

## 14 A MULTIDIMENSIONAL CONSTRUCT OF PERCEPTIONS ON SEXUAL AND REPRODUCTIVE HEALTH AMONG MUSLIM UNDERGRADUATE STUDENTS

*Samsoo Sa-U*

*Nik Suryani Nik Abd Rahman*

*Mohamad Sahari Nordin*


### **Introduction**

Studies which have been carried out in Muslim societies on sexual and reproductive health are limited. Many young Muslims are emitted from the learning process to cater the cultural and religious restrictions (Cok, 2000; DeJong, Shepard, Roudi-Fahimi, & Ashford, 2007; Halstead, 1997; Mohamad-Diah, 2007; Underwood, 2000). Very little is, therefore, known about the factors that influence the Muslim youths on sexual and reproductive health. Several studies in some Muslim countries reported that Muslim youth are not well prepared and educated in sexual and reproductive health due to some contributing factors. (Gökengin, Yamazhan, Özkaya, Aytuğ, Ertem, Arda, & Serter, 2003; Mohammadi, Mohammad, Farideh K.A. Farahani, Siamak Alikhani, Mohammad Zare, Tehrani, Ramezankhani, & Alaeddini, 2006; Nik-Abd-Rahman, Rais, Abd-Hamid, & Hashim, 2007; Paruk, Mohamed, Patel, & Ramgon, 2006).

Cok (2000) described sex education in Turkey, as similar as many other Muslim countries in the world, as “there are no sexuality classes, no mention of sexuality in health courses or no sexuality textbook material in Turkish school. Other issues take priority and sexuality education is pushed aside as unimportant and irrelevant” (p.5). Moreover, he stated that Turkish Muslim adolescents are highly influenced by media especially from Europe and North America. In addition, the study on 2,227 first-and fourth -years students at Ege Univesity, (Gökengin et al., 2003) revealed that knowledge about sexual health and sexuality transmitted diseases is insufficient among their samples.

Mohammadi et al. (2006) described the sex education in Iran that cultural sensitivities which may be a factor in young people’s poor knowledge about reproductive health. Furthermore, few programs provide sexuality education to adolescents or enable youth to ask questions and correct misconceptions about reproductive health. Indeed, large numbers of young Iranians lack information about safe sex and about the skills necessary to negotiate and adopt safe sex practices. In their study of 1,385 males aged 15–18 in Tehran about their beliefs and knowledge regarding reproductive health and their engaging in sexual activity, they found that there was a relatively high prevalence of sexual activity and the lack of knowledge regarding STIs and contraceptives pose a significant threat to the sexual and reproductive health of Iranian adolescent males. Hence, they requested programs to provide adolescents with the accurate information and skills to make safe sexual decisions.

A study conducted by Nik-Abd-Rahman et al. (2007) with undergraduate students (n=300) in Malaysia , discovered that, in general, students held a positive view toward



sex and sex-related matters; however, their knowledge on sexuality education, sexual and reproductive health matters calls for attention from the relevant authorities. Findings on their sources of information on sexuality education also revealed that more could be done to help them obtain an accurate picture of sex-related matters particularly with the roles played by parents, school, religion and media in disseminating knowledge on sex-related matters.

Paruk et al. (2006) presented finding on the influence of religiosity on attitude toward people with HIV/AIDS using 90 South African Muslim university students. They found that higher religiosity was significantly correlated with a more positive attitude to people with HIV.

Ojo and Bidemi (2008) conducted a study with 520 adolescent of Nigerian students on contemporary clothing habits and sexual behaviour of adolescents in the South Western Nigeria. They found that there is no significant difference in the factors influencing adolescents' dressing habits and also the fact that there is relationship between clothing habits and their sexual behaviour.

In Pakistan, Qidwai (2000) surveyed perception among 188 Pakistani young men, who presented to family physicians, at the outpatient department of the Aga Khan University Hospital, Karachi, about enjoyment of sexual experiences in women. He found a high prevalence of misconceptions about female sexuality among Pakistani young men. Furthermore, Hennink, Rana, and Iqbal (2005) studied on knowledge of personal and sexual development amongst young people in Pakistan. They found that young women typically gain information from a limited number of sources while young men accessed a wide variety of information sources outside the home.

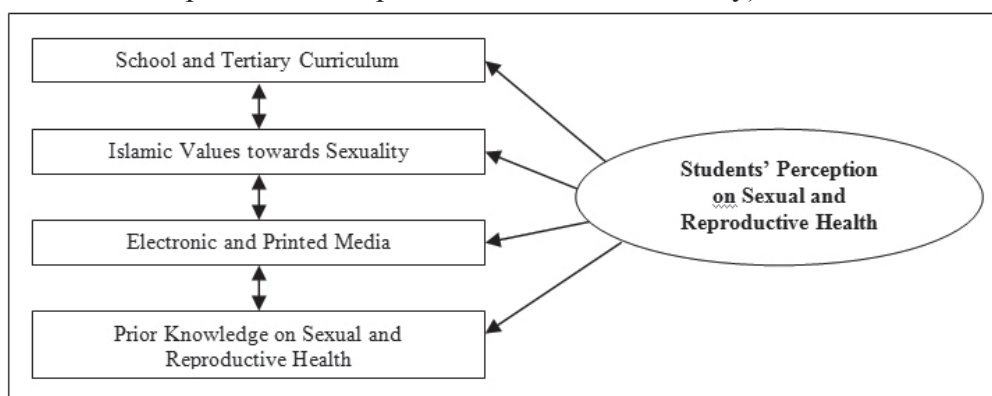
From studies done in various Muslim countries, however, there is not enough information on factors influencing the basic sexual and reproductive health among Muslim undergraduate student as well as in other developing countries (Singh, Bankole & Woog, 2005). Intervention studies are largely absent. Therefore, there is a need to determine factors associated with Muslims' sexual perception in order to develop a clear understanding in student variables. The results of of this study may contribute to help students on their knowledge and behaviour regarding to sexual and reproductive health and it will help determine best bets for programs for sex education for Muslim youths.

**The purpose of this study was to survey Muslim undergraduate students' perceptions in sexual and reproductive health, and in doing so, to clarify the meaning of the construct itself. Thus, the study addressed the following research questions: What are the factors influencing Muslim undergraduate students' perceptions towards sexual and reproductive health?**

**This study is based on the** crossed different populations and geographic regions influencing factor adolescent on sexual and reproductive health studied by Manlove et al. (2001). They pointed out that there are multiple domains in an adolescent's life associated with reproductive health outcomes. By grounded on *the ecological approach*, individual factor, family factor, peers, partners, school context, neighborhood, community, and social policy characteristics are all associated with sexual behaviours, adolescent pregnancy, and

STI. However, this study only looked at certain dimensions which comprised (1) *individual factor* (religiosity, knowledge of reproductive health and attitudes and belief about sex); (2) *school context* (curriculum); and, (3) *media*.

The authors, therefore, hypothesized **that there are four influencing factors of undergraduate Muslim students' perception on sexual and reproductive health: (1) school and tertiary curriculum support, (2) Islamic values on sexuality, (3) electronic and printed media, and (4) students' prior knowledge on sexual and reproduction health.** (Figure 1 below depicts the conceptual framework of the study).



**Figure 1:** Conceptual Framework of Study

### Significance of Study

Results of this study are pictured to provide empirical data on factors influencing perception on sexual and reproductive health among Muslim undergraduate students that have not been fully studied. Thus, the results of this study are expected to help in the understanding of students' perception towards sexual and reproductive health and sex education which is promoted by several factors. The findings are beneficial to understand and determine the success or failure of factors influence and the implementation of sex education in Islamic higher learning institute as perceived by students. Such information can help to improve the strategy in order to accomplish the sex education particularly for Muslim youths.

### Method

#### Participants

The participants were the undergraduate students in IIUM, Gombak campus, Kuala Lumpur, Malaysia. All were Malaysians. A random sampling was used to select participants. The principle component analysis (PCA) was conducted where the number of sample depends on the items of the questionnaire. Since the number of the item is 40, the minimum sample size is  $40 \times 5 = 200$  participants. In this study, the participants were 255 which were more than the minimum requirement (Hair et al., 2006).

## Measures

**In this study, the survey method was employed.** A questionnaire was selected from **Nik –Abd-Rahman et al. (2007)** measured these relationships. It consisted of two parts. The questionnaires were distributed randomly to a sample of undergraduate in the International Islamic University Malaysia (IIUM).

The survey instrument was adopted from a core questionnaire developed by **Nik –Abd-Rahman et al. (2007)**. The questionnaire comprised 40 questions divided into two sections: social and demographic variables and students' views and knowledge on a wide range of topics on sex and attitudes towards sex. It sought to find out students' perceptions on:

- (1) school and tertiary curriculum (5 items; no.1-5);
- (2) Islamic values on sexuality (6 items; no.6-11);
- (3) electronic and printed media (4 items; no.12-15);
- (4) sexual novel (4 items; no.16-19);
- (5) their prior knowledge of sexual and reproductive health
  - 5.1 protected sex (6items; no.20-25):
  - 5.2 sexual act (9 items; no.26-34):
  - 5.3 circumcisions (9 items; no.35-40).

The response to each item is in the form of a five-point Likert scale of “strongly disagree”, “disagree”, “undecided”, “agree”, and “strongly agree”.

The demographic characteristic of the first section of the questionnaire contains questions with regard to the respondent's background information (gender, age, country of origin, former school and location, faculty, year of study, CGPA, and marital status).

To establish the face and construct validity of the instrument, the opinions of two experts in education were sought on the design and items used for the various dimension. The instrument was pilot tested on 30 students that was not on the list of the selected students. Based on the pilot test, 50 items from **Nik-Abd-Rahman et al. (2007)** was tested and a few items were omitted in order to refine the instrument further. Finally, 40 items were confirmed with a reliability of Alpha Cronbach = .72.

## Procedures

To distribute the questionnaires, researchers sought help from three students which researchers have known. The questionnaire has an attached covering letter that assures the confidentiality of data collected and describes the major components of questionnaires to be completed. Students were given one week to complete the questionnaires and had to return them to the assigned persons within the time allocated. The usable returned response rate was 72.9 % (n=255) out of 350 students. The data collected was operated on January 2008.

## Data analysis

For the demographic data, frequency and percentage were employed. To answer the

research question on factors influencing students' perceptions of sexual and reproductive health, principle component analysis was utilized.

An explanatory factor analysis was conducted to construct-validate the factor influencing students' perception. To find out the number of factors the following rules were used: (1) the Kaiser's rule of 1.0 as the minimum eigenvalues, (2) the scree test and (3) the interpretability of the solutions. The degree of intercorrelation among items justified the application of the factor analysis as well as the Batlett's test of sphericity recorded a Chi square value.

## Results

Table 1 show out of 255 students, 152 (59.6%) were females and 101 (39.6%) were males. A majority of the students (91.4%) were between 20 and 25 years of age, the remaining being distributed between the age group of younger than 20 (7.4%) and older than 25 (1.2%). Approximately, 239 (93.7%) of the respondents were Malaysians while 16 (6.3%) were international students. Most of students (37.2%) graduated from urban day school, followed by religious school (27.1%), boarding school (16.5%), rural day school (9.0%), private school (5.9%), and others (1.9%). The respondents were represented from different faculty with nearly half (42.4%) being law students (AIKOL). The other half was distributed between Human Sciences (24.3%), KENMS (11.8%), ENGINEERING (7.1%), KAED (5.5%), INSTED (3.9%), KICT (2.7%), and IRK (2.4%) respectively.

Majority of students were second year student (32.5%), the remaining being almost distributed between the final year (29.8%), the first year (21.2%), and the third year (16.5%). In general, almost more than half of the students (49.4%) had CGPA more than 3.0, while the rest (28.7%) had less than 3.0. Almost 95.7% students were single which 131 (53.7%) were not attached to someone and 110 (45.1%) were having attached to someone, only 11 (4.3%) students were married.

**Table 1:** Respondents' Demographic Background

Variables	N	Percent
<b>1. Gender:</b>		
Male	101	39.6
Female	152	59.6
Missing Value	2	0.8
<b>2. Age</b>		
<20	19	7.4
20-25	233	91.4
>25	3	1.2
<b>3. Country of Origin</b>		
Malaysian (local student)	239	93.7
Non-Malaysian (international student)	16	6.3
<b>4. Former School and Location</b>		
Urban Day School	95	37.2
Rural Day School	23	9.0
Boarding School	42	16.5

Religious School	69	27.1
Private School	15	5.9
Others	6	2.4
Missing values	5	1.9
<b>5. Faculty</b>		
Information and Communication Technology (KICT)	7	2.7
Engineering	18	7.1
Laws (AIKOL)	108	42.4
Human Sciences (HS)	62	24.3
Islamic Revealed Knowledge (IRK)	6	2.3
Institute of Education (INSTEAD)	10	3.9
Economics and Management Sciences (KENMS)	30	11.8
Architecture and Environmental Design (KAED)	14	5.5
<b>6. Year of study</b>		
1 <sup>st</sup> year	54	21.2
2 <sup>nd</sup> year	83	32.5
3 <sup>rd</sup> year	42	16.5
4 <sup>th</sup> year	76	29.8
<b>5. CGPA</b>		
< 2.00	1	0.4
2.00-2.49	11	4.4
2.50-2.99	61	23.9
3.00-3.49	102	40
>3.50	24	9.4
Missing Value	56	21.9
<b>6. Marital status</b>		
Single	244	95.7
Single and have attached to someone	110	45.1
Single and have not attached to someone	131	53.7
Missing Value	3	1.2
Married	11	4.3

n = 255

### Perceptions toward Sexual and Reproductive Health

Table 2 summarizes the results of the descriptive analysis of the students' perceptions on sexual and reproductive health. The data showed that the mean scores ranged between 1.83 (items PRO23) and 4.57 (items REL10); the standard deviations ranged from .66 (items SEX34) to 1.18 (items PRO23). The mean scores were located within the expected range (none of the items are included a mean score of zero, at 95 % level of confidence, with a reliability of Alpha Cronbach = .72). The data showed that the dispersion of the scores for each item sufficiently discriminated the students' perceptions. In addition, the degree of bivariate correlation among most of the 40 items matrix variables ranged from low to high. However six of them (items EDU1, EDU2, PRO24, SEX28, SEX31, and CIR39) were found to link weakly and negatively with the rest of the items.



**Table 2: Mean (Standard Deviation) and Item-Total Correlations of Students' Perceptions on Sexual and Reproductive Health**

Items	Code	M	SD	r
1. The content of information on sexual related matters taught at school is sufficient.	EDU1	2.95	1.157	.081
2. Courses like Family Management and Parenting at undergraduate level should openly discuss sexual and reproductive health matters.	EDU2	4.11	.876	.023
3. Sexual education should be taught as subject of its own at secondary schools.	EDU3	3.28	1.176	.227
4. Sexual education should be taught as a separate subject at the tertiary level.	EDU4	3.60	1.043	.195
5. Sexual education should be taught in pre-marital courses.	EDU5	4.38	.686	.176
6. <i>Qur'an</i> provides me with information on sexuality in a decent manner.	REL6	4.38	.789	.239
7. My religious knowledge provides basis for me to develop the conscience not to engage in premarital sex	REL7	4.52	.728	.192
8. Religion helps me suppress my sexual desire.	REL8	4.26	.847	.237
9. Fasting is one of the best ways to keep my sexual desire under control.	REL9	4.31	.910	.327
10. Watching pornography is forbidden in Islam.	REL10	4.57	.767	.303
11. The only way to eliminate illicit sex is by implementing the <i>Syariah</i> Law.	REL11	4.19	.922	.389
12. Electronic media portrays negative perception of sexuality.	MED12	3.70	1.079	.339
13. Printed media portrays negative perception of sexuality.	MED13	3.65	1.075	.372
14. Electronic media leads young people to embark on pre-marital sexual relationship.	MED14	4.10	.927	.357
15. Printed media leads young people to embark on pre-marital sexual relationship.	MED15	3.94	.987	.412
16. Reading sexy novels leads people to having pre-marital sex.	NOV16	3.42	1.036	.354
17. Novels are most descriptive about sexual intercourses than other sources.	NOV17	2.98	1.072	.350
18. Novels with sexual descriptions increase my desire to masturbate.	NOV18	2.69	1.107	.324
19. Novels with sexual descriptions increase my sexual fantasies.	NOV19	2.95	1.093	.268
20. There is fertility problem if pregnancy does not occur in the first year of marriage.	PRO20	2.52	.972	.218
21. Unprotected sexual intercourse will guarantee pregnancy.	PRO21	3.32	1.175	.339
22. Protected intercourse guarantee pregnancy won't occur.	PRO22	2.70	1.085	.235
23. Kissing and touching can lead to pregnancy.	PRO23	1.83	1.177	.153
24. The use of contraceptives or protected sex ensures safety from sexually related diseases.	PRO24	3.41	.996	.069
25. Islam forbids the use of contraceptives.	PRO25	2.87	1.010	.169
26. Preservation of virginity is most important for both men and women before getting married.	SEX26	4.53	.781	.125
27. Sex is painful for first timers.	SEX27	3.44	.933	.100
28. Sex is painful for women.	SEX28	3.22	.886	.069
29. Sex is pleasurable to both men and women.	SEX29	4.04	.853	.162
30. Only matured people enjoy sexual relationship.	SEX30	2.88	1.088	.100
31. Sexual relationship is for young people only.	SEX31	1.91	.909	-.057
32. Good Communication between spouses ensures satisfying sexual relationship.	SEX32	4.32	.839	.100
33. Knowledge about sex is a pre requisite for enjoying sex.	SEX33	4.05	.876	.246
34. Understanding between each other's needs help improve sexual satisfaction.	SEX34	4.39	.660	.168
35. Circumcision is mainly for health reasons.	CIR35	3.93	1.090	.192
36. Circumcision is for cultural reasons.	CIR36	2.43	1.033	.189
37. Circumcision for women reduces sexual satisfaction.	CIR37	2.89	.935	.116
38. Circumcision for women represses their sexual desires.	CIR38	2.96	.856	.235
39. Circumcision for men reduces sexual satisfaction.	CIR39	2.59	.977	.076
40. Circumcision for men represses their sexual desires.	CIR40	2.92	.969	.105

### **The Underlying Dimensions of Students' Perceptions**

To identify the factors that influence undergraduate Muslim students' response toward sexual and reproductive health, the data collected from the sample of 255 respondents were subjected to principal component analysis. Nevertheless, the present analysis used only the responses on the 34 of the 40 items (Table 3). Based on the results of item analysis as described in the preceding section, 6 of the items (items EDU1, EDU2, PRO24, SEX28, SEX31, and CIR39) were excluded because they were behaving poorly in the item-total correlation.

Table 3 summarizes the correlations among the 34 items supported the use of principal component analysis. Specifically, the Bartlett Sphericity Test yielded statistically significant intercorrelation  $\chi^2 (561) = 2525.854$ ,  $p = .001$  with an overall MSA of .65, which exceeded the value of .60.

Thus, the data matrix has sufficient correlation to justify the use of the exploratory factor analysis. The principal component analysis yielded a seven-factor dimension structure, accounting for 60.69% of the variance. This indicates that four underlying dimensions explain more than 60% of the variance among the 34 variables.

The eigenvalues, ranging from 1.616 to 3.0622 (which is greater than 1 as required), satisfied the standards of important factors as prescribed by Hair, Jr. et al. (2006).



**Table 3: Correlation Matrix and Descriptive Statistic**

	EDU3	EDU4	EDU5	REL6	REL7	REL8	REL9	REL10	REL11	MED12	MED13	MED14	MED15	NOV16	NOV17	NOV18	NOV19	PRO20	PRO21	PRO22	PRO23	PRO25	SEX26	SEX27	SEX29	SEX30	SEX32	SEX33	SEX34	CIR35	CIR36	CIR37	CIR38	CIR40					
EDU3	.548																																						
EDU4	-.284	.557																																					
EDU5	-.134	-.128	.747																																				
REL6	.051	-.046	-.085	.769																																			
REL7	-.021	.017	-.107	-.385	.735																																		
REL8	.061	-.006	.027	-.125	-.233	.724																																	
REL9	-.052	.028	-.011	-.130	-.104	-.210	.771																																
REL10	.015	-.084	-.110	-.084	-.023	-.234	-.002	.742																															
REL11	.007	.040	-.099	.027	-.140	.031	-.194	-.153	.782																														
MED12	.062	.071	.045	-.044	.068	.107	-.062	-.183	-.005	.669																													
MED13	-.162	-.074	.029	-.025	-.014	-.082	.046	.100	-.202	-.784	.666																												
MED14	.046	.052	-.088	.045	-.021	.080	.110	-.118	.071	.005	-.172	.664																											
MED15	-.032	-.025	.017	.003	.001	-.124	-.044	.120	-.113	-.074	.052	-.763	.688																										
NOV16	.162	-.022	.047	-.145	.047	.001	-.010	-.069	-.191	.020	.072	-.138	-.034	.757																									
NOV17	-.020	-.056	.094	.046	.028	.017	-.174	.000	.125	.028	-.029	.045	-.141	-.338	.713																								
NOV18	-.034	-.113	-.078	-.017	.081	-.124	-.030	-.024	.209	-.019	-.076	.141	-.089	-.188	-.191	.591																							
NOV19	.085	-.105	-.101	.183	-.018	-.168	.126	.040	.053	-.004	-.012	-.011	.013	-.001	-.047	-.663	.588																						
PRO20	-.106	.172	.097	-.095	.194	-.099	.024	-.007	-.015	-.018	-.118	-.040	.033	-.075	.118	.036	-.051	.630																					
PRO21	.032	-.077	-.059	.056	-.056	-.098	.072	-.002	.006	-.031	.051	-.044	.051	-.044	.065	-.090	.049	-.093	.610																				
PRO22	-.055	-.041	.006	-.023	-.001	.022	-.140	.004	-.097	-.053	.109	.067	-.031	.108	-.111	-.081	.059	-.147	.290	.485																			
PRO23	-.120	.028	.054	-.017	.112	-.070	.003	.149	-.198	-.060	.040	-.141	.111	.042	-.050	-.087	.012	.010	-.045	-.196	.619																		
PRO25	.088	-.126	.092	-.052	.056	.126	-.134	-.206	.005	.114	-.030	-.028	-.017	-.015	.002	-.025	-.096	-.120	.169	.099	-.126	.490																	
SEX26	.004	-.041	.071	-.092	-.141	.034	-.010	-.063	-.056	-.031	.023	-.049	.067	.080	-.175	.047	.036	-.006	-.204	.086	-.101	.057	.671																
SEX27	.079	.083	-.093	.080	-.078	-.056	.098	.135	-.107	.051	-.024	-.100	.015	.098	.074	-.135	.085	.026	.196	-.244	.092	-.128	-.197	.319															
SEX29	-.085	-.058	-.089	-.088	.013	-.091	.011	-.055	.033	-.086	.153	.029	-.007	.048	-.105	-.135	-.199	-.211	.196	.120	.069	.111	.114	-.195	.372														
SEX30	-.023	.064	-.009	-.090	.118	.029	-.161	-.055	.048	-.006	.000	-.110	.075	-.117	-.027	.114	-.097	-.009	.011	-.001	.036	.092	.101	-.143	.147	.536													
SEX32	-.243	.095	.094	-.039	.066	-.068	-.006	.074	-.018	-.148	.127	-.028	.018	.047	-.001	-.043	-.004	.231	-.038	.114	.041	-.106	-.040	-.103	-.054	.089	.640												
SEX33	.127	-.132	-.039	-.139	.173	-.044	.020	.067	-.049	.105	-.085	-.076	.025	.064	.193	-.167	.075	.158	.006	-.155	.072	.032	-.058	.123	-.256	-.054	-.333	-.463	.555										
CIR35	-.103	.093	.052	-.006	.018	.025	-.115	-.101	-.075	-.026	.058	-.053	.056	.011	-.026	-.020	-.012	.065	-.052	.054	.038	-.065	-.104	-.074	.019	.018	.053	.128	-.237	.600									
CIR36	.003	-.139	.060	-.085	.159	-.147	.181	.069	-.084	.015	.045	-.014	.021	.025	-.197	-.173	.174	-.052	-.137	.084	.010	-.068	.108	-.114	.020	-.026	.032	-.170	.133	-.113	.613								
CIR37	-.145	.013	.021	.044	-.011	.168	-.081	.037	.072	-.034	.015	-.086	.068	-.157	.067	.104	-.121	.003	.126	-.073	.089	.039	-.024	-.022	.002	-.006	.121	.070	-.142	-.075	-.207	.642							
CIR38	-.077	-.072	.014	.008	-.056	.045	.011	-.093	.021	.052	-.015	-.043	.022	.044	-.038	-.023	.025	-.052	.026	-.071	-.032	.052	-.050	.023	-.039	-.032	-.136	-.118	.098	.000	-.060	-.193	.663						
CIR40	-.017	.022	.046	.057	-.007	-.042	.117	.061	-.060	-.135	.131	.111	-.105	.040	-.024	.056	.002	-.114	-.108	.058	.024	-.060	.123	-.076	.096	.014	.046	.013	-.083	-.029	-.066	-.102	-.502	.646					

Table 4 summarizes the result of the analysis, in which, the Varimax with Kaiser normalization rotation was used to produce the final solution. The result of the exploratory factor analysis revealed that there were four latent variables measured by the data. The solution, extracted positive statistically significant loadings, and free from factorial complexity and variable-specific factor which four factors loading = 60.69%.

**Table 4:** Varimax with Kaiser Normalization Rotated of Principal Component Analysis Factor Matrix

Variables	Factor1	Factor2	Factor3	Factor4	Communality
MED12	.820				.689
MED13	.827				.704
MED14	.847				.722
MED15	.803				.652
CIR37		.699			.508
CIR38		.790			.660
CIR39		.768			.667
CIR40		.772			.622
REL6			.782		.628
REL7			.784		.631
REL8			.723		.546
REL9			.698		.497
SEX29				.525**	.320**
SEX32				.765	.586
SEX33				.749	.582
SEX34				.832	.697

\*\* Items SEX25 is problematic due to (1) its loading value is less than 0.6 considering as unstable item and (2) its communality is less than .4 indicating a less good fit.

Table 5 shows that the first rotated factor, *the electronic and printed media*, has significant loadings, ranging between .803 and .847 on the same four items (MED14, MED15, MED16, and MED17) and Alpha Cronbach reliability = .84. Students' scores on this factor reflect the influence of media on getting information about sexual and reproductive health.

The second rotated factor includes four items (CIR37, CIR38, CIR39 and CIR40) ranging between .699 and .790, and Alpha Cronbach reliability = .76. Students' scores on this factor reflect their *prior knowledge of circumcisions*.

The third rotated factor comprises four items (REL6, REL7, REL8, and REL9), ranging between .698 and .784 and Alpha Cronbach reliability = .74. This factor can be described as the *Islamic values on sexuality* which essentially is religious affiliation relating to adolescents' sexual values.

The fourth rotated factor comprises four items (SEX29, SEX32, SEX33, and SEX34), ranging between .525 and .832 and Alpha Cronbach reliability = .71. Students' scores on this factor reflect their *prior knowledge of sexual act*.

**Table 5:** Solution and Statistic from Principle Component Analysis according to Scale of Assessment of Students' Perceptions and Reliability of Items for Each Scale

Measures	No. of factors (items)	Communality	Factor loading	Prop of Var. explained	Alpha Coeff
Electronic and Printed Media	1(4)	.652-.722	.803-.847	17.17	.84
Prior Knowledge of Circumcisions	1(4)	.508-.667	.699-.790	31.85	.76
Islamic Values of Sexuality	1(4)	.497-.631	.699-.790	46.46	.74
Prior Knowledge of Sexual Act	1(4)	.320-.697	.525-.765	60.69	.71

## Discussion

Confined within the limitations of the study, the present results confirm and add new information to current understanding on sex education. And it is clear that students' perceptions are a multidimensional construct and it confirmed that the context within which student live affects their perceptions toward sexual and reproductive health. This study examined the factor influencing on teaching thinking. Four factors were detected as the influencing factors in sexual and reproductive health which were identified as (1) the electronic and printed media, (2) prior knowledge of circumcisions, (3) Islamic values on sexuality, and (4) prior knowledge of sexual act.

The first latent factor, electronic and printed media, confirmed that Media highly influenced Muslim adolescents (Cok, 2000). However, results are hand in hand with much research discovering that youths get information about sexual and reproductive health mainly from media. This study concurs with *Boies (2002)* found that university students in Canada used the internet to obtain sexual information and said they benefited from it. It is because cyber space is the most convenient and accessible for youth to access worldwide and internet has a great potential medium for information. Here, it substantiated that electronic and printed media can be effective for delivering instruction on sexual and reproductive health (Evans, Edmundson-Drane & Harris, 2000).

The rest of three latent factors corroborated with earlier works on sex education especially the work of Manlove et al. (2001) on the individual factors particularly on the knowledge of reproductive health and attitudes and belief about sex and their religiosity.

The second and forth factors related to students' prior knowledge on circumcision and sex act. **Although students may have differed on prior sexual and reproductive knowledge, the principal component analysis indicated that perceptions in sexual and reproductive health demanded a common sense prior knowledge. Whereby, an accurate knowledge on both circumcision and sex act are related to sexual and reproductive health should be promoted such as to that they would influence students' perceptions on sexual and reproductive health.** Students who have an accurate knowledge on sexual and reproductive health may have a positive behaviour on sexual health. However, referring to some previous study, Muslim students are lacking of the accurate knowledge on sexual and reproductive health (Gökengin et al., 2003; Mohammadi et al., 2006; Nik-Abd-Rahman et al., 2007; Qidwai, 2000). Moreover, it will be worried to young Muslims were critical of the quality of information they received,



which often led to confusion and stress in understanding sexual development (Hennink, Rana, & Iqbal, 2005). This may call attention particularly with the roles played by parents, school, religion and media in disseminating knowledge on sex-related matters especially the prior knowledge of basic sexual and reproductive health.

In this study, religious affiliation (the third factor) affected adolescents' perceptions on sexual and reproductive health (Francis et al., 2004). Research found the relationship between religiosity and positive attitude and behaviour among Muslim youths (Paruk et al., 2006). It means that is clear that sex education is not contradict with Islamic principles (Ismail, 2007; Underwood, 2000), but in many part of Muslim societies some of cultural taboos are major obstacles to informed discussions about sexual and reproductive health issues, particularly among young people (DeJong et al., 2007; Mohammad Reza et al., 2006). Additionally, factors influencing students' perception on sexual and reproductive health indicated the religion plays crucial roles in shaping Muslim students' perception on sex-related issues. Therefore, it can be said that students who have accurate interpretation of Islamic principles, they enclose the positive perception on sexual and reproductive health.

To empower Muslim youths for protecting their sexual and reproductive health, it is recommended that these actions to be taken (by relevant parties): (1) provide comprehensive sexuality education in learning institution, particularly knowledge on basic anatomy, physiology and sexual act, (2) expand education and communication on sexual and reproductive health, using the mass media especially electronic media such as the internet, and (3) religious leaders have to provide ethical guidance to young Muslim as to confront the changes that scientific and technological innovations bring to develop a full understanding of the interpretations.

### **Recommendations**

Limitation of this study was scoped only by certain factors. More multidisciplinary and multidimensional research is needed that examines young Muslims' sexual and reproductive health perceptions as they relate to social, cultural, and economic conditions. Identifying factors associated with reproductive health behaviours will help determine best bets for comprehensive sex education to reduce negative behaviour and misperception among Muslim students.

### **Conclusion**

This study examined factors that influenced undergraduate Muslim students' perception on sexual and reproductive health. Four factors were detected as the influencing factors which were identified as (1) the electronic and printed media, (2) knowledge of circumcisions, (3) the Islamic values on sexuality, and (4) the prior knowledge of sexual act.

### **References**

1. *Boies, S.C. (2002). University students' uses of and reactions to online sexual information*





2. and entertainment: Links to online and offline sexual behaviour, *The Canadian Journal of Human Sexuality*, 11 (2), 77-90.
3. Cok, F. (2000). Reflections of an adolescent sexuality education program in Turkey,
4. *SIECUS Report*, 28(4), 5-6.
5. DeJong, J., Shepard, B., Roudi-Fahimi, F., & Ashford, L. (2007). *Young people's sexual and reproductive health in Middle East and North Africa*. N.Y.: Population and Reference Bureau. Retrieved January 29, 2008 from <http://www.prb.org/pdf07/MENAYouthReproductiveHealth.pdf>
6. Evans, A.E., Edmundson-Drane, E.W. & Harris, K.K. (2000). Computer-assisted
7. instruction: An effective instructional method for HIV prevention education? , *Journal Adolescent Health*, 26(4), 244-251.
8. Francis, L.J., Robbins, M., Lewis, C.A., Quigley, C.F., & Wheeler, C. (2004). Religiosity
9. and general health among undergraduate students: a response to O\_Connor, Cobb, and O\_Connor (2003), *Personality and Individual Differences*, 37, 485-494.
10. Gökengin, D., Yamazhan, T., Özkaya, D., Aytuğ, S., Ertem, E., Arda, B. &
11. Serter, D. (2003). Sexual knowledge, attitudes, and risk behaviours of students in Turkey, *Journal of School Health*, 73(7), 258-622.
12. Hair, Jr. J.F., Black, W.C., Babin, B.J., Anderson, R.E. & Tatham, R.L. (2006).
13. *Multivariate data analysis*. New Jersey: Pearson Education, Inc.
14. Halstead, J.M. (1997). Muslims and sex education, *Journal of Moral Education*, 26 (3),
15. 317-330.
16. Hennink, M., Rana, I. & Iqbal, R. (2005). *Knowledge of personal and sexual development among young people in Pakistan*. Retrieved 29 January, 2008 on <http://iussp2005.princeton.edu/download.aspx?submissionId=51402>
19. Ismaiel Hassanein Ahmed. (2007). *Sex education from Quranic approach*. Paper presented
20. at a National conference on Sex Education, The Implementation of Sex Education in Malaysia: Issue and Challenges. Organized by Institute of Education (INSTED) at Banquet Hall, International Islamic University Malaysia. 10-11 February, 2007.
21. Manlove, J., Terry-Humen, E., Papillo, A.M., Franzetta, K., Williams, S. & Ryan, S.
22. (2001). Background for community-level work on positive reproductive health in adolescence: Reviewing the literature on contributing factors. Retrieved January 29 , 2008 from <http://www.childtrends.org/files/KRepro.pdf>
23. Mohamad-Diah, N. (2007). *Understanding menopause: what we learnt*.



24. Paper presented at a National Conference on Sex Education, The Implementation of Sex Education in Malaysia: Issue and Challenges. Organized by Institute of Education (INSTED) at Banquet Hall, International Islamic University Malaysia. 10-11 February, 2007.
25. Mohammadi, M. R., Mohammad, K., Farideh K.A. Farahani, Siamak Alikhani, Mohammad Zare,
26. Tehrani, F. R., Ramezankhani, A. & Alaeddini, F. (2006). Reproductive knowledge, attitudes and behaviour among adolescent males in Tehran, Iran, *International Family Planning Perspectives*, 32 (1), 35–44.
27. Nik-Abd-Rahman, N. S., Rais, H., Abd-Hamid, S. R., & Hashim, C. N. (2007). *A survey on undergraduate students' knowledge, attitude, and awareness with respect to sexual and reproductive health*. Paper presented at a National Conference on Sex Education, The Implementation of Sex Education in Malaysia: Issue and Challenges. Organized by Institute of Education (INSTED) at Banquet Hall, International Islamic University Malaysia. 10-11 February, 2007.
28. Ojo, O.D & Bidemi, O. (2008) .Contemporary clothing habits and sexual behaviour of adolescents' in South Western Nigeria, *Journal of Human. Ecology.*, 23(1), 29. 39-44.
30. Paruk, Z., Mohamed, S.D., Patel, C., & Ramgon, S. (2006). Compassion or condemnation?
31. South African Muslim students attitudes to people with HIV/AIDS, *Journal of Social Aspects of HIV/AIDS*, 3(3), 510-515.
32. Qidwai W. (2000). Perceptions about female sexuality among young Pakistani men
33. presenting to family physicians at a Teaching Hospital in Karachi, *Journal of Pakistan Medical Association*, 50(2), 74-77 .
34. Singh, S., Bankole, A., & Woog, V. (2005). Evaluating the need for sex education in developing countries: sexual behaviour, knowledge of preventing sexually, *Sex Education*, 5(4), 307–331.
35. Underwood, C. (2000). Islamic precepts and family planning: The perceptions of Jordanian religious leaders and their constituents, *International Family Planning Perspectives*, 26(3), 110-117.





