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Risk and Protective Factors Affecting Youth Sexual and Reproductive Health in Peninsular Malaysia



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Introduction

Over the last 10 years, youth sexual and reproductive health (SRH) has raised a lot of concern on the national agenda. This concern has been driven by increasing proportion of young people who had sex at early age, increasing prevalence of HIV/AIDS and STI particularly in Malaysia. The Youth Sexuality Survey in 1996 showed the age at first sexual intercourse to be as early as 9-10 years for both male and female adolescents¹. The proportion of HIV infection due to sexual transmission is increasing from 18.8% in 2000 to 55.5% in 2011². Furthermore about 26% of newly infected cases of heterosexual transmission in 2011 are amongst teens and youth aged between 13 to 29 years³.

Identification of risk and protective factors are crucial in the planning of early SRH intervention programmes for young people. Early intervention programmes are more acceptable and cost effective.

Objective

To determine risk and protective factors of youth sexual and reproductive behaviours.

Methodology

A nationwide cross sectional study was done among randomly selected adolescent aged between 13-24 years in Peninsular Malaysia. There were three categories: secondary school students (aged 13-18 years), higher education institutional students (aged 18-24 years) and adolescents who were school drop-out, working and unemployed (aged 13-24 years).

Data was obtained from self-administered questionnaire and analyzed using SPSS 18.0 with descriptive analysis and logistic regression.

The factors measured were socio demographic, internal control (knowledge, attitude, youth psychology, religiosity, risky lifestyle), family (family involvement, family rules, communication and connectedness), peers (no integrity, substance abuse, criminal, sexual crime), school (connectedness, environment), community (environment of neighborhood, perception on problem of neighborhood) and source of information/social circle, internet, electronic, printed matters. Premarital sex was selected as an indicator to measure sexual and reproductive health behaviours.

Results

Youth Profile:

A total of 5,088 adolescents participated in the study; 1,035 (20.3%) secondary school students, 3,537 (69.5%) higher education institutional students and 516 (10.1%) adolescents who were school drop-out, working and unemployed (aged 13-24 years).

Their mean age was 16.8 years old with almost equal ratio by sex. By ethnicity, 69.6% were Malays, followed by 21.7% Chinese and 8.5% Indians. More than two third lived in urban areas. Majority of them stayed with their family and 89.6% have both parents.

Risk and Protective Factors of Premarital Sex

This study revealed that 5.8% youths have had premarital sex. Table 1 showed that premarital sex was common among male youths (7.7%), aged 19-24 years old (13.3%), Malay (6.5%), live in urban (6.4%), out of institutional education (22.9%), not living with parents (9.5%) and have divorced parents (12.5%). These variables were significantly associated with premarital sex after univariate analysis.

Table 1: Distribution of Youth By Socio Demographic and Premarital Sex

Socio Demographic	Premarital Sex		P-value
	Yes	%	
Sex			<0.001
Male	287	7.7	
Female	130	4.1	
Age			<0.001
13-15 Years	30	1.9	
16-18 Years	100	6.1	
19-24 Years	124	13.2	
Ethnicity			<0.01
Chinese	22	3.8	
Indians	45	5.5	
Malay	366	6.4	
Strata			<0.01
Urban	76	4.7	
Rural	85	4.4	
Status of Respondent			<0.001
School Students	89	3.3	
Higher institutional	98	6.5	
Out of institutional education	119	22.9	
Living with Parent			<0.001
Yes	271	4.5	
No	124	9.5	
Divorced Parents			<0.001
Yes	120	5.0	
No	96	12.5	

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Table 2: Distribution of Youths By Social Factors and Premarital Sex

Social Factors	Knowledge on SRH	Premarital Sex		P-value	
		Yes	%		
Internal Control	Knowledge on SRH	Low	126	6.7	<0.001
	High	269	6.7		
Attitude	Positive	293	6.7	<0.001	
	Negative	96	3.8		
Religiosity	Religious	120	4.4	<0.01	
	Non	175	7.8		
Self-Evaluation	High	124	4.8	<0.001	
	Low	275	10.9		
Cognitive Efficiency	High	124	4.7	<0.001	
	Low	169	7.0		
Motivation	High	132	6.8	<0.05	
	Low	143	5.2		
Self-Control	High	96	3.3	<0.001	
	Low	255	10.9		
Substance Abuse	Yes	109	17.4	<0.001	
	No	202	2.8		
Risky Lifestyles	Yes	273	10.4	<0.001	
	No	22	0.9		
Family	Family Involvement	High	4.4	<0.001	
	Low	158	2.2		
Family Rules	Good	130	4.3	<0.001	
	Poor	165	8.8		
Communication and Connectedness	High	114	4.0	<0.01	
	Low	181	8.1		
Peers	Clarity Rules	Yes	137	3.3	<0.001
	No	276	12.8		
Integrity	Yes	91	3.1	<0.001	
	No	164	8.6		
Substance Abuse	Yes	234	12.8	<0.001	
	No	62	3.8		
Involve in Crimes	Yes	170	13.2	<0.001	
	No	104	6.6		
Involve in Sexual Crimes	Yes	229	13.5	<0.001	
	No	89	3.8		
School	School Connectedness	Yes	49	3.3	<0.001
	No	259	8.5		
School Environment	Positive	124	4.6	<0.001	
	Negative	173	7.1		
Community	Neighbourhood Environment	Positive	150	4.9	<0.01
	Negative	142	7.1		
Perception on Neighbourhood Problem	Positive	128	4.1	<0.001	
	Negative	207	8.5		
Source of Information on Sex	Social Circle	Yes	173	5.7	<0.05
	No	134	3.0		
Internet	Yes	142	3.3	<0.05	
	No	153	5.0		
Electronics	Yes	130	6.6	<0.001	
	No	119	4.5		
Printed Materials	Yes	118	4.3	<0.001	
	No	177	6.8		

Table 2 showed all social factor variables were significantly associated with premarital sexual experience except for social circle variable.

Table 3: Logistic Regression Analysis of Youth's Characteristics and Premarital Sex

Youth's Characteristics	Crude	OR (95% CI)	
		Crude	Adjusted
Sex			
Male	1.000	1.000	1.000
Female	1.948 (1.527, 2.498)**	2.791 (1.881, 4.233)***	
Age			
13-15 Years (ref)	1.000	1.000	1.000
16-18 Years	3.885 (2.628, 5.602)***	3.260 (1.991, 5.322)**	
19-24 Years	7.881 (5.517, 11.441)***	2.861 (1.841, 4.692)***	
Ethnicity			
Chinese (ref)	1.000	1.000	1.000
Malay	1.718 (1.286, 2.285)**	0.982 (0.877, 1.098)	
Indians	2.429 (1.685, 3.475)***	3.252 (2.072, 5.266)**	
Strata			
Rural	1.000	1.000	1.000
Urban	1.389 (1.077, 1.792)**	1.139 (0.908, 1.382)	
Status of Respondent			
School Students (ref)	1.000	1.000	1.000
Higher institutional	3.662 (2.628, 5.126)***	1.442 (1.069, 1.945)	
Out of institutional education	11.486 (8.590, 15.413)***	6.584 (4.433, 9.776)***	
Living with Parent			
Yes	1.000	1.000	1.000
No	2.205 (1.762, 2.827)***	1.662 (1.204, 2.298)**	
Divorced Parents			
Yes	1.000	1.000	1.000
No	2.708 (2.026, 3.625)***	2.192 (1.590, 3.006)***	

* Significant, p<0.05, ** Significant, p<0.01, *** Significant, p<0.001

Logistic Regression analysis was used to measure the strength of the association between various socio demographic and social factors (internal control, family, peers, school, community and source of information). The result of Crude and Adjusted Logistic Regression Analysis are presented in Table 3. The odd ratio (OR) of crude and adjusted Logistic Regression significantly varies across the socio demographic and social factors.

Table 3: Logistic Regression Analysis of Youth's Characteristics and Premarital Sex

Social Factors	Knowledge on SRH	Low	OR (95% CI)	
			Crude	Adjusted
Internal Control	Knowledge on SRH	Low	1.000	1.000
	High	3.514 (3.048, 4.023)***	3.201 (2.261, 4.581)***	
Attitude	Positive	1.000	1.000	
	Negative	1.694 (1.363, 2.172)***	1.476 (1.043, 2.087)**	
Religiosity	Religious	1.000	1.000	
	Non	1.708 (1.363, 2.132)***	1.507 (1.076, 2.104)**	
Self-Evaluation	High	1.000	1.000	
	Low	1.693 (1.451, 2.086)***	1.511 (1.067, 2.133)**	
Cognitive Efficiency	High	1.000	1.000	
	Low	1.622 (1.368, 1.924)***	1.506 (1.061, 2.142)**	
Motivation	High	1.000	1.000	
	Low	1.527 (1.361, 1.697)**	1.426 (1.041, 1.949)**	
Self-Control	High	1.000	1.000	
	Low	2.045 (1.704, 2.436)***	1.893 (1.216, 2.937)***	
Substance Abuse	Yes	1.000	1.000	
	No	3.416 (3.061, 3.824)***	3.949 (3.021, 5.186)***	
Risky Lifestyles	Yes	1.000	1.000	
	No	2.594 (2.304, 2.924)***	2.949 (2.011, 4.347)***	
Family	Family involvement	High	1.000	1.000
	Low	3.221 (3.041, 3.412)***	3.765 (2.761, 5.162)***	
Family Rules	Good	1.000	1.000	
	Poor	1.512 (1.327, 1.724)***	1.511 (1.047, 2.182)**	
Communication and Connectedness	High	1.000	1.000	
	Low	1.642 (1.451, 1.867)***	1.511 (1.047, 2.182)**	
Peers	Clarity Rules	Yes	1.000	1.000
	No	3.755 (3.214, 4.352)***	3.252 (2.261, 4.681)***	
Integrity	Yes	1.000	1.000	
	No	1.592 (1.396, 1.826)**	1.502 (1.071, 2.104)**	
Substance Abuse	Yes	1.000	1.000	
	No	3.885 (3.412, 4.402)***	3.221 (2.261, 4.581)***	
Involve in Crimes	Yes	1.000	1.000	
	No	4.482 (3.924, 5.092)***	3.107 (2.045, 4.681)***	
Involve in Sexual Crimes	Yes	1.000	1.000	
	No	6.877 (5.712, 8.289)***	4.767 (3.476, 6.502)***	
School	School Connectedness	Yes	1.000	1.000
	No	2.281 (2.077, 2.499)***	3.424 (2.461, 4.781)***	
School Environment	Positive	1.000	1.000	
	Negative	1.693 (1.521, 1.887)***	1.662 (1.161, 2.386)**	
Community	Neighbourhood Environment	Positive	1.000	1.000
	Negative	1.642 (1.451, 1.867)***	1.511 (1.047, 2.182)**	
Perception on Neighbourhood Problem	Positive	1.000	1.000	
	Negative	1.642 (1.451, 1.867)***	1.511 (1.047, 2.182)**	
Source of Information on Sex	Social Circle	Yes	1.000	1.000
	No	2.205 (1.762, 2.827)***	1.662 (1.204, 2.298)**	
Internet	Yes	1.000	1.000	
	No	2.708 (2.026, 3.625)***	2.192 (1.590, 3.006)***	
Electronics	Yes	1.000	1.000	
	No	2.708 (2.026, 3.625)***	2.192 (1.590, 3.006)***	

* Significant, p<0.05, ** Significant, p<0.01, *** Significant, p<0.001

With regard to socio demographic factors, male youth was found to be 2 times more likely to be sexually experienced than female youth. Similarly with age group where the older age was found to be a risk factor for premarital sexual experience among youth. Youth aged 16-18 years and 19-24 years were almost 2 and 3 times more likely to have sexual experience respectively as compared to youth aged 13-15 years. Likewise, youth who were out of educational institution were 6.8 more likely than school student to have had sex. This study also found that youth who was not living with parent and have divorced parents were 1.7 and 2.2 times more likely respectively to be involved in sexual activity. Meanwhile, there was no evidence to show that ethnicity and strata were the risk factor for premarital sex.

In term of internal control factors, youth with negative attitude towards SRH [AOR=1.71 (2.42, 2.26)], have poor self control [AOR=1.6 (1.236, 2.181)], involved in substance abuse [AOR=3.9 (3.027, 5.154)] and have risky lifestyles [AOR=7.8 (4.937, 12.341)] were found to be at risk for premarital sexual experience.

Other risk factors that influenced the youth to be sexually active were those youth whose peers involved with substance abuse [AOR=3.2 (2.305, 4.531)] and sexual crime [AOR=4.8 (3.479, 6.600)].

Regarding school and source of information factors, youth with no school connectedness [AOR=3.2 (2.305, 4.531)] and have access to electronic media [AOR=2.5 (1.863, 3.352)] for sexual information were also found to be at risk for premarital sexual experience.

There were seven indicators found to be protective factors for premarital sexual experience: knowledge on SRH, family rules, high level of family communication and connectedness, positive neighbourhood environment, positive perception on neighbourhood problem and high accessibility to printed matters of sexual information.

Conclusions

In conclusion, family, peers, school and neighbourhood play an important role to prevent sexual and reproductive health problem among the youth apart from factors from within the youth themselves.

Therefore preventive programmes should be directed to enhance youth internal control as well as strengthened family communication and connectedness, choose peers wisely, strengthened school connectedness and reducing neighbourhood problems. Information in electronic materials should be monitored especially with regard to false sexual and reproductive information.

Even though this study does not show the influence of religiosity in premarital sexual experience, further study need to be done to explore on this.

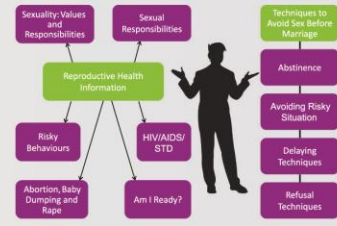
Introduction

The National Policy on Reproductive Health and Social Education was passed in late 2009 and the National Population and Family Development Board of Malaysia (NPFDB) has become one of the agencies in planning and implementing the initiatives of its Plan of Action. One of the programmes designed was sexual reproductive health education (SRHE) in schools or better known as PEKERTI@Sekolah. The objective of the Programme PEKERTI@Sekolah is to complement the SRHE in the school curriculum. Two modules on SRH were developed to cater for the primary school students targeting 12 years old and 15 years old secondary school students.

Module Content Primary School 8 hours



Module Content Secondary School - 8 hours



Objective

- The objective of the pilot study is to evaluate the feasibility, effectiveness and receptiveness of students and teachers of having PEKERTI@Sekolah as an extra-curricular subject.
- Facilitators conducting the modules were school counselors and Health Education teachers who had undergone 3 days training of the modules.
- The modules consisted of short interactive lectures, group discussions, case studies, games and role plays.

Method

33 schools from the whole of Malaysia were randomly selected by the Ministry of Education to participate in this pilot programme from September to November 2012; 16 primary schools, 16 secondary schools and 1 primary Special Education school.

Evaluation of the programme:

- Feasibility was assessed from post training evaluation of the teachers and counselors.
- Effectiveness was assessed from pre and post test assessment questionnaires on knowledge and attitude towards SRH were distributed to the students.
- Receptiveness was assessed from teachers' report after the pilot test.



PILOT TEST OF SRHE PROGRAMME AS EXTRA CURRICULUM IN MALAYSIAN SCHOOLS

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Results: Post Training Evaluation

- 67 teachers and counselors underwent 18 hours of training of the module.
- Pre and post training questionnaires showed that they found the modules were useful and shall benefit both teachers and students. They also thought that the structure of the modules and the programme were suitable and feasible to be implemented in the schools.
- The participants also provided suggestions for the implementation of the PEKERTI@Sekolah programme.

The suggestions were:

- Two teachers per class of 40 students.
- Each module to be conducted for 4 hours in 2 consecutive days.
- Each module to be implemented at the end of the year after completion of major examinations but before school holidays.

PRE AND POST TEST RESULTS

- A total of 2,376 students participated in this evaluation; 1,255 were 15 years old, 1,085 were 12 years old and 36 were from the primary special education class. Two third of them were boys. The result of the t-test showed that the mean score for SRH knowledge was significantly increased from 9.16 to 14.00 for the primary school students and from 6.52 to 10.31 for the secondary school students. Refer CHART 1.
- Chart 2 showed the positive attitude toward SRH was significantly increased for the secondary school students where the mean score increased from 3.94 to 4.61.

Chart 1: Level of Knowledge on SRH

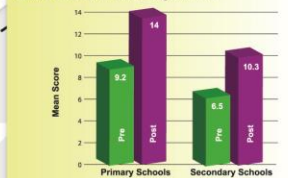
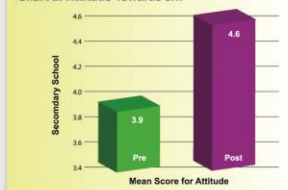


Chart 2: Attitude Towards srh



Receptiveness

Written reports of the post pilot project received from the participating schools showed positive and encouraging response of the SRH module from both students and teachers.

Conclusion

- PEKERTI@Sekolah programme is feasible, effective and acceptable to the students and teachers as an extracurricular subject.
- The success of this pilot project has lead to this programme being funded for the year 2014 for 47 schools.