

THE PREVALENCE OF MALE AND FEMALE SEXUAL DYSFUNCTION AND ITS ASSOCIATED FACTORS IN TEMERLOH, PAHANG



Thematic Project Study
as part of programme of
Community Residency Programme (CRP) Year 2006
Phase IIIa Class 2003/2008
Temerloh Station



by

Charles Teh Chuang Wei (Station Manager), Aisyah Wagiman, Ang Ming Ping, Azilina Abdul Aziz, Chan Poh Yee, Choong Swee Hsia, Chuah Seow Lin, Erleena Nur Hassan, Fairuzaman Jaafar, Faizal Firdaus Khairuddin, Faridah Md. Adnan, Hayati Mansor, Khaw Ju Lin, Lim Boon Kok, Lim Jin Huang, Lim Lay Ang, Low Dy-Win, Mohd. Harris Anwarali Khan, Mohd. Fandi Al Khafiz Kamis, Noor Hidayah Saarey @ Ghazali, Norazlan Shah Osman Basah, Norulhasna Hassan Basri, Nur Azwin Hamran, Nuraliza Edham, Nurhafizah Zainal Abidin, Nurhaidi Abdullah, Ong Gin Hwa, Shamsul Bahari Abdul Rahim, Wong Hui Tong, Yeoh Zhi Xiang

INTRODUCTION

- Sexuality is a complex process coordinated by the neurological, vascular and endocrine systems
- The importance of sexual health for quality of life and overall life satisfaction has been increasingly recognised
- Sexual dysfunction can have major impact on quality of life in men and women, where even impairment of sexual function can have damaging effects on the self-esteem, sense of wholeness and interpersonal relationship; it is often emotionally distressing
- Many epidemiological studies of sexual behaviour and disorders have been conducted during the past 10 years in various countries
- There have been few studies of the prevalence of sexual dysfunction in women
- Although the prevalence of male sexual dysfunction, and to a lesser extent, the prevalence of female sexual dysfunction, and their risk factors have been studied before in Malaysia, most of the studies are non-localised to a location, such as an administrative health district
- Our study was aimed at complementing a series of studies on male and female sexual dysfunction, especially how the factors such as age, health, and various relationship psychology have an impact on sexual functions (and thus dysfunctions)

MATERIALS AND METHODS

- **Sample selection :-**
 - 4 sampling sites in Temerloh (Kg. Penderas, Kg. Desa Murni, Kg. Felda Bukit Damar, Kg. Batu Kapor)
 - Sampling frame of 30 men and 30 women, who are aged 18 years and above, stayed for 6 months or more at the sampling site, by simple random method

- Using a pilot-tested questionnaire, either self-administered or face-to-face interview; Questionnaire used on the field was in Bahasa Malaysia, translated from original form of English version ; forward and backward translation was done to ensure minimum distortion of terms and purpose

- 4 major sections of the **survey instrument :-**
 - Demographic and health history information
 - Emotional and psychological assessment
 - Hospital Anxiety and Depression Scale (HADS)
 - Gender-specific questionnaires pertaining to measuring sexual dysfunction

- All statistical analyses were done using SPSS, version 13.0 (SPSS, Chicago, Illinois) and all hypotheses tests were 2-sided with $p < 0.05$ considered significant

MATERIALS AND METHODS

- **Questionnaire** to assess sexual dysfunction :-
 - Lacking desire for sex
 - Arousal difficulties (ie. erection problems for men, lubrication difficulties in women)
 - Inability to achieve climax or ejaculation
 - Anxiety about sexual performance
 - Achieving climax or ejaculating too rapidly
 - Physical pain during intercourse
 - Not finding sex pleasurable

- For **male**,
 - International Index of Erectile Function (IIEF-5) as a 5-question tool to screen for erectile dysfunction (ED)
 - International Premature Ejaculation (IPE) Scoring System
 - A separate scoring index, International Prostatic Symptoms Score (IPSS), was used to measure severity of prostatic symptoms of the respondent

- For **female**, Female Sexual Function Index (FSFI) Scoring System was applied

RESULTS

■ Study population :-

Variable	Value (Male)	Value (Female)
Number of sample (n)	123	123
Age		
▪ Mean age (\pm s. d.)	46.6 (\pm 14.0)	41.7 (\pm 13.0)
▪ Range	18 - 69	18 - 73
Ethnicity		
▪ Malay	96 (78.1%)	94 (76.4%)
▪ Chinese	2 (1.6%)	0
▪ Indian	1 (0.8%)	0
▪ Others	24 (19.5%)	29 (23.6%)
Religion		
▪ Islam	97 (78.9%)	97 (78.9%)
▪ Buddhism	2 (1.6%)	0
▪ Christian	1 (0.8%)	1 (0.8%)
▪ Others	23 (18.7%)	25 (20.3%)

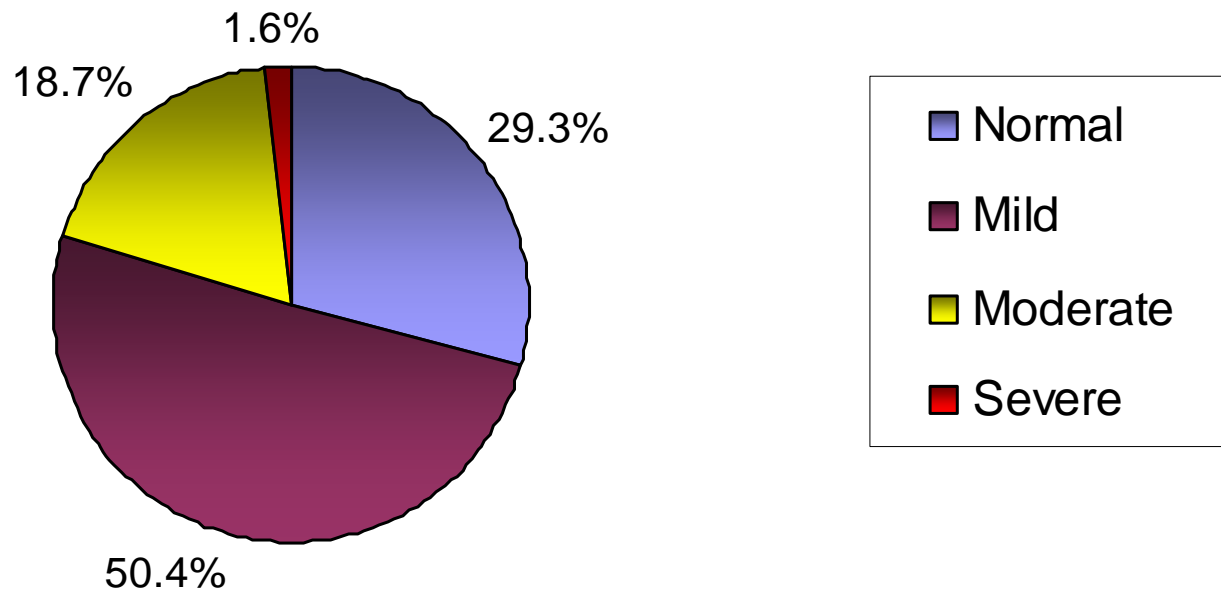
Variable	Value (Male)	Value (Female)
Education level		
▪ No formal education	26 (21.1%)	28 (22.8%)
▪ Primary (not completed)	17 (13.8%)	23 (18.7%)
▪ Primary (completed)	29 (23.6%)	27 (22.0%)
▪ Lower secondary	20 (16.3%)	15 (12.2%)
▪ Upper secondary	25 (20.3%)	27 (22.0%)
▪ Tertiary	6 (4.9%)	3 (2.4%)
Occupation		
▪ Pensioner	11 (8.9%)	1 (0.8%)
▪ Professional	2 (1.6%)	0
▪ Lesser professional & trades	20 (16.3%)	5 (4.1%)
▪ Skilled manual & clerical	5 (4.1%)	0
▪ Semi-skilled manual	27 (22.0%)	4 (3.3%)
▪ Housewife / Homemaker	0	104 (84.6%)
▪ Unskilled manual	42 (34.1%)	0
▪ Student	0	5 (4.1%)
▪ Unemployed	16 (13.0%)	4 (3.3%)
Marital status		
▪ Single	12 (9.8%)	0
▪ Married	110 (89.4%)	123 (100.0%)
▪ Divorced / separated	1 (0.8%)	0

Variable	Value (Male)	Value (Female)
Smoking status <ul style="list-style-type: none"> ▪ Currently smoking ▪ Never smoked before ▪ Previously smoked but quit 	[n=123] 64 (52.0%) 39 (31.7%) 20 (16.3%)	[n=123] 8 (6.5%) 111 (90.2%) 4 (3.3%)
Number of cigarettes smoked (pack-years) <ul style="list-style-type: none"> ▪ 0 – 4.99 ▪ 5.00 – 9.99 ▪ 10.00 – 14.99 ▪ 15.00 – 19.99 ▪ 20.00 – 24.99 ▪ 25.00 – 29.99 ▪ > 30.00 	[n=64] 16 (25.0%) 14 (21.9%) 7 (10.9%) 9 (14.1%) 6 (9.4%) 4 (6.2%) 8 (12.5%)	[n=8] 5 (62.5%) } 3 (37.5%)
Alcohol consumption status <ul style="list-style-type: none"> ▪ Active drinker ▪ Non-drinker ▪ Previous drinker but quit 	[n=123] 6 (4.9%) 107 (87.0%) 10 (8.1%)	[n=123] 1 (0.8%) 122 (99.2%) 0
History of illness <ul style="list-style-type: none"> • Diabetes mellitus • Ischaemic Heart Disease • Hypertension • Others • Menopause 	[n=123] 10.6% 4.9% 17.9% 22.8% -	[n=123] 5.7% 1.6% 24.4% 13.8% 17.1%

Variable	Value (Male)	Value (Female)
Emotional problems encountered within past one month	[n=118]	[n=123]
<ul style="list-style-type: none"> ▪ Domestic relationship problems ▪ Lack of trust ▪ Lack of communication ▪ Boring routine sexual intercourse 	<p>8.9%</p> <p>8.9%</p> <p>10.6%</p> <p>11.4%</p>	<p>11.0%</p> <p>12.0%</p> <p>11.0%</p> <p>11.0%</p>
Psychological problems encountered within past one month	[n=118]	[n=123]
<ul style="list-style-type: none"> ▪ Fear to have sexual intercourse ▪ Feeling of guilt to have sex ▪ Past sexual trauma ▪ Tensed-up for sexual intercourse ▪ Low self-esteem ▪ Fear of failure to satisfy partner ▪ Addicted to sexual intercourse 	<p>4.9%</p> <p>5.7%</p> <p>3.3%</p> <p>13.8%</p> <p>15.4%</p> <p>11.4%</p> <p>6.5%</p>	<p>10.6%</p> <p>8.1%</p> <p>3.3%</p> <p>11.4%</p> <p>16.3%</p> <p>17.1%</p> <p>5.7%</p>
Prevalence of anxiety (HADS score)	[n=123]	[n=123]
<ul style="list-style-type: none"> ▪ Normal ▪ Mild ▪ Moderate ▪ Severe 	<p>106 (86.2%)</p> <p>10 (8.1%)</p> <p>4 (3.3%)</p> <p>3 (2.4%)</p>	<p>91 (74.0%)</p> <p>21 (17.1%)</p> <p>9 (7.3%)</p> <p>2 (1.6%)</p>
Prevalence of depression (HADS score)	[n=123]	[n=123]
<ul style="list-style-type: none"> ▪ Normal ▪ Mild ▪ Moderate ▪ Severe 	<p>95 (77.2%)</p> <p>18 (14.6%)</p> <p>7 (5.7%)</p> <p>3 (2.4%)</p>	<p>101 (82.1%)</p> <p>19 (15.4%)</p> <p>3 (2.4%)</p> <p>0</p>

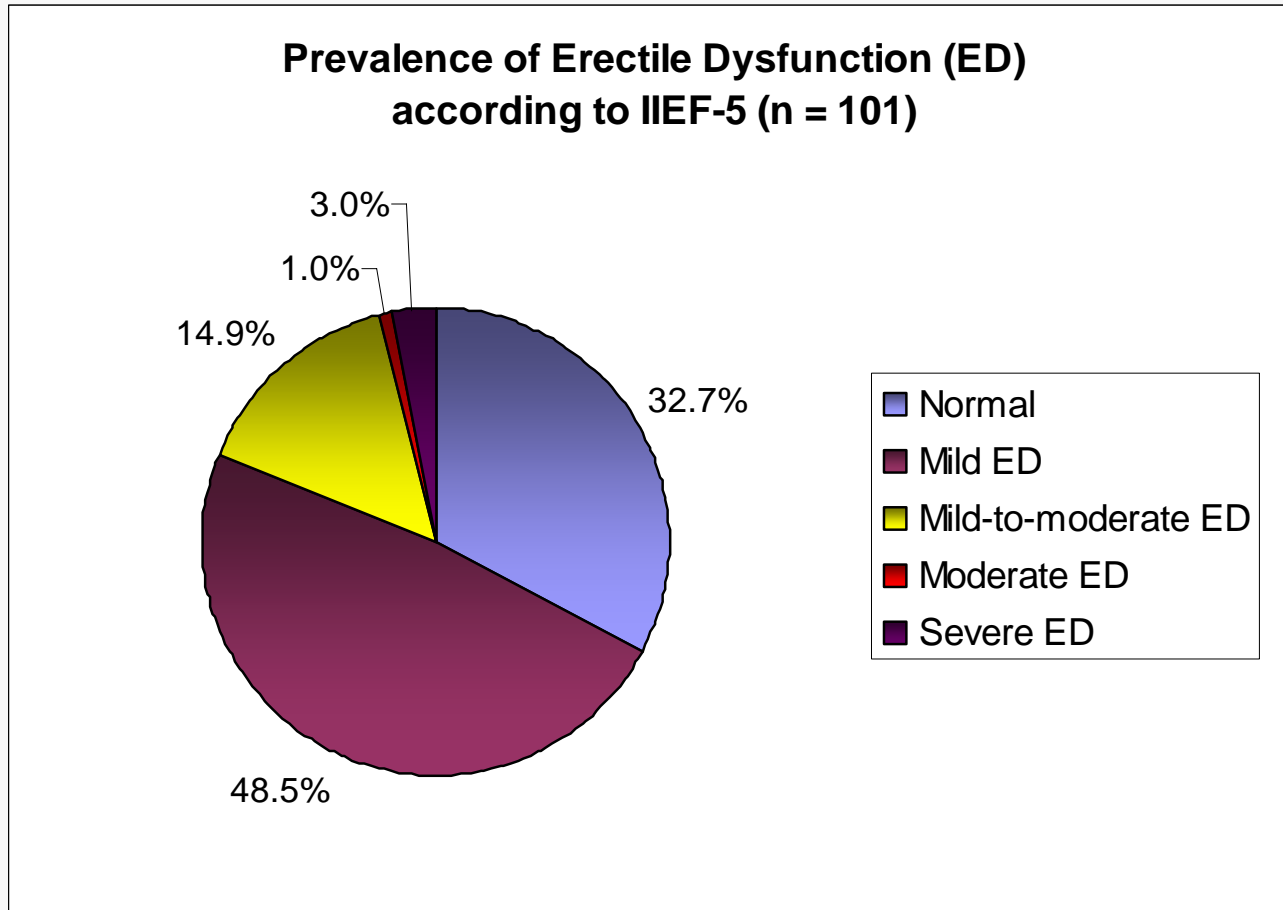
RESULTS - MALE

**IPSS scoring group for prostatic symptoms
(n = 123)**



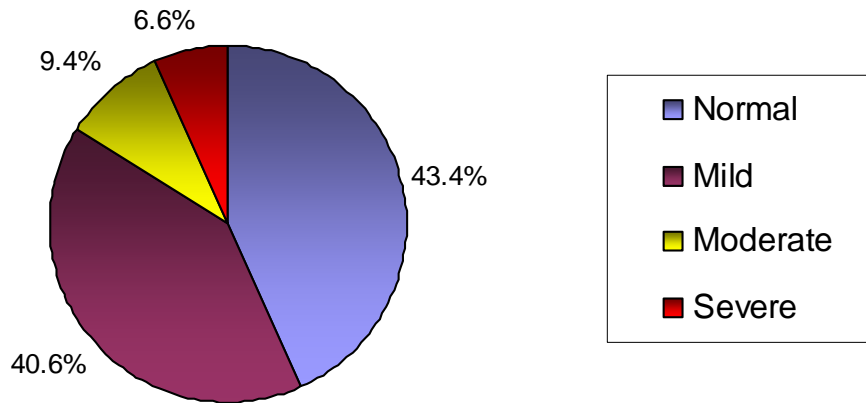
The prevalence rate for prostatic symptoms in our study population is 70.7%

RESULTS - MALE

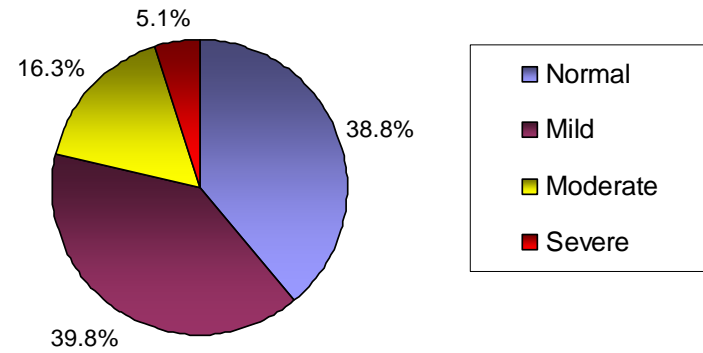


The prevalence rate for erectile dysfunction (consideration include mild to severe ED) in our study population is 67.3%

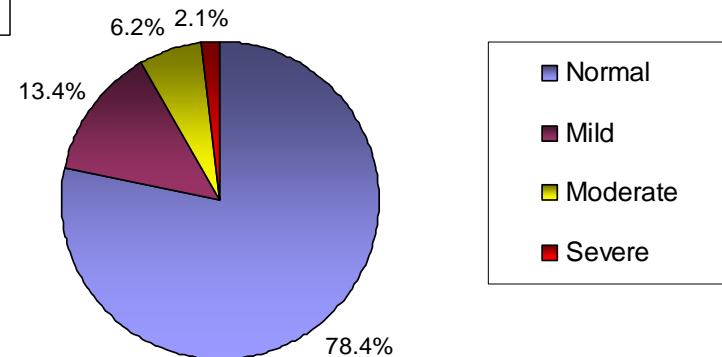
**IPE sexual satisfaction domain
(n = 106)**



**IPE control domain
(n = 98)**



**IPE distress domain
(n = 97)**



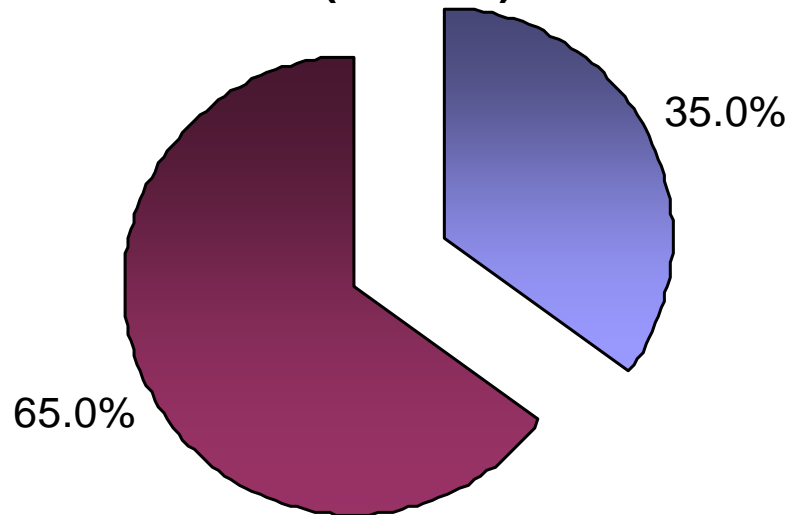
The prevalence rate for ejaculatory dysfunction

- Sexual satisfaction domain : 56.6%
- Control domain : 61.2%
- Distress domain : 21.6%

RESULTS - FEMALE

Prevalence of female sexual dysfunction based on FSFI

(n = 123)



■ Normal (FSFI \geq 26.55) ■ Sexual Dysfunction (FSFI < 26.55)

- Cut-off point at FSFI = 26.55 as suggested as the optimal cut-off point #, regardless of associated risk factors
- **Prevalence of female sexual dysfunction of our study population is 65.0%**

Wiegel M, Meston C, Rosen R. The female sexual function index (FSFI): cross-validation and development of clinical cutoff scores. J Sex & Marital Therapy 2005 ; 31: pp 1 - 20

- Anxiety (p=0.002)
- Depression (p=0.003)
- Domestic relationship problem (p=0.015)
- Loss of trust for partner (p=0.037)
- Loss of open communication (p=0.024)
- IPE[*sexual satisfaction domain*] (p=0.001)
- IPE[*control domain*] (p=0.002)

has a **statistically significant relationship** with erectile dysfunction

- Ethnicity (p=0.056)
- Education (p=0.121)
- Occupation (p=0.090)
- Smoking (p=0.604),
- Diabetes mellitus (p=0.100),
- Hypertension (p=0.476),
- Boring routine sexual intercourse (p=0.177)
- Inferiority (p=0.061)
- Fear of failure to fulfill partner's desire (p=0.132)
- Prostatic symptoms (p=0.380)
- Premature ejaculation [*distress domain*] (p=0.058)

has **no statistically significant relationship** with erectile dysfunction.

- Age (p=0.023)
- Tension (p=0.048)
- Depression (p=0.012)
- Loss of open communication (p=0.014)
- IPE [*control domain*] (p=0.001)
- IPE [*distress domain*] (p=0.028)

has a **statistically significant relationship** with IPE score (*sexual satisfaction domain*)

- Anxiety (p=0.158)

has **no statistically significant relationship** with IPE score (*sexual satisfaction domain*).

- Diabetes mellitus (p=0.045)
- Inferiority (p=0.026)
- Depression (p=0.003)
- Anxiety (p=0.047)
- IPE [*distress domain*] (p=0.003)

has a **statistically significant relationship** with IPE score (*control domain*)

- Occupation (p=0.018)
- Smoking (p=0.023)
- Traumatic sexual experience (p=0.028)
- Fear of failure to fulfill partner's desire (p=0.009)
- Anxiety (p=0.047)
- Depression (p=0.005)

has a **statistically significant relationship** with IPE score (*distress domain*)

- Education level (p=0.052)

has **no statistically significant relationship** with IPE score (*distress domain*)

- Age ($p=0.002$)
- Smoking ($p=0.036$)
- Inferiority ($p=0.041$)
- Fear for sexual intercourse ($p=0.030$)
- Feel guilty for sexual intercourse ($p=0.011$)
- Tension ($p=0.002$)

has a **statistically significant relationship** with female sexual dysfunction (using FSFI)

- Ethnicity ($p=0.065$)
- Education level ($p=0.065$)
- Diabetes mellitus ($p=0.468$)
- Hypertension ($p=0.125$)
- Anxiety ($p=0.17$)
- Depression ($p=0.404$)
- Domestic relationship problem ($p=0.189$)
- Loss of trust for partner ($p=0.587$)
- Loss of open communication ($p=0.053$)
- Boring routine sexual intercourse ($p=0.183$)
- Fear of failure to satisfy partner ($p=0.5$)
- Traumatic sexual experience ($p=0.174$)
- Cravings for sex ($p=0.227$)

has **no statistically significant relationship** with female sexual dysfunction (using FSFI)

DISCUSSION AND CONCLUSION

■ **Strength and weakness of the study :-**

- Study sample encompasses scattered group of people in rural Temerloh due to logistics limitation; not suitable for assumptive extrapolation for entire Temerloh population, moreover national population
- Realistic probability of underreporting, due to systemic limitation and low literacy level among respondents
- Likely underestimation of the prevalence of more severe cases because of the reluctance of respondents to report severe problems

■ **Suggestion :-**

- A large-scale systematic study on prevalence of male and female sexual dysfunction in order to promptly highlight the disease burden to the country
- Early clinical recognition of sexual dysfunction with emphasis on preventive advices
- Future research on refining the understanding of sexual function in both sexes, and where problems need help, what sort of help might be most effective in general practice, and the most appropriate training for general practitioners

■ **Male sexual dysfunction :-**

- Unlike our findings on association between age group and prevalence of erectile dysfunction (ED), which showed no statistical significance, increasing age was found to be a strong and consistent predictor for ED in men in most studies
- In view of numerous suggestive studies showing aging effects were actually strong, the insignificant association in our study is probably due to small sample size and less than comprehensive sampling
- Anxiety ($p = 0.002$) and depression ($p = 0.003$) both showed statistically highly significant associations with occurrence of ED in our study
 - Bonierbale et al. demonstrated that a much greater number of life events during the year prior to the onset of erectile disorders for the patients than for the control subjects, especially events of an emotional nature and those involving a loss or bereavement

[Bonierbale et al.. Life events, anxiety and erectile dysfunction. J Sex Research 2006]

- In men, financial problems, and diagnosis of depression were fairly consistent across various regions of the world in elevating risk of ED

[Laumann et al.. Prevalence of sexual problems among men and women aged 40 to 80 years: results of an international study. 2nd International Consultation on Erectile and Sexual Dysfunctions 2003]

- Other significant risk factors e.g. domestic partner problems, may contribute to prevalence rate of ED because of confounding emotional problems, as evidenced by many scientific papers; e.g. performance anxiety
- Premature ejaculation, a largely psychogenic disorder, was found to be significantly associated with ED, possibly confounded by organic lesion and/or psychological impact
- Prevalence of ED in our study (67.3%) much higher than reported rate in South-East Asian countries (24.2%), possible due to different study methodology and/or definition

[Laumann et al.. Prevalence of sexual problems among men and women aged 40 to 80 years: results of an international study. 2nd International Consultation on Erectile and Sexual Dysfunctions 2003]

■ **Female sexual dysfunction :-**

- Findings between association of age and female sexual dysfunction (FSD) were highly significant, consistent with findings of most papers
 - Global Study of Sexual Attitudes and Behaviours concluded that, like male sexual dysfunction, increasing age was a strong and consistent predictor for lubrication difficulties in women
- Unexpectedly, anxiety and depression did not showed significant association strength with FSD, although it was shown that women with depressive mood symptoms reported significantly lower sexual desire than women with normal mood

[Arch Sex Behav. 2006 ; 35(2): pp 160 – 74]

ACKNOWLEDGEMENT

- Station advisor, **Dr. Quek Kia Fatt**, and other staffs of SPM Department, FOM UM
- Staffs of Temerloh District Health Office
 - Dr. Ismail and Dr. Suzana, district health officers
- Dr. Bahari, Director of Hospital Sultan Haji Ahmad Shah Temerloh
- Mr. Chua BL, Assistant District Officer of Temerloh District Office
- Chiefs of villages Kg. Penderas, Kg. Desa Murni, Felda Bukit Damar, and Kg. Batu Kapor
- All parties, who directly or indirectly contributed to the completion of this study