

# GETTING HOTTER, GOING WILDER?: CHANGES IN SEXUAL RISK-TAKING BEHAVIOR AMONG FILIPINO YOUTH<sup>1</sup>

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## Introduction

Adolescents or young people<sup>4</sup> are in a major transitional life stage as they start to disengage from their family and, as De Silva (1998) has observed, are eager to achieve independence through risky actions. As such, they are oftentimes characterized as risk-takers and pleasure-seekers with sex as one of the array of risky behaviors which they engage in.

What makes youth sex risky is the increasing prevalence sex among the young of sexual practices such as early sex, nonmarital sex, commercial sex, sex with multiple partners and unprotected sex, all of which are associated with a host of deleterious consequences which may severely compromise their health, education, economic situation and general wellbeing.

Earlier age at initiation of sexual activity which oftentimes takes place without adequate protection are detrimental to young people since it poses heightened risk of unintended pregnancy which, in turn, precipitates either a hasty marriage or in many cases, end in abortion (de Silva, 1998). When women in their teens give birth, health and mortality risks are significantly higher, both for the women themselves and for their children (East-West Center, 2002).

In addition, early entrance into family life as a result of teen pregnancy can have serious implications such as early termination of formal education and limited employment opportunities (East-West Center, 2002; Werner-Wilson, 1998) as well as greater financial difficulties and marital conflict. Young unmarried mothers also face social stigmas that can have harmful psychological and social impact (Family Health, International, n.d.).

Unprotected sex and sex with either casual partners, commercial sex workers or multiple partners are risk markers for exposure and transmission of sexually transmitted diseases (STDs) including HIV-AIDS. Sex outside marriage, specifically premarital sex, is generally viewed as socially unacceptable and undermines traditional moral values which may be psychologically damaging to young people especially in a Catholic country such as the Philippines.

Needless to say, the risks associated with these activities are magnified by their interconnectedness or what Jessor, Donovan and Costa (1991, as cited in Arnett, 1998) refer to as the "interrelated syndrome of risk behaviors." Youth whose sexual debut comes early in life are more likely to have multiple sex partners, to practice unprotected sex and to turn to selling sex to make a living (Mateo, 2003; Smith, 1997; Alan Guttmacher Institute, 1994; Coker, Valois and Mckeown, 1994 and Klitsch, 1993). For instance, Klitsch (1993) documented that American women whose first intercourse happened before age 15 are much more likely than those who

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<sup>4</sup> For the purposes of this paper, the terms "young people," "adolescents", and "youth" are used interchangeably to refer to the segment of the population in the ages 15-24.

initiated sex at later ages to have had recent multiple partners, to have had sex with a risky partner (either bisexual, an intravenous drug user or an HIV-infected man) and to have had a sexually-transmitted disease. Among Filipino adolescents, the strong linkage of premarital sex experience with drug use, smoking, drinking, contemplation of suicide, involvement in physical violence and suspension from school has also been established (Raymundo and Cruz, 2004).

In the country, what makes adolescent sexual risk-taking doubly problematic and enormously challenging is due to the sheer size of the Filipino adolescent population. Constituting about 20 percent of the total population, the number of Filipino youth in the ages 15-24 has ballooned from 12.4 million in 1990 to 15.1 million a decade later (Ericta, 2003). In recent years, policymakers and the general public have demonstrated a growing concern about issues pertaining to adolescent wellbeing. The fact that the Commission on Population, the agency mandated to serve as the central coordinating and policymaking body of the government in the field of population, devoted its most recent edition of the *State of the Philippine Population Report* (Commission on Population, 2003) on adolescent reproductive health with prominent attention accorded to youth sexual risk-taking is a testimony to the urgency and seriousness of this issue.

Concurrent with the changes in adolescent behavior is the significant transformations occurring in the external environment of young people. Raymundo et al (2004) observed that the social institutions surrounding the adolescents have shown radical changes during the last decade. An ever-growing number of Filipino youth are being exposed to family disruption as a result of increasing levels of parental separation and exodus of parents due to overseas labor migration. With diminishing family influence, peers and mass media are gaining ground as alternative sources of support and guidance for young people. The rapid development in information technology such as the advent of the internet and the growing popularity of other forms of communication, notably texting (short-messaging service), have witnessed the emergence of different patterns of socialization. For instance, anecdotal reports point to increasing number of liaisons forged via chatting and texting which are characterized by diminished face-to-face interactions.

These structural changes are creating different patterns of lifestyles for adolescents that may increase both the desire and opportunity for sexual activity. According to de Silva (1998), structural changes and external environmental factors may in many instances be unfavorable to adolescents creating a more vulnerable situation that may have a negative impact on their overall wellbeing. Such changes may have already transformed the attitudes of young Filipinos as indicated by their growing approval of premarital sex and abortion during the last decade as documented by Ventura and Cabigon (2004) and Kabamalan (2003). It is widely perceived and literature (e.g., Natividad and Marquez, 2004) attests that risk-taking behavior is also manifesting the same increasing trend.

The question now is raised whether these changes are real, i.e., they stem from actual shifts in behavior, or whether they are in fact a result of the changing population composition over this period. It is quite possible that the increase in sexual risk-taking among the young can be explained by changes in the composition and it is also equally possible that the change is caused by the pervasive behavioral shift across a variety of sociodemographic subgroups.

It has been articulated that it is often difficult to discern the true root causes of social phenomena but, fortunately, a methodology is available that allows us to clarify to some extent the effect of change in sexual risk-taking relative to compositional and behavioral change and to assess the importance of each of the variables in explaining the overall change. In particular, the objectives of the study are two-fold: (1) to describe the changes that have transpired in the sexual risk-taking behavior of Filipino youth from 1994 to 2002, and (2) to examine possible explanations for such changes with emphasis on differentials in sociodemographic characteristics of the young. While a considerable amount of research on Filipino adolescents has focused on risky sexual

behaviors, primarily on premarital sex, the unique contribution of the study on existing literature lies on not merely describing the changes in the levels but on going beyond cross-sectional analysis by examining change using a multivariate decomposition technique.

It is hypothesized that sociodemographic characteristics of the youth impact on their sexual risk-taking behavior. Specifically, males, youth who are older, married, with higher educational attainment, Catholics and living in urban areas will be more predisposed to such behavior.

Moreover, the social institutions surrounding the youth jointly form a web of influence that either shield or lay them open to the lure of sexual risk-taking. The home and school constitute important venues for adolescent socialization. Women who leave their parents' home or leave school at an early age are more likely than other women to have their first sexual experience outside of marriage. This was found to be true in the Philippines, Taiwan and Thailand by Choe et al (2001). In addition, the presence of both parents during the growing-up years has been associated with delay in the initiation of sexual activity and fewer sexual partners (Bakken and Winter, 2002; and Smith, 1997) with parental monitoring serving as a protection against risky sexual behavior (Donenberg et al, 2002; Di Clemente et al, 2001; Miller Forehand and Kotchik, 1999 and Rodgers, 1999). The role of the mother is especially highlighted by Miller, Forehand and Kotchik (1999) who found that maternal monitoring and mother-adolescent general communication are associated with less frequent intercourse and fewer sexual partners. Among young Filipinos, family supervision and stable parental union are associated with diminished propensity for premarital sex (Cruz, Laguna and Raymundo, 2002) while increased parental communication consistently predicted a decrease in the likelihood of young Filipinos to engage in sexual risk-taking activities (Marquez, 2004a).

Empirical evidence (e.g., Onyango, 2004) suggests that peer influence has a more profound impact on adolescent behavior than parental influence. Conaco, Jimenez and Billedo (2002) noted the importance of the *barkada* in the lives of Filipino youth owing primarily to the social and emotional support that friends provide. The danger lies, however, in the fact that peer group exerts and expects conformity of the adolescent (Ujano-Batangan, 2003) and as such information as well as misinformation are equally shared in the group even in the area of sexuality and reproductive health. Billy, Rodgers and Udry (1984) substantiate this as they found that female adolescents whose friends engage in sexual behavior were found to be more likely to participate in these behaviors than are adolescents who do not associate with such peers. Perception of negative peer reaction to premarital pregnancy is strongly associated with preference for later ages of coital debut among young people in Kenya (Onyango, 2004). The likelihood of sexual experience was somewhat elevated among American high school students who socialized frequently with friends but it was slightly lowered among those who reported that their friends endorsed preventive health practices (O'Connor, 2000).

Religion is one of the major influences in the lives of Filipinos. Being concerned with the transmission of restrictive moral standards in sexuality, religion may discourage participation of the young in risk behaviors. The conservative teaching of the Catholic Church which forbids the use of modern methods such as pills and condom may have constrained the use of contraceptives and may have contributed to the low level of contraceptive practice not only among young Filipinos but in the older and married segments of the population as well. In 2002, the most common reason given by sexually active Filipino adolescents for refraining from using contraceptives is because contraception is against their religion (Marquez, 2004b).

It is clear from the above discussion that the family can serve as a protective factor against sexual risk-taking. Hence, it is posited that being raised by both parents, having no experience of being away from home and having familial discussions about sex will exert a

negative effect on adolescent risky sexual behavior. In contrast, it is hypothesized that having friends with premarital sex experience will predispose the youth to sexual risk-taking.

## **Data**

Data are drawn from two nationally-representative surveys of Filipino youth: the 2002 Young Adult Fertility and Sexuality Survey (YAFS3) and the 1994 Young Adult Fertility and Sexuality Survey (YAFS2). Both surveys were jointly undertaken by the University of the Philippines Population Institute and the Demographic Research and Development Foundation and utilized face-to-face interviews to collect extensive information on Filipino youth including issues pertaining to sexuality and reproductive health.

The YAFS2 survey interviewed nearly 10,879 respondents 15-24 years old. YAFS3 covered a larger sample of nearly 20,000 Filipinos in the ages 15-27. Since YAFS2 data is limited to the youth in the ages 15-24, the analysis is confined to that age bracket to make both data sets comparable. The resulting pooled analytic sample included 26,529 youth (10,879 in 1994 and 15,650 in 2002).

One potential limitation of trend analyses such as the one being undertaken by the present study is the design differences in the sources of data. In this regard, the authors are confident that such differences are controlled on account of the similarity in the data collection procedures and the nearly identical interview schedules utilized in the two surveys.

## **Measures**

### *Explanatory variables*

The following background characteristics of the youth are believed to demarcate important sociodemographic categories and as such are employed as explanatory variables: sex, age, marital status, educational attainment, main activity, religion and place of residence. In addition, several indicators of the social environment that impinges on adolescent sexual risk-taking behavior are included in the model. The family as one of the most critical institutions responsible for shaping adolescent behavior is represented by three variables: whether the youth were raised by both of their parents, whether they have lived away from home and whether they have discussions at home about sexual matters as they were growing up. One variable which asked the respondents whether they have friends of the same sex who have premarital sex experience reflects the influence of peers. With the exception of educational attainment and main activity, all variables are coded as dichotomous variables.

It should be noted that the variables are selected and operationalized on the basis of theoretical applicability as reflected in previous research studies and for the purpose of facilitating comparison between the two data sets. Information that are deemed important factors in the sexual behavior of the youth but were either elicited in only one of the surveys or were asked differently in the two surveys (e.g., exposure to pornographic materials) are excluded from the analysis.

### *Risky sexual behavior*

Sexual risk-taking behavior involves engaging in sexual activities that are associated with unintended pregnancy and increased risk for contracting HIV-AIDS and other sexually transmitted

diseases. In the present study, these activities include early sex, premarital sex, sex with a casual partner and unprotected sex<sup>5</sup>.

Early sex refers to sexual activities that occur before the young person turned 20 years old, regardless of whether they take place within or outside of the confines of marriage. Premarital sex involves engaging in sex prior to marriage including responses of having “gone all the way” during dates. Sex with a casual partner includes any sexual encounter with persons with whom the adolescent has no serious commitment such as an acquaintance, friend, admirer, classmate, neighbor or boardmate. Unprotected sex refers to non-use of any contraceptive method during any premarital sex encounter.

An overall measure of sexual risk-taking is created and represented by a dichotomous variable coded as either 0 (never engaged in any of the risky sexual behaviors) or 1 (have engaged in any of the four types of risky sexual activities).

### **Methods of analysis**

In the first part of the analysis, simple descriptive statistics are employed to make a comparison of the composition present the distribution of adolescents according to the selected explanatory variables. Chi-square statistic is used to test whether any observed difference in these variables is significant.

In the second part, multivariate logistic regression analysis is employed to test whether sexual risk-taking is likely to be associated with sociodemographic characteristics controlling for other factors.

The study utilizes a decomposition method to factor out the influence of compositional changes and to determine whether the changes can be attributed to actual change in sexual risk-taking behavior among the young or simply an artifact of the change in the composition of the 1994 and 2002 youth population. Using the method, the study will also assess the importance of each of the variables in explaining the overall change. The decomposition method employed in the study is patterned after the studies undertaken by Kabamalan (2003), Pagnini and Rindfuss (1993) and de Vos and Lee (1993). For a more detailed description of the decomposition method as applied in the present analysis, please refer to de Vos and Lee (1993).

### **Results**

#### *Compositional changes in the youth population*

Table 1 presents the changes in the composition of the sample adolescents in both survey periods according to selected explanatory variables. To determine whether the changes in the composition between the 1994 and 2002 youth population are statistically significant, the results of the Chi-square test of independence are also shown in the table.

The distribution of the two samples with respect to gender remained virtually unchanged with females outnumbering males in both time periods. In terms of age, the 2002 sample is slightly younger than the adolescents in the earlier survey. In the more recent survey, teens

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<sup>5</sup> Other types of risky sexual activities such as commercial sex, same-sex sex and sex with multiple partners have been excluded from the analysis to ensure comparability between the two survey data. For instance, information on commercial sex were asked of all respondents regardless of sex during the 2002 survey but only among males during the earlier round.

comprise a full 60 percent of the youth which is 2.2 percentage points higher than the 15-19 year old in 1994. Meanwhile, the proportion never married rose slightly over the eight-year period.

**Table 1. Composition of the Filipino youth population: 1994 and 2002 (%)**

Characteristics	1994	2002	Change (2002-1994)
Sex			
Female	51.7	52.5	0.8
Male	48.3	47.5	-0.8
Age**			
15-19	58.2	60.4	2.2
20-24	41.8	39.6	-2.2
Marital status*			
Never married	83.0	84.0	1.0
Ever married	17.0	16.0	-1.0
Educational attainment**			
No schooling/Elementary	18.7	10.6	-8.1
High School	57.5	61.4	3.9
College or higher	23.8	28.0	4.2
Main activity**			
No activity	28.2	29.9	1.7
Studying	43.5	47.9	4.4
Working	28.3	22.2	-6.1
Religion**			
Catholic	87.3	83.9	-3.4
Non-Catholic	12.7	16.1	3.4
Place of residence**			
Urban	55.1	52.4	-2.7
Rural	44.9	47.6	2.7
If raised by both parents*			
Yes	84.2	83.2	-1.0
No	15.8	16.8	1.0
If ever lived away from home			
Yes	45.2	44.8	-0.4
No	54.8	55.2	0.4
If discussed sex at home			
Yes	15.4	15.7	0.3
No	84.6	84.3	-0.3
If has friends of the same sex with premarital sex**			
Yes	42.5	53.8	11.3
No	57.5	46.2	-11.3
Total	100.0	100.0	---
N of cases	(10,879)	(16,650)	---

Notes: \* p < .05  
 \*\* p < .01

The recent strides made in education are clearly visible in the rising proportions who have reached the secondary and tertiary levels. Youth with at least high school education increased from 57.5% to 61.4% while those who have reached college have risen from 23.8% to 28.0% recording a combined eight percentage point increase from 1994 to 2002. This is also apparent in the rise of adolescents who are still studying (from 43.5% to 47.9%) and a decline in the proportion working (from 28.3% down to 22.2%).

The growing appeal of various evangelical or born-again Christian faiths is clearly manifested in the declining proportion of Catholics among the young. From 87.3% in 1994, Catholics comprise only 83.9% of the 2002 youth.

While majority of Filipino youth still resides in urban areas, it appears that increasingly more adolescents are now either remaining in rural areas or shifting residence to rural parts of the country. From 55.1% in 1994, the proportion of youth living in the cities and other urban centers has dropped to 52.4%, a possible indication that the urbanward mobility of Filipino adolescents has started to abate.<sup>6</sup>

Also apparent from the data is a slight downward trend in the proportions of adolescents who were raised by both parents signifying a decline in parental supervision over time.

A substantial proportion (45 percent) of Filipino youth has experienced being away from their families. Although the level is quite high, there is however, hardly any difference in the home-leaving experience among the young people in 1994 and 2002. Similarly, the low proportion (15 percent) of youth who reported having family discussion about sexual matters stayed at the 1994 level.

The most dramatic change over time can be found among adolescents who reported having sexually-experienced unmarried friends. Only 42.5% of the 1994 respondents admitted that they have such friends. Eight years later, however, more than half (53.8%) have sexually experienced peers posting an eleven percentage point increase.

Overall, it is evident that the 2002 youth are compositionally different from the earlier cohort. In fact, with the exception of sex, home-leaving experience and family discussion of sex which remained stable, statistically significant changes are recorded for all compositional subgroups over the eight year-period.

### *Changes in risky sexual behavior*

Sexual risk-taking among Filipino youth is becoming more pervasive but, contrary to general perceptions, the increase over time is quite modest. In 1994, twenty-three percent of young people have engaged in risky sex (refer to Table 2). The proportion rose to 27.1% by 2002 denoting a 3.6 percentage-point increase during the eight-year period.<sup>7</sup> The rise is largely on account of the shift in the proportion of multiple sexual risk-takers which posted a 5.6 percentage point increase. The percentages of single risk-takers are comparatively lower and in fact display a downward shift signifying the greater propensity of the youth to engage in more than one risky sexual activity once they had ventured into risky sex. This is consistent with the notion of “syndrome” of related risk behaviors cited earlier.

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<sup>6</sup> This finding should be interpreted with caution since the National Statistics Office had undertaken major revisions in the classification of urban and rural barangays in the 2000 census which is the basis of YAFS3's own urban-rural categorization.

<sup>7</sup> The level of sexual risk-taking presented here differs slightly from previous estimates (notably by Marquez, 2004a) due to the exclusion from the analysis of several types of risky sexual activities (e.g., commercial sex and sex with multiple partners).

**Table 2. Percent of Filipino youth engaging in risky sexual behavior by type of risky sexual activities: 1994 and 2002**

Type of risky sexual activities	1994	2002	Change (2002-1994)
Early sex	18.7	22.0	3.3
Premarital sex	17.8	23.4	5.6
Sex with a casual partner	6.0	6.6	0.6
Unprotected sex	13.8	17.9	4.1
Overall risky sex	23.5	27.1	3.6
Single risk	6.6	4.6	-2.0
Multiple risks	16.9	22.5	5.6
N of cases	(10,879)	(16,650)	---

Looking at the specific types of risky sexual activities, all types recorded a rising trend with premarital sex posting the highest absolute percentage change of 5.6%. From 17.8% in 1994, 23.4% of the young in 2002 have reportedly engaged in premarital sex. Nearly the same proportions are recorded with respect to early sex (from 18.7% to 22.0%) although the absolute change is relatively lower. Similarly, a rising level in unprotected sex is evident. Casual sex is the least prevalent among the various types of risky sex activities with the level practically remaining unchanged during the eight-year period under study.

The increasing pervasiveness of sexual risk-taking is apparent not only among the total youth population but across all subgroups of the youth as well. As can be seen from Table 3, the absolute percentage changes in all categories are all positive indicating increases in risky sexual behavior from 1994 to 2002. The rising trend among the youth in the 20-24 age bracket (6.8%) is particularly noteworthy along with the upward shift among the married (6.4%) as well as among those who were not raised by both parents (6.4%). Most striking, however, is the increase in risky sexual activity recorded among the inactive youth (8.3%).

The results in Table 3 and Table 4 essentially describe the same picture with the latter displaying an additional feature of reflecting the confounding effects of the other characteristics of the youth. The change in logit effects as shown in Table 4 is estimated by pooling the 1994 and 2002 data, adding a variable for time and estimating the interaction between time period and the independent variables.

The logit regression results in Table 4 show that nearly all explanatory variables exert significant effects on risky sexual activities. Sexual risk-taking remains to be dominated by males with the gender divide apparently diverging over time lending credence to the characterization of males as sexual adventurers. Meanwhile, it is the more senior youth (20-24 years old) who are considerably more likely to be sexual-risk takers than their junior counterparts.

The likelihood of engaging in risky sexual activities is overwhelmingly higher among married youth. Controlling for other factors, married young people are 3.6 times more likely to engage in risky sex compared to the unmarried youth and this holds true in both time periods.

**Table 3. Percent of Filipino youth engaging in risky sexual behavior by selected characteristics: 1994 and 2002**

Characteristics	1994	2002	Change (2002-1994)
Sex			
Female	19.6	22.5	2.9
Male	27.7	32.2	4.5
Age			
15-19	11.1	13.7	2.6
20-24	40.8	47.6	6.8
Marital status			
Never married	12.9	16.7	3.8
Ever married	75.3	81.7	6.4
Educational attainment			
No schooling/Elementary	29.3	34.8	5.5
High School	21.6	25.2	3.6
College or higher	23.0	28.2	5.2
Main activity			
No activity	38.8	46.3	8.3
Studying	8.6	10.7	2.1
Working	31.2	36.6	5.4
Religion			
Catholic	24.0	27.4	3.0
Non-Catholic	20.3	25.6	5.3
Place of residence			
Urban	23.5	29.1	5.6
Rural	23.5	24.9	1.4
If raised by both parents			
Yes	22.7	25.6	2.9
No	27.9	34.3	6.4
If ever lived away from home			
Yes	32.2	36.3	4.1
No	16.4	19.6	3.2
If discussed sex at home			
Yes	24.8	27.9	3.1
No	23.3	27.0	3.7
If has friends of the same sex with premarital sex			
Yes	39.1	39.4	0.3
No	13.5	14.1	0.6
Total	23.5	27.1	3.6
N of cases	(10,879)	(16,650)	---

**Table 4. Logit effects of risky sexual behavior among Filipino youth: 1994 and 2002**

Variables	1994		2002		Change (2002-1994)	
	b	s.e.	b	s.e.	b	s.e.
Intercept	-0.48**	0.079	-0.24**	0.060	-0.36**	0.050
Sex						
Female	---	---	---	---	---	---
Male	1.68**	0.086	1.85**	0.064	0.17	0.107
Age						
15-19	---	---	---	---	---	---
20-24	0.51**	0.072	0.69**	0.056	0.18*	0.091
Marital status						
Never married	---	---	---	---	---	---
Ever married	3.57**	0.102	3.66**	0.084	0.09	0.132
Educational attainment						
No schooling/Elementary	---	---	---	---	---	---
High School	0.05	0.085	0.14	0.080	0.09	0.117
College or higher	0.19	0.108	0.34**	0.092	0.14	0.142
Main activity						
No activity	---	---	---	---	---	---
Studying	-0.94**	0.093	-0.90**	0.065	0.03	0.114
Working	-0.42**	0.080	-0.44**	0.064	-0.02	0.102
Religion						
Catholic	---	---	---	---	---	---
Non-Catholic	-0.21*	0.098	0.19**	0.068	0.02	0.119
Place of residence						
Urban	---	---	---	---	---	---
Rural	-0.19**	0.066	-0.36**	0.050	-0.16*	0.083
If raised by both parents						
Yes	---	---	---	---	---	---
No	0.19*	0.084	0.28**	0.063	0.10	0.105
If ever lived away from home						
Yes	---	---	---	---	---	---
No	-0.29**	0.066	-0.47**	0.051	-0.18*	0.083
If discussed sex at home						
Yes	---	---	---	---	---	---
No	-0.34**	0.087	-0.06	0.066	0.28**	0.109
If has friends of the same sex with premarital sex						
Yes	---	---	---	---	---	---
No	-1.50**	0.074	-1.31**	0.058	0.19*	0.094

Notes: ( --- ) Reference category

\* p &lt; .05

\*\* p &lt; .01

To a certain extent, schooling appears to exert a protective influence on adolescent sexual risk-taking. The differentials in Table 3 reveal that young people with high school experience are the least likely to engage in risky sex compared to those with no formal education

or have reached only the elementary level as well as youth who have reached the tertiary level. However, perusal of the regression results (refer to Table 4) demonstrate that when other factors are taken into account, the likelihood of engaging in sexual risk-taking increases with rising levels of education. This is consistent with expectations considering that attending college exposes one to new ideas and lifestyles. It should be noted, however, that the effect of education is believed to be confounded by age, i.e., the college-educated are more likely to be older than those who have high-school education.

Sexual risk-taking varies considerably with main activity. Engaging in such behavior is least likely among students and most likely among inactive youth. The propensity for risky sex is getting higher and, as mentioned earlier, youth who are neither studying nor working registered the most marked gain over all other subgroups from 1994 to 2002.

Catholics exhibit greater likelihood of engaging in risky sex in 1994 but the pattern is reversed in 2002. This is also apparent in Table 3 wherein non-Catholics appear to be catching up with Catholic adherents pointing towards a converging in the gap.

Controlling for other factors, residence in urban areas appears to predispose the youth to sexual risk-taking and this is true for both time periods. Looking at the differentials in Table 3, there is no difference in 1994 in terms of place of residence but by 2002, urban dwellers have been left behind by their rural counterparts as nearly three of ten urbanites have engaged in risky sex.

Looking at familial influences, the data reveal their mixed effects on sexual risk-taking. Youth who were not raised by both parents exhibit greater likelihood to be sexual risk-takers than those who were not. Similarly, those who have no experience living away from home are less likely to engage in risky sex than those who had lived away from home. Both findings suggest that the family, or more specifically the direct supervision of parents, serves as protective factor against sexual risk-taking confirming the results of studies cited earlier.

An unexpected finding emerges in relation to discussion of sexual matters within the family. Youth who did not report having discussion at home about sex appear to be less likely to engage in risky sexual behavior than those who had family discussions. This holds true in both time periods although the association is not statistically significant in the 2002 survey. This finding seems to be quite surprising given that in an earlier study using the same data, Marquez (2004a) found that increased parental communication consistently predicted a decrease in the likelihood of the young to engage in sexual risk-taking activities. The seemingly contradictory result of the present study may be explained by the limited involvement of parents in intimate discussions at home and the preference to discuss such sensitive issues with somebody within their age bracket most likely with their brothers or sisters (Cruz, Raymundo and Laguna, 2002). Given that these family members are more likely to be of the same ages as the youth themselves, they may not be quite authoritative in terms of providing adequate information that will help these young people cope with their concerns about sex.

The considerable influence of peers is highlighted by the data. Substantiating the results of previous studies notably by Billy, Rogers and Udry (1984), young people who reported having no friends with premarital sex experience are far less likely to be sexual risk-takers than those with sexually-experienced friends.

Together, the results in the preceding sections highlight the need to factor the changes within a multivariate framework.

### *Decomposition of changes in risky sexual behavior*

Table 5 presents the decomposition of the overall increase in risky sexual behavior between 1994 and 2002 into the four factors discussed earlier – change in composition, change in behavior, interaction between change in composition and behavior and change in intercept. In addition, the table also depicts the contribution of each explanatory variable to these four factors.

It is clearly evident that the most important factor is change in behavior particularly when the contribution of the intercept (which as mentioned earlier can be considered a part of the change due to behavior which is not measured explicitly in the model) is added. Together, change in behavior accounted for 90.5% of the increase. Compositional change contributed 12.1% while the interaction term accounted for minus 2.6%. The change in behavior is largely due to the contribution of discussion of sex at home which accounted for 30.2% of the overall change.

Interestingly, peer influence contributed substantial amounts to both compositional and behavioral change with the former getting the higher share. In fact, the influence of peers is the single most important compositional factor contributing 22.1% to the overall increase in sexual risk-taking. This is borne out by the considerable 11.3% rise in the proportions of adolescents having friends with premarital sex experience (as shown in Table 1).

Another familial variable, ever lived away from home, accounted for 12.5% although its effect is to reduce the overall change. A similar reduction in the overall change is exerted by place of residence, specifically residence in rural areas. Both sex and age are differentiating factors contributing positively to the overall increase in the levels of sexual risk-taking.

Apart from the role of peers, the one other variable that contributed substantially to compositional change is main activity which accounted for minus 8.6%.

The composition, behavior and interaction components can be combined in order to assess the importance of each variable. Looking at these combined effects, the contributions of family discussion of sex and peer influence again stand out. Educational attainment also emerges as an important factor as well as the experience of living away from home.

## **Discussion**

The paper examined the changes in sexual risk-taking behavior among the youth in the Philippines between 1994 and 2002. Utilizing a decomposition model, the change was assessed and factored out in a number of sociodemographic characteristics and variables representing several social institutions surrounding the youth.

Sexual adventurousness is evident and in fact becoming more prevalent among young Filipinos, although the levels are far from the alarming proportions as generally perceived and as manifested in most Western countries. The 3.6 percent-increase during the eight-year period is quite modest but pervasive across all subgroups of the youth population.

The study found evidence that behavioral change accounted for the lion's share of the overall shift in sexual risk-taking and that compositional change accounted for a comparatively small fraction (12.1%) of the change. More than changes in the societal structure, the findings strongly suggest that it is the actual behavior of young Filipinos that have undergone modifications over time.

**Table 5. Decomposition of the change in risky sexual behavior among Filipino youth between 1994 and 2002**

Characteristics	Proportion (%) of change due to		
	Composition	Behavior	Interaction
Sex			
Female	---	---	---
Male	-1.7	10.7	-0.2
Age			
15-19	---	---	---
20-24	-1.5	9.5	-0.5
Marital status			
Never married	---	---	---
Ever married	-4.6	2.0	-0.1
Educational attainment			
No schooling/Elementary	---	---	---
High School	0.3	6.6	0.4
College or higher	1.0	4.4	0.8
Main activity			
No activity	---	---	---
Studying	-5.3	1.8	0.2
Working	-3.3	-0.6	0.1
Religion			
Catholic	---	---	---
Non-Catholic	-0.9	0.3	0.1
Place of residence			
Urban	---	---	---
Rural	-0.7	-9.6	-0.6
If raised by both parents			
Yes	---	---	---
No	0.3	2.0	0.1
If ever lived away from home			
Yes	---	---	---
No	-0.2	-12.5	-0.1
If discussed sex at home			
Yes	---	---	---
No	0.1	30.2	-0.1
If has friends of the same sex with premarital sex			
Yes	---	---	---
No	22.1	14.4	-2.8
Total	12.1	59.3	-2.6
Unexplained: intercept		31.2	

Note: ( --- ) Reference category

The study underscores the pivotal role played by peers in explaining the change in sexual-risk-taking which recorded a dual effect on both compositional and behavioral changes. Although the proportions of adolescents with friends who are sexually-experienced recorded the most dramatic increase, sexual risk-taking behavior within its categories remained virtually unchanged. This is interesting to say the least and warrants deeper exploration on the precise mechanism exercised by one's peers on the lives of adolescents. For instance, it is posited that young people may succumb to peer pressure to conform to sexual standards. However, peer pressure may not totally explain the strong similarities between sexual behaviors of peers but as Billy and Udry (1985) argue may occur via acquisition of friends who have similar sexual behavior.

The influence of the family also emerged as a significant factor consistent with the studies cited earlier. While the family, specifically, the parents, play a central role in the adolescent's life especially by moderating the potential negative influence of peers, they are also at the core of problems of adolescents who have their own anxieties and conflicts, lack of knowledge and frequent embarrassment over certain topics of discussion, physical absence, psychological distance, and strong needs for control (Conaco, Jimenez and Billedo, 2003). The study documented that the absence of parental supervision and limited family dynamics in terms of discussion about sex predispose the young to sexual risk behaviors.

One area that warrants further exploration is the familial discussion of sex. Clearly, other information such as the persons involved, the content of the discussion, the manner in which the topic is being discussed, the frequency of discussion are needed in order to fully understand the precise mechanism by which family discussion of sexual matters influence youth sexual risk-taking.

Future research might also expand on the findings by examining the changes in other adolescent risk behaviors such as smoking, drinking and drug use employing the same methodology used in the study. It would be instructive and programatically-relevant to determine whether the same processes that impinge on youth sexual risk-taking also operate on these non-sexual risk behaviors.

Another fertile area for research is ascertaining the definite direction of the causal relationship between behavior and attitudes. At least two American studies (Ku et al, 1998; Pleck, Sonenstein and Ku, 1993) have demonstrated the strong correlation between attitudes and behaviors although whether the attitudinal shifts lead to behavioral trends or whether the reverse is true have not been ascertained. The paper documented an increase in risky sexual behavior among Filipino youth while earlier studies notably by Ventura and Cabigon (2004) and Kabamalan (2003) had shown a growing acceptance of premarital sex. Did the liberalizing views on sex give rise to the increase in risky sexual behavior or is the pervasiveness of the behavior modified the attitude towards it?

If the increase in sexual risk-taking is indeed the result of changes in underlying shift in behavior, then more information about specific interventions is needed. The study therefore underscores the need for systematic and regular updating of data on adolescent sexuality to keep track of the changes in risk behavior over time for a fuller understanding of shifts in risk behaviors.

As a final note, given the considerable proportion of young people who engage in risky sex, adolescents should remain a priority target group in health and population programs and as the findings strongly suggest there is a compelling need for involvement of youth in peer programs.

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