

# The epidemiology of premature ejaculation

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**Abstract:** Vast advances have occurred over the past decade with regards to understanding the epidemiology, pathophysiology and management of premature ejaculation (PE); however, we still have much to learn about this common sexual problem. As a standardized evidence-based definition of PE has only recently been established, the reported prevalence rates of PE prior to this definition have been difficult to interpret. As a result, a large range of conflicting prevalence rates have been reported. In addition to the lack of a standardized definition and operational criteria, the method of recruitment for study participation and method of data collection have obviously contributed to the broad range of reported prevalence rates. The new criteria and classification of PE will allow for continued research into the diverse phenomenology, etiology and pathogenesis of the disease to be conducted. While the absolute pathophysiology and true prevalence of PE remains unclear, developing a better understanding of the true prevalence of the disease will allow for the completion of more accurate analysis and treatment of the disease.

**Keywords:** Epidemiology; premature ejaculation (PE); prevalence

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## Introduction

Vast advances have occurred over the past decade with regards to understanding the epidemiology, pathophysiology and management of premature ejaculation (PE) (1); however, we still have much to learn about this common sexual problem. As a standardized evidence-based definition of PE has only recently been established (2), the reported prevalence rates of PE prior to this definition have been difficult to interoperate. As a result, a large range of conflicting prevalence rates have been reported (*Table 1*). In addition to the lack of a standardized definition and operational criteria, the method of recruitment for study participation and method of data collection have obviously contributed to the broad range of reported prevalence rates. Controversy regarding the specific criteria comprising the disease of PE has not only hindered the ability to determine true prevalence rates, but also to conduct evidence-based research on the treatment of the disease. Understanding the

clinical significance of a reported sexual dysfunctions also remains a challenge (41).

In an attempt to remedy the disparity among reported prevalence rates, the International Society for Sexual Medicine (ISSM) developed an evidence-based definition and established set operational criteria (2). The American Psychiatric Association also recently revised their definition of PE, including a 1-minute cut off latency and the criterion of “ejaculation before desired” and “significant clinical distress” (42). Both of these definitions include three main parameters: ejaculatory latency time, distress and ejaculating before desired. A recent interesting statistical analysis took all three of these operational criteria into account and found that modifying each individual operational criterion could significantly alter the prevalence rates of PE (43). Thus, adherence to these criteria aims to allow for a better understanding of the prevalence of PE, according to each specific definition.

Table 1 The prevalence rates of premature ejaculation

Date	Authors	Method of data collection	Method of recruitment	Operational criteria	Prevalence rate (%)	Number of men
1998	Dunn <i>et al.</i> (3)	Mail	General practice registers – random stratification	Having difficulty with ejaculating prematurely	14 (past 3 mo) 31 (lifetime)	617 618
1999	Laumann <i>et al.</i> (NHLSL) (4)	Interview	NA	Climaxing/ejaculating too rapidly during the past 12 months	31	1,410
2002	Fugl-Meyer and Fugl-Meyer (5)	Interview	Population register	NA	9	1,475
2004	Rowland <i>et al.</i> (6)	Mailed questionnaire	Internet panel	DSM IV	16.3	1,158
2004	Nolazco <i>et al.</i> (7)	Interview	Invitation to outpatient clinic	Ejaculating fast or prematurely	28.3	2,456
2005	Laumann <i>et al.</i> (GSSAB) (8)	Telephone-personal interview/mailed questionnaires	Random (systematic) sampling	Reaching climax too quickly during the past 12 months	23.75 (4.26% frequently)	13,618
2005	Basile Fasolo <i>et al.</i> (9)	Clinician-based	Invitation to outpatient clinic	DSM IV	21.2	12,558
2006	Stulhofer and Bajjic (10)	Interview	Stratified sampling	Often ejaculating in less than 2 minutes	9.5	601
2007	Porst <i>et al.</i> (PEPA) (11)	Web-based survey Self-report	Internet panel	Control over ejaculation, distress	22.7	12,133
2008	Shindel <i>et al.</i> (12)	Questionnaire	Male partners of infertile couples under evaluation	Self-report premature ejaculation	50	73
2009	Brock <i>et al.</i> (13)	telephone interview	Web-based survey	DSM III	16	3,816
2010	Traeen and Stigum (14)	Mailed questionnaire + internet	Web interview + randomization	Control	26	11,746+1,671
2010	Son <i>et al.</i> (15)	Questionnaire	Internet panel (younger than 60)	DSM IV	18.3	600
2010	Amidu <i>et al.</i> (16)	Questionnaire	NA	NA	64.7	255
2010	Liang <i>et al.</i> (17)	NA	NA	ISSM	15.3	1,127

Table 1 (continued)

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Date	Authors	Method of data collection	Method of recruitment	Operational criteria	Prevalence rate (%)	Number of men
2010	Park <i>et al.</i> (18)	Mailed questionnaire	Stratified sampling	Suffering from PE	27.5	2,037
2011	Vakalopoulos <i>et al.</i> (19)	One-on-one survey	Population based cohort	EED	58.43	522
2010	Hirshfeld <i>et al.</i> (20)	Web-based survey	Online advertisement in the United States and Canada	ISSM lifelong PE	17.7	7,001
2011	Christensen <i>et al.</i> (21)	Interview + questionnaire	Population register (random)	NA	7	5,552
2011	Serefoglu <i>et al.</i> (22)	Interview	Stratified sampling	Complaining about ejaculating prematurely	20.0	2,593
2011	Son <i>et al.</i> (23)	Questionnaire	Internet panel	Estimated IELT $\leq$ 5 min, inability to control ejaculation, distress	10.5	334
2011	Tang and Khoo (24)	Interview	Primary care setting	PEDT $\geq$ 9	40.6	207
2012	Mialon <i>et al.</i> (25)	Mailed questionnaire	Convenience sampling (18–25 years old)	Control over ejaculation; distress	11.4	2,507
2012	Shaeer and Shaeer (26)	Web-based survey	Online advertisement in Arabic countries	Ejaculate before the person wishes to ejaculate at least sometimes	83.7	804
2012	Shindel <i>et al.</i> (27)	Web-based survey	Online advertisement targeted to MSM + distribution of invitation to organizations catering to MSM	PEDT $\geq$ 9	8–12	1,769
2012	McMahon <i>et al.</i> (28)	Computer assisted interviewing, online, or in-person self-completed	NA	PEDT $\geq$ 11	16	4,997
2012	Lotti <i>et al.</i> (29)	Interview	Men seeking medical care for infertility	Self-reported (always/nearly-always)	13	244
2013	Zhang <i>et al.</i> (30)	Interview	Random stratified sample of married men aged 30–60	Self-reported premature ejaculation	15.6	728

Table 1 (continued)

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Date	Authors	Method of data collection	Method of recruitment	Operational criteria	Prevalence rate (%)	Number of men
2013	Lee <i>et al.</i> (31)	Interview	Stratified random sampling	PEDT $\geq 11$ Self-reported	11.3 19.5	2,081
2013	Gao <i>et al.</i> (32)	Interview	Random stratified sample of monogamous heterosexual men in China	IELT <1 min Self-reported premature ejaculation	3 25.8	1,035 3,016
2013	Hwang <i>et al.</i> (33)	Survey of married couples	Married heterosexual couples in Korea	Estimated IELT <2 minutes PEDT $\geq 11$	21.7 12.1	290
2013	Vansintean <i>et al.</i> (34)	Web-based survey	Online and flyer advertisements to Belgian men who have sex with men (only HIV+ men in this study)	IPE score $\leq 50\%$ of total possible IPE score $\leq 66\%$ of total possible	4 18	72
2013	Gao <i>et al.</i> (35)	Interview	Men seeking medical care for infertility	PEDT $\geq 11$	7.08	1,468
2013	Shaeer (36)	Web-based survey	Healthy volunteers English-speaking male web surfers in the USA via paid advertising on Facebook®	ISSM definition PEDT Self-report	3.82 6.3 49.6 77.6	942 1,133
2014	Mo <i>et al.</i> (37)	NA	Chronic prostatitis patients	IELT <2 min	30	600
2014	Akre <i>et al.</i> (38)	Mailed questionnaire	-	Control over ejaculation, distress	10.9	3,695
2014	Song <i>et al.</i> (39)	Web-based survey	population-based sample of males aged 20–59 years	PEDT $\geq 11$	14.6	443
2014	O'Sullivan <i>et al.</i> (40)	Web-based survey	Adolescents aged 16–21	PEDT $\geq 11$	13.2	114

**Table 2** Prevalence of the complaint of PE based on sub-classification

PE classification	Prevalence (%) in Turkish (22) population	Prevalence (%) in Chinese (32) population
Life-long PE	2.3	3.18
Acquired PE	3.9	4.48
Variable PE	8.5	11.38
Subjective PE	5.1	6.4
Total prevalence	19.8	25.8

PE, premature ejaculation.

Some of the first to recognize the need for a specific definition of PE were Waldinger and Schweitzer, who hypothesized that the true prevalence of patients actually seeking treatment for PE was much less than previously reported prevalence rates (44,45). They proposed a new classification system of PE (46). Based on their classification system, two separate observational, cross-sectional surveys from two different continents found that the overall prevalence of the complaint of PE to be 19.8% and 25.80% (22,32) (Table 2). Further stratifying these complaints into the classifications defined, the complaint of lifelong PE was seen at rates of 2.3% and 3.2%, while the rates of acquired PE were 3.9% and 4.5%, variable PE were 8.5% and 11.4% and subjective PE were 5.1% and 6.4% (22,32). Interestingly both of these studies found that men with acquired PE were more likely to seek treatment when compared to men with lifelong PE. Treatment seeking behavior may contribute to errors in the previously reported rates of PE, as it is possible that men with lifelong PE come to terms with their problem and not seek treatment. The additional psychological burden of a new change in ejaculatory latency in acquired PE, on the other hand, may prompt more frequent treatment seeking behaviors (47). Thus, it is likely that a disparity exists between the incidence of various PE sub-types in the general community and in men actively seeking treatment for PE (48,49). This disparity could be a further barrier to understanding the true incidence of each sub-type of PE.

Several recent studies applying up-to-date definitions and operational criteria have examined the prevalence of PE in men with other associated urologic complaints. Zhang *et al.* (50) completed an investigation regarding the association of the International Prostate Symptom Score (IPSS) to the four various PE syndromes, and found that men complaining of ejaculating prematurely also reported

worse IPSS than men without PE complaints. Another cross-sectional study was conducted to determine the prevalence of PE among adult male participants with lower urinary tract symptoms (LUTS) and found that among the participants consulted with LUTS, 27% also had concomitant PE (51). Recently, Li and Kang (52) performed a meta-analysis of sexual dysfunctions that included a total of 11,189 men diagnosed with chronic prostatitis and chronic pelvic pain syndrome, and found the prevalence of PE to be 40% in these men. The results from these studies are promising with regards to developing an understanding of the true prevalence of PE according to the newly adapted definitions.

## Conclusions

The new criteria and classification of PE will allow for continued research into the diverse phenomenology, etiology and pathogenesis of the disease to be conducted (53). Although the pathogenesis of lifelong and acquired PE differs, the presence of shared dimensions, such as a lack of ejaculatory control and the presence of negative personal consequences, suggest a potential for a single unifying definition of both lifelong and acquired PE (54). While the absolute pathophysiology and true prevalence of PE remains unclear, developing a better understanding of the true prevalence of the disease will allow for the completion of more accurate analysis and treatment of the disease.

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## Footnote

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

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