

A Study on the Awareness, Attitudes and Readiness of Pre-Service Teachers towards Sexual Education in Selangor, Malaysia

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ABSTRACT

This study aims to examine the awareness, attitude and readiness of pre-service teachers in a public university located in Selangor, Malaysia towards sexual education. Despite the increasing concerns over sexual health issues in Malaysia, there is a lack of research focusing on the preparedness of pre-service teachers to deliver sexual education. This study seeks to address this gap by exploring the factors influencing their awareness, attitudes, and readiness. The readiness of pre-service teachers is assessed based on the preparation of pre-service teachers in terms of awareness and attitude, mental and physical readiness towards sexual education. The study was conducted through a cross-sectional survey method using a questionnaire comprising Likert scale with questions analysed on the mean value and standard deviation. The sample of the study consisted of 113 pre-service teachers majoring in Biology, Chemistry, Physics, and Physical Health from Faculty of Education at University Teknologi Mara (UiTM), Selangor. The study showed that the pre-service teachers from those four (4) courses have a high level of awareness, attitude and readiness towards sexual education. Comparing the difference exists between gender by using independent sample t-test, it showed that there is no significant difference between male and female pre-service teachers in the level awareness, attitude and readiness towards sexual education. An independent sample t-test revealed no significant difference in awareness, attitude, and readiness between male and female pre-service teachers. Similarly, ANOVA tests indicated no significant difference based on age and course of study. Finally, a Pearson-Correlation test demonstrated a significant relationship between awareness, attitude, and readiness towards sexual education.

Keywords: Awareness, Attitude, Readiness, Pre-service Teachers, Sexual Education, Science Education, Physical and Health

INTRODUCTION

Sexual education has been a controversial issue in Malaysia, particularly following the government's decision to enforce it in the school curriculum (MStar, 2016). Despite the high prevalence of issues such as pre-marital sex, baby dumping, and sexually transmitted diseases (STDs), sexual education remains a sensitive topic due to cultural and religious considerations. The lack of adequate sexual education contributes to misinformation and reluctance among teachers to address these issues in classrooms (Shariza, 2017). Given the importance of teacher readiness in implementing effective sexual education, it is essential to explore the level of awareness, attitude, and preparedness of pre-service teachers to handle such topics.

This stigma has always been debated on what is sex education and what should be taught in the syllabus regarding sexual education. Due to this situation, the implementation on sexual education cannot be enforced effectively in Malaysian schools to solve the issue on sexuality as mentioned previously (Shariza, 2017). Sexual education is important and should be taught in school because human beings naturally have a desire towards sexuality (Ismail, 2010) as it is one of human need but without a good exposure on sexuality, the desire later could lead to social issue such as paedophile, pre-marital sex, babies dumping and more as being mention previously. Although there has been clear evidence that broad approaches to sex education can enable young people both to

cope with the pressures to get to gender too soon when they do get sexually active and to have safe, responsible and mutually protective connections (Leung, 2019), sexual education still a very controversial as numerous views are expressed. The topic of sexuality is a taboo subject or topic in Malaysia, but there are still reports indicating on the increment of the misbehaviour of sexual activities among Malaysian teenagers (Syairah and Ruzianisra, 2012).

Reported by Salmi et al. (2017), Malaysia are one of 28 developing countries that applying the sexual education into school syllabus through the existing curriculum. Since sexual is something taboo to be discussed, which is against the norm, mostly teacher did not teach or exposed topic regarding sexuality clearly towards their students due to the resistance of different culture and religion perspective (Amir, 2007). Rahimah, et al. (2009) mention that mostly parent agree with implementation of sexual education but it should be limited with the culture and religion aspect. Based on the finding by Chan (2010) and Shariza (2008), mostly teachers are low confident and did not ready to teach sexual education towards their students. But later, Suleiman and Cheong (2011) come out with new finding previous 10 years which state that higher education institution students, showed a positive feedback on sexual education on enforcement of sexual education which indicates the acceptance on sexual education from nowadays generation, where it might change the pattern and teaching skills and content of sexual education enforcement in future.

Ang and Lee (2013) state that low sexual enforcement since primary school which later lead to sexual problem and issue during secondary school since the children lack of knowledge and information regarding sexual behaviour. Based on Johari (2011) findings, about 53.6 per cent of the teachers clarified that the content of sexual details in the books is already adequate for students to understand the problem. However, 58.2 per cent of them reported that the information contained in the book does not completely cover all the important aspects. These results are very significant as they relate to sexual harassment among adolescents and adults in Malaysia.

Other than that, the children and teenagers also need to be aware with a 'good touch' and 'bad touch' to as it is the early sign of sexual harassment. Children are at high risk to become victims of sexual abuse due to their dependence on adult individuals (Amri, 2009). By aware with the others body language such of the 'good touch' and 'bad touch' could help them to protect themselves from being sexually abuse as the early prevention of sexual harassment can be taken (Mostafavi, 2020). They must know that their private part is forbidden to be touch by others and it should be covered and safe in public. Based from the record, there was 12987 cases of paedophile reported from 2012 till 2016, about 3247 cases each year (NST, 2016).

Problem Statement

Sexual education in Malaysia faces resistance from educators due to cultural and religious sensitivities, despite its integration into the curriculum. The lack of teacher preparedness in handling sexual education topics poses a challenge to effective implementation. Previous studies indicate that teachers exhibit low confidence and reluctance in teaching sexual education (Chan, 2010; Shariza, 2008). However, recent studies suggest that university students are more receptive to sexual education (Suleiman & Cheong, 2011). This study aims to assess whether current pre-service teachers are adequately prepared to teach sexual education by examining their awareness, attitudes, and readiness.

Objectives of the Study

This study aims to:

Examine the level of awareness, attitude, and readiness of pre-service teachers towards sexual education.

Determine whether there is a significant difference in awareness, attitude, and readiness between male and female pre-service teachers.

Investigate whether age and course of study influence the level of awareness, attitude, and readiness.

Analyze the relationship between awareness, attitude, and readiness towards sexual education.

Research Questions

The research questions guiding this study are:

What is the level of pre-service teachers' awareness, attitude, and readiness towards sexual education?

Is there a significant difference in awareness, attitude, and readiness based on gender?

Does age and course of study affect awareness, attitude, and readiness towards sexual education?

What is the relationship between awareness, attitude, and readiness towards sexual education?

Research Questions

The research questions for this study are:

What is the level of pre-service teachers' awareness, attitude and readiness towards sexual education?

- i. Is there any significant difference for pre-service teachers' awareness, attitude and readiness towards sexual education between gender?
- ii. Is there any significant difference for pre-service teachers' awareness, attitude and readiness towards sexual education between courses?
- iii. Is there any significant difference for pre-service teachers' awareness, attitude and readiness towards sexual education with respect to age?
- iv. Is there any significant relationship between the level of awareness, attitude and readiness towards sexual education among pre-service teachers?

Research design

This study employs a quantitative, cross-sectional survey design, utilizing a structured questionnaire to collect data. This instrument consisted of 46 questions with 5 Likert-scale answers type. The questionnaire was divided into four sections. Section A in the questionnaire were intended in order to determine the following demographic characteristic of the respondents: (1) The gender of respondents, (2) Age using combination response scale, (3) Course of respondents and (4) the last time they being exposed towards sexual education. In Section B, there were fifteen questions and this section measured pre-services teachers' awareness on sexual education. In Section C, there were fourteen questions and this section measured the attitude of respondent towards sexual education. While in Section D, there were seventeen questions and this section measured the readiness towards the implementation of sexual education. All questions in the instrument are Likert scale answer-type. The following table will summarize the items distribution in the questionnaire.

Table 3 Items distributed in the questionnaire.

Domain	Section	Items	Total number of items
Awareness	A	1-15	15
Attitude	B	1-14	14
Readiness	C	1-17	17

Therefore, this study utilized a set of self-made questionnaires as the instrument to answer the research questions. Therefore, a pilot study is conducted to ensure that the questionnaire is suitable enough for this study. There were 20 pre-service teachers in the Faculty of Education took part in this pilot study.

Pilot Study

A pilot study was conducted to ensure the reliability and validity of the instrument, achieving a Cronbach's Alpha value above 0.7 for all sections, which was found to be sufficient to be accepted as an appropriate level of reliability for a tool. (Chua, 2016). The reliability value of the study instrument is as below:

Table 3.1 Reliability of the items in pilot study questionnaire.

Scale	Cronbach's Alpha	Cronbach's Alpha based on standardise items	N of items
Awareness	.810	.850	15
Attitude	.703	.810	13
Readiness	.732	.753	17

Data collection

The questionnaire was distributed to the students in Faculty of Education randomly through link via Google Form. This web-based questionnaire was carried out through various social media platforms such as WhatsApp and Telegram through the link given. Respondents could view the questions simply by clicking on it and answer the questions. After the data were collected, the data were analysed by the researcher by using Statistical Package for the Social Sciences Software (SPSS).

Table 4 Data Analysis Procedure

Unit	Section	Statistical Tool(s)
1	Demographic Data.	Descriptive Analysis
2	RO 1: To study the level of pre-service teachers' awareness, attitude and readiness towards sexual education.	Descriptive Analysis
3	RO 2: To compare pre-service teachers' awareness, attitude and readiness towards sexual education between gender.	Independent – Samples T-Test
4	RO 3: To determine the significant difference for pre-service teachers' awareness, attitude and readiness towards sexual education between courses.	Analysis of Variance (ANOVA)
5	RO 4: To determine the significant difference for pre-service teachers' awareness, attitude and readiness towards sexual education with respect of age.	Analysis of Variance (ANOVA)
6	RO 5: To determine the relationship between pre-service teachers' awareness, attitude and readiness towards sexual education.	Correlation – Pearson Test

Demographic Details

The Demographic Questionnaire was composed of four (4) questions, which were designed to provide information about pre-service teachers' gender, courses, age and when was the last time they being exposed towards sexual education. Simple statistical analysis, such as descriptive analysis was used.

Gender of respondent

Table 4.2.1 below presents the summary statistics about gender of the respondents participated were in total are 113 respondents. Apart from that, most of them was 84 (74.3%) respondents are female and 29 (25.7%) respondents are male.

Table 4.2.1 Gender of respondents

Gender	Frequency	Percent (%)
Male	29	25.7
Female	84	74.3
Total	113	100

Course of respondent

Table 4.2.2 shows the tabulation of the respondents' course in the Faculty of Education at Puncak Alam. The most shows 44.2% (n=50) respondents major in Biology, followed by Physical Health Education with 26.5% (n=30), while 17.7% (n=20) respondents major in Chemistry and 11.5% (n=13) respondents major in Physics.

Table 4.2.2 Course of respondents

Course	Frequency	Percent (%)
Biology	50	44.2
Chemistry	20	17.7
Physics	13	11.5
Physical and Health Education	30	26.5
Total	113	100

Respondent's age

Table 4.2.3 shows the tabulation of the respondents' age that participate in this research data collection. In total, there were about 113 respondents who were participated in this research. There were 13 (11.5%) of them with the age 20 and below, 20 (17.7%) of them with the age 21-23 years old, and 80 (70.8%) of them are with the age 24-26 years old.

Table 4.2.3 Respondent's age

Age	Frequency	Percent (%)
20 and below	13	11.5
21-23	20	17.7
24-26	80	70.8
Total	113	100

The last time respondents exposed toward sexual education.

Table 4.2.4 shows the tabulation of the respondents' age that participate in this research data collection. In total, there were about 113 respondents who were participated in this research. There were 9 (8.0%) of them exposed towards sexual education during primary school, 54 (47.8%) of them exposed towards sexual education during secondary school, 19 (16.8%) of them during diploma, and there are 31 (27.4%) of them exposed during first degree education.

Table 4.2.4 The last time respondents exposed toward sexual education.

The last time respondents exposed towards sexual education	Frequency	Percent (%)
Primary school	9	8.0
Secondary school	54	47.8
Diploma	19	16.8
First degree	31	27.4
Total	113	100

Research Question 1: What is the level of pre-service teachers' awareness, attitude and readiness towards sexual education?

The level of pre-service teachers' awareness towards the sexual education.

In section B, it provides an overview level of pre-service teachers' awareness towards sexual education. From Table 4.3.1, the researcher found that the level of pre-service teachers' awareness towards sexual education has the total mean score $M = 4.06$. This shows that the level of awareness towards sexual education among pre-service science teachers is at a higher level. Item number 6 has a mean value of 2.95 which indicates pre-service teachers did not aware about sexual education from their parents and relative. For item number 1 until 15, except for item number 6, indicates that the level of pre-service teachers' awareness is high as the pre-service teachers mean interpretation is high.

Table 4.3.1 Respondents' level of awareness towards sexual education

No	Item	Mean	Std. Deviation	Mean Interpretation
1	I have been aware about sex education.	4.15	.722	High
2	I have been aware that education system in Malaysia have been trying to enlighten students on the importance of sexual education.	3.90	.876	High
3	I have been introduced to sexual education since secondary school.	3.98	.916	High
4	Sexual education curriculum is newly integrated into certain subjects in school, thus I am not fully aware of such a subject.	3.77	1.035	High

5	I have been aware of sexual education has been implement indirectly in school through certain subject. (Science, Science and health subject)	4.27	.759	High
6	I learnt on sexual education from parent and relatives.	2.95	1.252	Low
7	I gain information regarding sexual education from my peers.	3.76	1.011	High
8	I gain information about sexual education from multimedia platform. (television, social media, radio)	4.18	.747	High
9	Sexual education promotes a healthy lifestyle especially for younger that are sexually active.	4.01	1.013	High
10	Sexual education educates me about sexually transmitted disease.	4.43	.549	High
11	Sexual education helps me to protect/prevent against HIV, unwanted pregnancy and other sexually transmitted disease.	4.51	.614	High
12	Sexual education increasing my awareness to be responsible for making my own sexual decisions.	4.45	.612	High
13	I am aware that teaching sexual education are parents' responsibilities.	4.15	.826	High
14	I am aware that teaching sexual education are teachers' responsibilities.	3.94	.919	High
15	I am aware that sexual education are important to build a healthy lifestyle society.	4.44	.611	High
Overall		4.06	0.831	High

The level of pre-service teachers' attitude towards sexual education.

In section C, the attitude item scale was developed to interpret whether the pre-service teachers have positive or negative value towards the implementation of sexual education. Based on their responses towards 14 items of attitudinal statements, it showed that the total mean score is $M=4.02$ and $SD=0.859$. Moreover, the respondents agreed that sex education helps students to grow to become responsible adults which shows the highest mean value $M=4.47$ and $SD=0.669$. On the other hand, respondent showed negative attitudes for item number 4 and 11 which have mean value $M=2.88$, $SD=1.368$ and $M=2.20$, $SD=1.304$ respectively. Overall, the respondent demonstrates a positive response to most attitudinal statements.

Table 4.3.2 Respondents' level of attitude towards sexual education

No	Item	Mean	Std. Deviation	Mean Interpretation
1	I think sex education plays an important role in maintaining healthy lifestyle.	4.35	.665	High

2	Lack of sex education leads to sexual violence.	4.44	.719	High
3	Adolescence has shy feeling while talking about sex	4.09	1.106	High
4	Classes on sex education will encourage students to have premarital sex.	2.88	1.368	Low
5	Prevention of pregnancy should be taught during sex education.	4.28	.871	High
6	Sex education helps students to grow to become responsible adults.	4.47	.669	High
7	How to have healthy relationship with the opposite sex should be discussed in sex education lesson.	4.20	.888	High
8	Sex education is an important aspect of one's life.	4.30	.680	High
9	School is responsible for imparting sex education.	4.25	.797	High
10	Sex education is not given enough emphasis in schools.	4.12	.894	High
11	Sex education is a waste of time.	2.20	1.304	Low
12	Sex education is adolescent's right.	3.96	.865	High
13	Sex education helps to make important decisions about sexual behavior.	4.35	.596	High
14	In general, I think sex education is a good thing.	4.36	.599	High
	Overall	4.02	0.859	High

The level of pre-service teachers' readiness towards sexual education.

In section D, the readiness item scale was developed to interpret whether the pre-service teachers are ready to implement sexual education in the future. Refer on Table 4.3.3, the respondents displayed relative to positive readiness intention towards the implementation of sexual education based on their responses to seventeen (17) items of readiness statements which show that the total mean is equal to $M=3.55$ with standard deviation $SD=0.974$. The respondents mostly confident to face the challenges related to sexual education in their teaching. This statement showed the highest mean value $M=3.92$ and $SD=0.867$. While the lowest rating respondent gave to the item 1 which most of them agreed to teach sexual education with mean $M=2.32$ and $SD=1.175$. Overall, the respondent intended to make a good preparation for the implementation of sexual education in the future.

Table 4.3.3 Respondents' level of readiness towards sexual education

No	Item	Mean	Std. Deviation	Mean Interpretation
1	I am not going to teach sexual education.	2.32	1.175	Low
2	I am shy to teach sexual education for students.	2.62	1.190	Low
3	I felt comfortable to use the terminology in sexual education syllabus when teaching.	3.81	.959	High

4	I would prefer to filter some terms before teaching regarding sexual education towards the students.	3.90	.855	High
5	I am comfortable to teach all about sexual education to both male and female students.	3.52	1.095	High
6	I am comfortable to teach all about sexual education to both students from lower and upper level.	3.62	1.055	High
7	I am open to discuss to share information regarding sex education with students and peers.	3.82	.909	High
8	I am confident in my potential to teach sexual education if there is an appropriate module provided.	3.68	.966	High
9	I am able to answer a question when someone asked me about sexual education.	3.67	.930	High
10	I have prepared myself with the knowledge of sexual education to be share with others.	3.71	.873	High
11	I have no problems if the students ask me about sexual education since they are growing to become an adult.	3.88	.863	High
12	I am ready to face the challenges related to the teaching of sexual education.	3.92	.867	High
13	I am ready to teach sexual education to students.	3.87	.921	High
14	My knowledge is enough to teach the students regarding sexual education.	3.22	1.067	Moderate
15	I would cover the topics regarding sexual education based on syllabus only.	3.60	.996	High
16	I am not going to teach in depth about sexual education.	3.44	1.069	Moderate
17	I would prepare teaching aids to helps my students understand easily about the topics being covered in sexual education.	3.78	.776	High
Overall		3.55	0.974	High

Based on the result of descriptive research, the results showed that the pre-service science teachers of Faculty of Education at Puncak Alam have a high level of awareness, attitude and readiness towards sexual education. The mean score for each section showed the awareness is $M=4.06$, attitude is $M=4.02$ and readiness is $M=3.55$.

Table 4.3.4 Respondents' level of awareness, attitude and readiness towards sexual education

Item	N	Mean	Std. Deviation	Mean Interpretation
Awareness	113	4.06	0.831	High
Attitude	113	4.02	0.859	High
Readiness	113	3.55	0.974	High

Research Question 2: Is there any significant difference of pre-service teachers' awareness, attitude and readiness towards sexual education between gender?

An independent samples t-test was conducted to compare the level of awareness, attitude and readiness towards sexual education between male and female pre-service teachers. The first tabulation of data, Table 4.4.1 showed the descriptive statistics of awareness, attitude and readiness towards sexual education with respect to gender. For the male respondents' mean score of the data showed for awareness, attitude and readiness are $M=58.14$, $M=53.27$ and $M=59.72$ respectively. Meanwhile for the female respondents' mean score, the data showed for awareness, attitude and readiness are $M=56.28$, $M=51.75$ and $M=55.85$ respectively. It was found that the mean for male pre-service teachers is higher than female pre-service teachers in terms of awareness, attitude and readiness towards sexual education.

Table 4.4.1 Group statistics

Item	Gender	N	Mean	Std. Deviation	Std. Error Mean
Awareness	Male	29	58.14	6.420	1.192
	Female	84	56.28	5.577	.609
Attitude	Male	29	53.57	6.016	1.117
	Female	84	51.75	5.530	.603
Readiness	Male	29	59.72	1.990	.086
	Female	84	55.85	.759	.041

The second tabulation of data, Table 4.4.2 represent the independent samples t-test for awareness, attitude and readiness towards sexual education with respect to gender. Assuming that the two groups have equal variances for awareness ($F = 1.639$, $p = 0.203$), attitude ($F=0.011$, $p = 0.915$) while readiness ($F = 4.492$, $p = 0.036$) equal variances are not assumed. There is statistically no significant difference between male and female pre-service teachers in the level of awareness, attitude and readiness towards sexual education, which awareness is ($t = 1.485$, $p = 0.140$), attitude ($t = 1.435$, $p = 0.158$) and readiness is ($t=1.820$, $p = 0.077$). These results indicate that the null hypothesis is failed to reject since there is no significant difference in pre-service teachers' awareness, attitude and readiness. towards sexual education between male and female. In other words, male and female pre-service teachers have similar level of awareness, attitude, and readiness between male and female towards sexual education.

Table 4.4.2 Independent samples test for awareness, attitudes and readiness with respect to gender

		Levene's Test for Equality of Variance		T – Test for Equality of Means		
		F	Sig	t	df	Sig.(2 – Tailed)
Awareness	Equal Variance Assumed	1.639	.203	1.485	111	.140
	Equal Variance not Assumed			1.386	43.497	.173
Attitude	Equal Variance Assumed	.011	.915	1.496	111	.138
	Equal Variance not Assumed			1.435	45.416	.158

Readiness	Equal Variance Assumed	4.492	.036	2.230	111	.028
	Equal Variance not Assumed			1.820	36.487	.077

Research Question 3: Is there any significant difference of pre-service teachers' level of awareness, attitude and readiness towards sexual education between courses?

Research question 3 seeks to determine whether the four (4) courses which consist of Biology, Chemistry, Physics and Physical Health Education differ significantly in their level of awareness, attitude and readiness towards sexual education. A one-way ANOVA was conducted and the first tabulation of data, Table 4.5.1 showed the descriptive statistics for awareness, attitude and readiness towards sexual education with respect to courses. It was found that Chemistry course has the highest mean in awareness ($M = 57.67$, $SD = 5.340$), followed by those in Physics ($M = 56.75$, $SD = 6.434$), Physical Health ($M = 56.64$, $SD = 4.651$) and last is Biology ($M = 56.59$, $SD = 0.913$). In terms of attitude, both Physics and Physical Health course showed a slightly similar mean score which is the highest Physical Health ($M = 53.91$, $SD = 5.384$) and Physics ($M = 53.41$, $SD = 5.193$) followed by those in Chemistry ($M = 51.76$, $SD = 4.741$) and last is Biology which are ($M = 50.83$, $SD = 6.040$). Meanwhile Chemistry course showed the highest mean in terms of readiness ($M = 57.67$, $SD = 6.288$), followed by those in Biology ($M = 57.26$, $SD = 8.127$), while Physical Health ($M = 56.43$, $SD = 9.160$) and lastly Physics ($M = 55.86$, $SD = 8.510$).

Table 4.5.1 Descriptive statistics for awareness, attitude and readiness toward sexual education with respect to courses.

		N	Mean	Std. Deviation	Std. Error
Awareness	Biology	50	56.59	6.455	.913
	Chemistry	13	57.67	5.340	1.481
	Physics	20	56.75	6.434	1.439
	Physical Health	30	56.64	4.651	.849
	Total	113	56.76	5.833	.549
Attitude	Biology	50	50.83	6.040	.854
	Chemistry	13	51.76	4.741	1.315
	Physics	20	53.41	5.193	1.161
	Physical Health	30	53.91	5.384	.983
	Total	113	52.21	5.688	.535
Readiness	Biology	50	57.26	8.127	1.149
	Chemistry	13	57.67	6.288	1.744
	Physics	20	55.86	8.510	1.903
	Physical Health	30	56.43	9.160	1.672
	Total	113	56.84	8.217	.773

Table 4.5.2 represent the results for ANOVA analysis in the level of awareness, attitude and readiness towards sexual education with respect to courses. It was found that Biology, Chemistry, Physics and Physical Health

course have similar level of awareness, attitude and readiness towards sexual education. In terms of awareness, the F-value = 0.121, df = 3, 109 and the significant value = 0.948, attitude F-value = 2.278, df = 3, 109 and the significant value = 0.084, meanwhile readiness F-value = 0.203, df = 3, 109 and the significant value = 0.894. Since the significant value is more than .05, it can be concluded that there is no significant difference in the level of awareness, attitude and readiness towards sexual education between the four (4) courses.

Table 4.5.2 ANOVA for awareness, attitude and readiness toward sexual education with respect to courses

		Sum of Squares	df	Mean Square	F	Sig.
Awareness	Between Groups	12.653	3	4.218	.121	.948
	Within Groups	3797.603	109	34.840		
	Total	3810.256	112			
Attitude	Between Groups	213.754	3	71.251	2.278	.084
	Within Groups	3409.950	109	31.284		
	Total	3623.704	112			
Readiness	Between Groups	41.999	3	14.000	.203	.894
	Within Groups	7519.870	109	68.990		
	Total	7561.869	112			

Research Question 4: Is there any significant difference of pre-service teachers' awareness, attitudes and readiness towards sexual education with respects of age?

Research question 4 seeks to determine whether the age of pre-service teachers differ significantly in their level of awareness, attitudes and readiness towards sexual education. A one-way ANOVA was conducted and the first tabulation of data Table 4.6.1 revealed that age of 24-26 has the highest mean ($M = 57.09$, $SD = 6.147$) followed by those whose age 21-23 years old which are ($M = 56.71$, $SD = 4.305$) and last is 20 and below ($M = 54.76$, $SD = 5.861$). In terms of attitude shown the highest mean is respondent with the age 24-26 ($M = 52.70$, $SD = 6.161$) followed by respondent with the age 21-23 which is ($M = 51.86$, $SD = 4.196$). Lastly is the respondent with the age 20 and below which is ($M = 49.77$, $SD = 4.001$). Meanwhile, in term of readiness shown the highest mean score is respondent with the age 24-26 ($M = 57.61$, $SD = 8.215$) followed by respondent with the age 21-23 which is ($M = 56.33$, $SD = 9.475$). Lastly is the respondent with the age 20 and below which is ($M = 52.90$, $SD = 4.737$).

Descriptive statistics for awareness, attitude and readiness toward sexual education with respect to age

		N	Mean	Std. Deviation	Std. Error
Awareness	20 and below	13	54.76	5.861	1.626
	21-23	20	56.71	4.305	.963
	24-26	80	57.09	6.147	.687
	Total	113	56.76	5.833	.549

Attitude	20 and below	13	49.77	4.001	1.110
	21-23	20	51.86	4.196	.938
	24-26	80	52.70	6.161	.689
	Total	113	52.21	5.688	.535
Readiness	20 and below	13	52.90	4.737	1.314
	21-23	20	56.33	9.475	2.119
	24-26	80	57.61	8.215	.919
	Total	113	56.84	8.217	.773

The second tabulation of data showed the results of ANOVA analysis with respect respondents' age. The awareness, have F-value =0.895, df = 2,110 and the significant value = 0.412 while attitude have F-value =1.538, df = 2,110 and the significant value = 0.219. For readiness, it has F-value =1.919, df = 2,110 and the significant value = 0.152. Since the significant value is more than 0.05, it can be concluded that there is no significant difference in the level of awareness, attitude and readiness of pre-service teachers towards sexual education.

ANOVA for awareness, attitude and readiness towards sexual education with respect of respondent's age

		Sum of Squares	df	Mean Square	F	Sig.
Awareness	Between Groups	60.998	2	30.499	.895	.412
	Within Groups	3749.258	110	34.084		
	Total	3810.256	112			
Attitude	Between Groups	98.554	2	49.277	1.538	.219
	Within Groups	3525.150	110	32.047		
	Total	3623.704	112			
Readiness	Between Groups	254.997	2	127.498	1.919	.152
	Within Groups	7306.872	110	66.426		
	Total	7561.869	112			

Research Question 5: Is there any significant relationship between the level of awareness, attitude and readiness towards sexual education among pre-service teachers?

A Pearson-Correlation test was conducted to identify the relationship between the level of awareness, attitude and readiness towards sexual education. The first tabulation of data, Table 4.7.1 showed the descriptive statistics for awareness, attitude and readiness towards sexual education among pre-service teachers. The mean score for each section is awareness is 56.76, attitude is 52.21 and readiness is 56.84.

Descriptive statistics for relationship between level of awareness, attitude and readiness towards sexual education among pre-service teachers

Item	Mean	Std. Deviation	N
Awareness	56.76	5.833	113
Attitude	52.21	5.688	113
Readiness	56.84	8.217	113

The second tabulation of data, Table 4.7.2 showed the Pearson-correlation analysis between three variables. The analysis was used in order to explain whether the variables are correlate and has a significant relationship with each other or not. The level of significant used in this test is $p \leq .01$. The relationship of the section is determined among Awareness and Attitude, Awareness and Readiness, and Attitude and Readiness. The result found for Awareness and Attitude is $r = 0.539$, and $\alpha = 0.000$ which is less than 0.05. This means that it has a strong positive correlation between each other, thus there is a significant relationship between Awareness and Attitude. The result found for Awareness and Readiness is $r = 0.417$, and $\alpha = 0.000$ which is less than 0.05. Thus, it has a moderate positive correlation between each other, thus there is a significant relationship between Awareness and Readiness. Meanwhile, the result found for Attitude and Readiness is $r = 0.288$ and $\alpha = 0.002$. This means that there is significantly weak positive relationship between the two variables towards sexual education.

In other words, respondents' attitude is greatly influenced by respondents' awareness on sexual education as it has a strong positive correlation between both variables. Meanwhile respondents' readiness towards sexual education is affected by respondents' awareness with moderate positive correlation between both variables and lastly is respondents' readiness towards sexual education is slightly affected by respondents' attitudes with a weak positive correlation between both variables.

Pearson-Correlation for relationship between awareness, attitude and readiness towards sexual education among pre-service teachers

		Awareness	Attitude	Readiness
Awareness	Pearson Correlation	1	.539**	.417**
	Sig. (2-tailed)		.000	.000
	N	113	113	113
Attitude	Pearson Correlation	.539**	1	.288**
	Sig. (2-tailed)	.000		.002
	N	113	113	113
Readiness	Pearson Correlation	.417**	.288**	1
	Sig. (2-tailed)	.000	.002	
	N	113	113	113

** . Correlation is significant at the 0.01 level (2-tailed).

CONCLUSION AND RECOMMENDATIONS

This study underscores the importance of understanding the awareness, attitudes, and readiness of pre-service teachers in Malaysia towards sexual education. The findings indicate that while pre-service teachers in science

education (biology, chemistry, and physics) and physical and health education exhibit high levels of awareness, attitude, and readiness, there remains a need for structured training to ensure effective implementation of sexual education in schools.

Overall, the analyses of findings concluded that

- i. Pre-service teachers in science education (biology, chemistry, and physics) and physical and health education of Faculty of Education have high level of awareness, attitude and readiness towards sexual education.
- ii. Both male and female pre-service science teachers had similar level of awareness, attitude and readiness towards sexual education.
- iii. Pre-service teachers in science education (biology, chemistry, and physics) and physical and health education of Faculty of Education had similar level of awareness, attitude and readiness towards sexual education.
- iv. Different ages among pre-service teachers have same level of awareness, attitude and readiness towards sexual education.
- v. There is a significant relationship between the three (3) variables which are awareness and attitude, awareness and readiness, and attitude and readiness of pre-service teachers toward sexual education.

To bridge this gap, the following recommendations are proposed:

- i. Teacher education institutions should integrate comprehensive sexual education training modules to improve confidence and pedagogical skills in delivering the subject.
- ii. Policymakers should ensure sexual education aligns with cultural and religious values to promote broader acceptance among educators and communities.
- iii. In-service teachers should be provided with workshops and refresher courses on best practices in sexual education.
- iv. Future studies should adopt qualitative approaches to explore the deeper concerns and barriers faced by pre-service teachers in teaching sexual education.

By addressing these areas, educational institutions and policymakers can better equip pre-service teachers with the necessary knowledge and skills to deliver effective sexual education. Strengthening teacher preparedness will not only improve students' understanding of sexual health but also contribute to a more informed and responsible society.

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