

SEX RATIO AND SEXUALITY OF MEDICAL STUDENTS, THAILAND: 27-YEAR STUDY (1982-2008).

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ABSTRACT

Medical profession is now more attractive to females than males. Ratio of male to female medical students is decreasing from 2.70:1 to 0.86:1. Overall self report as exclusively heterosexual for males is 77.07% (n=1709), and 70.57% for females (n=1370). Menarche occurred at average age of 12.45 yrs old. Average age at first male ejaculation is 13.16 yrs old and masturbation is the most frequent event for first ejaculation. Age at first ejaculation is declining as time passed by. Almost all males did at least one type of sexual outlets while only slightly more than one third of females did. The most common sexual outlet which both male (96.83%) and female (36.85%) medical students were practicing is masturbation. One third of males (33.79%) and very minor females (4.35%) engaged in coitus. Most coital partners of males were prostitutes while for females were their boy-friends. Number of males who engaged in coital activity was declining as time passed by. Gender difference in sexuality of Thai population is still existed.

Keywords: Sex ratio, sexuality, sexual orientation, Thai, medical student.

INTRODUCTION

Sexuality, i.e., sexual orientation as well as sexual outlet represents physicosexual, psychosexual and sociosexual development which may be influenced by several factors including time. In Thailand, double standard of sexuality is still existed, the knowledge of sexuality development is yet very limited. This study was aimed to determine the sex ratio of medical students as time passed by, and to explore and compare sexual orientation and sexual outlets among male and female medical students and the influence of time on sexuality development.

MATERIALS AND METHODS

This descriptive study was conducted between 1982-2008 at one Faculty of Medicine of one university in Bangkok, Thailand. The study project was approved by the Ethical Clearance Committee on Human Rights of that institute (MURA2004/0380/S1).

First clinical year medical students (fourth year of 6-year curriculum of medicine) were explained about the study and the meaning used prior to asking for their voluntarily anonymous participation to complete the questionnaires. Sexual orientation means sexual interest of anyone toward other people and is rating as Kinsey class 0 as those who had exclusively heterosexual arousal to Kinsey class 6 as those who had exclusively homosexual preference (Kinsey et al, 1948; Kinsey et al, 1953). Homosexual is defined as those who belonged to Kinsey class 1, 2, 3, 4, 5, and 6. Masturbation means self erotic arousal leading to orgasm, nocturnal sex dream means sex dream with orgasm, coitus means penile penetration into vagina with or without orgasm, homosexual contact means physical contact between same sex leading to either erotic arousal or orgasm, animal contact means physical contact with animal leading to either erotic arousal or orgasm.

Males and females were divided by academic year and birth year into five groups each: by academic year : group A (grA), grB, grC, grD, and grE were those who belonged to academic year 1981-1988, 1989-1993, 1994-1998, 1999-2003, and 2004-2008, respectively; by birth year: group 1 (gr1)

was composed of those who were born prior to and on 1967, group 2, 3, 4, and 5 were those who were born between 1968-1972, 1973-1977, 1978-1982, and 1983-1987, respectively.

RESULTS

More than ninety per cent of both male (1742/1820=95.71%) and female (1409/1507=93.49%) students voluntarily participated. Most of them were Buddhist (95.64% and 96.41%). None was married. Almost all (98.33% males and 98.64% females) were teenagers (18, 19 yrs old) and youths (20-24 yrs old). The average age for males was 21.16±1.41 yrs old and 96.6% was between 19-23 with 21 as their mode (69.5%), their age ranged between 18-37. For females, their average age was 20.82±1.02 yrs old and 98.8% was between 19-23 with 21 as their mode (44.6%), their age ranged between 18-29. The earliest male birth year was 1955 A.D., the latest was 1987, and only 10 males were born between 1955-1960; for female: the earliest was 1961 A.D., the latest was 1987. The number of males who belonged to gr1, gr2, gr3, gr4, and gr5 was 440, 330, 261, 339, and 225, respectively; while of females was 167, 221, 299, 402, and 278, respectively.

Ratio of male to female students by each academic period was grA 2.70 : 1 (552 : 204 or 73.01% : 26.99%), grB 1.56 : 1 (347 : 222 or 60.98% : 39.02%), grC 0.87 : 1 (279 : 320 or 46.57% : 53.43%), grD 0.84 : 1 (308 : 366 or 45.69% : 54.31%), and grE 0.86 : 1 (256 : 297 or 46.29% : 53.71%), respectively. The difference is significant, $X^2 = 165.141$, $df=4$, $p=0$. Male sexual orientation ($n=1709$) for Kinsey class 0, 1, 2, 3, 4, 5, and 6 was 77.06%, 10.59%, 4.33%, 2.28%, 2.28%, 1.87%, and 1.34% respectively; one (0.05%) reported being asexual. The incidence of heterosexual and homosexual of gr1, gr2, gr3, gr4, and gr5 males was 83.25% and 16.75%, 89.38% and 10.62%, 75.19% and 24.81%, 73.87 and 26.13%, 67.72% and 32.28%, respectively. This heterosexual incidence is significantly decreasing as time passed by ($X^2 = 24.135$, $df=4$, $p=0.00007505$). The overall incidence of male homosexual is 22.93%.

Female sexual orientation ($n=1370$) for Kinsey class 0, 1, 2, 3, 4, 5, and 6, respectively, was 72.40%,

16.60%, 4.94%, 2.09%, 0.89%, 0.59% and 0.29%; six (0.52%) reported being asexual. The incidence of heterosexual and homosexual of gr1, gr2, gr3, gr4, and gr5 females was 79.12% and 20.88%, 75.12% and 24.88%, 71.49% and 28.51%, 72.14% and 27.86%, 69.43% and 31.57%, respectively. This heterosexual-homosexual incidence is not significantly changed as time passed by ($X^2 = 6.192$, $df=4$, $p=0.185261$). The overall incidence of female homosexual is 29.43%.

Overall incidence of homosexuality for female medical students is greater than males ($X^2 = 16.304$, $df=1$, $p=0.0005395$).

Ejaculation was experienced by 99.7% of male students ($n=1740$). The average age at first ejaculation was 13.16 (± 1.65) yrs old ($n=1111$) and 13.63, 13.34, 13.07, 12.83, and 12.94 yrs old for gr1, gr2, gr3, gr4, and gr5, respectively which was significantly declined as time passed by (Pearson Correlation, $r = -0.130$, $p=0.01$, $n=1015$). Masturbation was the most common event (59.05%) led to first ejaculation, the second was wet dream (38.01%).

All female students already had menstruation. Menarche occurred at the average age of 12.45(± 1.28) yrs old and was stable as time passed by (Pearson Correlation, $r = 0.040$, $p=0.219$, $n=925$). Female who experienced orgasm was 39.91% ($n=1155$). The average age of first orgasm was 15.70 (± 3.33) yrs old ($n=186$).

The incidence of sexual outlets of male students were as follows: masturbation (96.83%, $n=1737$), wet dream (81.12%, $n=1732$), coitus (33.79%, $n=1737$), homosexual contact (10.62%, $n=1732$), and animal contact (0.50%, $n=787$). Masturbation for gr1, gr2, gr3, gr4, and gr5 males is 98.40%, 93.03%, 97.31%, 96.74%, and 97.75%, respectively ($X^2 = 18.847$, $df = 4$, $p = 0.00084225$); wet dream is 85.42%, 85.10%, 78.16%, 74.61%, and 75.46%, respectively ($X^2 = 22.988$, $df = 4$, $p = 0.00012733$); coitus is 61.90%, 34.24%, 11.87%, 15.72%, and 16.14%, respectively ($X^2 = 298.391$, $df = 4$, $p = 0.000000$) and most of coital partner was prostitute (81.43%, $n = 587$); homosexual contact is 11.92%, 6.96%, 10.46%, 8.90%, and 12.5%, respectively ($X^2 = 7.158$, $df = 4$, $p = 0.12777053$). The average age at first masturbation was 13.50 \pm 2.20 yrs old

($n = 1135$) and 13.83, 13.68, 13.46, 12.93 and 13.03 yrs old for gr1, gr2, gr3, gr4, and gr5, respectively, which was significantly declined as time passed by (Pearson Correlation, $r = -0.179$, $p = 0.01$, $n = 1035$); wet dream 14.09 \pm 2.04 yrs old which was stable as time passed by (Pearson Correlation, $r = 0.059$, $p = 0.163$, $n = 564$); coitus 18.32 \pm 1.93 yrs old ($n = 541$) which was stable as time passed by (Pearson Correlation, $r = -0.043$, $p = 0.358$, $n = 464$) and homosexual contact 16.41 \pm 3.51 yrs old ($n = 135$) which was stable as time passed by (Pearson Correlation, $r = -0.095$, $p = 0.310$, $n=115$).

The incidence of sexual outlets of female students was as follows: masturbation (36.85%, $n = 1392$), nocturnal sex dream (10.68%, $n = 1292$), coitus (4.35%, $n = 1401$), homosexual contact (3.79%, $n = 1397$), and animal contact (0.21%, $n = 918$). Masturbation for gr1, gr2, gr3, gr4, and gr5 females is 49.69%, 36.52%, 38.17%, 39.19%, and 23.18%, respectively ($X^2 = 34.93$, $df = 4$, $p = 0.0000$); nocturnal sex dream is 29.80%, 8.16%, 8.74%, 8.63%, and 5.66%, respectively ($X^2 = 67.74$, $df = 4$, $p = 0.0000$); coitus is 1.82%, 1.36%, 2.67%, 6.50%, and 7.22%, respectively ($X^2 = 18.895$, $df = 4$, $p = 0.00082$) and most of coital partner was boy friend (95.08%, $n = 61$); homosexual contact is 3.68%, 2.76%, 3.55%, 5.25%, and 2.89%, respectively ($X^2 = 3.786$, $df = 4$, $p = 0.48574156$). The average age at first masturbation was 15.12 \pm 3.36 yrs old which was stable as time passed by (Pearson Correlation, $r = 0.029$, $p = 0.699$, $n = 179$), nocturnal sex dream 17.87 \pm 2.53 yrs old which was stable as time passed by (Pearson Correlation, $r = -0.178$, $p = 0.279$, $n = 39$), coitus 18.45 \pm 1.83 yrs old which was stable as time passed by (Pearson Correlation, $r = 0.025$, $p = 0.851$, $n = 59$) and homosexual contact 16.36 \pm 3.13 yrs old which was stable as time passed by (Pearson Correlation, $r = 0.268$, $p = 0.104$, $n = 38$).

The comparison between age at first ejaculation and menarche is $t = 10.6818$, $df = 2034$, $p < 0.0001$.

The comparison of age at first orgasm between male and female is $t = 16.1988$, $df = 1295$, $p < 0.0001$.

The comparison of incidence of each sexual

outlet between male and female is as follows: masturbation, $X^2 = 1327.63$, $df = 1$, $p = 0$; nocturnal sex dream, $X^2 = 1469.25$, $df = 1$, $p = 0$; coitus, $X^2 = 410.19$, $df = 1$, $p = 0$; homosexual contact, $X^2 = 51.52$, $df = 1$, $p = 0$.

The comparison of age at first admittance to each sexual outlet between male and female is as follows: masturbation, $t = 8.4262$, $df = 1312$, $p < 0.0001$; nocturnal sex dream, $t = 11.0055$, $df = 601$, $p < 0.0001$; coitus, $t = 0.4937$, $df = 598$, $p = 0.6217$; homosexual contact, $t = 0.0793$, $df = 171$, $p = 0.9368$.

DISCUSSION

More than 90 per cent of the medical students during the period of study voluntarily participated; this can represent all first clinical year students at this institute between 1982-2008.

The medical profession is now more attractive to female than male since, as time passed by, number of female medical students were significantly increased and the ratio of male per female is reversed from 2.70:1 to 0.86:1.

According to Kinsey heterosexual-homosexual classification, most of medical students (70% of males and 72.40% of females) was classified as exclusively heterosexual, leaving around 30% of both sexes as homosexual including a very small number being exclusively homosexual (1.34% male and 0.29% female). Interestingly, the incidence for male homosexuals is significantly changed as time passed by; the percentage of male homosexuality is increasing. Since there is no correct data indicating the incidence of homosexuality of Thai male population in Thailand, this figure could be explained by either the incidence of homosexuality of Thai male population is also increasing so the same proportion could be happened among medical students or if the incidence of homosexuality of Thai male population is not increasing, this figure demonstrates that more homosexual male people entered medical school as time passed by.

Almost all male students started the reproductive capability at a very early teenage since their first ejaculation was at the average age of 13.16

(± 1.65) yrs old. And as time passed by, the age at first ejaculation was decreased. Various factors are believed to explain this, better nutrition and better exercise for their physical growth and development as well as easier and more access to erotic medias in this present world for their psychosexual development are highly suggested to be responsible. As masturbation is stated as the most frequent activity leading to first ejaculation and wet dream is the second, and since almost all males did masturbation with decreasing incidence of wet dream, the decreasing age at first masturbation can also influence the decreasing age at first ejaculation.

The reproductive capability of females started almost one year earlier than males as shown by the average age of menarche at 12.45(± 1.28) yrs old and no change can be demonstrated as time passed by.

More males admitted to sexual activity than females as shown by more incidence of each sexual outlet belonged to males than females and almost all males experienced at least one activity while approximately only one third of females did and males performed every self sexual activity at very earlier than females. This could be explained by gender difference of physical, psychological and social factors. Easier genital contact with less societal restriction to sexual activity for male drives these males to easier performance of sexual outlets.

The most common practicing sexual outlet among both males and females is masturbation which is the same all over the world for those who are not married as well as medical students (Hoch et al., 1978; Lancet et al., 1978; Leitenberg et al., 1993; Cao et al., 1998; Aggarwal et al., 2000; Ozan et al., 2005; Kazaura and Masatu, 2009) and could be explained by the reason that this activity is easily self performed and needs no sexual partner as well as can certainly lead to orgasm. Males performed masturbation very earlier than females. This decreasing age is getting along with the decreasing age at first sexual activity, masturbation, and also with the same explanation that easier as well as more access to erotic medias in this present world is strongly believed to be responsible for this change.

For nocturnal sex dream, only minority of males but majority of females did not experience. As time passed by, the incidence of nocturnal sex dream with orgasm for both males and females were decreasing. Since this sexual outlet related to the internal sexual function, this can reflect, in females, that they could perform more intentionally any other sexual activity more freely as societal sexual restriction is less; but the reason to explain this finding for males could not be the same as females.

Coital experience among males is decreasing while among females is increasing. For male, most coital relationship was performed with prostitute and very less with their girl- friends, and since the AIDS era in Thailand (Bamber et al., 1993; Punyacharoensin and Viwatwongkasem, 2009) was well realized by medical students so this could be one important reason for this decreasing incidence and also the increasing incidence of homosexual male could be another reason. For female, since almost all coital experience was performed with their boy- friends, so this increasing incidence could reflect the more sexual liberal trend among females.

Sexual contact between same sex for both males and females is not unusual. But still more males engaged this activity than females. The incidence did not changed though homosexual males were increasing in number.

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