

Premature Ejaculation and Erectile Dysfunction Prevalence and Attitudes in the Asia-Pacific Region

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ABSTRACT

Introduction. Premature ejaculation (PE) is a common male sexual dysfunction. The prevalence of PE in the Asia-Pacific region has not been comprehensively studied.

Aim. The aim of this study is to evaluate PE prevalence in nine Asia-Pacific countries and the impact of PE on sufferers.

Methods. A random sample of heterosexual males aged 18–65 years in a stable sexual relationship currently or in the past 2 years completed a 48-question survey by computer-assisted interviewing, online, or in-person; the survey and recruitment methodologies varied by location. The survey included demographic questions, the five-question Premature Ejaculation Diagnostic Tool (PEDT), the five-question Sexual Health Inventory for Men (SHIM), and the 10-question Index of Premature Ejaculation (IPE). Separately, men self-reported having PE (lifelong or acquired) or erectile dysfunction (ED).

Main Outcome Measures. The PEDT was used to diagnose PE or probable PE; the SHIM was used to diagnose ED; and the IPE was used to assess respondent's attitudes toward PE.

Results. Of the 4,997 men who completed the survey, the prevalences of PEDT-diagnosed PE, PEDT-diagnosed probable PE, and self-reported PE were 16%, 15%, and 13%, respectively. Less than half of men with PEDT-diagnosed PE (N = 816) or probable PE (N = 738) self-reported the condition (40% and 19%, respectively), and 6% of men with a PEDT diagnosis of no PE self-reported PE. In contrast, more respondents self-reported ED (8%) than had SHIM-diagnosed moderate or severe ED (5%). IPE responses indicated that 45%, 46%, and 23% of men with PEDT-diagnosed PE were somewhat or very dissatisfied with the length of intercourse before ejaculation, their control over ejaculation, and with sexual intercourse, respectively.

Conclusions. In this study, PE was more prevalent than ED in the Asia-Pacific countries surveyed, but only 40% of men with PEDT-diagnosed PE self-reported PE. McMahon CG, Lee G, Park JK, and Adaikan PG. Premature ejaculation and erectile dysfunction prevalence and attitudes in the Asia-Pacific region. *J Sex Med* 2012;9:454–465.

Key Words. Premature Ejaculation; Asia-Pacific; PEDT; SHIM; IPE

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Introduction

Premature ejaculation (PE) is one of the most common male sexual complaints [1–6]. In addition to adversely influencing sexual relationships, PE significantly impacts the emotional well-being and overall quality of life of both men and their partners [7,8]. However, despite having such

a widespread and significant impact, there is currently a lack of comprehensive data regarding the prevalence and attitudes of PE among men in the Asia-Pacific region.

In the past, reports of the prevalence of PE have varied from study to study, ranging from as low as 4% [9] to as high as 65% [10] depending, in part, on the criteria used to define PE. One of the most widely recognized sets of clinical criteria for diagnosis of PE, the American Psychiatric Association's Diagnostic and Statistical Manual, fourth edition, text revision (DSM-IV-TR), is difficult to apply consistently in diagnosing the condition because the criteria are vague and open to interpretation by the clinician [11]. Studies that define PE using only the measure of time between penetration and ejaculation or intravaginal ejaculatory latency time (IELT) fail to account for the psychological aspect of PE, and there is considerable overlap in the IELT among men who fit the DSM-IV-TR definition of PE and those who do not [12]. Many additional studies [1,2,13,14] have used respondent answers to nonvalidated survey questions to assess the various dimensions of male sexual function.

Accurate determination of the prevalence of PE is limited by the lack of understanding of the condition by both patients and clinicians [15]. PE may be confused with other sexual disorders, especially erectile dysfunction (ED) [16], and self-report of PE may be unreliable. Although ED is often regarded as the most significant male sexual dysfunction, PE is associated with a similar negative psychological impact upon sufferers and their partners [17,18]. Over the past 20–30 years, clinical and epidemiological research has predominantly focused on ED, despite preliminary data suggesting that PE is at least as prevalent. Data from the National Health and Social Life Survey showed that among men 18–59 years of age, the prevalence of self-reported PE in the United States (21%) was four times that of ED (5%) [13].

Several recent observational studies suggest that the prevalence of PE varies by geographic location and ethnicity. The Global Study of Sexual Attitudes and Behaviors (GSSAB) reported a PE prevalence ranging from 12% in the Middle East to 30% in Southeast Asia among men 40–80 years of age [1]. In a separate study of men between the ages of 18 and 59 years in the United States, the overall prevalence of PE was 21%, which comprised 19% of Caucasian men, 27% of Hispanic men, and 34% of African-American men [13]. However, data from this and other observational

studies are limited and cannot be reliably applied to the general PE population because of the reliance on patient diagnosis of PE by self-report and the use of nonvalidated instruments. The underlying factors involved in these regional- and/or ethnic-dependent variations require further study.

Aims

The purpose of this study was to determine the prevalence of PE across nine locations in the Asia-Pacific region using the Premature Ejaculation Diagnostic Tool (PEDT) [19], which is a validated instrument for diagnosing PE. Additionally, this study assessed the prevalence of ED across the region, as well as respondents' attitudes toward these two conditions.

Methods

Subjects

This survey enrolled heterosexual males aged 18–65 years that were currently involved or had been involved in a sexual relationship within the past 2 years. In order to ensure an unbiased sample population, respondents were excluded from the study if they or their immediate family members were working in marketing research, advertising, marketing, public relations, mass media, medical profession, or pharmaceutical manufacturing or sales.

Study Design

A 48-question survey was administered to a random sample of heterosexual men in nine locations in the Asia-Pacific region. The nine locations surveyed included Australia/New Zealand, China, Hong Kong, Indonesia, Malaysia, Philippines, South Korea, Taiwan, and Thailand. Recruitment methodology varied by location. The fieldwork period for the entire survey was from March 3 to April 26, 2009 and also varied by location. In China and Thailand, the survey was administered via computer-assisted personal interviewing at multiple locations; in Australia/New Zealand, the survey was administered online; in Taiwan and South Korea, the survey was administered online for respondents younger than 50 years of age and by in-person self-completed surveys for respondents aged 50 and older; and in Hong Kong, Malaysia, Indonesia, and the Philippines, the survey was a self-completed survey administered at multiple locations.

The survey questionnaire determined the respondents' age, marital status, level of education, and health status. The presence, time of onset, and impact of self-reported PE were identified by separate questions, and the subject's response was used to distinguish between lifelong and acquired PE. IELT was determined by asking respondents to estimate their average interval between penetration and ejaculation (responses: within 10 seconds after penetration, 10–30 seconds, 30 seconds to 1 minute, 1–2 minutes, 2–3 minutes, 3–4 minutes, 4–5 minutes, 5–10 minutes, 10–15 minutes, 15–20 minutes, 20–30 minutes, and greater than 30 minutes). The presence of self-reported PE was determined by the subject's choice from the following statements: (i) "I do not feel that I have PE," (ii) "I just have PE symptoms occasionally," (iii) "I have always/nearly always had PE since my first sexual contact," (iv) "I previously had normal ejaculation but developed PE always/nearly always after a certain age," or (v) "I previously had normal ejaculation but developed PE always/nearly always after/or at the same time that I experienced difficulty in achieving and/or maintaining erections"; respondents who selected the first two statements were determined not to have PE, while those who chose the last three statements were determined to have self-assessed PE. Lifelong PE was defined as self-reported PE from the first sexual experience (selection of statement [iii]), and acquired PE was regarded as the development of PE after previous normal ejaculatory experiences (selection of statements [iv] or [v]). The presence and severity of PE and ED were also evaluated using several validated multi-item inventories including the PEDT [19], the Index of Premature Ejaculation (IPE) [20], and the Sexual Health Inventory for Men (SHIM) [21].

The PEDT is a validated, five-item, unidimensional instrument that captures the essence of the DSM-IV-TR definition of PE: control, frequency, minimal stimulation, distress, and interpersonal difficulty [19]. Responses to each of the five items are based on a rating scale from zero to four and are summed to arrive at a total PEDT score that can range from 0 to 25. Sensitivity/specificity analyses suggest that a score ≤ 8 indicates no PE, scores 9 and 10 indicate probable PE, and those ≥ 11 indicate PE.

The IPE is a validated multidomain 10-item questionnaire for the assessment of control over ejaculation, satisfaction with sex life, and distress in subjects with PE [22]. The IPE has good internal consistency, test-retest reliability, and convergent validity against IELT.

The SHIM is a validated abridged five-item version of the 15-item International Index of Erectile Function questionnaire and was developed and validated as a brief, easily administered, patient-reported diagnostic tool for the screening and diagnosis of ED and evaluating the severity of ED in clinical practice and research [21]. Responses to each of the five items are based on a rating scale from zero to five or from one to five (depending on the item) and are summed to arrive at a total score that can range from 1 to 25, with higher scores indicating better sexual health. Classification of ED is partitioned into five severity grades: no ED (SHIM total score, 22–25), mild (17–22), mild to moderate (12–16), moderate (8–11), and severe ED (1–7).

Responses to all individual questions on the survey were analyzed for the total respondent population as well as by geographic location. There were no statistical analyses or comparisons performed on the results of the survey.

Main Outcome Measures

Key outcomes included the prevalence of PE based on PEDT diagnosis and self-reported the prevalence of ED based on SHIM diagnosis, the respondent's attitudes toward PE based on the IPE, and IELT based on self-report.

Results

Patients

A total of 4,997 men were surveyed across the nine geographic locations, which included Australia/New Zealand ($N = 1,019$), China ($N = 600$), Hong Kong ($N = 204$), Indonesia ($N = 207$), Malaysia ($N = 400$), Philippines ($N = 200$), South Korea ($N = 1,167$), Taiwan ($N = 1,000$), and Thailand ($N = 200$). Overall, 43% of respondents were 18–35 years of age, and the majority (69%) were married. Demographic characteristics varied slightly from country to country and are shown in Table 1.

Prevalence of PE

Overall, the PEDT diagnosed PE in 16% (816/4,997) of respondents and probable PE in a further 15% (738/4,997) of respondents (Figure 1A). In contrast, only 13% (658/4,997) of all respondents self-reported PE. Across countries, the prevalence of PEDT-diagnosed PE ranged from 4% (21/600; China) to 33% (388/1,167; South Korea), while

Table 1 Baseline demographic and clinical characteristics

Characteristic	Total	Australia/New Zealand	China	Hong Kong	Indonesia	Malaysia	Philippines	South Korea	Taiwan	Thailand
N, %	4,997 (100)	1,019 (20.4)	600 (12.0)	204 (4.1)	207 (4.1)	400 (8.0)	200 (4.0)	1,167 (23.4)	1,000 (20.0)	200 (4.0)
Age category, %										
18–35 years	43	37	38	37	55	57	57	39	43	50
36–45 years	25	24	25	24	23	28	22	27	24	26
46–55 years	21	23	23	26	15	10	14	23	22	19
56–65 years	12	16	14	13	7	5	8	11	12	5
Marital status, %										
Married/live-in	69	76	77	67	88	68	52	68	58	71
Single	28	18	19	32	7	32	43	30	40	25
Separated	3	5	5	1	2	0	4	1	1	3
Widowed	1	0	0	0	2	0	1	0	1	2
Number of intercourse episodes in the last month, %										
0	14	18	18	17	9	9	14	17	7	7
1–2	25	20	26	36	17	21	22	31	23	20
3–4	28	21	25	26	29	39	24	29	29	38
5–7	17	16	14	13	18	20	16	14	22	16
8–10	8	10	8	4	16	7	11	5	10	9
>10	9	16	10	4	11	5	14	3	8	12
Education, %										
Primary or less	3	1	5	2	14	1	0	2	2	18
Lower secondary	8	6	15	24	21	8	2	1	6	18
Upper secondary	25	27	27	48	53	37	5	19	21	9
Vocational/technical	24	36	31	15	8	30	24	16	21	19
Bachelor degree	33	23	20	9	4	22	64	53	39	37
Master degree or above	7	7	3	2	0	2	6	9	11	1
Health issues, %										
Hypertension	14	18	10	10	2	11	11	19	9	10
High cholesterol	10	18	6	6	0	8	7	15	8	7
Low level of sexual desire	8	13	6	3	3	4	1	14	3	5
Depression and/or anxiety	6	13	5	2	0	1	3	5	2	3
Diabetes	5	7	4	5	1	7	3	4	3	3

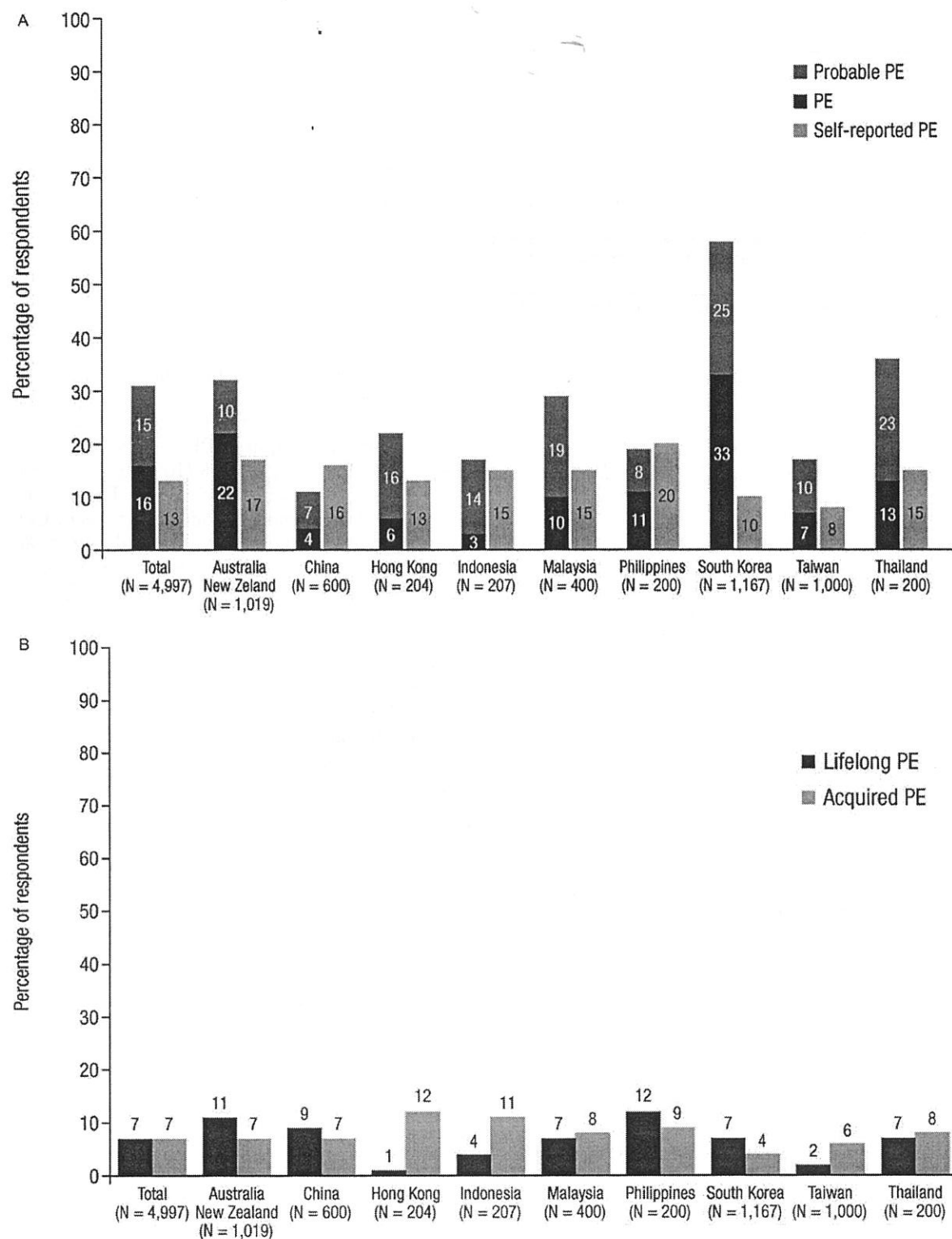


Figure 1 (A) Percentage of respondents with PEDT-diagnosed PE or probable PE and self-reported PE by geographic location. (B) Percentage of respondents with lifelong and acquired PE by geographic location. PE, premature ejaculation; PEDT, Premature Ejaculation Diagnostic Tool.

Table 2 Prevalence of self-reported PE by PEDT diagnosis

Respondents chose among the following statements, %	Total (N = 4,997)	PEDT diagnosis		
		PE (N = 816)	Probable PE (N = 738)	No PE (N = 3,443)
I do not feel that I have PE	53	12	28	68
I just have PE symptoms occasionally	34	48	53	27
I have (nearly) always had PE since my first sexual contact	7	22	9	3
I previously had normal ejaculation but developed PE (nearly) always after a certain age	5	13	8	2
I previously had normal ejaculation but developed PE (nearly) always after or at the same time that I experienced difficulty in achieving and/or maintaining erections	2	5	2	1

PE = premature ejaculation; PEDT = Premature Ejaculation Diagnostic Tool.

the prevalence of self-reported PE ranged from 8% (77/1,000; Taiwan) to 20% (40/200; Philippines). When evaluated by age, the incidence of PEDT-diagnosed PE varied from 14% (319/2,214; 18–35 age group) to 19% (246/1,299; 36–45 age group). The majority of respondents with PEDT-diagnosed PE and probable PE self-reported as not having PE (60% [492/816] and 81% [601/738], respectively, while only 6% [197/3,443] of respondents diagnosed by the PEDT as not having PE self-reported PE) (Table 2).

IELTs of up to 1 minute were reported by 11% (88/816) of men with PEDT-diagnosed PE, 6% (47/738) of men with PEDT-diagnosed probable PE, and 3% (101/3,443) of men with PEDT-diagnosed no PE (Figure 2A). The most frequently self-reported IELT for respondents regardless of PE status was 5–10 minutes (Figure 2B). Overall, 34% (277/816) of respondents with PEDT-diagnosed PE reported IELTs of more than 5 minutes, and 14% (112/816) reported IELTs of more than 10 minutes.

Of the 658 respondents who self-reported PE, 51% (334/658) reported lifelong PE and 49% (324/658) reported acquired PE. The ratio of respondents who reported lifelong vs. acquired PE varied from country to country (Figure 1B) and ranged from 11/89% (lifelong/acquired as a percentage of men with PE) in Hong Kong (N = 27) to 66/34% in South Korea (N = 117).

Prevalence of ED

Overall, 5% (235/4,990) of respondents were diagnosed by the SHIM to have moderate (3% [172/4,990]) or severe ED (1% [63/4,990]), while 15% (760/4,997) were diagnosed with mild-to-moderate ED and the remainder (80%) were diagnosed with mild ED. As shown in Table 3, the prevalence of SHIM-diagnosed moderate ED was 7% (59/814) in men with PEDT-diagnosed PE,

4% (33/738) in men with probable PE, and 2% (80/3,438) in men without PE. SHIM-diagnosed moderate ED was present in 10% (31/324) of men with self-reported acquired PE, 10% (32/333) of men with lifelong PE, and 3% (109/4,333) of men who self-reported as not having PE. The prevalence of SHIM-diagnosed moderate or severe ED varied by location (Figure 3) and ranged from <1% (moderate ED only) in Hong Kong (3/253) and Taiwan (14/1,000) to 13% in China (53/657).

Of respondents with PEDT-diagnosed PE, 40% (325/816) were confident in getting and keeping an erection, as were 58% (2,901/4,997) of all respondents and 66% (2,264/3,443) of those without PE. Difficulty maintaining an erection to the completion of intercourse was reported by 68% (558/816), 85% (4,285/4,997), and 91% (3,121/3,443), respectively (Table 4).

Patient Experiences with PE

The PEDT survey results for all respondents are shown in Table 5. Overall, 32% (1,576/4,997) of respondents were very or extremely concerned that their time to ejaculation left their partner sexually unfulfilled. Among respondents with PEDT-PE, 57% (465/816) reported that they ejaculated before they wished and 37% (302/816) reported ejaculation with very little stimulation in more than 50% of intercourse attempts. Similarly, a majority respondents with PEDT-PE reported very or extreme difficulty in delaying ejaculation, felt very or extremely frustrated because of ejaculating before they wished, and were very or extremely concerned that their time to ejaculation left their partner sexually unfulfilled. Only 45% (363/816) of respondents with PEDT-PE reported that sexual intercourse was satisfactory for them most of the time to always (Table 4).

To assess experiences with PE and how it affects their overall sex life and relationship with their

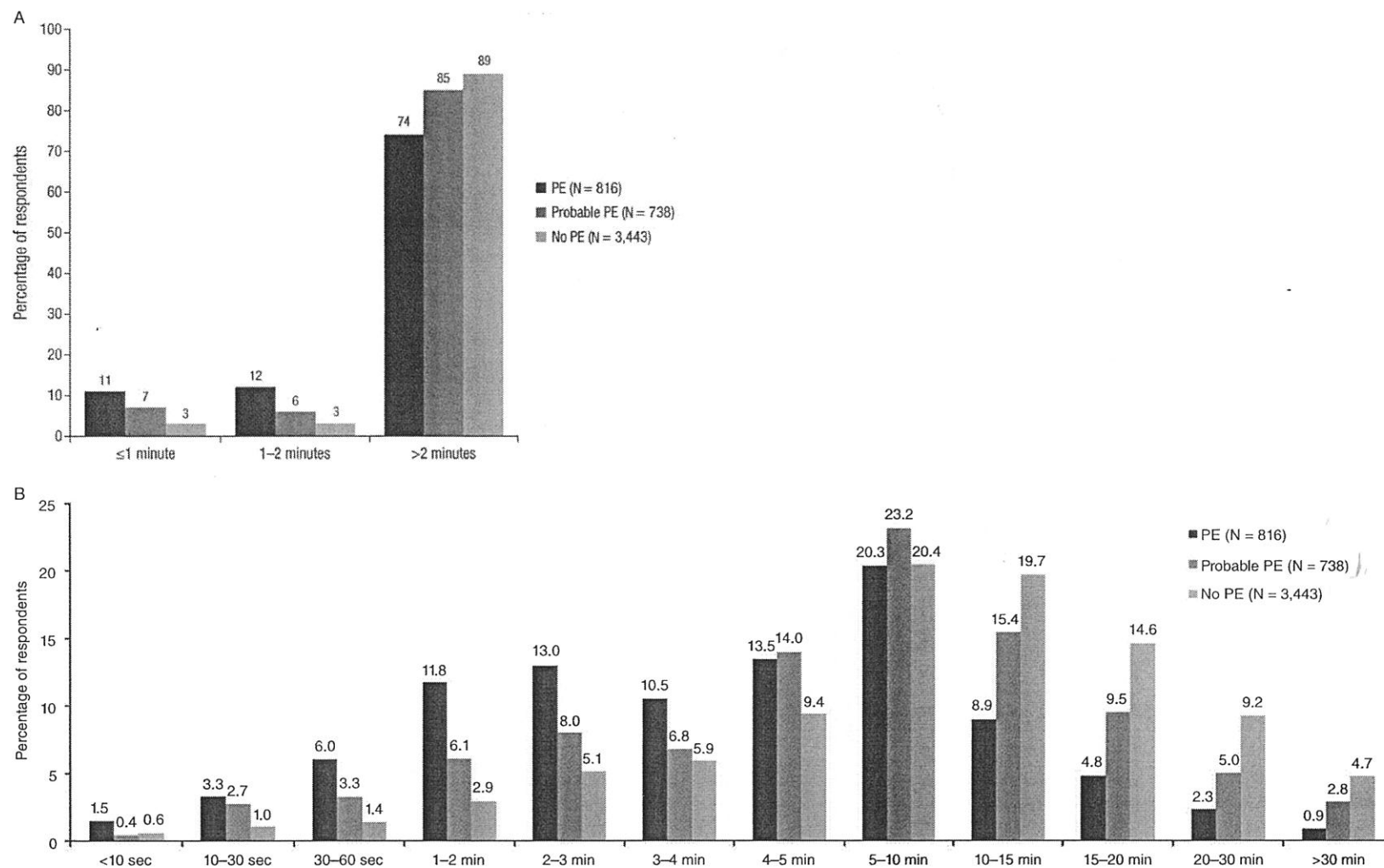


Figure 2 (A) Percentage of respondents with PEDT-diagnosed PE, probable PE, or no PE with IELTs of ≤1, 1–2, and >2 minutes. (B) Average interval of self-reported IELT of respondents by PE status. IELT, intravaginal ejaculatory latency time; PE, premature ejaculation; PEDT, Premature Ejaculation Diagnostic Tool.

Table 3 Comorbid PE and ED: the number (percentage) of men with SHIM-diagnosed ED by PEDT-diagnosis and self-reported PE status

N, %	PEDT diagnosis*			Self-reported		
	No PE (N = 3,438)	Probable PE (N = 738)	PE (N = 814)	No PE (N = 4,333)	Acquired PE (N = 324)	Lifelong PE (N = 333)
Mild ED (N = 3,995)	2,927 (85)	538 (73)	530 (65)	3,633 (84)	162 (50)	200 (60)
Mild to moderate ED (N = 760)	391 (11)	156 (21)	213 (26)	543 (13)	121 (37)	96 (29)
Moderate ED (N = 172)	80 (2)	33 (4)	59 (7)	109 (3)	31 (10)	32 (10)
Severe ED (N = 63)	40 (1)	11 (1)	12 (1)	48 (1)	10 (3)	5 (2)

*Seven respondents were excluded from this analysis because of no sexual activity/intercourse within the past 6 months.
 PE = premature ejaculation; ED = erectile dysfunction; SHIM = Sexual Health Inventory for Men; PEDT = Premature Ejaculation Diagnostic Tool.

Table 4 SHIM results by PEDT diagnosis

	Total (N = 4,997)	PE (N = 816)	Probable PE (N = 738)	No PE (n = 3,443)
How do you rate your confidence that you could get and keep an erection?	High or very high, %*	40	43	66
When you had erections with sexual stimulation, how often were your erections hard enough for penetration (entering your partner)?	Most times or almost always/always, %†	67	63	77
During sexual intercourse, how often were you able to maintain your erection after you had penetrated (entered) your partner?		60	63	77
When you attempted sexual intercourse, how often was it satisfactory for you?		45	58	80
During sexual intercourse, how difficult was it to maintain your erection to completion of intercourse?	Slightly difficult or not difficult, %‡	68	82	91

*Scale: very low, low, moderate, high, and very high.

†Scale: no sexual activity, almost never or never, a few times, sometimes (about half of the time), most times, and almost always or always.

‡Scale: no sexual activity, extremely difficult, very difficult, difficult, slightly difficult, and not difficult.

SHIM = Sexual Health Inventory for Men; PE = premature ejaculation; PEDT = Premature Ejaculation Diagnostic Tool.

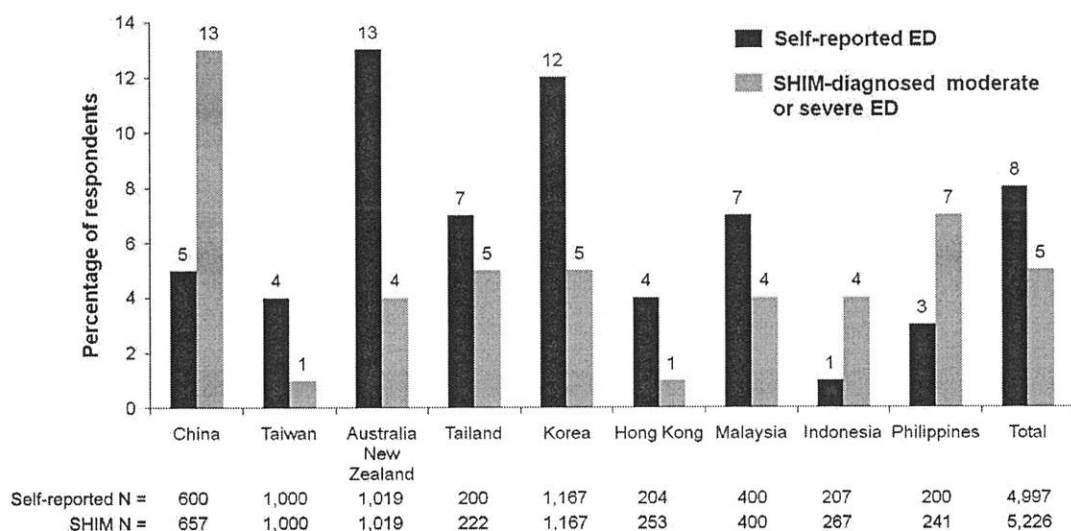
**Figure 3** Percentage of respondents with self-reported ED or SHIM-diagnosed moderate or severe ED by geographic location. ED, erectile dysfunction; SHIM, Sexual Health Inventory for Men.

Table 5 PEDT survey results

	Percentage of total respondents (N = 4,997)					PE (N = 816)	Probable PE (N = 738)	No PE (N = 3,443)
	Never or almost never	Less than half of the time	About half of the time	Greater than half of the time	Almost always/ always	More than half of the time or almost always/always, %		
Do you ejaculate before you want to?	25	36	25	10	4	57	13	5
Do you ejaculate with very little stimulation?	42	32	18	7	1	37	7	1
	Not at all	Somewhat	Moderately	Very	Extremely	Very or extremely, %		
How difficult is it for you to delay ejaculation?	29	40	20	9	2	51	10	1
Do you feel frustrated because of ejaculating before you want to?	30	32	20	14	4	79	23	2
How concerned are you that your time to ejaculation leaves your partner sexually unfulfilled?	22	24	22	24	7	86	46	16

PE = premature ejaculation; PEDT = Premature Ejaculation Diagnostic Tool.

partner, respondents completed the IPE (Table 6). Respondents with PEDT-PE and PEDT-probable PE reported low levels of sexual satisfaction and high levels of frustration over how long they lasted before ejaculation as well as their control over ejaculation. Additionally, among men with PEDT-PE, 72% (592/816) felt that their time to ejaculation was a problem, either for them (17% [140/816]), their partner (18% [149/816]), or both them and their partner (37% [303/816]). Similarly,

among men with PEDT-probable PE, 50% (373/738) felt that their time to ejaculation was a problem, either for them (13% [97/738]), their partner (12% [89/738]), or both them and their partner (25% [187/738]). Among respondents with PEDT-no PE, 6% (210/3,443) felt that their time to ejaculation was a problem for them, 8% (284/3,443) felt that it was a problem for their partner, and 11% (368/3,443) felt that it was a problem for both them and their partner.

Table 6 IPE survey results

	Total (N = 4,997)	PE (N = 816)	Probable PE (N = 738)	No PE (N = 3,443)
How satisfied were you with your sense of control over when you ejaculated?	14	46	16	5
How satisfied were you with the length of intercourse before ejaculation?	13	45	19	6
How satisfied have you been in your sex life overall?	17	44	19	11
How satisfied have you been with your sexual relationship with your partner?	17	39	20	10
How much confidence did you have over when you ejaculated?	9	37	10	3
How much pleasure has sexual intercourse given you?	6	16	7	3
How often did you have control over when you ejaculated?	21	48	25	15
How often was sexual intercourse satisfactory for you?	8	23	11	5
How distressed (frustrated) were you by how long you lasted before you ejaculated?	7	21	7	4
How distressed (frustrated) have you been about your control over ejaculation?	6	23	8	2

*Scale: very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied, and very dissatisfied.

†Scale: high, moderately high, neither high nor low, moderately low, and low.

‡Scale: always or almost always, more than half of the time, about half of the time, less than half of the time, and almost never or never.

§Scale: not at all, slightly, moderately, very, and extremely.

IPE = Index of Premature Ejaculation; PE = premature ejaculation.

Discussion

This was the most comprehensive study conducted in the Asia-Pacific region of PE and attitudes surrounding the condition. Using the PEDT, which is a validated tool for the diagnosis of PE, 31% of men in this study were found to have the condition (PE, 16%; probable PE, 15%). The prevalence of PE and probable PE varied from country to country; PE ranged from 3% in Indonesia to 33% in South Korea, and probable PE ranged from 7% in China to 25% in South Korea. This study also showed that 13% of men in the region assessed themselves as having PE, and this varied from 8% of men in Taiwan to 20% of men in the Philippines.

The International Society for Sexual Medicine (ISSM) has recently proposed new criteria for lifelong PE that include an IELT of approximately 1 minute in addition to an inability to delay ejaculation on all or nearly all vaginal penetrations and experiencing negative personal consequences as a result of this condition [23]. Based on these criteria, 11% of men with PEDT-diagnosed PE and 7% of men with probable PE reported an IELT of 1 minute or less. The PEDT was developed based on the criteria of the DSM-IV-TR, which have been criticized for being vague and imprecise, and do not consider IELT in the diagnosis of PE. Results from this study suggest that the ISSM criteria are much more stringent than those of the DSM-IV-TR and that the introduction of a diagnostic IELT value has a significant impact on the measured prevalence of the condition.

The percentage of men with PE and probable PE in this study (31%) is similar to the prevalence reported for Southeast Asia using data from the GSSAB, which found that 30.5% of men reported that they "reached climax too quickly" (Indonesia, Malaysia, Philippines, Singapore, and Thailand; $N = 907$) [1]. The results presented here, however, differ from other studies specific to countries in the Asia-Pacific region where men from China, Korea, and Malaysia were found to have PE rates of 8%, 11%, and 22.3%, respectively [14,24,25], although it should be noted that these studies relied exclusively on respondent self-reporting their condition and not validated instruments for the assessment of sexual dysfunction.

There was a wide discrepancy in the percentages of men who self-reported and those who were diagnosed with this condition using the PEDT. When respondents were asked if they perceived themselves to have PE, a large majority (87%) did

not think so, and 22% of respondents were diagnosed with PE or probable PE by the PEDT but did not self-assess themselves as having PE. This discrepancy may arise because men do not know enough about PE to meaningfully self-diagnose the condition; other studies have revealed that the prevalence of self-reported PE may be lower than that of a clinical diagnosis among patients because of its confusion with other sexual dysfunctions, especially ED [16]. Alternatively, the apparent difference in prevalences may result from the challenges of using the PEDT. The mean IELTs of respondents with PEDT-diagnosed PE and probable PE overlapped considerably with that of the general population [26]. The majority of respondents with PEDT-diagnosed PE or probable PE had IELT values of greater than 2 minutes (74% and 85%, respectively) and would not be diagnosed with PE under the ISSM criteria. However, these men clearly have symptoms or complaints of PE and may be experiencing negative personal consequences related to these symptoms. These men may be better characterized as having "natural variable PE" or "premature-like ejaculatory dysfunction" as suggested by Waldinger [27]. These PE subtypes, although not validated categories of PE assessment, may actually be normal variations of a wide range of sexual performance.

The prevalence of ED was determined using the SHIM questionnaire, which is a validated tool for the diagnosis of ED. These data show that ED affects 5% of men in the Asia-Pacific region, and, as with PE, this prevalence varies by geographic location. The percentage of men with PE (16%) and probable PE (15%) far exceeded that of ED for the total study population and for the majority of the individual countries assessed; the prevalence of ED was numerically higher than that of PEDT-diagnosed PE in China (13% and 4%, respectively) and Indonesia (4% and 3%, respectively). These results contrast with those of other studies in the region. The GSSAB reported that the prevalence of ED was similar to that of PE (28.4% and 30.5%, respectively), and the three previously mentioned studies from China, Korea, and Malaysia all found that the percentage of men who had ED was greater than or equal to the percentage who had PE (China: 8% ED and 8% PE [14]; Korea: 32.4% ED and 11% PE [24]; and Malaysia: 41.6% ED and 22.3% PE [25]). Unlike the study described here and the GSSAB, however, the studies conducted in China and Korea found increases in both PE and ED with age, whereas the study from Malaysia found an increasing preva-

lence of ED with age, but that the prevalence of PE actually decreased in older men.

One limitation of this study was the relatively small sample size of respondents across the countries in which the survey was conducted. Another limitation lay in the survey methodology employed across countries. Although the same survey questions were answered by all men, recruitment methodology varied by country as did the method for collecting responses (i.e., computer assisted, online, or in-person). Computer-assisted surveys are very accurate in terms of data collection but are susceptible to variable interpretation of the questions and require a certain level of proficiency by the respondents [28]. Internet surveys have several additional limitations including demographic bias and the possibility for multiple entries by the same respondent [29]. In-person surveys may be able to overcome some of the technical limitations associated with computer- or web-based surveys, but some respondents may feel embarrassed by their condition and may be reluctant to give accurate answers during face-to-face interviews [30,31]. Lastly, statistical analyses were not conducted, and so it is not known to what extent the variation observed represents statistically significant differences between populations.

Conclusions

PE significantly impacts a large portion of the male population in the Asia-Pacific region. Although the prevalence of both PE and ED varies from country to country, a higher percentage of men in most countries suffer from PE. Across the region, the proportion of lifelong PE is similar to that of acquired PE, but this too varies by location. One hypothesis is that these differences may be related to the differences in cultural or religious backgrounds. At the time this study was conducted, no agents were approved for the treatment of PE in any of the countries included. Further study is required to better understand the reasons for these regional differences.

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