LAPURAN AKHIR PROJEK PENYELIDIKAN JANGKA PENDEK

UNIVERSITI SAINS MALAYSIA

Tajuk : " A Study on Menopausal Experiences in Malaysian Women in Kelantan "

(No Akuan : 304/PPSP/6131199)

PROF MADYA DR NIK MOHAMED ZAKI NIK MAHMOOD
Jabatan Obstetriks dan Ginekologi
Pusat Pengajian Sains Perubatan

Kampus Kesihatan USM

ISI KANDUNGAN :

i. Borang Lapuran Akhir Projek Penyelidikan USM Jangka Pendek

ii. Senarai Peralatan

iii. Penyata perbelanjaan

iv. Senarai penerbitan beserta salinan kertas kerja

BAHAGIAN PENYELIDIKAN & PEMBANGUNAN
CANSELORI
UNIVERSITI SAINS MALAYSIA

Laporan Akhir Projek Penyelidikan Jangka Pendek

1) Nama Penyelidik:

PROF MADYA DR NIK MOHAMED ZAKI NIK MAHMOOD

Nama Penyelidik-Penyelidik Lain (Jika berkaitan) :

PUAN HARDIP KAUR DHILLON

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2) Pusat Pengajian/Pusat/Unit :

SAINS PERUBATAN

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3) Tajuk Projek:

A STUDY ON MENOPAUSAL EXPERIENCE OF MALAYSIAN WOMEN IN KELANTAN

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4) (a) Penemuan Projek/Abstrak

(Perlu disediakan makluman di antara 100 – 200 perkataan di dalam Bahasa Malaysia dan Bahasa Inggeris. Ini kemudiannya akan dimuatkan ke dalam Laporan Tahunan Bahagian Penyelidikan & Pembangunan sebagai satu cara untuk menyampaikan dapatan projek tuan/puan kepada pihak Universiti).

SEPERTI DILAMPIRAN A

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ABSTRAK

SATU KAJIAN PENGALAMAN PUTUS HAID PADA GOLONGAN WANITA KELANTAN.

Menopaus ataupun putus haid telah dikaitkan dengan pelbagai gejala sementara biasa *(typical)* dan yang bukan biasa (*atypical*). Dipercayai bahawa, berbanding dengan wanita Barat, wanita Asia lebih menanggung atau mengalami kesusahan gejala putus haid atipikal yang berlaku lebih kerapkali daripada gejala tipikal seperti gejala psikologi dan vasomotor. Gejala tipikal juga didapati kurang teruk di kalangan wanita Asia berbanding wanita Barat. Kajian ini melaporkan insiden dan jenis gejala putus haid dari golongan wanita di Kelantan dan jenis-jenis tindakan penjagaan diri yang diambil oleh mereka.

Satu soalan kajiselidik berstruktor separuh (semi-structured) dan boleh dijawab sendiri diberi kepada 326 wanita di negeri Kelantan. Responden berumur 57.01 ± 6.58 (SD) tahun. Mereka yang mengambil bahagian adalah sihat dan sudah mengalami putus haid secara semulajadi. Wanita yang mengalami kencing manis ataupun tekanan darah tinggi yang tidak terkawal, telah dikecualikan daripada kajian ini. Untuk analisa data, statistik deskriptif SPSS telah digunakan.

Keputusan menunjukan umur purata putus haid adalah 49.4 ± 3.4 (SD) tahun, umur mode dan median adalah 50 tahun. Mode bilangan gejala yang diadukan oleh wanita adalah lapan gejala. Insiden gejala atipikal adalah: keletihan (79.1%), perubahan daya tumpuan (77.5%), sakit otot dan tulang (70.6%), sakit belakang / pinggang (67.7%).

Berpeluh di waktu malam (53%), sakit kepala (49.4%), panas muka atau *hot flushes* (44.7%) adalah gejala vasomotor biasa. Perubahan perasaan atau *mood swing* (51%), payah tidur (45.1%), kesunyian (41.1%), merasa cemas (39.8%), rasa sedih / menangis (33.4%) adalah gejala psikologi yang berlaku dengan lazim dalam kajian ini. Gejala urogenital seperti 'stress incontinence', kawalan pundi air kencing yang lemah dan jangkitan trek urinari yang berlaku kadangkala juga dilaporkan.

Peratusan tindakan penjagaan diri bergantung kepada gejala masing masing dan julat adalah antara 47.7% untuk perubahan daya tumpuan ke 100% untuk rasa sedih / menangis dan rasa cemas. Tindakan penjagaan diri termasuk ubatan tradisi, ubatan alternatif, ubatan preskripsi, ambil bahagian aktif dalam kerja komuniti, terima sokongan daripada kawan. Pilihan tindakan penjagaan dipengaruhi oleh kebudayaan, pendidikan dan faktor sosio – ekonomi.

Lebih ramai wanita melaporkan kekurangan amaun sekresi / kebasahan faraj (50.9%) dan kekerapan persetubuhan adalah 2 – 4 kali sebulan (49.7%). Dari segi keseluruhan, 42.3% mendapati kekurangan dalam aktiviti kekerapan persetubuhan selepas putus haid. 69% wanita melapurkan tidak berminat terhadap hubungan seks, dimana 39% kurang minat dan 29.6% tiada minat langsung. Corak yang sama dilaporkan oleh wanita untuk kebangkitan nafsu berahi ("libido"). Pelbagai peringkat ketidak selesaan serta kesakitan semasa persetubuhan dilaporkan oleh 34% wanita.

Jika dibandingkan dengan sebelum menopaus, ada juga wanita (23.3%) sekarang merasa suaminya kurang berminat seks dengan mereka. Sebahagian besar (66.2%) sudah berkahwin lebih dari 26 tahun. Bagaimanapun ada juga pecahan kecil (7.1%) wanita yang berkata semasa persetubuhan, faraj mereka tidak dapat menyesuaikan dengan ketegangan kemaluan (*penis*) pasangannya. Dan ada juga pecahan kecil (2.1%) wanita mengaku mereka ada masalah seks yang menjejaskan hubungan antara suami – isteri. Ada juga golongan (9.5%) dimana suami mengadu masalah seks yang menjejaskan hubungan suami-isteri. Tentang masalah seksualiti, satu perempat kaum wanita percaya masalah seksualiti ini dapat dipertingkatkan dan lagi satu perempat merasa masalah seksualiti ini tidak dapat diselesaikan. Tindakan yang diambil oleh wanita adalah seperti pengambilan "HRT", Jamu, "Evening Primrose Oil", "Royal Jelly", senaman dan kawalan makanan.

Lebih daripada setengah (55%) wanita tidak mendapat nasihat daripada sesiapa tentang menopaus. Mereka yang ambil nasihat, hanya mengambil daripada golongan kawan sahaja. Hanya 13% responden tidak menyedari bahawa menopaus berlaku kepada mereka. Sumber–sumber pengetahuan responden adalah melalui perbualan dengan kawan, ahli–ahli kesihatan, atau menghadiri bengkel menopaus. Wanita Kelantan kebanyakannya memandang putus haid sebagai proses semulajadi dan menyifatkannya sebagai peristiwa perkembangan khas. Mereka yang melihat putus haid sebagai tanda penuaan, menerimanya sebagai tempoh masa didalam jangkahayat.

Kesimpulan kajian ini, menunjukkan bahawa gejala-gejala menopaus yang dialami oleh wanita di negeri Kelantan adalah bersamaan dengan wanita lain dikebanyakan negara di seluruh dunia. Perbezaan hanya adalah dari segi kekerapan berlakunya gejala–gejala tersebut. Kebanyakan wanita menerima menopaus sebagai satu prosess permulaan meningkat tua. Walaubagaimanapun, mereka akan mengambil pelbagai tindakan penjagaan diri untuk membantu mereka dalam melayari fenomena putus haid atau menopaus.

ABSTRACT

A STUDY ON MENOPAUSAL EXPERIENCES OF KELANTANESE WOMEN

Menopause is associated with numerous transient typical and atypical symptoms. It is believed that Asian women suffer more of the atypical symptoms and fewer, and with lesser severity, the typical psychological and vasomotor symptoms than the western women. This study reports the incidence and nature of menopausal symptoms in Kelantanese women and the self-care actions taken by them.

A semi-structured, self-administered questionnaire was administered to 326 postmenopausal women (aged, 57.01 ± 6.58 (SD) years) residing in the state of Kelantan. The subjects comprised of naturally menopaused, healthy women. Women with uncontrolled diabetes and hypertension were not included. Descriptive statistical analysis was performed on the data using SPSS programme.

Mean age at menopause was 49.4 ± 3.4 (SD) years while both the mode and median were 50 years. The mode for the number of symptoms complained by each woman was 8 (range 0 – 16). The incidences for atypical symptoms was; tiredness (79.1%), reduced concentration (77.5%), musculo-skeletal aches (70.6%) and backache (67.7%). Night sweats (53%), headaches (49.4%) and hot flushes (44.7%) were the typical vasomotor symptoms, whereas mood swings (51%), sleep problems (45.1%), loneliness (41.1%), anxiety (39.8%), and crying spells (33.4%) were the main psychological symptoms.

Majority of the women reported reduced vaginal secretion (50.9%). The commonest coital frequency was approximately 2–4 times per month (49.7%). Overall, 42.3% reported a decrease in the frequency of sexual activity postmenopausally. Over two-thirds (69%) of the women reported either reduced (39%) or absent (29.6%) sexual desire or interest. A similar pattern was also reported for libido. Varying degree of dyspareunia was reported by 34% of the women. Some women (23.3%) had noticed that their spouses' sexual interest in them had reduced compared to before menopause. A small percentage (7.1%) reported that their vagina was not able to accommodate completely an erect penis. A small percentage (2.1%) admitted to having sexual problems, which had an affect on their marital relationship and another group (9.5%) had spouses with sexual problems. A quarter of the women thought their sexuality could be improved while another quarter thought otherwise. More than half (52.6%) did not take any action to improve their sexuality. Those who did, took HRT, "Jamu", Evening Primrose Oil, Royal jelly, did regular exercises and controlled their diet.

The percentage of women taking self-care actions depended upon the symptom, and ranged from 47.7% for reduced concentration to 100% for crying spells and anxiety. Their self-care actions included taking traditional medicine, alternative medicine, prescribed medications, getting actively involved in community work, and having peer support. More than half (55%) did not seek any advice regarding their menopause. Those who did, mainly approached their friends. Some 13% of women were not aware of the menopause when it occurred. The sources of knowledge on menopause, according to the respondents, were friends, health professionals, and attending seminars. Most of the

respondents viewed menopause as a biological event and placed it within the context of their developmental milestones. Those who viewed menopause as a marker of old age accepted it as a time frame within the lifespan

In conclusion, it appears that the menopausal symptoms experienced by women in Kelantan are very similar to those experienced by women elsewhere, albeit, with differing frequencies. Majority of the women accepted menopause as the beginning of the aging process and resorted to numerous self-care actions to help see them through this transition.

(b) Senaraikan Kata Kunci yang digunakan di dalam abstrak:

Bahasa Malaysia	Bahasa Inggeris
Malaysia	Malaysia
Wanita Kelantan	Kelantanese women
Putus haid	Postmenopause
Pengalaman	Experience

5) Output Dan Faedah Projek

(a) Penerbitan (termasuk laporan/kertas seminar)
(Sila nyatakan jenis, tajuk, pengarang, tahun terbitan dan di mana telah diterbit/dibentangkan).

SEPERTI DILAMPIRAN B.

LAMPIRAN B

A: PENERBITAN (termasuk laporan/kertas seminar)

POSTER PRESENTATION

" Prevalence of Menopausal Symptoms in Malaysia Kelantanese women "
Hardip Kaur Dhillon ; Nik Mohamed Zaki Nik Mahmood
8th National Conference on Medical Sciences
School of Medical Sciences : 8-9th may 2003

" Sexual Function in Menopausal Malay women in Kelantan "
Hardip Kaur Dhillon; Nik Mohamed Zaki Nik Mahmood
4th Malaysian Congress on Menopause
Malaysian Menopausa Society. Kuala Lumpur 25-27th July 2003

" Documentation of Selfcare Actions taken by Kelantanese women during Menopause "
Hardip Kaur Dhillon, Nik Mohamed Zaki Nik Mahmood
20th Scientific Meeting of the Malaysian Society of Pharmacology and Physiology
Penang ; 25-27th April 2005

ORAL PRESENTATION

" A Cross-sectional Study OF postmenopausal Experiences and Selfcare Actions of Kelantanese Women in Malaysia "
Hardip Kaur Dhillon ; Nik Mohamed Zaki Nik Mahmood
Sigma Theta Tau International's
15th International Research Congress
Burlington Hotel, Dublin , Ireland : 22-24th July 2004

JOURNAL PUBLICATIONS

" Sexual Function in Menopausal women in Kelantan, Malaysia "
Dhillon HK, Singh HJ, Ghaffar NA.
Maturitas . 2005 May (Accepted in coming issues)

"Prevalence of Menopausal symptoms in women in Kelantan, Malaysia "
Hardip Kaur Dhillon, Harbindar Jeet Singh, Rashidah Shuib, Nik Mohamed Zaki Nik Mahmood.
Maturitas, 2007 July (Submitted for review and received)

(b) Faedah-Faedah Lain Seperti Perkembangan Produk, Prospek Komersialisasi Dan Pendaftaran Paten.
(Jika ada dan jika perlu, sila guna kertas berasingan)

TIADA

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(c) Latihan Gunatenaga Manusia

i) Pelajar Siswazah:

SARJANA SAINS (KESIHATAN WANITA)
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PUAN HARDIP KAUR DHILLON
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GRADUASI : OGOS 2005
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ii) Pelajar Prasiswazah: .

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iii) Lain-Lain : .....

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6. Peralatan Yang Telah Dibeli:

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UNTUK KEGUNAAN JAWATANKUASA PENYELIDIKAN UNIVERSITI

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Output penyelidikan lain - Sebarang
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T/TANGAN PENGERUSI
J/K PENYELIDIKAN
PUSAT PENGAJIAN

PROFESSOR ABDUL AZIZ BABA
Chairman of Research & Ethics Committee
School of Medical Sciences
Health Campus
Universiti Sains Malaysia
16150 Kubang Kerian, Kelantan

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Tarikh : 25 Februari 2002

Account:
304/pps p/6131199

Dr. Nik Mohamed Zaki Nik Mahmood
Jabatan Obstetrik & Ginekologi
Pusat Pengajian Sains Perubatan
Kampus Kesihatan USM
15990 Kubang Kerian,
KELANTAN DARUL NAIM

Tuan,

Permohonan Geran Jangka Pendek

Sukacita dimaklumkan bahawa Jawatankuasa Sains Bio-Perubatan dan Kesihatan di mesyuarat ke-8 pada 7 Disember 2001 telah meluluskan permohonan penyelidikan tuan di atas tajuk **"A Study on Menopausal Experiences in Malaysian Women in Kelantan"** daripada geran ***USM Jangka Pendek.*** Sebanyak **RM11,177.00** diluluskan dengan perincian seperti berikut:

* Vot 11000 (Gaji dan Upahan)	RM	3,072.00
* (diluluskan seorang Pembantu Projek untuk tempoh 6 bulan)		
Vot 21000 (Perbelanjaan Perjalanan dan Sarahidup)	RM	3,270.00
Vot 23000 (Perhubungan dan Utiliti)	RM	300.00
Vot 27000 (Bekalan dan Bahan-Bahan Lain)	RM	1,540.00
Vot 29000 (Perkhidmatan Ikhtisas & Perkhidmatan Lain yang dibeli dan Hospitaliti)	RM	2,995.00
JUMLAH BESAR	**RM**	**11,177.00**

Selanjutnya, tuan dikehendaki mengambil perhatian kepada perkara-perkara berikut:

(i) Bayaran Hospitaliti untuk Subjek (Vot 29000) diluluskan RM5 seorang; dan
(ii) Permohonan untuk bayaran kepada typist (Vot 29000) tidak diluluskan.

JABATAN BENDAHARI

KUMPULAN PENYELIDIKAN GERAN JANGKA PENDEK

PENYATA PERBELANJAAN SEHINGGA 31 DISEMBER 2004

Jumlah Geran		11,177.00	Ketua Projek	DR NIK MOHAMED ZAKI NIK MAHMOOD
Peruntukan 2002 (Tahun 1)	RM	11,177.00	Tajuk Projek	A STUDY ON MENOPSUSAL EXPERIENCES IN MALAYSIAN WOMEN IN KELANTAN
Peruntukan 2004 (Tahun 2)	RM	0.00		
Peruntukan 2005 (Tahun 3)	RM	0.00	Tempoh	
			No.Akaun:	304/PPSP/6131199

Kwg	Akaun	PTJ	Projek	Donor	Peruntukan Projek	Perbelanjaan Terkumpul sehingga Tahun lalu	Peruntukan Semasa	Tanggungan Semasa	Bayaran Tahun Semasa	Belanja Tahun Semasa	Baki Projek
304	11000	PPSP	6131199		3,072.00	-	3,072.00	-	-	-	3,072.00
304	14000	PPSP	6131199		-	551.50	(551.50)	-	-	-	(551.50)
304	15000	PPSP	6131199		-	-	-	-	-	-	-
304	21000	PPSP	6131199		3,270.00	1,574.80	1,695.20	-	-	-	1,695.20
304	22000	PPSP	6131199		-	-	-	-	-	-	-
304	23000	PPSP	6131199		300.00	10.00	290.00	-	-	-	290.00
304	24000	PPSP	6131199		-	-	-	-	-	-	-
304	25000	PPSP	6131199		-	-	-	-	-	-	-
304	26000	PPSP	6131199		-	-	-	-	-	-	-
304	27000	PPSP	6131199		1,540.00	2,933.49	(1,393.49)	-	-	-	(1,393.49)
304	28000	PPSP	6131199		-	-	-	-	-	-	-
304	29000	PPSP	6131199		2,995.00	2,510.30	484.70	-	-	-	484.70
304	35000	PPSP	6131199		-	-	-	-	-	-	-
					11,177.00	7,580.09	3,596.91	-	-	-	3,596.91

LAMPIRAN B

A: PENERBITAN (termasuk laporan/kertas seminar)

POSTER PRESENTATION

" Prevalence of Menopausal Symptoms in Malaysia Kelantanese women "
Hardip Kaur Dhillon ; Nik Mohamed Zaki Nik Mahmood
8th National Conference on Medical Sciences
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" Sexual Function in Menopausal Malay women in Kelantan "
Hardip Kaur Dhillon; Nik Mohamed Zaki Nik Mahmood
4th Malaysian Congress on Menopause
Malaysian Menopausa Society. Kuala Lumpur 25-27th July 2003

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Hardip Kaur Dhillon, Harbindar Jeet Singh, Rashidah Shuib, Nik Mohamed Zaki Nik Mahmood.
Maturitas, 2007 July (Submitted for review and received)

Appendix E

PREVALENCE OF MENOPAUSAL SYMPTOMS IN MALAYSIAN KELANTANESE WOMEN

Hardip Kaur Dhillon, Nik Mohamed Zaki Nik Mahmood. Dept of Obs & Gyn, Sch Med Sciences. USM, 16150 Kubang Kerian, Kelantan.

Menopause is a universal biological phenomenon that is reportedly associated with numerous transient typical and atypical symptoms. It has been suggested that asian women suffer more of the atypical symptoms and fewer, and with lesser severity, the typical psychological and vasomotor symptoms then the western women [1,2]. This study therefore reports the incidence and the nature of menopausal symptoms in Kelantanese women.

A semi-structured self administered questionnaire in Malay and English language was administered to 326 postmenopausal women (mean age of 57.01 ± 6.58(SD) years) residing in Kelantan. The subjects comprised of naturally menopaused, healthy women. Women with uncontrolled diabetes and hypertension were not included.

Mean age of menopause was 49.4 ± 3.4 (SD) while the mode and median were 50 years. The postmenopausal period varied from 1 to 20 years with 56.4% of the respondents being within 1 to 5 years postmenopause, 18.1% within 6 to 10 years postmenopause, 12.9% within the 11 to 15 years postmenopause, 12.6% within 16 to more then 20 years postmenopause. The break-up of the menopausal symptoms included complaints of tiredness (79.1%), decreased level of concentration (77.5%), backache (67.7%), joint and muscle pain (70.6%), night sweat (53%), mood swing (51.5%), headache (49.4%), sleep problems (45.21%), vaginal discomfort (45.7%), hot flushes (44.7%), crying spells (33.4%), loneliness (41.1%) and anxiousness (39.8%).

Tiredness, reduced level of concentration, night sweat, mood swing, headache, occasional vaginal discomfort, hot flushes, were complained to a mild degree whereas sleep problems, crying spells, loneliness and anxiousness were in the mild to moderate category. Interestingly, backache, joint and muscle aches were complained to a moderate degree by majority of the women

It appears that the majority of the Kelantanese women had more of the atypical symptoms of tiredness, decreased level of concentration, backache and joint and muscle pain. The classical symptoms such as hot flushes, vaginal discomfort were reported by less then 50% of the women with the exception of night sweats and mood swings.

Reference

1. Boulet MJ, Oddens BJ, Lehert P, Vemer HM, Visser A. (1994). Climacteric and menopause in seven South-east Asian countries. Maturitas 1994 Oct; 19(3): 157 -76.
2. Harvey Chim et al (2002). The prevalence of menopausal symptoms in a community in Singapore. Maturitas 41 (2002) 275 - 282

Poster Presentation

Theme: Medicine in the Genomic Era
Conference: 8th National Conference on Medical Science
Venue: School of Medical Sciences
Universiti Sains Malaysia
Date: 8th – 9th May 2003

ABSTRACT FORM
4TH MALAYSIAN CONGRESS ON MENOPAUSE

(DO NOT FOLD)

SEXUAL FUNCTION IN MENOPAUSAL MALAY WOMEN IN KOTA BHARU

Hardip-Kaur Dhillon , * Nik Mohamed Zaki Nik Mahmood, Nurse Education Unit, *Dept. O & G., Sch Med Sci., Univ Sains Malaysia, 16150 Kubang Kerian, Kelantan.

Symptoms of urogenital aging affecting sexual functioning is prevalent in postmenopausal women. In addition, cultural beliefs and practices influence a woman's perception of menopause and her sexual functioning. Little documented information on menopausal experiences of Malaysian women exists in the literature. This study therefore reports the sexual history of women during menopause.

A semi-structured self administered questionnaire in Malay language was administered to 160 Malay women (mean age of 58.1 ± 7.37 (SD) years) residing around Kota Bharu. The subjects comprised of naturally menopaused, healthy women. Women with uncontrolled diabetes and hypertension were not included.

The mean age of menopause was 48.5 ± 6.62 (SD). Of the total respondents 69.4% (111) had sexual partners. Amongst these women, sexual activity was reportedly decreased in 66.7%, increased in 2.7% and remained unchanged in 26.1% with 3.1% of women being unsure. Libido was also reportedly decreased in 69.4%, increased in 0.9% and remained unchanged in 29.7% of the women. The frequency of sexual activity ranged from no interest (11.7%); 1-2 times a month (37.8%); > 6 times a month (17.1%); to those having (33.4%) varied frequencies. During sexual activity, 47.7% of the women reported a decrease in lubrication, 11.7% described themselves as dry while 42.3% varied between same, increased and unsure. However 60.4% had no dyspareunia, while 28.8 % had varied degree of pain and the remaining 10.8% had no sexual activity. Vaginal accommodation of erected penis was reportedly difficult in 12.6% of the women. Many of the women described themselves as old (tua) with the onset of menopause and 52.3% had no intervention while the reminder (47.7%) used either hormonal therapy, alternative medicine, practiced healthy lifestyle or a varied combination of these. The majority having no intervention were women from rural areas.

It appears that urogenital aging and sexual functioning are adversely affected by menopause. Socio-cultural practices also appear to influence a Malay woman's perception and management of her sexuality.

Poster Presentation

Theme:	Reaching New Heights with Menopause
Congress	4th Malaysian Congress on Menopause Malaysian Menopause Society
Venue:	Nikko Hotel, Kuala Lumpur
Date:	25th – 27th July 2003

Paper to be presented by: Hardip Kaur Dhillon

Your abstract must not exceed 250 words

Documentation of Self –Care Actions Taken by Kelantanese Women During Menopause

Hardip-Kaur Dhillon & Nik Mohamed Zaki Nik Mohmood, Dept Obs & Gyn, School of Medical Sciences, Universiti Sains Malaysia, Health Campus.16150. Kubang Kerian. Kelantan.

Menopause is associated with numerous symptoms and women often resort to a number of self-care actions, which include the use of both modern and traditional remedies. This study documents some of the traditional and alternative remedies used by Kelantanese women to manage their postmenopausal symptoms.

A semi-structured questionnaire in the Malay language was administered to 326 naturally menopaused healthy women (mean age of 57.1 ± 6.58 (SD) years) residing in Kelantan. Mean age at menopause was 49.4 ± 3.4 (SD) years and 75% of these women were within the first ten years of menopause. The mode for the number of symptoms complained by each women was 8 (range 0 – 16). The commonest symptoms were tiredness (79.1%), reduced level of concentration (77.5%), musculo-skeletal aches and pains (70.6%), back ache (67.7%) and night sweat (53%).

Apart from hormonal replacement therapy, other self-care actions included traditional medicine; *akar kayu, kacip fatima, jamu, ginseng,* or / and alternative medicine; Evening Primrose Oil, Royal Jelly, Omega 3 and KY jelly. Prescribed medication was used to relieve aches and pains, preventing osteoporosis or coronary hear disease, and reduce urogenital symptoms. The percentage of women taking self-care actions depended upon the symptom. It ranged from 47.8% for the reduced level of concentration to 100% for crying spells and anxiety. Their choice of self-care actions might be influenced by their cultural, religious, educational and socio-economic factors.

In conclusion, it appears that in addition to modern medicines the use of traditional and alternative remedies formed a significant component of the self-care actions taken by the majority of the Kelantanese women to help see them through the menopause transition.

Poster Presentation:
The Malaysian Society of Pharmacology and Physiology
20th Scientific Meeting
'Nutraceuticals: The Scientific Basis'
25th – 27th April 2005
Equatorial Hotel. Penang. Malaysia.

Appendix E

A CROSS SECTIONAL STUDY OF POSTMENOPAUSAL EXPERIENCES AND SELF-CARE ACTIONS OF KELANTANESE WOMEN IN MALAYSIA. *Hardip Kaur Dhillon, Nik Mohamed Zaki Nik Mahmood. Dept of Obs & Gyn, Sch Med Sciences. USM, 16150 Kubang Kerian, Kelantan, Malaysia.*

Menopause is associated with numerous transient typical and atypical symptoms. It is believed that Asian women suffer more of the atypical symptoms and fewer, and with lesser severity, the typical psychological and vasomotor symptoms then the western women. This study reports the incidence and nature of menopausal symptoms in Kelantanese women and the self-care action taken by them.

A semi-structured self administered questionnaire was administered to 326 postmenopausal women (aged, 57.01 ± 6.58 (SD) years) residing in the state of Kelantan. The subjects comprised of naturally menopaused, healthy women. Women with uncontrolled diabetes and hypertension were not included. Descriptive statistical analysis was performed on the data using SPSS.

Mean age at menopause was 49.4 ± 3.4 (SD) years while both the mode and median were 50 years. The mode for the number of symptoms complained by each woman was 8 (range 0 – 16). The incidence of atypical symptoms was; tiredness (79.1%), reduced concentration (77.5%), musculo-skeletal aches (70.6%) and backache (67.7%). Night sweats (53%), headaches (49.4%) and hot flushes (44.7%) were the typical vasomotor symptoms, whereas mood swings (51%), sleep problems (45.1%), loneliness (41.1%), anxiety (39.8%), and crying spells (33.4%) were the main psychological symptoms. Urogenital symptoms such as occasional stress incontinence (38.3%), weak bladder control (21.2%) and occasional urinary tract infection (19%) was also reported. Urogenital aging can affect sexual functioning particularly changes in sexual desire and onset of dyspareunia .

Majority women reported a reduced amount of vaginal secretion (50.9%). The commonest coital frequency was approximately 2 – 4 times per month (49.7%). On the whole 42.3% observed a decrease in the frequency of sexual activity post menopausally. Nearly 69% of the women reported to either have a reduced (39%) or no (29.6%) sexual desire or interest. A similar pattern was seen in the libido. Various degree of dyspareunia was reported by 34%. Some women (23.3%) had noticed that their spouses' sexual interest in them had reduced compared to before menopause. Majority (61%) spent almost all their time with their spouses. A high proportion (66.2%) had been married for more then 26 years and had a positive relationship with their spouses. A small fraction (7.1%) found their vagina was not able to accommodate completely an erected penis. Again a small fraction (2.1%) admitted to having sexual problem which had an affect on their marital relationship. Another (9.5%) spouses had sexual problem which possibly also affected the marital relationship. A quarter of the women thought their sexuality could be improved while another quarter thought otherwise. More then half (52.6%) did not take any action to improve their sexuality. Those who did, took HRT, Jamu, Evening Primrose Oil , Royal jelly, did regular exercises and controlled their diet.

The percentage of women taking self-care action depended upon the symptom, and ranged from 47.7% for the reduced concentration to 100% for crying spells and

anxiety. Their self-care actions included taking traditional medicine, alternative medicine, prescribed medication, being actively involved in community work, and having peer support and the choice was influenced by cultural, religious, educational and socio-economic factors. More the half (55%) did not seek any advice regarding their menopause. Those who did, mainly approached their friends. Only 13% of women were not aware of the phenomena when menopause occurred. The source of gaining knowledge on menopause was by talking to friends, health professionals, and attending seminars.

In conclusion, it appears that the menopausal symptoms experienced by women in Kelantan are somewhat similar to those experienced by women elsewhere, albeit, with differing frequencies. Majority of the women accepted menopause as the beginning of the aging process and resorted to numerous self-care actions to help see them through this transition.

Words 605

Oral Presentation

Theme: Building Community Through Research
Congress: Sigma Theta Tau International's 15th International Research Congress
Venue: Burlington Hotel, Dublin. Ireland.
Date: 22nd – 24th July 2004

1: Maturitas. 2005 May 12; [Epub ahead of print] Related Articles, Links

Sexual function in menopausal women in Kelantan, Malaysia.

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OBJECTIVES:: The aim of the study was to document sexual function in Kelantanese postmenopausal women. METHOD:: A semi-structured questionnaire in Malay language was administered to 326 women (mean age of 57.1+/-6.58 (S.D.) years) residing in Kelantan. The subjects comprised of naturally menopaused, healthy women. RESULTS:: Of the total respondents, 70% (n=227) were with a spouse at the time of the study. Of these, more than two-thirds reported a decrease in sexual activity following menopause. Varying degree of dyspareunia was reported by 44% of the women. A small fraction (8.8%) reported inability of the vagina to stretch sufficiently to enable the complete penetration of an erect penis. Of the total married respondents, vaginal secretion during sexual intercourse was decreased in 52.4%, did not change in 31% but increased in 1.3% of the women following menopause. Sexual desire was reportedly decreased or absent in two-thirds of the total respondents (n=326). CONCLUSION:: It appears that sexual function significantly decreases during menopause. This may be due to dyspareunia, poor lubrication, loss of sexual desire, and the spouse's health status and ageing itself. Although declining sexual function was recognised by nearly two-thirds of the women, more than half did not take any action to improve their sexual function. Of those who did, they used hormonal therapy, traditional, alternative medicine or practiced healthy lifestyle or a varied combination of above self-help actions.

PMID: 15894440 [PubMed - as supplied by publisher]

liefs and practices that influence a woman's perception of menopause, can also influence her sexual function. Amongst many societies, there is a belief that older women become 'sexually retired' after menopause and are therefore expected to be less sexually active [3,4,9]. Furthermore, some women are embarrassed to ask questions about their sexual health because of some cultural taboos. The impact of all this on the quality of life of menopausal women is unclear. Understanding menopause from all aspects has therefore become increasingly important to the health professionals. Particularly, when, owing to the current longevity, more and more women can expect to spend more than a third of their life span in menopause. No information exists in the literature on sexual functioning of postmenopausal women living in Kelantan, Malaysia, a state where culture and tradition is strongly adhered to. It is unknown if the sexual functioning in Kelantanese women after menopause is similar to that which has been reported in other societies. This cross-sectional study therefore attempts to record some information on sexual functioning in postmenopausal Kelantanese women living in Malaysia.

2. Materials and methods

A semi-structured questionnaire in the Malay language was designed to obtain information on the sexual functioning of women in menopause. It consisted of eleven statements where the respondents had to either choose from the provided responses, or provide their own responses that reflected the current status of the women's sexual functioning. The development and design of the questionnaire were done following extensive literature review of related studies and through a focus group interview, which consisted of eight postmenopausal women. These women were randomly chosen from those attending the menopause clinic as well as gynaecology clinic and nurses working at Hospital Universiti Sains Malaysia.

To ascertain its face validity, the content of the questionnaire was reviewed by three academic staff consisting of a gynaecologist, an academician from the Department of Community Medicine and one other academic from the Women's Health and Development Unit. After this, it was distributed to 30 Kelantanese postmenopausal women in Kelantan to ensure that the questions were clearly understood with very little ambiguity and the respondents would have little difficulty in understanding and answering the statements. Those statements that were found ambiguous were either removed or amended or reworded accordingly until such time that all the questions were clearly understood by the respondents. After this its construct validity was determined using factor analysis. For this the questionnaire was distributed to 100 postmenopausal women. Their responses to the questions were tabulated and KMO and Bartletts test was done which revealed a $p < 0.001$, indicating that these questions were acceptable for factor analysis. Reliability coefficient (Cronbach's alpha) was 0.8334 which indicated that the measurement tool had a good reliability. The statements or questions contained in the questionnaire have been translated into the English language and are presented in Table 1.

After verification, the questionnaire was distributed to 326 naturally menopaused, healthy women living in Kelantan. The subjects consisted of women, whose education level ranged from no education (23%) to primary (25.1%), secondary (39.9%) and tertiary (12%) education, living in rural (38.7%), suburban (23.3%) and urban (38%) areas; and from housewives (28.8%), self-employed and support staff (61%), and professionals (10.2%). The response rate was 100 percent as the questionnaire was given personally to the respondents, either at their homes or at their workplaces. Due to their upbringing women in Kelantan are generally shy to talk freely about their sexual functioning. To overcome this and to minimise any influence when answering questions in a group, all questionnaires were distributed and filled on a one to one basis. For those subjects who were unable to read, the questions were read to them and their responses were recorded by the same researcher. As the questions were in the local language and designed with the local population in mind, the subjects did not have any difficulty in understanding the questions when they were read to them. The questionnaires were collected immediately upon completion. Before collection of the questionnaire, the statements were re-checked to ensure all statements were answered. The respondents' responses were those experienced currently or within the last four weeks. Questions regarding masturbation or sex with a partner living in a different house were excluded as these questions could offend some of the respondents.

Table 1
Questionnaire used in the study

No.	n	Statements
1	326	My current marital status is 1 = single 2 = married 3 = separated 4 = divorcee 5 = widow
2	227	Since menopause, I feel I have a problem with my sexual function 1 = no 2 = unsure 3 = yes 4 = no sexual partner 5 = if others, state
3	227	Since menopause, the secretion from my vagina during sexual activity 1 = has decreased 2 = unsure 3 = is the same 4 = has increased 5 = if others, state
4	326	Since menopause my wish (sexual desire) to participate in sexual activity 1 = is absent 2 = has decreased 3 = is the same 4 = has increased 5 = if others, state
5	227	Since menopause, during sexual intercourse, I experience 1= no pain 2 = discomfort 3 = slight pain 4 = moderate pain 5 = severe pain 6 = if others, state
6	227	Since menopause, my vagina is unable to stretch completely to allow full penetration of an erect penis 1 = no 2 = unsure 3 = yes 4 = if others, state
7	227	My partner has sexual problems 1= no 2 = unsure 3 = yes 4 = if others, state
8	227	Since menopause, my partner's sexual interest in me 1 = has decreased 2 = unsure 3 = is the same 4 = has increased 5 = if others, state
9	227	Since menopause, the frequency of my sexual activity 1 = decreased 2 = unsure 3 = remained the same 4 = has increased 5 = if others, state
10	227	Since menopause, my sexual problem has affected my marital relationship 1 = no 2 = unsure 3 = yes 4 = if others, state
11	227	To my knowledge my sexual function can be improved 1 = no 2 = unsure 3 = yes 4 = if others, state

Women were recruited through the family planning association, menopause clinic and gynecology clinic at Hospital Universiti Sains Malaysia, local general practitioners, hospital-based nurses, public service departments and community workers. About 50% of the participants were recruited via the snowballing technique, where respondents' suggested other subjects to the researcher. The inclusion criteria consisted of healthy women who had menopaused naturally for a period of 1 year or more. Women with uncontrolled medical conditions, such as hypertension, diabetes mellitus or heart disease, or who had undergone oophorectomy, or those who were undergoing treatment for cancer or were in remission were excluded from the study. Statistical analysis was performed using descriptive statistics.

3. Results

The mean age of the subjects in the study was 57.1 ± 6.58 (S.D.) years and almost three-quarters of the women in this study were in the first 10 years of menopause, i.e. from the last date of their menstruation. Mean age at menopause was 49.3 ± 4.30 (S.D.) years whereas the mode and median were 50 years. About 7.2% of the women had early menopause (<45 years) while 3.6% reached menopause after the age of 55 years. Of the total respondents 227 were still living with a spouse.

Of the 326 subjects in the study, only 227 were currently living with a spouse, and therefore, able to provide information on their sexual activity. Of these, slightly more than half the women reported a decrease in coital frequency while a small proportion had no interest in sexual activity (Table 2).

Although a large number of women had noticed no change in their vagina's ability to stretch completely for full penetration of an erect penis, there was, however, a small fraction of women who found that their vaginas were unable to stretch completely (Table 3).

Nearly half the women who were sexually active reported some discomfort or pain during sexual inter-

Table 2
Changes in frequency in sexual activity following menopause

Statement	Count	Percentage
Since menopause, the frequency of my sexual activity has:		
Decreased	127	56
Unsure	6	2.6
Remained the same	65	29
Increased	5	2
Other comments (respondents own words):		
No sexual interest	24	10
Dysfunctional spouse	1	0.4
TOTAL	227	100

Table 3
Respondents' self- assessment of their vaginal wall's elasticity

Statement	Count	Percentage
Since menopause, my vagina is unable to stretch completely to allow full penetration of an erect penis.		
No	124	54.6
Unsure	67	29.5
Yes	20	8.8
Other comments (respondents own words)		
No sexual interest	15	6.6
Dysfunctional spouse	1	0.4
TOTAL	227	100

Table 4
Complaint of pain during sexual intercourse

Statement	Married	Percentage
Since menopause, during intercourse, I had experienced		
No pain	109	48
Discomfort	8	12.3
Slight pain	57	25.1
Moderate pain	13	5.7
Severe pain	1	0.4
Other comments (respondents own words):		
No sexual interest	18	7.9
Dysfunctional spouse	1	0.4
TOTAL	227	100

course. The fraction of women complaining of moderate to severe pain was highest in the first 10 years of menopause (Table 4).

Following menopause, more than half the respondents had experienced a decrease in vaginal secretion during sexual intercourse, while about a third reported no change. Interestingly, a very small fraction reported an increase in their vaginal secretion (Table 5).

Overall, sexual desire declined with advancing menopausal years, where more than two-thirds of the

Table 5
Changes in vaginal secretion during sexual intercourse

Statement	Married	Percentage
Since menopause, the secretion from my vagina during sexual intercourse has:		
Decreased	119	53
Unsure	11	5
Remained the same	71	31
Increased	3	1
Other comments (respondents own words):		
Become dry	23	10
TOTAL	227	100

Table 6
Changes in the level of sexual desire

Statement	Count	Percentage
Since menopause my wish (sexual desire) to participate in sexual activity		
Is absent	95	29.1
Has decreased	127	39.0
Has remained the same	90	27.6
Has increased	3	0.9
Other comments (respondents own words)		
No sexual partners	11	3.4
TOTAL	326	100

women reported either an absent or decreased sexual desire (Table 6). Interestingly, a small fraction reported a slight increase in sexual desire. These women were all in the first 5 years of their menopause.

Nearly a third of the women revealed that their spouses' sexual interest in them had waned. But half the women found their husband's interest in them was about the same compared to before menopause. Interestingly, a small fraction reported an increase.

The overall view of the respondents whether their sexual functioning could be improved or not was equivocal. Half the number of postmenopausal women in the study did not take any action to improve their sexual functioning while the remainder took various self-care actions of which HRT was the most common followed by Jamu (local herb), Evening Primrose, Royal Jelly, and regular exercises. Diet control was another popular intervention. A few did consider traditional medicine such as *akar kayu*, *gingseng* and *Luk Mei Pa*. The reminder individuals had a combination of the above. Conventional medication was combined with either traditional or alternative medicine.

4. Discussion

This study was conducted to document the sexual experiences of Kelantanese women and to see if there was any difference in their sexual functioning when compared to that documented in other studies in populations from other societies with different cultural practices.

In this study, nearly two-thirds of those women living with a spouse reported a decrease or absent sexual activity following menopause (Table 2). This in-

cidence is somewhat similar to a recent Korean study [10], but is higher than that reported in the Australian population [1,5]. Dennerstein [5] found that only 31% of their respondents reported a decrease in sexual activity with nearly two-thirds reporting no change and about 7% reporting an increase [5]. The reason for the slight differences between the two studies may be related to the age range of the study population. The age range of the study population in the studies of Dennerstein et al. was 45–55 years [1] and 45–58 years [5], respectively, whereas in this study it was 45–75 years. That it may indeed be the case, is supported by a more recent Australian report where the percentage scores in sexual dysfunction was found to rise from early to late menopausal transition (42–88%) [7].

The reason for the increased sexual activity in this study is not apparent but it may be related to the recent retirement of the respondent or her spouse. It is possible that following their retirement they had more time to themselves and therefore more opportunities for sexual activity. The retirement age in Malaysia is 55 years and there were a number of respondents in the study who had just retired recently. Incidentally, none of these women had new partners, which is also known to contribute to increased sexual activity in some instances [5,8]. Of importance is the finding that although more than two thirds of the women in this study were still active sexually, there was nevertheless a decrease in overall sexual activity following menopause.

The reasons for the decline in sexual activity following menopause remain numerous and complex and it is not possible to say from this study if the decrease in sexual activity was due to menopause per se or due to the advancing age. Sexual activity generally also decreases with age [8–10,25] although there is evidence that natural menopause may itself further contribute to its decline [4,7]. Clearly more controlled studies are needed to discern the effects of menopause per se on sexual activity. Nevertheless, the decrease in frequency of sexual activity in this age group could be due to a number of reasons, some of which include; dyspareunia, loss of sexual desire, spouse's declining interest, and infirmed or aged spouse. Nearly half the women in this study admitted to experiencing dyspareunia of varying degree following menopause, which may have made some of them reluctant to participate in sexual activity (Table 4). A negative correlation was also evident between dyspareunia and sexual frequency ($r = -0.537$; $p < 0.01$). Increased dyspareunia following menopause has been reported before but the percentage of women complaining of dyspareunia in this study (46.6%) was somewhat higher than that reported in women from Australia (12%) [1,6], Taiwan [11,12] (32%), Lahore, Pakistan (16.9%) [13] and Turkey [14]. The reason for the difference in the incidence of dyspareunia in the various study populations is not known. Physical examination was not done on the respondents. Certain factors might contribute to the dyspareunia noted by many of the respondents; including estrogen deficiency related dryness, estrogen deficiency related loss of elasticity and thinning of the vaginal epithelium, all of which is typical of vaginal atrophy. However, only a small fraction of women complained of the inability of their vagina to stretch sufficiently to allow full penetration of an erect penis (Table 3). It is therefore possible that the dyspareunia may not be related to vaginal atrophy. In addition, counteracting these effects is the possible laxity of the vaginal wall due to multiple births as parity is high in this population.

Pain during coitus could result from poor lubrication during sexual intercourse and/or atrophic changes following menopause. Nearly 60% of women in this study reported decreased vaginal secretion in response to sexual secretion following menopause (Table 5). Decreased vaginal secretion following menopause has been reported before, albeit at a slightly lower prevalence [5,11–16]. A prevalence of vaginal dryness of 23.6, 20.7 and 20.7% was reported in the Taiwanese [11], Thai [15] and Singaporean [16] women, respectively, where a similar methodology was used. One of the reasons for the slightly higher incidence of vaginal dryness in our study could once again be due to the age range of our study population. Alternatively, it is possible a lot more women in those studies may have been on HRT, as only 19% of the women in this study were on HRT. Women, after menopause, often experience a significant decrease in vaginal-cervical secretions [21]. Although oestrogen deficiency may, in part, contribute to this, there is evidence suggesting that some other factors may also be involved, as oestrogens do not increase or reverse the decline in vaginal-cervical secretions in all postmenopausal women [17,18]. Moreover, recent evidence suggests that the declining vaginal se-

cretion might also be due to the effect of age and hypoandrogenism [17]. A negative correlation between age and the density of androgen receptor expression has been reported, suggesting that androgens might also be involved in the regulation of vaginal blood flow and secretions [18]. One other possibility of reduced vaginal secretion is decreased stimulation during sexual intercourse. There is a need for a slower and more prolonged stimulation as women age. The increased prevalence in erectile dysfunction in the male partner in this age group is such that sexual activity may be hurried and very goal oriented to 'use' the erection while it lasts and the sexual interaction may consist of very little other than the act of intercourse. In this study a significant fraction (14%) of women admitted to their spouses' having some sexual problems.

In addition to dyspareunia, reduced sexual activity could also be due to decreased or absent sexual desire (Table 6). More than half the women in this study reported decreased sexual desire following menopause. Majority who admitted to absent sexual desire however had been in menopause for more than 15 years. The precise reason for the increased number of women complaining of reduced sexual desire following menopause is not clear but it may be associated with changing hormone levels, symptomatology and ageing. A similar prevalence in the loss of sexual desire has been reported in the Australian [6,7], Turkish [14] and Dutch [19] populations. The Australian study also found that the decline in sexual interest with natural menopause was significantly associated with decreased well being, decreased employment and increased symptoms in three of the symptom groups: vasomotor, cardio-pulmonary, and skeletal symptoms. Vaginal dryness has been found to be associated with not only dyspareunia but also with decreased sexual desire [19,20,24]. All or any one of these complaints by themselves could contribute to a significant reduction in sexual desire. Whether reduced sexual desire is construed as a problem or not, will depend on the individual and her partners' expectations. Interestingly, about a third of the women in our study reported a decrease in their spouse's sexual interest in them following menopause while approximately half reported no change and a small fraction admitting to a slight increase. There is a dearth in the literature of studies dealing with the issue of spouses' sexual interest and menopause. A recently published study, examining the attitude toward menopause among married middle-aged adults, found that wives expressed a more positive attitude toward menopause than their husbands did [22]. In addition, wives reported experiencing more menopausal symptoms than their husbands perceived them having. Whether the partner's perception of menopause will affect his interest in his wife, and if it does, to what extent and how this impacts the woman's sexual desire is unclear. There was a significant positive correlation between sexual frequency and spouses' interest in the respondents ($r=0.833$; $p<0.01$), and marital relationship ($r=0.730$; $p<0.01$). How much of the loss in sexual desire is due to the spouse's age and interest is also not very clear. A negative correlation was noticed between the age of the spouse and sexual desire of the women in this study ($r=-0.438$ $p<0.01$). Similar to the Australian [6], and American women [9,23] the older Kelantanese women who participated in regular sexual activity were those who were married to healthy spouses, indicating the poor health status of the spouse could also be a contributing factor to declining sexual function. Clearly more studies are needed to discern the role of the spouse's status in the decline in sexual function following menopause.

In terms of self-care actions; although nearly two-thirds of the women reported a decline in sexual function, more than half (53%) of the respondents did not take any action to improve their sexual function. One reason for the lesser number of women taking any self-care action is because majority of the Malaysian women accepted menopause as a natural ageing process. There were also those who may have been ignorant of the self-care actions available to improve their sexual function. Besides, there may have been some who may have had reservations about discussing their sexual problems with a clinician, particularly a young, unmarried, male physician. These topics are not freely discussed. The extent or prevalence of this was not evaluated in this study and it is therefore difficult to say to what extent it may have contributed to the large number of women preferring to take no self-care action. A vast majority of the women who took self-care action were from those who were educated and from urban areas. Of those who took action, majority was within the first 10 years of menopause. A very wide variety of self-care actions were taken by

the women to overcome the decline in sexual function. Of the actions taken HRT was the commonest action followed by traditional and alternative therapy. Controlling diet and regular exercises were some of the behavioral readjustments undertaken by the women to help improve or maintain their sexual functioning. Some varied combinations were also undertaken.

In conclusion, as has been reported before in other populations, sexual activity was found to decrease following menopause in majority of the women in this study. The decline in sexual function appeared somewhat greater in this study compared to studies elsewhere. Dyspareunia, decreased vaginal secretions and decreased sexual desire was reported by a majority of the women in this study. Any of these could contribute to the decline in sexual function. However, owing to the nature of this study it is difficult to ascertain the individual contribution of age and menopause to the declining sexual function following menopause. Irrespective of their attitude towards menopause, some women in this study still considered sexual function as an important part of their marital relationship, as evident from the self-care action taken by the women to improve their sexuality. It is therefore important that the health professionals remain aware of the women's needs in menopause and help them maintain a quality of life as they age.

Acknowledgements

This study was supported by Universiti Sains Malaysia short-term grant (304/PPSP/613199) and approved by the University's Ethics Committee. We would like to thank Assoc. Prof. Syed Hatim, for the statistical assistance, and Assoc. Prof. Datin Rashidah Shuib and Assoc. Prof. Abdul Manaf for their critical evaluation of the questionnaire.

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Prevalence of menopausal symptoms in women in Kelantan, Malaysia

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Abstract

Objectives: The aim of the study was to document the prevalence of 16 symptoms commonly associated with menopause, in women living in Kelantan.

Method: After verification, a semi-structured questionnaire in the Malay language was administered to 326 naturally menopaused healthy women (mean age of 57.1 ± 6.58 (SD)) to assess the prevalence of 16 common symptoms, which had been identified through focus group discussions and those that have been repeatedly reported in the literature.

Results: Mean age at menopause was 49.4 ± 3.4 (SD) years while both the mode and median were 50 years. Of these, 75% were within the first ten years of menopause and the rest were within the range of 11 to more than 20 years postmenopause. The mode for the number of symptoms complained by each woman was 8 (range 0 – 16). The prevalence of atypical symptoms was as follows: tiredness (79.1%), reduced level of concentration (77.5%), musculo-skeletal aches (70.6%), and backache (67.7%). Night sweats (53%), headache (49.4%), and hot flushes (45.1%) were the typical vasomotor symptoms, whereas mood swings (51%), sleep problems (44.8%), loneliness (41.1%), anxiety (39.8%) and crying spells (33.4%) were the main psychological symptoms. Uro-genital symptoms such as vaginal discomfort (45.1%), occasional stress incontinence (40%), weak bladder control (24%), and urinary tract infection (19.3%) were also reported.

Conclusion: The symptoms are somewhat similar to those experienced by postmenopausal women elsewhere, albeit at different frequencies. There was a tendency for the women to admit to having more of the atypical somatic symptoms, the prevalence of some which increased with increasing age category, and lesser of the vasomotor and psychological symptoms.

Keywords: Malaysia; Kelantanese women; postmenopausal symptoms; women's health

1. Introduction

Menopause has been associated with numerous transient typical and atypical symptoms. Typical or classical symptoms are those that include vasomotor symptoms [1], e.g. hot flushes, night sweats, and sleep disturbance. Atypical or somatic symptoms, on the other hand, include headache [2,3], low backache [2,3], skin dryness [2,3] and reduced level of concentration [2,3], which can be associated to both menopause and as well as to the ageing process. Frequency of micturition, avoiding intimacy, changes in sexual desire and vaginal dryness are considered as urogenital problems often associated with declining estrogen levels.

It has been suggested that Asian women suffer more of the atypical symptoms and fewer, and with lesser severity, the typical psychological and vasomotor symptoms when compared to those reported in Caucasian women in the west [2-5]. Avis et al [6], on the other hand reported of significantly more psychosomatic symptoms in Caucasian women than in African-American, Chinese, Japanese and Hispanic women, and significantly more vasomotor symptoms in Afro-American women. In a review of five studies evaluating the impact of menopause in different cultures, Robinson [7] concluded that there were large differences in the experiences of menopause by women from different cultures and even in women from the same culture. They further suggested that menopausal complaints appear to depend on a combination of physical changes, cultural influences and individual perception and expectations [7]. In addition, studies on women in Singapore [1], Taiwan [5], Malaysia [8], Thailand [9-11] and Australia [12] suggest that other variables such as socio-demography, education level, access to health care and perception of menopause could also influence the menopausal woman's quality of life. It is therefore becoming apparent that the experience during climacteric is influenced by numerous factors. Even though there have been studies [8], [13] done in Malaysia, there still remains very little information on the prevalence of symptoms, particularly in the postmenopausal Malaysian women living in Kelantan, a state in Malaysia where there is a strong adherence to traditional and cultural practices. Documenting menopausal experiences from all populations and geographical locations is important if we want to better understand climacteric. This study was therefore undertaken to ascertain the prevalence of some of the commonly documented menopausal symptoms in women living in Kelantan.

2. Materials and Methods

A semi-structured questionnaire in the Malay language was designed to obtain information on the most common postmenopausal symptoms described by women worldwide. The development and design of the questionnaire were done following a substantial literature review of related studies and through focus group discussions, which consisted of eight postmenopausal women. These women were randomly chosen from those attending the menopause clinic, gynaecology clinic and nurses working at Hospital Universiti Sains Malaysia. The list of symptoms chosen consisted of those that were complained most frequently by the women in the focus group and also commonly reported in the literature. To ascertain its face validity, the content of the questionnaire was reviewed by three academic staff, consisting of a gynaecologist, an academician from the Department of Community Medicine, and one other academic from the Women's Health Development Unit.

Upon approval of the study by the University's Ethics Committee the questionnaire's construct validity was determined using factor analysis. For this the questionnaire was distributed to 100 postmenopausal women. Their responses to the questions were tabulated and KMO and Bartletts test was done which revealed a $p<0.001$, indicating that these questions were acceptable for factor analysis. Reliability coefficient (Cronbach's alpha) was 0.8334, which indicated that the measurement tool had a good reliability [14].

After verification, we were able to distribute the questionnaires to 326 naturally menopausal women living in Kelantan. The subjects consisted of women, living in rural, suburban and urban areas whose education level ranged from no education to tertiary education. Some were self-employed whereas others consisted of support staff to professionals. Being a purposive, cross-sectional study, women were recruited through the Kelantan Family Planning Association, menopause clinic, and gynecology clinic at Hospital Universiti Sains Malaysia, local general practitioners, public services departments and village committees. About 50% of the participants were recruited via the snowballing technique, where respondents recommended or introduced other subjects to the researcher. The inclusion criteria consisted of healthy women who had menopaused naturally and had no menses for a period of 1 year or

more. Women with uncontrolled medical conditions such as hypertension, diabetes mellitus or heart disease, or who had undergone oophorectomy or those who were undergoing treatment for cancer or were in remission were excluded from the study.

The response rate was 100 percent as the questionnaire was given personally to the respondents, either at home or at their workplaces. For those subjects who were unable to read, the questions were read to them and their responses were recorded by the same researcher. As the questions were in the local language and designed with the local population in mind, the subjects did not have any difficulty in understanding the questions when they were read to them. The questionnaire was collected immediately upon completion. Before collection of the questionnaire, the statements were re-checked to ensure all statements were answered. The respondents' responses were based on those symptoms, which they were experiencing or had experienced within the month. Sample size was determined from other studies, which had sample sizes ranging from 200 [15] to 400 women [4, 13]. The minimum sample size for this study was ascertained to be 255. As the data was being collected and analysed, the outcome started showing a saturation point at sample size of about 250 women and no difference was seen when the sample size was increased to 300 and then to 326. It was then assumed that a saturation point had been reached and further addition of subjects to the sample size was not going to have any significant effect on the findings. Statistical analysis was performed using descriptive statistics.

3. Results

Mean age of the subjects in this study was 57.01 ± 6.58 (SD) years and the age range of the respondents was between 40 to 70 years. However, more than three-quarters of the subjects in this study were within the age of 45 – 60 years. According to the STRAW classification [16], more than half the participants in this study were in early postmenopause i.e. the first five years of menopause, while the rest were in late postmenopause. Nevertheless, nearly three quarters were within the first ten years of menopause. The mean age at menopause was 49.4 ± 3.4 (SD) years while both the mode and median were 50 years. The breakdown of the education level of the subjects was as follows; no education (23%) to primary (25.1%), secondary (39.9%), and tertiary (12%) education and consisted of women living in rural (38.7%), suburban (23.3%), and urban (38%) areas. Their occupations ranged from housewives (28.8%), self-employed and support staff (61%) to professionals (10.2%).

Table 1
Prevalence of postmenopausal symptoms

	Menopausal symptoms	n = 326	100%
1.	Tiredness	258	79.1
2.	Reduced level of concentration	253	77.5
3.	Musculo-skeletal aches & pains	230	70.6
4.	Backache	221	67.7
5.	Night sweats	173	53.0
6.	Mood swings	168	51.5
7.	Headache	161	49.4
8.	Vaginal discomfort	149	45.7
9	Hot flushes	146	44.0
10	Sleep disturbances	147	45.1
11	Loneliness	134	41.1
12	Anxiousness	130	39.8
13	Stress incontinence	126	40.0
14	Crying Spells	106	33.4
15	Poor bladder control	78	24.0
16	Urinary Tract Infection	63	19.3

Of the symptoms, somatic symptoms were the most prevalent followed by vasomotor, genital, psychological and urological symptoms (Table 1). Only six women did not have any symptoms at all and they were within the first ten years of their menopause.

Table 2
Frequency distribution of symptoms in the whole group

No. of symptoms	1-5 years	> 5 years	TOTAL
0	2	4	6 (1.8%)
1	3	1	4 (1.2%)
2	8	6	14 (4.3%)
3	10	12	22 (6.7%)
4	10	14	24 (7.4%)
5	14	12	26 (8%) 8.0%
6	20	9	29 (8.9%)
7	18	12	30 (9.2%)
8	21	14	35 (11.3%)
9	17	5	22 (6.7%)
10	17	16	33 (10.1%)
11	14	11	25 (7.7%)
12	13	8	21 (6.4%)
13	11	13	24 (6.7%)
14	6	2	8 (2.5%)
15	0	1	1 (0.3%)
16	0	2	2 (0.6 %)
TOTAL	**184 (56.4%)**	**142 (43.61%)**	**326 100%**

43.6 (Standardise to one decimal place)

Table 2 presents the frequency distribution of the number of women admitting to having one or more symptoms in this study. The complaints per women ranged from zero to 16. The overall mean was six symptoms. The mode for women who had been in menopause for 1-5 years was 8 whereas the mode for women who had been menopaused for >5 years was 10. A small fraction (0.6%) had complained of all the sixteen symptoms and these women had been in menopause for more than 11 years.

Table 3

Prevalence of menopausal symptoms in the two groups based on STRAW classification

Symptoms	Menopausal status 1-5 years n= 184 %	Menopausal status 6 - 21 years and more n=146 %	$\chi 2$
Tiredness	79.3	78.9	*ns*
Reduced level of concentration	72.8	83.8	**p<0.018**
Musculo-skeletal aches and pain	69.0	72.5	*ns*
Backache	68.0	68.0	*ns*
Night sweat	53.8	52.1	*ns*
Mood swing	59.8	41.0	**p<0.001**
Headache	55.4	41.5	**p<0.013**
Vaginal discomfort	38.6	55.0	**p<0.003**
Hot flushes	52.7	34.5	**p<0.001**
Sleep disturbance	44.0	46.5	*ns*
Loneliness	35.0	49.0	**p<0.016**
Anxiousness	41.0	39.0	*ns*
Stress incontinence	39.0	40.0	*ns*
Crying spells	34.0	33.0	*ns*
Weak bladder control	19.9	24.0	*ns*
Urinary Tract Infection	19.7	19.0	*ns*

To determine how many of the women continued to have some of the symptoms beyond the first five years of menopause, the subjects were divided into two groups based on STRAW classification (Table 3). Some clear trends were observed between menopausal status and symptoms. Symptoms like mood swings, headache, and hot flushes were lower in women who had been in menopause for more than five years. In contrast, the prevalence of reduced level of concentration, vaginal discomfort and loneliness was higher in women who had been in menopause for more than five years menopause. There were however a few symptoms with prevalence that was not different between the two groups.

4. Discussion

This study sought to ascertain the prevalence of 16 commonly reported symptoms in menopaused women living in Kelantan and to see if the prevalence of some of these was similar to that reported in other studies. Subjects in this study consisted of women with varying occupational and educational background, derived from rural, suburban and urban areas but were mainly from one ethnic group. The ages of the subjects ranged from 40 – 70 years, providing information on the menopausal experiences of women beyond the age of 60 years, which is somewhat lacking except for one Pakistani study where the respondents' ages ranged from 42 – 80 years [17]. This consideration is becoming important as more women are living longer and the current average life span of a woman in Malaysia is 75.2 years, indicating that nearly a third of a women's life is now spent in menopause.

Of interest in this study population is the overall prevalence and the distribution of the symptoms amongst the respondents, and their prevalence when women are divided based on the duration of their menopause. Although majority of the women experienced symptoms that were similar to those reported in other populations, but when ranked in the order of prevalence, the atypical symptoms or somatic symptoms of tiredness, decreased level of concentration, backache and joint and muscle pain had the highest prevalence (Table 1). The classical symptoms such as hot flushes and vaginal discomfort were reported by less than 50% of the women, with the exception of night sweat and mood swings. This, to an extent, concurs with suggestions of Asian women having more of the atypical symptoms than their western counterparts [2-5]. Interestingly, a recent report indicates that the prevalence may also differ among Asian women of different ethic origins [18], indicating that the experiences may differ even in women living within the same geographical location. The exact reason for the higher prevalence of atypical symptoms in this study is not evident, although dietary [19], cultural [20] and possibly life-style [21] factors have been proposed to influence the menopausal experiences of women. Dietary and cultural life-styles were not studied in this population but the study population consisted primarily of one race.

The mode for the number of symptoms complained was eight, where nearly 52% of the women in this study had complained of eight or more symptoms (Table 2). The number of

women complaining of 5 or more symptoms was 78.9%. This is somewhat higher than what was reported in the Australian women [12], where only 56% of the respondents had reported to having 5 or more complaints. The reason for this difference is once again not clearly apparent, although one possibility that may explain the higher prevalence of most symptoms documented in this study is the fact that the questionnaire in this study was more structured and the subjects were asked directly if they had or were experiencing the symptoms within a month of the interview, rather than the participant having to recall what symptoms they had. No significant correlation was evident between the number of symptoms complained and the level of education, occupation or the place of residence.

It is often difficult to identify which symptoms are primarily due to oestrogen deficiency and which are due to the ageing process. In addition, there may also be symptoms that are related to ageing but are exacerbated during oestrogen withdrawal or symptoms due to oestrogen deficiency that are exacerbated by age. While it is difficult to comment about the influence of age on the symptoms, or vice versa, from this study, we tried to explore this possibility by examining the prevalence of these symptoms in women by grouping them into early (first five years of menopause) and late (more than 6 years of menopause) menopause, based on the STRAW classification [16], (Table 3). It was assumed that symptoms primarily due to oestrogen deficiency only would decrease with advancing duration of menopause as the body adapts to the deficiency, whereas those that are due to aging or both may either increase or remain the same. Interestingly, there were some significant differences observed in the prevalence of the symptoms between the two groups. The prevalence of mood swings, headache and hot flushes was lower in women who had been menopaused for more than 5 years. In contrast, the prevalence of complaints like reduced level of concentration, vaginal discomfort and loneliness was higher in women who had been in menopause for more than 5 years, suggesting the latter complaints may also be related to the ageing process (Table 3). Urinary tract infection, stress incontinence and anxiousness were the same in all categories. From the ensuing it seems that not all complaints that arise during menopause are entirely due to the declining oestrogen levels, but rather there are some that are also due to the aging process, which is of course ongoing. Support for women in menopause has therefore to be planned appropriately. There is a clear need for more study to differentiate complaints that

are primarily due to oestrogen deficiency and those that are due to ageing or both if we wish to better manage women through this transition.

Comparison of the prevalence of the symptoms in this study with that reported in other studies in the Asia-pacific region is presented in Table 4. The prevalence of the symptoms was generally higher in this study with the exception of headache and sleep problems, which were

Table 4 Prevalence of postmenopausal symptoms in other studies in the Asia-pacific region.

No		Kelantan 2003 n=326 %	Singapore[1] 2002 n=495 %	Taipei[5] 2001 n=210 %	Melbourne[12] 2000 n=438 %	Bangkok[9] 1997 n=268 %
	Age (yrs)	40 – 70	40 – 60	46-54	45-55	40 – 59
	Symptoms					
1	Tiredness	79.1	38.8	33.8	43	63
2	Reduced concentration	77.5	45.1	-	20	-
3	Musculo–skeletal aches	70.6	51.7	37.4	57	71
4	Backache (lumbago)	67.7	included with muscle ache	41.5	32	27
5	Night sweat	53.0	8.9	11.8	24	-
6	Mood swing	51.0	22.4	-	-	43
7	Headache	49.4	30.1	36.9	-	59
8	Vaginal discomfort	45.7	20.7	24.2	32	8
9	Sleep problem	45.1	23.4	57.4	45	52
10	Hot flushes	44.8	17.6	16.4	41	33
11	Loneliness	41.1	-	-	-	-
12	Anxiousness	39.8	19.2	-	28	39
13	stress incontinence	40.0	19.6	23.6	-	25
14	Crying spells	33.4	16.4	-	32	27
15	Poor bladder control	24.0	Included with Stress incontinence	-	26	-
16	Urinary tract infection	19.3	-	-	2	-

This study, 2003: n= 326, 326 were postmenopausal (100%)
Chim *et al.*, 2002 [1]: n= 495, 133 were postmenopausal (27%)
Fuh *et al.*, 2001 [5]: n=210; 210 were postmenopausal (100%)
Dennerstein *et al.*, 2000 [12]: n= 438, 157 were post menopausal (36%)
Punyahotra *et al.*, 1997 [9]: n = 268; 107 were post menopausal (40%)

higher in the Bangkok study (Table 4). In addition, the complaints also differed in both their rates of prevalence and their order of complaint. For example, tiredness, which was the most prevalent symptom in this study, was listed as the 2nd, 3rd, and 5th most frequent complaint in the Bangkok, Melbourne, Singapore and Taipei studies respectively, where it ranged from 63 – 33.8%. Another study in Malaysia, on a Kuala Lumpur based population, listed tiredness as the 2nd most frequent symptom and with a slightly lower prevalence [8]. The study however consisted of a multiethnic population drawn from an urban area. A more recent study, documented 65.4% rural women in Lahore complaining of lethargy [17]. Decreased level of concentration had a prevalence that was once again higher than that reported in some of the other studies and was complained more by women who had been in menopause for more than 5 years. Although reduced level of concentration was ranked as the 2nd most frequent complaint in the Singapore study [1], it was only ranked 11th most frequent complaint in the Melbourne study [12]. Despite the slight differences in the prevalence of tiredness and loss of concentration, the prevalence of the atypical symptoms nevertheless was generally higher when compared to the vasomotor symptoms in all these studies with the exception of the Melbourne study [12]. The reason for the higher prevalence of most of the symptoms in our study is not clearly apparent, but as stated earlier, it may be related to the fact that the questionnaire used to ascertain the prevalence was more structured, where the participants were specifically asked about the symptoms, and also, the age range of the participants in this study was greater than that in the other studies, the latter may have contributed to the prevalence of those symptoms that are also related to ageing. The cause for the tiredness and decreased level of concentration is not known. None of the participants in this study had any evidence of anaemia or thyroid dysfunction, which are known to cause tiredness and lethargy. The demonstration of oestrogen receptors in the various part of the brain suggests that oestrogen may serve a wider function than its widely understood role in reproduction [22]. There are reports of association between circulating sex steroids and cognitive function in aged men and women [23]. As reduced level of concentration was significantly associated with menopausal status (χ^2 5.5 $p<0.018$) and tiredness did not differ between the two groups (Table 3), indicate that these two complaints may also be influenced by age.

Vasomotor symptoms like hot flushes and headaches were common among women within the first five years of menopause (Tables 1 & 3). Their prevalence seems to be lower in women who had been in menopause for more than five years, indicating an adaptation to the declining oestrogen levels. Significant correlation was evident between headaches and hot flush ($r = 0.389$; $p<0.01$) and mood swings ($r = 0.349$; $p<0.001$). There was also a significant correlation between sleep disturbances and hot flushes ($r=0.446$; $p<0.01$), implying that one of the reason for the sleep disturbance may be hot flushes during the night. Like in the case of the atypical symptoms, the prevalence of vasomotor symptoms was higher in this study compared to other studies. However, the order of the complaint was lower in this and in other studies in the Asian region, but it was higher up the ranking order in the Melbourne study [12].

Uro-genital atrophy is a common occurrence in postmenopausal women. It manifests as stress and urgent urinary incontinence, dysuria and recurrent infection of the lower urinary tract [24]. Occasional stress incontinence (38.7%) and frequent stress incontinence (0.9%) was reported by some women in this study. Stress incontinence had also been reported in studies from other populations [1,5,10], but the prevalence is somewhat lower. This symptom was however not reported among the Australian postmenopausal women [12]. On the other hand, Milsom [25] reported that half the postmenopausal women in the Swedish study had lower urinary tract symptoms. There was no correlation observed between stress incontinence and menopausal status or age in the Kelantanese women. A vast majority of the women in this study felt they had either no change in their bladder control or still had a strong bladder control after menopause. The rate of occurrence of poor bladder control was somewhat similar to that reported in the Australian study [12]. In this study, urinary tract infection was the least frequent symptom amongst the women. Out of the 19.3% (63) women who admitted to urinary tract infection, majority had occasional infection and only three women had frequent episodes. Of the few studies referred to here, only in the Melbourne study was there women who complained of urinary tract infection [12], where only 2% complained and it ranked as the tenth most common complaint. The women who had frequent UTI were within the first ten years of postmenopause. This is probably due to the result of poor estrogenisation in the vagina and adjacent tissues [26, 27]. The prevalence of bacteriuria has been reported to

increase with age and has also been associated with parity and previous history of urinary tract infection [28]. Yoshikawa et al., [27] estimated that as many as 30% of women older than 80 years were bacteriuric. A survey of 1,280 Swedish women aged 61 years old, revealed that 75% were affected by genitourinary complaints; 4% reporting recurrent urinary traction infection [29]. In another Swedish survey of 2,245 women showed that more than twice as many 81-year olds (11%) reported recurrent UTI as did 71-year olds (5%) [29].

Out of the total, less than half complained of occasional vaginal discomfort. There was a small minority who had frequent or continuous vaginal discomfort. Vaginal discomfort has been reported before in other studies [1,5,10,12]. The overall incidence of vaginal discomfort was lower in all these studies compared to our study. Over a third (35.9%) of the women did not complain of any pain during sexual intercourse. However 34% of the respondents did complain of dyspareunia. A small fraction (7.1%) of women found that their vagina was unable to accommodate completely an erect penis. There was a significant correlation between dyspareunia and reported inability of the vagina to accommodate an erect penis ($r = 0.55$; $p<0.001$). Vaginal discomfort also had significant association with menopausal status ($p<0.003$), which was higher (55%) among women who had been in menopause for more than 5 years. Prevalence of stress incontinence (40%) and weak bladder control (24%) was also higher in women who had been menopaused more than 11 years than those in the 1st five years of menopause (Table 3).

Psychological symptoms like mood swing, loneliness, anxiousness, and crying spells were reported by a significant number of participants (Table 1). Similar complaints from postmenopausal women have also been recorded in other populations. However, the prevalence of these was once again higher in this study. Loneliness had significant association with menopausal status ($p<0.016$) which was higher (49%) in women who had menopaused more than 5 years (Table 3). In contrast mood swing, another symptom significantly associated with menopausal status ($p<0.001$) decreased from 59.8% to 41% in women menopaused for more than 5 years.

In summary, it appears that the menopausal symptoms experienced by women in Kelantan are similar to those experienced by women elsewhere. Their prevalence however was consistently higher in this population, which may be related to the study methodology. In addition, majority of the women had more of the atypical symptoms of tiredness, decreased level of concentration, backache and joint and muscle pain. The classical symptoms such as hot flushes and vaginal discomfort were reported by less than 50% of the women with the exception of night sweat and mood swing. Uro-genital ageing and sexual functioning were adversely affected by menopause but the impact of these on their quality of life appeared small. This was probably because the uro-genital changes and sexual functioning were not that severe and also they were more prevalent in the older age group, where perhaps the importance of sexual functioning was somewhat reconciled and readily accepted as a natural process and consequence of ageing. Only a small fraction of women complained of the inability of their vaginas to stretch sufficiently to allow full penetration of an erect penis. Parity is high in this population and the multiple births could also contribute to the possible laxity of the vaginas, hence only a very small fraction complained of the inability of the vaginas to accommodate an erect penis. In conclusion therefore, our study seems to suggest that the prevalence of postmenopausal symptoms may be higher in some populations than has been generally reported and further confirms that the prevalence of symptoms may vary from population to population, depending upon the type of symptom.

Acknowledgements

This study was supported by Universiti Sains Malaysia short-term grant (304/PPSP/613199) and approved by the University's ethics Committee. We would like to thank Assoc. Prof. Syed Hatim, for the statistical assistance and Assoc. Prof. Datin Rashidah Shuib and Assoc. Prof. Abdul Manaf for their critical evaluation of the questionnaire.

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