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Adolescent Sexuality: Implications for National Policy on Secondary School Education in an East Asian Setting

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ADOLESCENT SEXUALITY: IMPLICATIONS FOR NATIONAL POLICY ON SECONDARY SCHOOL EDUCATION IN AN EAST ASIAN SETTING

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INTERNATIONAL AREA STUDIES PROGRAMS UNIVERSITY OF MASSACHUSETTS AT AMHERST

JULY 1985

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BACKGROUND

The quality and availability of Taiwan's labor force continues to be a prime attraction for international as well as domestic industrial investment. This quality largely can be attributed to a national educational policy of increasing access to higher education. The more this policy concentrates on ways to continue improving quality of human resources, the more this asset will continue to help attract investment in higher technology.

With increasing modernization, however, many questions are being asked about the need to adapt educational policy to the changing social and economic development situation. The value of lower tuition, for example, has been debated in everyday discussion and has been the subject of serious question. In Taiwan's world today, the process of modernization has initiated considerable social change in addition to nearly universal education for the young: increased access to "modern" ideas in the mass media and improved communications, expanded employment outside the family, living patterns, wherein separate housing for children after marriage is becoming common (and sometimes before marriage), changes in the traditional Chinese family, and increases in premarital sex which are not in accord with traditional norms*, pregnancy, and consequent high adolescent marital fertility. 1-4, 9

These changing sexual mores, of course, have significant social implications (mental health, unwanted pregnancy, premature marriage.

^{*}As espoused in earlier Confucian teaching of decorum, as reinforced in the concepts of female chastity developed in the twelfth century and current in the twentieth century in Taiwan.

higher adolescent fertility, possibly juvenile delinquency) which undoubtedly are affecting the quality of our human resources. Early sex behavior leading to premature marriage may lead to an unstable family structure, and hence, weakens the social structure. Furthermore, an unstable marital situation affects the education of the next generation which will be the natural resource for future social development. In addition to these considerations, these changing mores disturb the economic as well as social balance in society because of their demographic effect. For example, in the past few years, from 7-8% of all live births in the Taiwan Area were to women ages 15-19 (i.e., the group referred to internationally as "adolescents"). Although the overall fertility rate for those 15-19 is relatively low, that for the married women (652 per 1,000 in $1981)^{7}$ is higher even than in the U.S. which many there regard as alarmingly high (see Table 1). Many of those pregnancies in Taiwan, of course, are unwanted and likely are the reasons for the high marital fertility (percent currently married has been about 5-6% for about ten years). Given Taiwan's present level of economic development there seems little reason for any of these births to 15-19 year olds to occur. If they were stopped the Natural Increase Rate in Taiwan would have dropped in 1982 from 17.3 to 15.8 per 1,000. See Table 2.

Premarital sex is relatively common: for those in the 20-24 year age group (born in 1955-59) it was 47.9% in 1980 (See Table 3)⁶. Premarital pregnancy also is definitely on the rise. Taiwan sample surveys show a five-fold increase in incidence from 1965's 3.7% (to 12.9% in 1973) to 19.2% in 1980 (See Table 4). About two-thirds of married women with premarital pregnancy interviewed in 1980 felt that their first birth came too early.

TABLE 1. Fertility Rates: Taiwan Area, Selected Years: 1961-1981

6. Age-specific rate for married women by age 15-19 20-24 25-29 30-34 35-39 40-44 45-49	5. General fertility rate for married women	4. Age-specific fertility rate for all women by age 15-19 20-24 25-29 30-34 35-39 40-44 45-49	 Crude birth rate Total fertility General fertility rate 	Rate
362 409 384 269 175 83	258	45 249 342 246 157 71	37.7 5,608 177	1961
390 447 368 210 109 47	225	36 261 326 195 100 41	32,1 4,825 152	1965
502 473 332 158 64 22	192	40 238 293 147 59 20	27.2 4,000 120	1970
639 450 259 89 29	157	37 194 215 83 27 8	23.0 2,830 94	1975
682 500 294 94 30 8	175	38 213 241 87 28 8	25.9 3,080 105	1976
663 463 254 79 25 7	158	37 194 206 73 23 6	23.6 2,700 95	1977
653 467 264 80 21 6	160	36 194 213 73 20 5	24.2 2,710 96	1978
671 480 262 79 19	160	35 194 209 72 18 4	24.4 2,660 96	1979
670 453 253 77 17 4	152	33 180 200 69 16	23.3 2,515 91	1980
652 447 251 77 15 4	149	31 176 197 69 14	23.1 2,455 89	1981

Source: Taiwan-Fukien Demographic Factbooks for relevant years.

TABLE 2. Demographic Effect of Eliminating All Births to Women Ages 15-19 in 1982

		No. LIVE BIRTHS	CRUDE BIRTH RATE	CRUDE DEATH RATE	NATURAL INCREASE RATE
1.	ACTUAL	401,905	22.1	4.8	17.3
2.	LESS 15-19	- 28,317*	- 1.5	4.8	- 1.5
3.	DEMOGRAPHIC EFFECT	373,588	20.6	4.8	15.8

TABLE 3. Premarital Sex Among Women 20-39: 1980*

BIRTH COHORT/AGE GROUP	% HAVING PREMARITAL SEX
1. 1955-59/20-24	47.9**
2. 1950-54/25-29	30.2**
3. 1945-49/30-34	18.6**
4. 1940-44/35-39	13.5**

^{*} Includes 350 births to those younger than 15.

^{*} Source: 1980 Island-wide Fertility Knowledge, Attitude and Practice Survey (n=3,859). Based on the question: "Before your marriage, did you have sexual intercourse with your future husband?"

^{**} Statistically significant differences at the .001 level.

TABLE 4. Premarital Pregnancy: 1965 vs. 1973 vs. 1980*

TOTAL	4.7	12.5	17.1
20 or older	5.7	12.2	15.8
Less than 20	3.7	12.9	19.2
Age at Marriage	1965	1973	1980

^{*} Source: Lin, HS⁶, p. 19. Data based on births occurring less than 7 months from date of marriage in Island-wide Fertility KAP surveys, conducted by the Taiwan Provincial Institute of Family Planning in 1965, 1973 and 1980.

Modernization, it appears, is bringing not only universal education but certain social and demographic problems. Unfortunately, until recently, we did not know a great deal about adolescent activities, i.e., our scientific body of knowledge on adolescent sexuality-related behavior was quite limited. Although there were a number of university-centered or sponsored studies of small samples or limited geographic areas (which attracted a fair amount of newspaper coverage), there had been no island-wide probability sample from which one might draw conclusions about the whole adolescent body. Too often, impressions of adolescent sexual activity are overstated based on anecdotes, sometimes apocryphal, about factory workers who represent only a small segment of the adolescent population.

To remedy this and provide a clearer understanding of the existing social situation, the Taiwan Provincial Institute of Family Planning, with National Science Council support, and the cooperation of the

Ministry of Education and 57 principals of secondary schools in Taiwan conducted the first island-wide sample survey of male and female students' sexually-related awareness, knowledge, attitude and behavior as well as felt educational needs. These students comprise more than 70 percent of the age group 15-19 and are more readily reachable in the organized classroom setting.

These findings, made available in early 1984, suggest the need to review the overall Governmental policy related to strengthening the present educational input on reproduction, pregnancy, family planning and contraception as well as developing curriculum input, teacher training, and educational materials related to the social relationships of boys and girls particularly regarding responsibilities about sexuality.

INTRODUCTION

The Government has carried out an active family planning education and contraceptive service program which as helped cut Taiwan's natural increase rate in half in twenty years (from 1963's 3.0% to less than 1.6% in 1983). 1-2,7 Nevertheless, the population has increased from 1963's 12 million to nearly 19 million in 1983. To continue this fertility decline, the program has begun to try to reach the adolescent group (15-19) whose births comprised 7-8% of all during the past few years. In addition to demographic policy, there has recently been more awareness of social problems occurring as a result of a definite increase in unwanted premarital pregnancy for those married at age less than 20 (derived from findings of the 1980 Fertility KAP) $^{3-4,6,9}$ Previous studies of sexual activity among adolescents, however, have been of special groups such as factory workers or college students and not representative large-scale sample surveys. Since 7 of 10 of those aged 15-19 are in secondary school, 1 the Taiwan Provincial Institute of Family Planning (TPIFP) carried out this island-wide survey to determine students' sexuallyrelated awareness, knowledge, attitude and behavior.

METHODS

A random stratified sample of all 780,000 students in Taiwan's public and private senior high and vocational high schools as well as 5-year junior colleges was drawn in late 1983. A two-stage stratified probability sample was drawn: first, by geographic area and type of school with probability proportionate to the number of students provided 57 sample schools. Second, classes from each grade level of school provided a sample size of 7,831 students. These were 1% of all secondary

students in Taiwan. (see Table 5)

The survey questionnaire was reviewed by related experts, pretested among students, revised, and administered by TPIFP staff in the classrooms at the schools in December 1983 and January 1984. To increase response validity, the questionnaires were anonymous, largely multiple-choice, and teachers were not present during administration.

Content areas included brief socio-demographic data, sexually-related awareness, knowledge, attitude, behavior, and unmet needs.

School principal cooperation was excellent and the response rate was 100%.

RESULTS

The findings have important implications for social planning in Taiwan and demonstrate that Government educational, social welfare and public health agencies could play a larger role in education of adolescents.

A. Behavior

Of all students, 3.6% have experienced sexual intercourse, 8.0% petting and 14.0% kissing. Males are considerably more sexually active than females (kissing, petting and sexual intercourse), more likely to have used contraception and more likely to have a close friend of the opposite sex (see Table 6). Experience increases with grade of school (from 1.7% in first year to 4.6% in third year). Students in private vocational high schools are more sexually active than others (6.5% had sexual intercourse); excluding 4th and 5th year junior college students, the most active are males, in the 3rd year of private vocational school (17.5% having had sexual intercourse). See Table 7.

TABLE 5. Respondents (n=7,831) by Sex, School, Grade, and Age

	No.	Percent
Male	4,330	55.3
Female	3,501	44.7
Public Senior High	1,807	23.2
Private Senior High	1,307	16.8
Public Vocational High	1,519	19.5
Private Vocational High	1,575	20.2
Five Year Junior College	1,587	20.4
First Year of School	2,454	31.3
Second Year of School	2,448	31.3
Third Year of School	2,369	30.2
Fourth Year of School*	311	4.0
Fifth Year of School*	249	3.2
Age (n=16.7) 15 16 17 18 19 20 and above**	1,413 2,175 2,326 1,216 464 230	18.0 27.8 29.7 15.5 5.9 2.9

^{*}Senior high and vocational high schools have three grades only; fourth- and fifth-year students (660) are only in the Five-year Junior College.

^{**}Virtually all students 20 and above (20-22 years) are in the 4th and 5th year of Junior College. Less than 0.1% were age 14 (7 persons).

Experience with sexual intercourse increases with age, e.g., 9.0% of males age 18 vs. 1.9% at age 15, 2.3% at 16, and 5.0% at 17.

TABLE 6 Sexually-related Experience of Students by Sex*

			%	
		<u>Male</u>	Female	<u>Total</u>
1.	Kissing	17.7	9.4	14.0
2.	Petting	11.3	3.8	8.0
3.	Sexual Intercourse	5.6	1.0	3.6
4.	Used Contraception	2.6	0.3	1.6
5.	Have Close Friend of Opposite Sex	42.1	25.0	34.4

^{*}All statistically significant differences by sex at the .001 level.

A multiple classification analysis of the effects of 14 independent variables substantiates the impact of the characteristics of age, sex, type of school and residence, after adjustment for other variables. (see Table 8)

Of those who had had sexual intercourse, 26.8% had experience with contraceptives (representing 1.6% of all students). A sixth of those having sexual intercourse said they became pregnant and two-thirds had induced abortions. Mean age at first intercourse was 17.0 (SD+2.0) for males (n=236) and 15.7 (SD+4.0) for females (n=33).***

^{**}Not statistically significant at the .05 level.

^{***}It is important to remember that some students who became pregnant may have not returned to school and, therefore, would not have been included in this survey.

TABLE 7. Percent Having Sexual Intercourse by Type of School* by Grade by Sex

				A. Male			
		Total	PUB SH**	PRIV SH**	PUB VH	PRI VH	5YR College
Grade	1 2 3 4 5	2.6 4.7 7.9 13.9 31.0	0.7 2.1 1.9 -	2.5 7.1 6.8 -	3.5 1.2 7.3 -		6.7 5.5 4.8 14.0 31.0
Total		5.6	1.5	5.0	3.9	10.6	10.6
				B. Female			
Grade	1 2 3 4 5	0.9 1.3 1.0 2.3 0.7	0.0 0.0 0.5	0.6 0.8 0.7 -	0.4 1.4 0.5	1.9 3.9 2.0	1.9 0.0 1.4 2.3 0.7
Total		1.0	0.2	0.7	0.7	2.6	1.4

^{*73.3%} of all the age group 15-19 in Taiwan were attending either Senior High or Senior Vocational or the first 3 years of 5-year Junior College.

^{**}SH=Senior High; VH=Vocational High; PUB=Public; PRI=Private.

TABLE 8. Multiple Classification Analysis (MCA) of the Impact of Characteristics of Students on Sexual Behavior

PERCENT HAVING SEXUAL INTERCOURSE

1. AGE	(N)	Unadj.	Adj.*		
15* 16 17 18 19*	(1,326) (1,999) (2,117) (1,122) (639) Eta=.18	1.1 1.6 3.4 5.6 13.8 Beta=.11	2.9 2.4 3.5 4.3 9.9		
2. SEX					
MALE FEMALE	(4,113) (3,311) Eta=.13	5.9 1.0 Beta=.03	4.2		
3. TYPE OF	SCHOOL				
Private Ser Private Voc	itional High	(1,719) (1,408) (1,182) (1,415) (1,479) Beta=.06	1.0 2.3 3.1 7.0 5.7	3.1 3.6 3.9 6.0 2.4	
4. URBAN/F	RURAL				
Rural Urban	(3,306) (4,118) Eta=.03	3.0 3. 4.4 3. Beta=.00			
5. TYPE OF	RESIDENCE				
School Dorm	lassmate/Frien	(5,860) (925) d (294) (124) Beta=.05	3.3 5.1 6.1 12.1		3.3 5.6 5.1 7.2
TOTAL		(7,831)	A STATE OF THE STA		
R ²		.208**		Ng	

*Adjusted by MCA for the variables shown in the table and also: father's education, mother's education, knowledge about and attitude toward sexual permissiveness, awareness of peer sexual experience, and having close friends of the opposite sex.

^{**}For the 14 independent variables considered in the MCA analysis.

The level of sexual petting in general and high sexual intercourse experience in certain school settings, particularly among males lead one to conclude that higher premarital pregnancy in the future is likely, particularly if contraception is so little used.

B. Attitude

Attitude to sexual behavior seems relatively open, with the degree of intimacy permissible depending upon the relationship of the male and the female partners. Although 22.8% agreed that it was permissible for an unmarried female to have sexual intercourse with an engaged partner, only 11.5% agreed if the couple were in love. Guttman scales where developed based upon Reiss⁸ using responses to items ranging by degree of intimacy (holding hands, kissing, petting and sexual intercourse) with various types of partners (casual, liked, loved, engaged. (see Table 9). Response patterns show clear-cut cumulative scales (reproducibility coefficients of 0.973 to 0.99) of permissibility.

TABLE 9. Attitude Scale on Sexual Intercourse for Unmarried Female With Male Partner

	Scale Steps	Percent Distribution
5.	Permissible for all four re- lationships: a) Casual Person; b) Person Likes; c) Person Loved; and d) Engaged Partner.	1.7
4.	Permissible for b), c) and d) only.	3.5
3.	Permissible for c) and d) only.	8.2
4.	Permissible for d) only	16.6
5.	Permissible for None of the Above.	70.0
	Tota	100.0

^{*} The Reproducibility Coefficient where items scored "No opinion/Neither Permitted nor Not Permitted" were counted as passive approval was .973 (N=7,813). The percent scale step distribution is based on the 5,951 of the 7,831 students whose responses fitted the scales without any errors (primarily, exclusive of "3" on a 5 point scale of permissibility).

Males generally are more permissive than females (see Table 10), e.g., 18.5% of males feel sex is permissible if the couple are in love vs. only 2.8% of females (11.5% overall).

The degree of permissibility toward sex may be open to interpretation. It is clear, however, that males express more permissibility over females by a high ratio. If attitudes eventually lead to action, than increased sexual intercourse in the future seems likely when couples feel that they may be "in love."

C. Knowledge

25.3% of all students were unable to answer correctly half of the 14 simple questions of the quiz about reproduction and contraception. The mean number of correct answers was 9.2 (SD \pm 2.7) with males scoring slightly higher than females: 9:4 (SD \pm 2.7) vs. 9:0 (SD \pm 2.7)*. Fewer than 2 percent answered all correctly. Scores were higher by year of school: 8.5 (SD \pm 2.8) for first-year vs. 9.6 (SD \pm 2.5) for third year. The lowest mean score, 8.4 (SD \pm 2.8), was for females in private vocational schools where female sexual behavior is the most active.

Furthermore, many students were either not taught in class about reproduction or family planning (standard school curriculum) or not taught adequately (see Table 11).

These low levels of knowledge and the fact that students are not being taught well in the schools is a serious matter. It is a correctable one, however, if educational authorities can take the appropriate actions to be certain that what the school curriculum calls for to be taught actually is covered adequately.

^{*} Statistically significant difference at the .001 level

TABLE 10. Male and Female Respondent Difference in Permissibility of Sexual Intercourse by Type of Partner

a) % AGREE PERMISSIBLE FOR AN UNMARRIED FEMALE WITH*:

		MALE	FEMALE	TOTAL
		(4,330)	(3,501)	(7,831)
1.	Casual Person	3.3	0.5	2.0
2.	Person Fond of	7.9	1.1	4.9
3.	Person She Loves	18.5	2.8	11.5
4.	Engaged Partner	36.2	6.2	22.8

b) % AGREE PERMISSIBLE FOR AN UNMARRIED MALE WITH*:

		MALE (4,330)	FEMALE (3,501)	TOTAL (7,831)
1.	Casual Person	3.5	0.4	2.1
2.	Person Fond of	9.1	0.9	5.5
3.	Person He Loves	18.9	2.7	11.7
4.	Engaged Partner	36.8	5,5	22,9

^{*}All associations with sex of respondent are statistically significant at the .001 level.

TABLE 11. Student Experience with Middle School Coverage of Related Curricula*

		Reproduction	FAMILY PLANNING
1.	Not Taught	4.1%	16.8
2.	Students Told to Read Content by Self	13.4%	4.7%
3.	Briefly Taught	59.6%	55.5%
4.	Carefully Taught	22.8%	22.7%

^{*} Reproduction, pregnancy and related physiology are covered in biology, health education and first aid courses. Family planning is integrated into health education courses.

D. Peer Awareness

Awareness of sexual activity among peers was relatively high compared to actual practice: 20.8% knew of an unmarried friend who had become pregnant; 13.5% of an unmarried friend who had used or was using contraception; and 50.8% indicated that a proportion of their friends/classmates of the same age had close boy or girl friends of the opposite sex.

The extent to which peer influence contributed to individual behavior cannot be determined by this survey. There, however, is considerable evidence that in all societies peer behavior is a model for individual action and certainly in matters of adolescent sexuality. This survey also ignores the effect of modernization as influenced by the mass media which often project sexual images as norms, both in movies, music and TV, which are accessible to all in Taiwan.

^{*} Statistically significant difference at the .001 level.

E. Needs and Resources

More than 69.3% of students indicated that the solution for an unwanted pregnancy for an unmarried woman was to marry the one who impregnated her; only 23% recommend having an abortion. Furthermore, males tend to romanticize sex, e.g., 50% of males cited an advantage of close involvement with a girlfriend as partners being able to help each other (vs. only 31% females); they also are more permissive in attitude about sexual intercourse if partners are in love (19% vs. only 3% of females).*

Overall, 79% of students wanted more education on reproduction, family planning and contraception. In addition, 41% indicated that schools and teachers should provide them the information contained in the knowledge quiz taken and 30% that Government public health agencies should. If unmarried persons became pregnant, 32% of students recommended that they should consult the Government family planning workers in each local area (and 31% their parents).

DISCUSSION

This survey indicates that Taiwan's students: (1) lack some basic knowledge about contraception and reproduction; (2) are often not being taught what they are supposed to be or as adequately as they ought to be about these subjects in their academic courses in middle and senior high school; have fairly permissive attitudes about sexual relationships, particularly males; are sexually active, particularly males and those in private vocational schools although less so than U.S. counterparts; want to learn more about the nature of male and female intimate relationships; and look to the schools and public health agencies to be more *Statistically significant difference at the .001 level.

active learning resources.

The present level of sexual permissiveness requires more serious attention than it is getting. More than 63% of students indicate that even with a casual acquaintance it is permissible to hold hands; 15% to kiss; 5% to pet; and 2% to have sexual intercourse. Although the percent of the 15-19 group having had sexual intercourse is 3.6, more than three times as many said that it was permissible to have sexual intercourse if you loved the person concerned. Given the considerable mass media emphasis on youth in love and its overly idyllic benefits, society in Taiwan has good reason to be concerned that the present youth may be influenced to move too easily, too early and much too uninformed to this idyllic state of being in love. The consequences in terms of increased sexual intercourse, pregnancy, and early marriage are obvious.

It is especially important to view these survey results in the context of the findings of the 1980 Island-wide sample survey of married women ages 20-39. A dramatic rise in premarital sex may be occurring. The youngest age group interviewed, 20-24, were nearly 60% more likely to have had premarital sexual intercourse (with their future husbands) than the wives 25-29 years old. And, nearly $2\frac{1}{2}$ times as likely as the wives 30-34. That is, nearly half (47.9%) of wives 20-24 in Taiwan had had sexual intercourse before marriage. (see Table 3)

To combat this trend toward increasing premarital sex, it is essential that action be taken <u>now</u> to reach youth at least by age 15 with an appropriate educational curriculum that meets their needs and extends through the 15-19 period.

It is obvious that students want more education, particularly on boy/girl relationships. For school education, in-service training of teachers, curriculum review, and material preparation seems called

for. More also needs to be known about public acceptability and school teacher and administrator views. Public health agencies such as the Taiwan Provincial Institute of Family Planning, the Taipei and Kaohsiung Family Planning Promotion Centers also need to expand the role of their family planning field workers to include education in this area and increasing access to contraceptives.

Content of courses will be a critical area since any "sex education" curriculum clearly is controversial. The initial emphasis should be placed on strengthening the existing curriculum on reproduction, pregnancy, family planning and contraception and seeing that it is taught. The social relationship of boy and girl and ethical implications and responsibilities associated with sexual activity may be where one can start expanding the curriculum. A pilot project to do so seems appropriate.

It is clear from this study that the students surveyed felt that they needed help and wanted it from Government education and public health agencies. It, therefore, is important for the Government to live up to the confidence that these adolescents have in their ability as a source of useful information and work to meet their needs now.

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