ORIGINAL ARTICLE

PREVALENCE OF PREMATURE EJACULATION AND ERECTILE DYSFUNCTION AND THEIR ASSOCIATED FACTORS AMONG URBAN ANDRURAL POPULATION OF MALAYSIA

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ABSTRACT

The purpose of this study was to determine the prevalence and factors associated with of Premature Ejaculation &Erectile Dysfunctionamong Malaysian men.A cross-sectional study was conducted in urban and rural areas using standardized and validated self-administeredquestionnaires.A total of 319 samples were recruited for PE screening. The overall prevalence of PE was 31.7% with 20.7% and 40.8% for urban and rural arearespectively. Depression, anxiety and frequent masturbation were significantly associated with PE. While For ED, infrequent sexual intercourse was the sole factor significantly associated with ED.PE and ED were highly prevalent in both urban and rural areas; with several significant preventable associated factors.

Keywords: Premature Ejaculation, Erectile Dysfunction, Sexual Dysfunction, Malaysia

INTRODUCTION

Sexual health is one of the aspects of reproductive health, as well as part of mental and elderly health. The disturbance in sexual health affected both male and female after the age of puberty[1]. However, men's sexual health was not one of the major concerns in health priority. In some countries, men's sexual health problem remained hidden due to religious and cultural influences [2]. In recent years, professional and public interest in men sexual dysfunction has been sparked by developments in several areas especially due to better understanding of the problems & availability of better treatment. However, in Malaysia particularly, the epidemiologic data on men sexual dysfunction is relatively scant [3-5]especially throughout the different type of population e.g.population urban and rural areas.

Theoretically, men sexual problem primarily indexed according to seven response items; lacking desire of sex, arousal difficulties (i.e. erectile dysfunction), inability achieving climax or ejaculation, anxiety about sexual performance, climaxing or ejaculating too rapidly (premature ejaculation), physical pain during intercourse and not finding sex pleasurable[6]. However, in this study, only two out of seven sexual dysfunctions werestudied; premature ejaculation and erectile dysfunction which account the highest prevalence in the community and yet treatable [2, 7].

Premature Ejaculation (PE) and Erectile Dysfunction (ED) are the two most common sexual dysfunctions among men worldwide. The worldwide prevalence for both conditions can be up to 20 – 50% of all men in reproductive age [6, 8-13, 15-17]. Even though the problem is not life threatening, it may result in withdrawal from sexual intimacy, reduction in quality of life, under productivity and increase in healthcare utilization. Moreover, it will be a significant public health problem due to current rapid urbanization, globalization and increasing in aging population.

Based on available community studies, it appears that both problems are highly prevalent. It was reported in the United States of America that the prevalence of PE and ED were 21% and 5% amongst men respectively[7]. Prevalence of both PE and ED are relatively different between urban and rural population[5,11,12]. Information from the Global Study of Sexual Attitude &Behaviour suggests a global prevalence of PEof approximately 30% in all age groups[8]. Some other studies gave the approximate prevalence ranging from 22.7 to 27.5% [9, 10,11]. For ED, the prevalence varied although within the same country[6, 8, 15]. In Asian

region, the prevalence of ED was high, can be up to 50%[5,13].

PE is defined as ejaculation occurring without control, on or shortly after vaginal penetration and before the subject wishes it, causing remarked distress or interpersonal difficulties [18]. PE can be caused by primary (genetic, penile hypertrophy or hyper-excitable ejaculation reflex) and secondary causes (acquired after a period of normal sexual dysfunction) is due to multiple causes includes psychological, sexual experience, drugs and medical illness [1, 6, 9, 19-21]. Lifestyle and occupational status also affected the risk of having PE [30].Meanwhile, ED is defined as inability to achieve or maintain an erection sufficient for sexual performance [22]. In most literature, it is the most common chronic medical condition for all men after the age of 40 [15, 24, 31].There are many underlying physiological and physical causes of ED including aging [5] , development of chronic medical diseases [8,25, 32], smoking [2], drug and substances[6,25], hormonal imbalances [25] and psychological factors [6,8,16].

The objective of this study was to determine the prevalence of PE and ED and their associated risk factors among Malaysian men in rural and urban area.

METHODOLOGY

A total of 319 respondents were involved in this cross sectional study conducted in 2 different areas to represent urban (Kuala Lumpur Federal Territory) and rural (outskirt of District of Hilir Perak of Perak State) area. The criteria for selection of studied areas were based on the Malaysian Statistics Department and Department of Urban and Rural Development Plan. Purposive sampling was used to select respondents. The inclusion criteria were men aged 18 years old and above who had resided at least for the past 1 year permanently in the studied area. Men who were having severe mental illness or any condition that preventing respondent to voluntarily participate in this study were excluded.

This study was conducted using a self-administered questionnaire. The screening questionnaires were validated questionnaires and widely used in medical research (PE Diagnostic Tool and 5-Item International Index of Erectile Function (IIEF-5) [26, 27]. The questionnaire comprised of 3 parts. The first part was the subject's basic particular (age, race, marital status, educational level, occupation and household income). The second part was the 3 sets of validated screening questionnaire to identify those who could be suffering from premature ejaculation, erectile dysfunction and

psychological problem (depression, stress and anxiety). The final part of the questionnaire was the subsequent questions on possible risk factors of Premature Ejaculation and Erectile Dysfunction.

Symonds's PE Diagnostic Tool comprised of 5 questions and the subjects scored answer based on their general experience with sexual intercourse (Score 0- best to 4-worst). From the scoring point, no PE was regarded as score ≤ 8, probable PE was 9 – 10 and most likely PE was ≥ 11. The IIEF-5 contained 5 items which takes into account the latest six months. The possible scores for the IIEF-5 ranged from 1 to 25 (one question has scores of 1-5), and a score above 21 was considered as normal erectile function and at or below this cut-off was ED. According to this scale, ED was classified into four categories based on IIEF-5 scores: severe (1-7), moderate (8-11), mild to moderate (12-16), mild (17-21), and no ED (22-25) [28]. The 21-item version of Depression, Anxiety and Stress Scale (DASS 21) was used to assess current psychological status consisting of 21 statements referring to the past week. Each item was scored on a 4-point scale (0 = did not apply to me at all, to 3 = applied to me very much or most of the time). Scores from each subscale were summed and multiplied by two to get the same rating with DASS 42. Subscale score ranged from 0 to 42. Higher scores indicate greater levels of distress. The aim of the screening was just to assess the current psychological status in relation to the occurrence of PE and ED, therefore, the rating scale for DASS 21 was only to screen whether the samples were having depression, stress or anxiety or not, not the severity of the problems. Sequence of questions was as follow: Depression: Question 3, 5,10, 13, 16, 17 and 20, Stress: Question 1, 6, 8, 11, 12, 14 and 18 and anxiety Question 2, 4, 7, 9, 15, 19 and 21[29].

This study was approved by Research Ethical Committee, The National University of Malaysia (IRB REF NO: UKM 1.5.3.5/244/UKM-GGPM-TKP-066-2010). All respondents were informed regarding the purpose of the study, their right and confidentiality. Written permissions were obtained from the respondents before they participate. Statistical analysis was performed using the Statistical Package for Social Sciences for Windows (SPSS 17.0 for Windows™).

RESULT

A total of 319 samples were recruited for PE screening; 86.2% of them were Malays, 54.5% resided in rural area, 42.0% aged between 18-29 years old, 58.0% were married / widower, 84.3% have completed at least secondary education,

59.6% have salary wages maximum of RM 1000.00 per month(Table 1). The overall prevalence of PE was 31.7% with 20.7% and 40.8% for urban and rural area respectively(Table 2). Marital status, occupation, area of residence, smoking status, psychological status and frequency of masturbation were found to be associated with PE(Table 3& 4). However, by performing multivariate logistic regression analysis, depression (OR 2.95, 95% CI 1.02-8.55), anxiety (OR 8.2, 95% CI 1.37-49.03) and frequent masturbation (OR 2.82, 95% CI 1.32-6.04) were significantly associated with PE.

For ED, only 185 (married&widower) respondents were recruited for screening with 90.8% were Malays, 80.0% resided in rural area, 48.6% aged between 30-49 years old, 75.0% have completed at least secondary education, 44.7% have salary wages maximum of RM 1000.00 per month and 37.3% were government servants. The overall prevalence of ED was 69.2% with 54.1% and 73.0% urban and rural area respectively. Multivariate analysis found that infrequent sexual intercourse (OR 5.3, 95% CI 1.50-18.85) was the sole factor significantly associated with ED.

Table 1: Sociodemographic Distribution of the Respondents

Sociodemographic factor	Urban, N=145 N (%) / Mean ± SD	Rural, N=174 N (%)/ Mean ± SD
Age (Year)		
Mean ± SD	26.34 ± 9.131	44.43 ± 13.643
18 – 29	108 (74.5)	27 (15.5)
30 – 49	30 (20.7)	79 (45.4)
50 – 59	7 (4.8)	35 (20.1)
60 and above	0 (0)	33 (19.0)
Ethnicity		
Malay	125 (86.2)	150 (86.2)
Chinese	14 (9.7)	7 (4.0)
India	2 (1.4)	12 (6.9)
Other	4 (2.8)	5 (2.9)
Occupation		
Government	24 (16.6)	62 (35.6)
Private	26 (17.9)	33 (19.0)
Self-Employed	8 (5.5)	74 (42.5)
Unemployed / retired	1 (0.7)	5 (2.9)
Student	86 (59.3)	0 (0.0)
Marital Status		
Single	108 (74.5)	26 (14.9)
Married	37 (25.5)	145 (83.3)
Widower	0	3 (1.7)
Educational Level		
No Formal Education	0	3 (1.7)
Primary School	0	47 (27.0)
Secondary School	19 (13.1)	101 (58.0)
Higher Education	126 (86.9)	28 (13.2)
Household Income		
<RM400	87 (60.0)	16 (9.2)
RM400-RM1,000	7 (4.8)	81 (46.6)
RM1,001-RM2,000	11 (7.6)	43 (24.7)
RM2,001-RM3,000	10 (6.9)	25 (14.4)
RM3,001-RM4,000	7 (4.8)	7 (4.0)
>RM4,000	23 (15.9)	2 (1.1)

Table 2: Prevalence of Premature Ejaculation and Erectile Dysfunction by Severity

	Premature Ejaculation N=319				Erectile Dysfunction N=185					
	No PE	Probable PE	Most Likely PE	Total PE	No ED	Mild ED	Mild-Moderate ED	Moderate ED	Severe ED	Total ED
	n (%)					n (%)				
Age										
18 – 29	96 (71.1)	17 (12.6)	22 (16.3)	39 (28.9)	11 (45.8)	7 (29.2)	3 (12.5)	2 (8.3)	1 (4.2)	13 (54.2)
30 – 49	75 (68.8)	16 (14.7)	18 (16.5)	34 (31.2)	31 (34.4)	35 (38.9)	21 (23.3)	3 (3.3)	0 (0.0)	59 (65.5)
50 – 59	25 (59.5)	5 (11.9)	12 (28.6)	17 (40.5)	9 (22.5)	12 (30.0)	14 (35.0)	4 (10.0)	1 (2.5)	31 (77.5)
60 and above	22 (66.7)	2 (6.1)	9 (27.3)	11 (33.3)	6 (19.4)	8 (25.8)	8 (25.8)	5 (16.1)	4 (12.9)	25 (80.6)
Ethnicity										
Malay	188 (68.4)	33 (12.0)	54 (19.6)	87 (31.6)	51 (30.4)	58 (34.5)	42 (25.0)	13 (7.7)	4 (2.4)	117 (69.6)
Chinese	16 (76.2)	2 (9.5)	3 (14.3)	5 (23.8)	1 (33.3)	1 (33.3)	1 (33.3)	0 (0.0)	0 (0.0)	2 (66.7)
India	7 (50.0)	3 (21.4)	4 (28.6)	7 (50.0)	5 (38.5)	3 (23.1)	2 (15.4)	1 (7.7)	2 (15.4)	8 (61.5)
Other	7 (77.8)	2 (22.2)	0 (0.0)	2 (22.2)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
Occupation										
Government	56 (65.1)	10 (11.6)	20 (23.3)	30 (34.9)	24 (34.8)	26 (37.7)	15 (21.7)	3 (4.3)	1 (1.4)	45 (65.2)
Private	33 (55.9)	14 (23.7)	12 (20.3)	26 (44.1)	16 (34.8)	17 (37.0)	7 (15.2)	5 (10.9)	1 (2.2)	30 (65.2)
Self-Employed	51 (62.2)	10 (12.2)	21 (25.6)	31 (37.8)	16 (24.6)	17 (26.2)	23 (35.4)	6 (9.2)	3 (4.6)	49 (75.4)
Unemployed/ retired	5 (83.3)	0 (0.0)	1 (16.7)	1 (16.7)	1 (20.0)	2 (40.0)	1 (20.0)	0 (0.0)	1 (20.0)	4 (80.0)
Student	73 (84.9)	6 (7.0)	7 (8.1)	13 (15.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Marital Status										
Single	104 (77.6)	16 (11.9)	14 (10.4)	30 (22.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Married	113 (62.1)	24 (13.2)	45 (24.7)	69 (37.9)	57 (31.3)	61 (33.5)	45 (24.7)	13 (7.1)	6 (3.3)	125 (68.7)
Widower	1 (33.3)	0 (0.0)	2 (66.7)	2 (66.7)	0 (0.0)	1 (33.3)	1 (33.3)	1 (33.3)	0 (0.0)	3 (100.0)
Educational Level										
No Formal Education	3 (37.5)	5 (62.5)	0 (0.0)	5 (62.5)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
Primary School	28 (45.9)	19 (31.1)	14 (23.0)	33 (54.1)	12 (26.7)	8 (17.8)	16 (35.6)	5 (11.1)	4 (8.9)	33 (73.3)
Secondary School	74 (68.5)	7 (6.5)	27 (25.0)	34 (31.5)	24 (24.7)	38 (39.2)	26 (26.8)	8 (8.2)	1 (1.0)	73 (75.3)
Higher Education	113 (79.6)	9 (6.3)	20 (14.1)	29 (20.4)	21 (50.0)	16 (38.1)	3 (7.1)	1 (2.4)	1 (2.4)	21 (50.0)
Household Income										
<RM400	81 (78.6)	9 (8.7)	13 (12.6)	22 (21.4)	1 (10.0)	1 (10.0)	6 (60.0)	1 (10.0)	1 (10.0)	9 (90.0)
RM400-RM1,000	57 (64.8)	9 (10.2)	22 (25.0)	31 (35.2)	19 (26.0)	19 (26.0)	23 (31.5)	9 (12.3)	3 (4.1)	54 (74.0)
RM1,001-RM2,000	30 (55.6)	11 (20.4)	13 (24.1)	24 (44.4)	12 (28.6)	18 (42.9)	8 (19.0)	3 (7.1)	1 (2.4)	30 (71.4)
RM2,001-RM3,000	22 (62.9)	6 (17.1)	7 (20.0)	13 (37.1)	11 (37.9)	13 (44.8)	4 (13.8)	1 (3.4)	0 (0.0)	18 (62.1)
RM3,001-RM4,000	10 (71.4)	3 (21.4)	1 (7.1)	4 (28.6)	3 (25.0)	5 (41.7)	3 (25.0)	0 (0.0)	1 (8.3)	9 (75.0)
>RM4,000	18 (72.0)	2 (8.0)	5 (20.0)	7 (28.0)	11 (57.9)	6 (31.6)	2 (10.5)	0 (0.0)	0 (0.0)	8 (42.1)
Area										
Urban	115 (79.3)	15 (10.3)	15 (10.3)	30 (20.7)	17 (45.9)	16 (43.2)	3 (8.1)	1 (2.7)	0 (0.0)	20 (54.1)
Rural	103 (59.2)	25 (14.4)	46 (26.4)	71 (40.8)	40 (27.0)	46 (31.1)	43 (29.1)	13 (8.8)	6 (4.1)	108 (73.0)

Table 3: Premature Ejaculation and Erectile Dysfunction and their association with sociodemographic factors

	Premature Ejaculation, N=319					Erectile Dysfunction, N=185				
	PE n (%)	No PE	X^2	p value	POR	ED n (%)	No ED	X^2	p value	POR
Age										
18 – 29	39 (28.9)	96 (71.1)	2.042	0.564		13 (54.2)	11 (45.8)	6.303	0.098	
30 – 49	34 (31.2)	75 (68.8)				59 (65.6)	31 (34.4)			
50 – 59	17 (40.5)	25 (59.5)				31 (77.5)	9 (22.5)			
60 above	11 (33.3)	22 (66.7)				25 (80.6)	6 (19.4)			
Ethnicity										
Malay	87 (31.6)	188 (68.4)	0.001	0.981		51 (30.4)	117 (69.6)	0.117	0.674	
Non-Malay	14 (31.8)	30 (68.2)				6 (35.3)	11 (64.7)			
Occupation										
Government	30 (34.9)	56 (65.1)	17.538	**0.001**		45 (65.2)	24 (34.8)	2.295	0.513	
Private	26 (44.1)	33 (55.9)				30 (65.2)	16 (34.8)			
Self-Employed	31 (37.8)	51 (62.2)				49 (75.4)	16 (24.6)			
Unemployed / retired/ student	14 (15.2)	78 (84.8)				4 (80.2)	1 (20.0)			
Marital Status										
Single	30 (22.4)	104 (77.6)	9.183	**0.002**	0.46	0 (0.0)	0 (0.0)	-	-	
Married / Widower	71 (38.4)	114 (61.6)				128(69.2)	57 (30.8)			
Educational Level										
Primary &Lower	19 (38.0)	31 (62.0)	1.101	0.294		34 (73.9)	12 (26.1)	0.641	0.423	
Secondary & Higher	82 (30.5)	187 (69.5)				94 (67.6)	45 (32.4)			
Household Income										
<RM1000	53 (27.9)	137 (72.1)	6.014	0.111		63 (75.9)	20 (24.1)	5.538	0.136	
RM1001-2000	24 (44.4)	30 (55.6)				30 (71.4)	12 (28.6)			
RM2001-3000	13 (37.1)	22 (62.9)				18 (62.1)	11 (37.9)			
>RM3000	11 (28.2)	28 (71.8)				17 (54.8)	14 (45.2)			
Area										
Urban	30 (20.7)	115 (79.3)	14.790	**<0.001**	0.38	20 (54.1)	17 (45.9)	4.970	**0.026**	0.44
Rural	71 (40.8)	103 (59.2)				108(73.0)	40 (27.0)			

Table 4A: Prevalence of Premature Ejaculation & Erectile Dysfunction and association with health and lifestyle, social status and social experience

	Premature Ejaculation, N=319					Erectile Dysfunction, N=185				
	PE	No PE	X^2	p value	POR	ED	No ED	X^2	pvalue	POR
	n (%)					n (%)				
Health and Lifestyle										
Daily Alcohol Consumption										
Yes	1 (20.0)	4 (80.0)		1.000 [a]		1 (100.0)	0 (0.0)		1.000[a]	
No	100(31.8)	214(68.2)				127(69.0)	57 (31.0)			
Sexually Transmitted Disease										
Yes	1(33.3)	2(66.7)		1.000 [a]		1 (100.0)	0 (0.0)		1.000[a]	
No	100(31.6)	216(68.4)				127 (69.0)	57 (31.0)			
Chronic Medical Illness										
Diabetes Mellitus										
Yes	5(22.7)	17 (77.3)	0.872	0.350		17 (77.3)	5 (22.7)	0.765	0.382	
No	96 (32.3)	201(67.7)				111(68.1)	52(31.9)			
Heart Disease										
Yes	2 (22.2)	7 (77.8)		0.724 [a]		8 (88.9)	1 (11.1)		0.279[a]	
No	99 (31.9)	211(68.1)				120 (68.2)	56 (31.8)			
Hypertension										
Yes	12(35.3)	22(64.7)	0.232	0.630		27 (81.8)	6(18.2)	3.005	0.083	
No	89 (31.2)	196 (68.8)				101 (66.4)	51 (33.6)			
History of UTI										
Yes	9 (45.0)	11 (55.0)	1.755	0.185		14 (82.4)	3 (17.6)	1.522	0.217	
No	92 (30.8)	207(69.2)				114(67.9)	54 (32.1)			
Circumcision										
Yes	90 (31.6)	195(68.4)	0.008	0.927		118(69.4)	52 (30.6)		0.779 [a]	
No	11 (32.4)	23 (67.6)				10 (66.7)	5 (33.3)			
Smoking										
Yes	46 (39.3)	71 (60.7)	5.004	**0.025***	1.73	60 (66.7)	30 (33.3)	0.523	0.470	
No	55 (27.2)	147 (72.8)				68 (71.6)	27 (28.4)			
Taking Medication to Improve Sexual Performance										
Yes	5 (29.4)	12 (70.6)	0.042	0.838		12 (80.0)	3 (20.0)		0.560 [a]	
No	96 (31.8)	206 (68.2)				116 (68.2)	54 (31.8)			
Psychological Status										
Depression										
Yes	85 (28.9)	209 (71.1)	13.111	**<0.001***	0.23	119 (68.0)	56(32.0)		0.560 [a]	
No	16 (64.0)	9 (36.0)				9 (90.0)	1 (10.0)			
Anxiety										
Yes	92(29.9)	216 (70.1)		**0.001 [a]**	0.09	124 (76.7)	57 (31.5)		0.313 [a]	
No	9 (81.8)	2 (18.2)				4 (100.0)	0(0.0)			
Stress										
Yes	62(26.7)	170 (73.3)	9.584	**0.002***	0.45	93 (65.5)	49 (34.5)	3.915	**0.048**	0.43
No	39 (44.8)	48 (55.2)				35 (81.4)	8(18.6)			

[a] Fisher's Exact Test
POR Prevalence Odd Ratio
*level of significance at p < 0.05

Table 4B: Prevalence of Premature Ejaculation & Erectile Dysfunction and association with health and lifestyle, social status and social experience

Social Status										
Open Towards Sexual Discussion										
Yes	74 (33.0)	150(67.0)	0.627	0.418		92 (69.2)	41(30.8)	<0.001	0.994	
No	27 (28.4)	68 (71.6)				36 (69.2)	16(30.8)			
Sexual Experience										
History of more than 5 Life Partner										
Yes	8(44.4)	10 (55.6)	1.441	0.230		3 (60.0)	2 (40.0)		0.644 [a]	
No	93 (30.9)	208 (69.1)				125 (67.4)	55 (32.6)			
Frequency of Sex Less Than Once Monthly										
Yes	31 (52.5)	28 (47.5)	14.587	**<0.001***	3.0	33(91.7)	3 (8.3)	10.594	**0.001**	**6.25**
No	70 (26.9)	190 (73.1)				95 (63.8)	54 (36.2)			
Think About Sex Less Than Once in a Week										
Yes	32(38.1)	52 (61.9)	2.181	0.140		38 (80.4)	9 (19.6)	4.020	**0.045**	**2.25**
No	69 (29.4)	166 (70.6)				90 (65.2)	48 (34.8)			
Masturbate at Least Once a Week										
Yes	20 (45.5)	24(54.5)	4.488	**0.034***	2.0	10 (58.8)	7 (41.2)	0.994	0.331	
No	81(29.5)	194 (70.5)				118 (70.2)	50 (29.8)			
Any Same Sex Activity Ever										
Yes	4 (57.1)	3(42.9)		0.214 [a]		4 (100.0)	0 (0.0)		0.313 [a]	
No	97 (31.1)	215 (68.9)				124 (68.5)	57 (31.5)			
Partner Had Experience Abortion										
Yes	17 (37.8)	28(62.2)	0.906	0.341		31 (70.5)	13 (29.5)	0.043	0.835	
No	84 (30.7)	190 (69.3)				97 (68.8)	44 (31.2)			
Sexually Forced Someone Before										
Yes	2 (28.6)	5 (71.4)		1.000 [a]		3 (100.0)	0(0.0)		0.554 [a]	
No	99 (31.7)	213 (68.3)				125 (68.7)	57 (30.8)			
Sexually Harassed by Someone Before										
Yes	5 (22.7)	17 (77.3)	0.872	0.350		2 (40.0)	3 (60.0)		0.171 [a]	
No	96 (32.3)	201 (67.7)				126 (70.0)	54 (30.0)			
Sexually Touched / Molested Before Puberty										
Yes	2 (28.6)	5 (71.4)		1.000 [a]		0 (0.0)	0 (0.0)	-	-	
No	99 (31.7)	213 (68.3)				128 69.2)	62 (30.8)			

[a] *Fisher's Exact Test*

DISCUSSION

The overall prevalence of PE among Malaysian men in this study was 31.7% and it was consistent with similar studies done elsewhere which ranged from 20 to 30%[8,11]. The PE prevalence among rural respondents was higher even it was not significant. A Chinese study showed a high prevalence of PE among rural Chinese men [12]. No evidence to support that low media exposure and sexual health promotion are causing the problem in our society, but these could be one of the reasons. In contrast, the prevalence of ED in this study was extremely higher, almost 70%. Elsewhere, we noted that the prevalence of ED varied between 5 to 50% [15, 6,13, 16, 5, 8]. The variety in the prevalence was probably due to different study group, substantially contributed by the number of samples.

There are multiple risk factors that cause PE and ED. Primary PE is more difficult to diagnose and basic PE screening does not rule out the diagnosis. Secondary PE is easier to manage and the factors associated are well-established. From our study, respondents with depression and anxiety were prone to develop PE; consistent with several previous studies [6,9]. We also found that men who had frequent masturbation surprisingly had a higher tendency to develop PE.Other important risk factors for PE such as history of Urinary Tract Infection (UTI) and Diabetes Mellitus were found not significantly associated in this study. Even Screponi(2001)has proven the association between UTI in men and PE[19], we knew that the prevalence of UTI among men were substantially lower than women and we were just manage to screen 4.7% of all the samples for history of UTI through the study. Surprisingly, diabetes was not associated with PE in our study; perhaps larger sample size would give different result as proven by other studies [20].

The risk of ED among diabetics, smokers and aging men have been clearly understood [30, 8, 5,2]. Diabetes which can cause vascular insufficiency for penile erection was statistically not associated with ED in this study, even we managed to screen 12% diabetics from all respondents. The prevalence of ED was noted high as early as in early adult. With a high prevalence of ED among smokers (66.7%) in this study, we still unable to determine the association between smoking and ED, perhaps with sub-analysis of each smoking severity we could prove something. As far as we know, experts have determined the association between psychological status and the risk of developing ED [16, 6]. Although we found that the prevalence of depression, anxiety and stress were extremely high among those who screened as ED, we could not find significant association. The only factor significantly associated with ED after controlling the confounders was infrequent sexual intercourse (SI) with a ratio of 5. Causes for infrequent SI itself can be multi-factorial, thus not much explained the underlying root of the problem. Further extended studies focusing on sexual behaviour would suggest some better explanation. Also, engaging between the health care providers and those who utilize it such as men is important in reducing morbidity and mortality among them [31].

Several limitations were encountered during the data collection. It was noted that not all respondents were eligible to participate for ED screening. Bias was noted in the IEEF-5 screening questionnaires for ED. Questions 3 to 5 contained scoring for '*did not attempt intercourse*' have confused the respondents especially those who never had sex. The bias is even greater in Malay translated version ('*tidakmencubapersetubuhan*') and the questionnaires were answered by the respondents themselves. Sex before marriage is prohibited in Malaysian culture, especially among the Malay Muslims. Most of unmarried men will have a low tendency to attempt sexual intercourse. The selection bias have led the respondents who never experience sex to score it as 'did not attempt intercourse', which was actually meant for the respondents who unable to perform sexual intercourse due to erectile dysfunction. In addition, refusal towards sexual discussion and high ego will lead the respondents to be screened no ED, as well as no PE. In view of high percentage of misscoring among those who never had sex, only 58% (185) out of total respondents were analysed for ED.

CONCLUSION

In conclusion, the prevalence of PE and ED were high in both urban and rural areas.However, the majority of significant risks factors associated with the problems are preventable and treatable. Thus, a good collaboration between clinical and public health intervention will give hope to improve the conditions in Malaysia.

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CONFLICTS OF INTEREST
The authors declare no conflicts of interest

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