volume [p=0.038], SHIM score [P = 0.002], and orgasmic function [OF] score [p=0.001].

**Table [1]:** Sociodemographic characteristics of the studied patients [n=1000]

Variable	Parameters	Statistics
<b>Age</b>	Mean ± SD	34.07 ± 8.03
	Median [min-max]	34 [18-55]
	18-25	157 [15.7%]
	25.1-40	610 [61%]
	>40	233 [23.3%]
<b>Body mass index</b>	Mean ± SD	28.61 ± 3.61
	Median [min-max]	28.16 [21.8-43.8]
	Healthy weight	100 [10%]
	Overweight	676 [67.6%]
	Obesity	224 [22.4%]
<b>Residence</b>	Rural	32 [3.2%]
	Urban	968 [96.8%]
<b>Smoking</b>	Non-smoker	582 [58.2%]
	A smoker	418 1.8%]

**Table [2]:** History and clinical characteristics of the disease

Variables	Parameters	Statistics
Symptoms	Fever	949 [94.6%]
	Cough	521 [52.1%]
	Sore throat	67 [6.7%]
	Myalgia	126 [12.6%]
	Dyspnea	142 [14.2%]
	Chest pain	33 [3.35%]
	Diarrhea	84 [8.4%]
Period between first positive-oropharyngeal swab and healing from COVID-19 [days]	Mean ± SD	27.4 ± 3.81
	Median [min-max]	28 [20 – 36]
Hospitalization for COVID-19	Hospitalized	235 [23.5%]
	Non-hospitalized	765 [76.5%]
Severity of COVID 19, n [%]	Mild	509 [50.9%]
	Moderate	411 [41.1%]
	Severe	50 [5%]
	Critical type	30 [3%]

**Table [3]:** Total score of MSHQ-EjD short form among study participants

Parameter	Total N=1000	Normal N=312	PE N=325	DE N=220	Retrograde ejaculation N=143	P-value
EJD	2.93 ± 1.35	4.62 ± 0.48	2.07 ± 0.868	2.21 ± 0.77	2.29 ± 0.803	<0.001*
Strength	2.04 ± 1.84	4.43 ± 0.54	0.99 ± 0.96	1 ± 1.04	0.83 ± 1.12	<0.001*
Volume	2.05 ± 1.69	4.37 ± 0.56	0.92 ± 0.78	1 ± 0.608	1.16 ± 0.58	<0.001*
Bother	3.22 ± 1.7	0.88 ± 0.65	4.3 ± 0.62	4.25 ± 0.65	4.29 ± 0.635	<0.001*

**Table [4]:** Total score of SHIM questionnaire among the study participants

Parameter	Total N=1000	Normal N=312	PE N=325	DE N=220	Retrograde ejaculation N=143	P-value
Severe ED	523 [52.3%]	0 [0%]	256 [78.8%]	155 [70.5%]	112 [78.3%]	<0.001*
Moderate ED	154 [15.4%]	0 [0%]	62 [19.1%]	61 [27.7%]	31 [21.7%]	
Mild to moderate ED	11 [1.1%]	0 [0%]	7 [2.2%]	4 [1.8%]	0 [0%]	
Mild ED	158 [15.8%]	158 [50.6%]	0 [0%]	0 [0%]	0 [0%]	
No ED	154 [15.4%]	154 [49.4%]	0 [0%]	0 [0%]	0 [0%]	
Total score	11.23 ± 7.12	21.52 ± 1.11	6.78 ± 1.51	6.27 ± 2.35	6.50 ± 1.59	

**Table [5]:** International index of erectile function [IIEF] score among the study participants

Variable	Mean ± SD	Median [min-max]
Sum erectile function [EF]	16.74 ± 2.44	16.50 [10-24]
Intercourse satisfaction [IS]	5.99 ± 2.06	6 [2-11]
Orgasmic function [OF]	3.28 ± 1.2	3 [1-7]
Sexual desire [SD]	5.36 ± 1.25	5 [2-9]
Overall satisfaction [OS]	7.07 ± 1.098	7 [5-10]

**Table [6]:** Multiple linear regression for the association of the ejaculatory dysfunction scores with the severity of COVID-19 disease

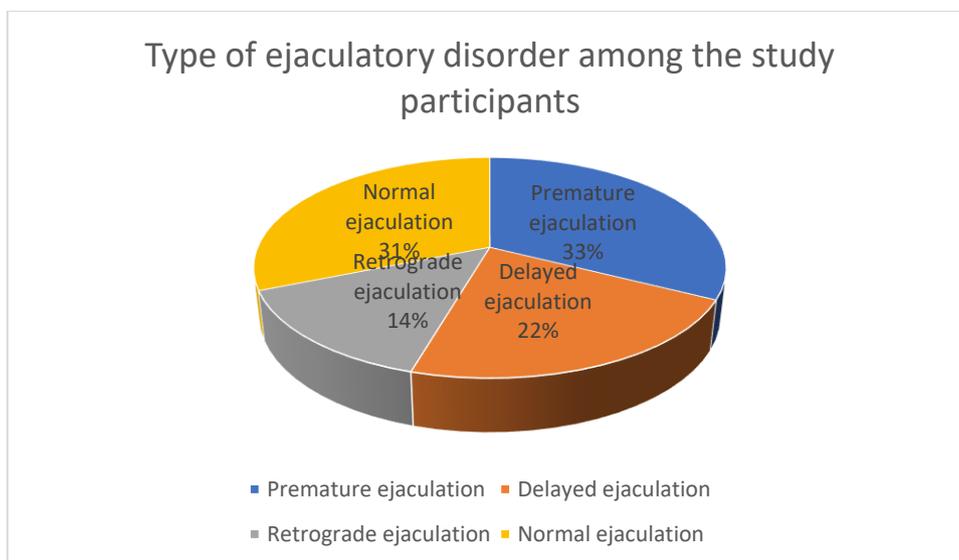
Model		Coefficients <sup>a, b</sup>						
		Unstandardized Coefficients		Standardized Coefficients	T	p-value	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	[Constant]	3.441	0.232		14.826	0.000	2.985	3.897
	EJD	-0.059	0.022	-0.100	-2.669	0.008	-0.103	-0.016
	Strength	-0.089	0.020	-0.184	-4.338	0.000	-0.129	-0.049
	Volume	0.002	0.027	0.002	0.061	0.951	-0.051	0.054
	Bother	-0.017	0.029	-0.022	-.603	0.547	-0.074	0.039
	SHIM	0.234	0.045	0.224	5.219	0.000	0.146	0.322
	EF	-0.016	0.009	-0.064	-1.681	0.093	-0.034	0.003
	IS	0.013	0.009	0.055	1.387	0.166	-0.005	0.032
	OF	0.005	0.016	0.012	0.308	0.758	-0.027	0.037
	SD	0.036	0.016	0.091	2.286	0.023	0.005	0.067
OS	0.020	0.018	0.045	1.148	0.251	-0.014	0.055	

a. Dependent Variable: Severity of COVID  
 b. Selecting only cases for which Group > Normal

**Table [7]:** Multiple linear regression for the association of the ejaculatory dysfunction scores with patient hospitalization

Model		Coefficients <sup>a, b</sup>						
		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	[Constant]	0.713	0.225		3.170	0.002	0.271	1.154
	EJD	-0.081	0.021	-0.142	-3.767-	0.000	-0.123	-0.039
	Strength	-0.055	0.020	-0.120	-2.787-	0.005	-0.094	-0.016
	Volume	-0.054	0.026	-0.079	-2.075-	0.038	-0.104	-0.003
	Bother	0.003	0.028	0.004	.105	0.916	-0.052	0.058
	SHIMdis	0.137	0.043	0.137	3.160	0.002	0.052	0.223
	EF	0.002	0.009	0.007	.173	0.863	-0.016	0.019
	IS	-0.012	0.009	-0.051	-1.284-	0.200	-0.030	0.006
	OF	-0.053	0.016	-0.135	-3.340-	.001	-.084-	-.022-
	SD	-0.013	0.015	-0.035	-.877-	.381	-.043-	.016
	OS	0.002	0.017	0.005	.133	.894	-.031-	.036

a. Dependent Variable: Hospitalization  
 b. Selecting only cases for which Group > Normal



**Figure [1]:** Type of ejaculatory disorder among the study participants

**DISCUSSION**

Despite being one of the most prevalent male sexual illnesses, EJD is still commonly unvalued or ignored due to a number of patient and clinician hurdles. The broad range of EJD involves retrograde ejaculation and painful ejaculation, and it extends from PE via DE to a total incapacity to ejaculate, also referred to as anejaculation [15]. Individuals with these illnesses have a reduced frequency of organic comorbidities like diabetes, hypertension, or dyslipidemia and a higher likelihood of anxiety or depression [16].

The current study set out to determine whether ejaculatory problems are impacted in any way by

the SARS-CoV-2 epidemic. The research project retrospectively recruited one thousand male post-COVID patients who had previously contracted SARS-CoV-2 and had recovered from COVID-19.

The study included 1000 patients with a mean age of 34.07 ± 8.03 years ranging from 18 to 55 years old. The Mean of BMI was 28.61 ± 3.61 kg/m<sup>2</sup>. More than half of the participants [67.6%] were classified as overweight. Most participants [96.8%] comes from urban regions. More than half of the participants [58.2%] were non-smokers.

In a comparable online survey study, the median age of respondent during the COVID-19 outbreak of 2019 was 28 years old [interquartile range

[IQR] 24–35]. The study focused on the sexual lives and functions of Chinese adult males. Of the participants, 280 [45.8%] were married, 10 [1.6%] were divorced or widowed, and 322 [52.6%] were single. There were 239 infrequent smokers [39.1%], 255 never smokers [41.7%], and 118 habitual smokers [19.3%] [17]. Another study done by **Holtmann et al.** [18] in order to examine whether viral RNA was present in the human semen of those infected with the severe COVID-19 infection, as well as its significance in relation to semen variables, mean age was  $42.2 \pm 9.9$  years and the mean BMI was  $25.6 \pm 2.9$  kg/m<sup>2</sup>.

According to the current study, the majority of patients suffered from fever during the infection, 52.1% of them had cough. 14.2% of patients had dyspnoea and 12.6% had myalgia. 3.35% suffered from chest pain. The mean  $\pm$  SD of the period between first positive oropharyngeal swab and healing from COVID-19 was  $27.4 \pm 3.81$  ranging from 20 to 36 days. Only 23.5% of the study participants were hospitalized during their infection.

This was in line with another study wherein 17 out of the 18 patients who recovered reported complaints, primarily fever [10 out of 18], cough, headache, ague, body ache, muscular discomfort, dyspnea, and tiredness. Two subjects experienced tasting loss and anosmia. Testicular pain was experienced by one person. Due to a high fever and dyspnea, four individuals with a moderate course of the disease were admitted to the hospital. They were all able to avoid endotracheal intubation [18].

According to COVID 19 severity in the current study, 50.9% of patients were mild, 41.1% were moderate, 5% were severe and 3% were with critical type.

In a related study, the participants were categorised as follows: 32 patients were classed as mild, 22 as moderate, 15 as severe, and 11 as critical. Eighty-eight percent of participants reported having a temperature during their illness; in particular, the ten participants who were afebrile all had relatively minor illnesses [19].

According to a different research, out of 119 male COVID-19 patients whose testosterone levels were found higher, 2.52% [3/119] were classified as "mild type," 84.03% [100/119] as "moderate type," 11.76% [14/119] as "severe type," and 1.68% [2/119] as "critical type" [20].

In this study, the MSHQ-EjD scores were significantly higher in normal individuals compared to those with premature ejaculation [PE], delayed ejaculation [DE], and retrograde ejaculation. Normal participants also had higher scores in terms of strength and volume, while being less bothered compared to individuals with ejaculation disorders. These differences were statistically significant [ $p < 0.001$ ] across all measured parameters.

**Paduch et al.** [21] were in line with the findings of the present study and used the MSHQ-EjD to analyse survey data from individuals who had been selected for a clinical trial looking at testosterone therapy in males with EjD. Even though the study was only looking at men with EjD, 88% of them reported having a baseline problem that bothered them a lot at 68%.

**Kasman et al.** [22] also discovered that while generating a great deal of discomfort, many people may go undetected with EjD. The root cause of the absence of a diagnosis is uncertain and might be anything from time restrictions in a modern healthcare system to a lack of recognition or reluctance on the part of the patient or the healthcare professional to investigate symptoms.

In the current study, based on IIEF questions, the mean sum erectile function score was  $16.74 \pm 2.44$ . Intercourse satisfaction represented  $5.99 \pm 2.06$  of the mean total score. The Mean  $\pm$  SD of the orgasmic function score was  $3.28 \pm 1.2$ . The Mean  $\pm$  SD of the sexual desire and overall satisfaction was  $5.36 \pm 1.25$  and  $7.07 \pm 1.098$  respectively.

This was in line with an investigation of aggregate data from nearly 12,000 males participating in tadalafil versus placebo studies, which revealed that 57.8% of them had impaired ejaculatory performance as assessed by IIEF questions 9 and 10 [23]. In a different study, 251 participants completed the IIEF-5 scale. The IIEF-5's median value dropped from 21 [range 1–25, IQR 14–23] to 20 [range 1–25, IQR 11–23], and the mean score [ $18.13 \pm 6.74$  vs.  $17.00 \pm 7.15$ ,  $t = 4.867$ ,  $P < 0.001$ ] differed significantly. Following the epidemic, 31.9% of those surveyed had lower IIEF-5 scores; additionally, they exhibited higher GAD-7 [ $P = .001$ ], higher PHQ-9 [ $P = 0.002$ ], a greater percentage of lowered sexual life frequency [ $P < 0.001$ ], lower sexual life frequency [ $P = 0.025$ ], and lower frequency of physical activity [ $P = .007$ ] [17].

**Paoli et al.** [19] discovered that the ratings of the different survey domains are displayed for sexual function as examined by the IIEF-15. Thirty percent of the patients had erectile dysfunction [Erectile function domain score < 26]. While the researchers observed a trend of decreasing EF domain assessments in the highest degree levels and a rise in the incidence of erectile dysfunction, they did not find significant variations in IIEF-15 disciplines among COVID-19 severity scores [erectile function domain scores,  $P = 0.473$  Mild vs. Severe].

**Baran and Aykac** [24] agreed with the present investigation and discovered that, when using the international erectile function indices [IIEF-5, IIEF-15], erectile function was assessed; a decline was observed in the initial phases of COVID-19 in comparison to the pre-pandemic era.

**Fang et al.** [17] reported that throughout the epidemic, men experienced a decline in their ability to regulate their erection and ejaculation. It was found in that research that the IIEF-5 grades of 31.9% of individuals had decreased.

In **Ates et al.** [25]'s study, throughout the epidemic, all other IIEF-15 subdomains showed much higher values, but the erection grade decreased significantly. Compared to before the epidemic, more males reported having an IELT of less than one minute.

According to the current study, by multi-variable linear regression analysis, it was found that patient hospitalization associated significantly with EJD [ $p < 0.001$ ], strength [ $p = 0.005$ ], volume [ $p = 0.038$ ], SHIM score [ $p = 0.002$ ], and orgasmic function [OF] score [ $p = 0.001$ ]. This was in line with recent results that showed a link between SARS-CoV-2 infection and a higher incidence of EJD [26, 27].

**Sivritepe et al.** [28] agreed with the current research and looked into the possibility of EJD for COVID-19 three months after hospital discharge. They found that IIEF scores had gotten worse during hospital admission and connected this worsening to IL-6 levels.

**Corona et al.** [29] outlined in their research that, meta-regression analysis was carried out to find potential causes of PE linked to ED. Older people had a higher incidence of EJD in PE subjects, while smoking and educational attainment were negatively correlated. Moreover, there was a strong correlation found between anxiety

and depressed symptoms and an increased risk of ED. Lastly, it was reported that a higher percentage of patients claiming to have an acquired PE condition were associated with a higher risk of EJD. These correlations were all validated even after age was taken into account.

**Conclusion:** The most common EJD reported in this study was premature ejaculation, followed by DE and retrograde ejaculation. EJD patients showed lower erectile function and sexual health, decreased strength and volume score, higher bother feeling and erectile function score. Furthermore, EJD individuals had low ratings for overall satisfaction, orgasmic function, sexual desire, and intercourse satisfaction. The severity of the disease was associated significantly with sexual desire among EJD patients. Hospitalisation of the patients was substantially correlated with EJD, strength, volume, and orgasmic functionality. When feasible, it could be beneficial to continue having a regular routine for sexual activity in light of the current study. Finally, because frequent therapy is so important, it's important to continue using social media to communicate with doctors and to continue taking the appropriate medications.

**Conflict of Interest:** None.

## REFERENCES

- Ludwig S, Zarbock A. Coronaviruses and SARS-CoV-2: A Brief Overview. *Anesth Analg.* 2020 Jul;131[1]:93-96. doi: 10.1213/ANE.0000000000004845.
- Johnson KD, Harris C, Cain JK, Hummer C, Goyal H, Perisetti A. Pulmonary and Extra-Pulmonary Clinical Manifestations of COVID-19. *Front Med [Lausanne].* 2020 Aug 13;7:526. doi: 10.3389/fmed.2020.00526.
- Salama N, Blgozah S. COVID-19 and Male Sexual Functioning: A report of 3 Recovered Cases and Literature Review. *Clin Med Insights Case Rep.* 2021 May 28;14:11795476211020593. doi: 10.1177/11795476211020593.
- Gutiérrez MJ, Inguanzo B, Orbe S. Distributional impact of COVID-19: regional inequalities in cases and deaths in Spain during the first wave. *Appl Economics.* 2021; 53[31]:3636-57. doi: 10.1080/00036846.2021.1884838.
- Coskuner ER, Ozkan B. Premature Ejaculation and Endocrine Disorders: A Literature Review. *World J Mens Health.* 2022;40[1]:38-51. doi: 10.5534/wjmh.200184.
- Pintea-Trifu M. Erectile dysfunction and premature ejaculation during the pandemic caused by the SARS-CoV-2 virus. *Int J Adv Stud Sexol.* 2021;3[1]:33-39. doi: 10.46388/ijass.2021.13.35.
- Emanu JC, Avildsen I, Nelson CJ. Psychotherapeutic treatments for male and female sexual dysfunction disorders. *Evidence-Based Psychotherapy: The State of the Science and Practice;* Wiley-Blackwell: Hoboken, NJ, USA. 2018:253-70. doi: 10.1002/9781119462996.ch10.

8. Mason MM, Schuppe K, Weber A, Gurayah A, Muthigi A, Ramasamy R. Ejaculation: the Process and Characteristics From Start to Finish. *Curr Sex Health Rep.* 2023 Mar; 15[1]:1-9. doi: 10.1007/s11930-022-00340-z.
9. Diagnosis and Treatment Protocol for Novel Coronavirus Pneumonia [Trial Version 7]. *Chin Med J [Engl].* 2020; 133[9]:1087-95. doi: 10.1097/CM9.0000000000000819.
10. Rosen RC, Catania JA, Althof SE, Pollack LM, O'Leary M, Seftel AD, Coon DW. Development and validation of four-item version of Male Sexual Health Questionnaire to assess ejaculatory dysfunction. *Urology.* 2007 May; 69[5]:805-9. doi: 10.1016/j.urology.2007.02.036.
11. Cappelleri JC, Rosen RC. The Sexual Health Inventory for Men [SHIM]: a 5-year review of research and clinical experience. *Int J Impot Res.* 2005 Jul-Aug;17[4]:307-19. doi: 10.1038/sj.ijir.3901327.
12. Rosen RC, Riley A, Wagner G, Osterloh IH, Kirkpatrick J, Mishra A. The international index of erectile function [IIEF]: a multidimensional scale for assessment of erectile dysfunction. *Urology.* 1997 Jun;49[6]:822-30. doi: 10.1016/s0090-4295[97]00238-0.
13. Yule M, Davison J, Brotto L. The International Index of Erectile Function: a methodological critique and suggestions for improvement. *J Sex Marital Ther.* 2011;37[4]:255-69. doi: 10.1080/0092623X.2011.582431.
14. Sansalone S, Silvani M, Leonardi R, Vespasiani G, Iacovelli V. Sexual outcomes after partial penectomy for penile cancer: results from a multi-institutional study. *Asian J Androl.* 2017 Jan-Feb;19[1]:57-61. doi: 10.4103/1008-682X.168690.
15. Haghghi M, Doostizadeh M, Jahangard L, Soltanian A, Faryadres M, Dürsteler KM, et al. Influence of Lisdexamfetamine Dimesylate on Early Ejaculation-Results from a Double-Blind Randomized Clinical Trial. *Healthcare [Basel].* 2021 Jul 7;9[7]:859. doi: 10.3390/healthcare9070859.
16. Popova A, Gamidov S, Shatylo T, Gasanov N, Ovchinnikov R, Gamidov R. Possibilities of conservative treatment for andrological conditions in men with history of COVID-19. *Androl Genit Surg.* 2021;22[1]:71-5. doi: 10.17650/1726-9784-2021-22-1-71-75.
17. Fang D, Peng J, Liao S, Tang Y, Cui W, Yuan Y, et al. An Online Questionnaire Survey on the Sexual Life and Sexual Function of Chinese Adult Men During the Coronavirus Disease 2019 Epidemic. *Sex Med.* 2021 Feb;9[1]:100293. doi: 10.1016/j.esxm.2020.100293.
18. Holtmann N, Edimiris P, Andree M, Doehmen C, Baston-Buest D, Adams O, Kruessel JS, Bielfeld AP. Assessment of SARS-CoV-2 in human semen-a cohort study. *Fertil Steril.* 2020 Aug;114[2]:233-238. doi: 10.1016/j.fertnstert.2020.05.028.
19. Paoli D, Pallotti F, Anzuini A, Bianchini S, Caponecchia L, Carraro A, et al. Male reproductive health after 3 months from SARS-CoV-2 infection: a multicentric study. *J Endocrinol Invest.* 2023 Jan;46[1]:89-101. doi: 10.1007/s40618-022-01887-3.
20. Ma L, Xie W, Li D, Shi L, Ye G, Mao Y, et al. Evaluation of sex-related hormones and semen characteristics in reproductive-aged male COVID-19 patients. *J Med Virol.* 2021;93[1]:456-462. doi: 10.1002/jmv.26259.
21. Paduch DA, Polzer P, Morgentaler A, Althof S, Donatucci C, Ni X, Patel AB, Basaria S. Clinical and Demographic Correlates of Ejaculatory Dysfunctions Other Than Premature Ejaculation: A Prospective, Observational Study. *J Sex Med.* 2015 Dec;12[12]:2276-86. doi: 10.1111/jsm.13027.
22. Kasman AM, Bhambhani HP, Eisenberg ML. Ejaculatory Dysfunction in Patients Presenting to a Men's Health Clinic: A Retrospective Cohort Study. *Sex Med.* 2020 Sep;8[3]:454-460. doi: 10.1016/j.esxm.2020.05.002.
23. Paduch DA, Bolyakov A, Beardsworth A, Watts SD. Factors associated with ejaculatory and orgasmic dysfunction in men with erectile dysfunction: analysis of clinical trials involving the phosphodiesterase type 5 inhibitor tadalafil. *BJU Int.* 2012 Apr;109[7]:1060-7. doi: 10.1111/j.1464-410X.2011.10504.x.
24. Baran O, Aykac A. The effect of fear of covid-19 transmission on male sexual behaviour: A cross-sectional survey study. *Int J Clin Pract.* 2021 Apr; 75[4]:e13889. doi: 10.1111/ijcp.13889.
25. Ates E, Kazici HG, Yildiz AE, Sulaimanov S, Kol A, Erol H. Male sexual functions and behaviors in the age of COVID-19: Evaluation of mid-term effects with online cross-sectional survey study. *Arch Ital Urol Androl.* 2021 Oct;93[3]:341-347. doi: 10.4081/aiua.2021.3.341.
26. Sansone A, Mollaioli D, Ciocca G, Colonnello E, Limoncin E, Balercia G, Jannini EA. "Mask up to keep it up": Preliminary evidence of the association between erectile dysfunction and COVID-19. *Andrology.* 2021 Jul;9[4]:1053-1059. doi: 10.1111/andr.13003.
27. Katz J, Yue S, Xue W, Gao H. Increased odds ratio for erectile dysfunction in COVID-19 patients. *J Endocrinol Invest.* 2022 Apr;45[4]:859-864. doi: 10.1007/s40618-021-01717-y.
28. Sivritepe R, Uçak Basat S, Baygul A, Küçük EV. The effect of interleukin-6 level at the time of hospitalisation on erectile functions in hospitalised patients with COVID-19. *Andrologia.* 2022 Feb;54[1]:e14285. doi: 10.1111/and.14285.
29. Corona G. Erectile dysfunction and premature ejaculation: a continuum movens supporting couple sexual dysfunction. *J Endocrinol Invest.* 2022 Nov;45[11]:2029-2041. doi: 10.1007/s40618-022-01793-8.

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