

A STUDY ON THE ASSOCIATION OF SEXUAL FACTORS AND
PERSONAL HYGIENE BETWEEN COUPLES IN RELATION TO
CERVICAL CHANGES IN PAP SMEAR

By

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ABBREVIATIONS

CI	=	Confidence Interval
CIN	=	Cervical Intraepithelial Neoplasia
HIV	=	Human Immunodeficiency Virus
HUSM	=	Hospital Universiti Sains Malaysia
HPV	=	Human Papilloma Virus
Pap smear	=	Papanicolaou smear
PID	=	Pelvic Inflammatory Disease
STD	=	Sexually Transmitted Disease
USA	=	United States of America

ABSTRACT

OBJECTIVE:

This study was conducted to determine the association of sexual factors and personal hygiene between couples in relation to cervical changes in Pap smear.

METHODOLOGY:

This multicentre cross sectional study was conducted in the Obstetric and Gynaecology Clinic of Hospital Universiti Sains Malaysia, Hospital Kota Bharu and Hospital Kuala Terengganu from June 2004 till May 2005. A total of 99 couples who fulfilled the criteria were interviewed and the Pap smear performed on the female spouse. Their sexual habits and personal hygiene in relation to cervical changes in Pap smear were then compared and analysed using SPSS Version 12.0

RESULTS:

There were 55 (55.6%) of female respondents found to have reactive cervical changes in Pap smear. The degree of inflammatory changes were 33 (60%) mild, 13 (23.6%) moderate and 9 (16.4%) severe features. Three percent (3%) of the cervical smears exhibit organisms (trichomonas, candidiasis and HPV infections) and 14.1% had per vaginal discharge. There were 31 (31.3%) from both female and male respondents who had early sexual activity (<20 years). There were three male respondents whom had engaged in coitus before the age of 16 years. Sixty-eight percent (68%) of couples had coitus two to three times per week.

There were only 7 (7.1%) female respondents whom had more than two sexual partners (divorcee and remarried) and only one male respondent whom engaged with sexual workers. Among the males, 87 patients (87.9%) had good genital hygiene and 95 patients (96 %) practiced the habit of genitalia washing after sexual intercourse. There were 86 males (86.9%) who were circumcised. There were 88 (88.9%) females who practiced the habit of genital wash prior to intercourse.

CONCLUSION:

From the statistical analysis, there was no significant association of cervical changes in relation to the age of first intercourse among the male and female spouses, the number of sexual partners among female participants, the frequency of sexual activity among female participants, male of whom had sex with multiple sexual partners or sexual workers, the practice of applying condom, the status of circumcision, washing genitalia before or after intercourse in both couples and the status of genital hygiene.

ABSTRAK

OBJEKTIF:

Kajian ini telah dijalankan untuk mencari hubungkait di antara faktor seksual dan kebersihan individu di kalangan pasangan suami isteri dengan perubahan servik pada Papsmear.

METODOLOGI:

Kajian yang berbentuk multicentre cross sectional ini telah dijalankan di Klinik Obstetrik dan Ginekologi di Hospital Universiti Sains Malaysia, Hospital Kota Bharu dan Hospital Kuala Terengganu dari Jun 2004 sehingga May 2005. Sebanyak 99 pasangan yang memenuhi kriteria kajian telah ditemubual dan Papsmear telah dilakukan ke atas wanita. Amalan seksual dan kebersihan individu yang berhubungkait dengan perubahan servik dalam Papsmear telah dibandingkan dan dianalisa menggunakan SPSS versi 12.0.

KEPUTUSAN:

Seramai 55 (55.6%) responden wanita mengalami perubahan servik yang reaktif pada Pap smear. Tahap inflamasi yang didapati adalah: peringkat sedikit, 33 (60%), peringkat sederhana, 13 (23.6%) dan peringkat teruk, 9 (16.4%). Tiga peratus (3%) dari smear servik mempamerkan organisma (trichomonas, candidiasis dan jangkitan HPV) dan 14.1% mengalami discaj dari faraj. Terdapat 31(31.3%) dari kedua-dua responden wanita dan lelaki yang terlibat dalam kegiatan seks yang awal (<20 tahun). Enam-puluh lapan peratus (68%) daripada pasangan melakukan hubungan seks sebanyak dua hingga tiga kali seminggu. Hanya 7 (7.1%) responden wanita yang mempunyai lebih dari dua orang

pasangan seks (janda dan berkahwin semula) dan hanya seorang responden lelaki yang mempunyai hubungan seks dengan pelacur. Dikalangan pesakit lelaki, 87 orang (87.9%) mempunyai tahap kebersihan kemaluan yang baik dan seramai 95 orang (96%) mengamalkan tabiat membersihkan kemaluan selepas hubungan seksual. Terdapat 86 (86.9%) lelaki yang telah bersunat. Seramai 88 (88.9%) wanita yang mengamalkan tabiat membersihkan kemaluan sebelum hubungan seksual.

KESIMPULAN:

Daripada analisis statistik, tiada hubungkait yang signifikan di antara perubahan servik dengan umur pada kali pertama melakukan hubungan seksual dikalangan pasangan wanita dan lelaki, bilangan pasangan seks dikalangan wanita, kekerapan melakukan hubungan seks dikalangan wanita, lelaki yang mempunyai hubungan seks dengan ramai pasangan seks atau pelacur, tabiat menggunakan kondom, status bersunat, tabiat membersihkan kemaluan sebelum atau selepas hubungan seksual dikalangan pasangan lelaki dan wanita dan tahap kebersihan kemaluan.

INTRODUCTION

1. INTRODUCTION TO THE STATE OF KELANTAN

Kelantan, which means the "Land of Lightning", is one of the thirteen states in Malaysia. This traditional Malay heartland state is located in the northeastern part of Peninsula Malaysia. It covers an area of 14,931 square kilometres. Kelantan's coastline is almost completely undeveloped, and offers a number of idyllic beaches. Vast stretches of tropical forest cover the state, and its southeastern corner forms part of the Taman Negara National Park.

Sharing a common border with Thailand in the north, visitors have been captivated by the rustic fishing villages, verdant padi (rice) fields, and languid, palm-fringed beaches of Kelantan. Picturesque villages amidst padi-fields give insights into a way of life that has endured the passing of time.

It is also the cradle of Malay culture, crafts, and religion. There are numerous things to do and see here. One can watch the process of batik being made, take part in kite-flying contests, or admire traditional woodcarving techniques. For most visitors, the charms of Kelantan are found in the vitality of its culture and its remote, unsullied beauty. The traditional sports of giant kite-flying, top-spinning, silat, wayang kulit, bird-singing competitions and the making of exquisite handicrafts such as songket, batik, silverware and mengkuang products still remain fixtures here, offering a glimpse of traditional Malay culture in truly spectacular setting.

Kelantan boasts of a historical past that date as far back as prehistoric times, to between 8000-3000 B.C. Chinese historical documents chronicle the existence of a government which had links with China, when Kelantan was referred to as 'Ho-lo-tan'.

In the 15th Century, it came under the Melaka Sultanate. It was further ruled by the sultanates of Johor and Terengganu. By the 1820s, Kelantan was one of the most prosperous states in the Peninsula with unlimited development. Kelantan also retained strong ties with Siam throughout the 19th Century before control was passed on to the British after the signing of the Anglo-Siamese Treaty in 1909. By 1948, Kelantan had become part of the Federation of Malaya.

One of the most conservative states in Malaysia, Kelantan is driven by the production of padi (rice), rubber, and tobacco. Fishing and livestock rearing are also important economic activities. The state has witnessed a steady rise in economic growth over the last few years. This has been attributed to the stringent economic policies implemented by the state government.

As the capital, Kota Bharu is a good place to sample traditional Malay culture. It is also a good place to explore the surrounding countryside. The town signals the end of the east coast road, and the beginning of Thailand. It is situated on the northern bank of the flood-prone Sungai Kelantan (Kelantan River).

With modern architecture, Kota Bharu looks like any other east coast cities at first glance. But if you look closer, it has more to offer. Its rich cultural heritage and many other attractions have made it one of the most interesting places for a vacation. Located in the heart of the city is the Japanese war museum, a reminiscence of our colonial past. The invasion of Malaya by the Japanese troops in 1941 was heralded by the landing of its army on the shores of Kota Bharu.

The state has undergone tremendous development in the last decade. The opening of the East-West Highway and the Sultan Ismail Petra airport in Pengkalan Chepa has bridged the gap between the West Coast and promises to further accelerate economic growth in the state.

2. INTRODUCTION TO UNIVERSITI SAINS MALAYSIA

Universiti Sains Malaysia (USM) is one of the country's premier universities with the main campus being located in Penang and the medical campus in Kelantan. With around 35,000 students including 28,000 undergraduates in 2005, USM is the biggest university in terms of enrolled students in Malaysia. The number of lecturers is about 1,800 which leads to a student-lecturer ratio of around 1:20.

It is one of three universities in this country that has been identified as research-intensive university. This is in tandem with its mission and vision to be a world-class university embarking on world class research programmes via strategic planning and implementation of its R&D mechanism. The university has qualified academic staffs and excellent human resources support in order to realise its mission.

Started from USM hospital, the health campus has expanded after the School of Medical Sciences was moved from the main campus in Penang to the campus in Kelantan which is 72.84 hecter in size. The School of Medical Sciences was moved from the main campus in June 1990. Currently, the health campus in Kubang Kerian, Kelantan has three faculties: School of Medical Sciences (Pusat Pengajian Sains Perubatan), School of Dental Sciences (Pusat Pengajian Sains Pergigian), School of Health Sciences (Pusat Pengajian Sains Kesihatan) and School of Sport Sciences (Pusat Pengajian Sains Sukan). It is located 5 kilometers from the capital, Kota Bharu and is easily accessible by public or private transport.

3. THE DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY

In the year 2006, the Department of Obstetrics and Gynaecology of HUSM has fifteen Lecturers, four trainee Lecturers , twenty-nine Masters students and six House Officers. Other supporting staffs include one Matron, six Sisters, ninety-three Staff Nurses, eight Midwives, one Assistant Nurse, forty-seven Attendants, three Ward Assistants and three Clinic Assistants.

The department consists of the main office, 2 antenatal wards (2 Akik and 2 Baiduri), 1 postnatal ward (2 Topaz) 1 gynaecology ward (1 Utara), 1 labour suite (1 Berlian) and the Obstetrics and Gynaecology Clinic. The various wards and clinic are lead by a Sister and staffed by dedicated staff nurses, assistant nurses and attendants.

Apart from the routine booking, antenatal and general gynaecology clinic, the department also offers sub-speciality services such as Gynae-oncology clinic, Molar surveillance clinic, Well women's clinic, Infertility and reproductive clinic, Antenatal Combined Clinic and Postnatal clinic for the improved health care services of patients. Detail scan of fetus and urogynaecology services are also provided.

Many gynaecology surgeries are performed here, ranging from dilatation and curettage to Wertheim's Hysterectomy and Pelvic Lymph Nodes Dissection. The in-trend minimally invasive surgeries are also performed.

3.1 The Obstetrics and Gynaecology Clinics Schedule in HUSM

Table 1: The Obstetrics and Gynaecology Clinics Schedule in HUSM

DAY	MORNING	AFTERNOON
SUNDAY	Antenatal Clinic (Team A & B)	Gynaecology Clinic (Team A & B)
MONDAY	Elective Operation (Team B & C) Well women's Clinic (Team A) Combined Clinic (Team D) Elective Ultrasound	Elective Operation (Team B & C) Molar Surveillance Clinic (Team A) Gynae-oncology Clinic (Team A) Colposcopy
TUESDAY	Antenatal Clinic (Team C & D)	Gynaecology Clinic (Team C & D)
WEDNESDAY	Elective Operation (Team A & D) Infertility & Reproductive Clinic (Team C)	Elective Operation (Team A & D) Postnatal Clinic (Team B)
THURSDAY	Antenatal Booking Clinic	Masters Students Teaching Session

4. INTRODUCTION

Sexual relationship and personal hygiene forms an integral element of the human being lifestyle. There are many sexual factors and hygienic factors which can affect an individual's well being. Irresponsible sexual behaviour and inadequate personal hygiene can result in undesirable consequences such as sexually transmitted diseases, upper genital tract infection, infertility and cervical cancer. This unhealthy sexual behaviour include having multiple sexual partners, early involvement in sexual activities, sexual engagement with sex workers and having unprotected sexual intercourse (Lee, N., 1991).

Normal microflora in the vagina is 90% lactobacillus, which excretes lactic acid. Vaginal acidic environment inactivates most harmful bacteria. Any factor that changes the vaginal environment to become alkaline, will diminish the number of lactobacillus in the vagina dramatically and other microbes will colonize the vagina. Abnormal vaginal microflora is the cause of many female problems: inflammations, sexually transmitted diseases and even cervical cancer. Lack of lactobacillus brings about the weakening of protective function and thus, an infection can easily get into both the vagina and the cervix and provoke inflammation. Therefore, abnormal vaginal microflora is an enemy of female sexual health (Varghese, C, 1999).

The purpose of this study is to evaluate the epidemiological aspects and the association of sexual factors and hygiene status between couples in relation to cervical changes in Pap smear.

4.1 The Papanicolaou Smear

The cervical smear was invented by Dr Georgios Papanicolaou (1883-1962). He was a Greek from the island of Evia who later emigrated to the United States of America and the father of cytopathology. “Pap” is an abbreviation for Papanicolaou. Based on his thirty years of work at the Weill Medical College of Cornell University, Papanicolaou published a large series of cases in diagnosis of uterine cancer by the vaginal smear (Papanicolaou & Traut, 1943). The sampling technique has hardly changed ever since.

The Papanicolaou (Pap) smear is the standard screening test for the lower genital tract neoplasia. The landmark report of this technique was published in 1941. The standardization of Pap smear terminology was accomplished with the introduction of the Bethesda System in 1988, and last revised in 2001. An adequate conventional Pap smear has an estimated minimum of approximately 8 000 to 12 000 well-preserved and well-visualised squamous epithelial cells (Solomon, 2003).

4.1.1 Important steps in obtaining an adequate sample

Steps must be taken to avoid contaminating the sample with lubricant; thus, the specimen should be obtained prior to the bimanual examination. The Pap smear should also be obtained before samples for testing for sexually transmitted diseases. If large amounts of vaginal discharge are present, the discharge must be carefully removed with a large swab