



Contraceptive Awareness, Knowledge and Attitude among Unmarried Young Adults in Malaysia

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Article Info

Received date: 30 March 2023
Accepted date: 16 June 2023
Published date: 30 Jun 2023

Keywords: attitude, awareness, contraception, knowledge, sexual education, young adults

ABSTRACT

A lack of accurate sexual knowledge can lead to unwanted pregnancies, unsafe abortions, sexually transmitted diseases (STDs), substantial morbidity and social problems. The aim of this study was to determine awareness, knowledge and attitude toward contraceptives among unmarried young adults in Malaysia. A cross-sectional, survey-based study among unmarried young adults aged between 18-35 years was conducted. Of the 406 participants, male and female respondents were 20.4% (n=83), and 79.6% (n=323) respectively, with 406 (100%) aware of at least one contraceptive method. Overall, the mean total knowledge score obtained was 4.76 ± 2.90 (maximum knowledge score of 12). The total attitude score of the participants was 29.92 ± 4.12 (maximum score of 50). There was a significant positive correlation between knowledge and attitudes towards contraception ($p=0.317$, $p=0.000$). There is an urgent need to educate Malaysian youths about the importance of contraception for the prevention of unintended pregnancy and STDs.

INTRODUCTION

In Malaysia, there is an increasing number of sexual activities reported among the Malaysian youth [1, 2]. This phenomenon is also contributed by the widening age gap between menarche and marriage within the community [3, 4]. Most disturbing are reports that young adults have higher rates of unintended pregnancy than any other age group [3, 4]. Furthermore, due to the sensitivity of this issue within the local population, young adults receive inadequate education, guidance and awareness of contraception [5, 6], which leads to further problems.

Awareness of contraceptive methods is the first step in reducing problems associated with active sexual behaviour. The awareness of contraception is high in America and Europe with approximately 98% of the population admitting to being aware of the contraceptive pill [7]. In a related study carried out in Nigeria, respondents knew at least one method of contraception [8]. However, of the respondents, 87% had experienced sex with only 34% using some method of contraception [8]. However, the level of contraception awareness differs quite significantly in Asia, with an estimated

one-third of unintended pregnancies associated with low awareness and lack of the use of contraception, contraceptive method failure, and a high unmet need for contraceptives [9]. As such, despite being aware of contraceptive methods, the need for education on appropriate use is similarly vital to ensure its proper use.

Contraceptive knowledge and attitude are likely factors influencing its use. The association between individuals' knowledge about reproductive health and contraceptive methods and their contraceptive behaviours have been mixed and varies from one population to another [3, 5]. In Western countries, knowledge of contraceptive pills and condoms is higher compared to other methods [7]. There was also a more positive attitude towards contraceptive pills and condoms, which was demonstrated in the frequent use of both methods of birth control [7]. In Malaysia, the knowledge of contraception is relatively low [10], with most studies conducted among married adults. According to a national survey on reproductive health and the use of contraceptives, due to the low knowledge and attitude towards contraception, only 34.4% of **married** Malaysian women practised modern contraceptive methods [11]. The lack of knowledge and negative attitude towards

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DOI: <https://doi.org/10.52494/RJMT2943>

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contraceptive use has also led to various complications, including maternal deaths [12]. Therefore, appropriate use of contraception remains a serious issue within the society.

The topic of contraception is an important and widely discussed issue in today's world. Interestingly, the overall prevalence of sexual activity in the local setting between those aged 18-19 years was 6.4%, with a portion of this age group being exposed to more than one partner [13,14]. This can lead to unwanted pregnancies, unsafe abortions, and sexually transmitted diseases (STDs) including HIV/AIDS as well as substantial morbidity and social problems [15], in the long run. Therefore, due to the lack of work in this area among Malaysians, this study was conducted to identify the level of awareness, knowledge and attitude towards contraception among unmarried adults in the local population.

METHODOLOGY

Study Design

A cross-sectional, self-administered survey was conducted among unmarried young adults from 18 to 35 years of age. A total of 15 participants were recruited using convenience sampling within the Kuala Lumpur and Selangor area. Unmarried, young adults aged 18 to 35 that were interested in participating were included. Informed consent was obtained from all individuals included in the study. Incomplete questionnaires were excluded. Ethical approval was obtained from the local research ethics committee (UKM PPI/111/8/JEP-2016-366).

Sample size

The sample size was calculated based on a total population of 9,412,959 unmarried young adults in Malaysia [11]. Based on a population size formula the sample size required was 384 (at 95% confidence and 5% margin of error) respondents [16]. However, this was increased by 10% to target a slightly higher number of 422 to allow for incomplete questionnaires.

Study instrument

The questionnaire was divided into four sections: demographics, awareness, knowledge, and attitude towards contraception. In the first section, participants' demographic characteristics were assessed. Demographic data collected were gender, age, ethnicity, level of education, educational background and employment status.

Awareness was assessed based on a list of 14 different contraceptive methods [17]. Respondents were asked to select one or more options that reflected their awareness of contraceptive methods. Other information assessed were contraception characteristics such as participants' sexual behaviour, age of first sexual intercourse, usage of contraceptive methods, reasons for non-usage, frequency of

contraceptive use, history of unintended pregnancy and STDs [17, 18].

Contraceptive knowledge was examined using a series of true or false questions on the correct use of six methods: intrauterine device (IUD), depo/injectable contraception, vaginal ring, oral contraceptive pill, condom and emergency contraception [17]. Responses were coded as 'correct' versus 'incorrect/don't know' and were given the score of '1' and '0', respectively [17]. The maximum score was 12 with a higher score demonstrating a higher knowledge of contraception. Sources of knowledge consisted of eight different options: mass media, family/relatives, books/magazines, healthcare workers, friends, school/teachers, internet and university/lecturers.

Attitude was assessed using eight items; decision-making, effectiveness, cost, ease of use, acceptability, STD prevention, hormones and interferences as previously described [17]. Two more relevant items were added to this questionnaire [18], to assess the degree to which fear of infertility and religious reasons influence the practice of contraception. Response was evaluated using a 5-point Likert scale ranging from 1 - strongly disagree to 5 - strongly agree. There were two negatively phrased items which were reverse-coded. The calculated maximum score was 50 with a higher score indicating a more positive contraceptive attitude [17, 18]

To determine the validity and reliability of the questionnaire, ten respondents [19] between the ages of 18-35 years were selected through convenient sampling for both face and content validity. Necessary changes were made to the questionnaire to improve understanding and congruency. The time taken to complete the questionnaire was approximately 7 ± 2 minutes. In order to determine the reliability of the items in the questionnaire, the internal consistency was measured using Cronbach's alpha test. The Cronbach's alpha obtained was 0.802 indicating that the questionnaire was reliable [17, 18]

Data analyses

All analyses were performed using the IBM SPSS Statistics for Windows, Version 22.0 (Armonk, NY: IBM Corp.). Descriptive statistical analysis was performed using frequencies and percentages to describe demographic characteristics, awareness, knowledge and attitude towards contraception. Mean and standard deviation were analysed and compared using t-test and ANOVA or non-parametric Mann-Whitney and Kruskal-Wallis. A Pearson or Spearman rank correlation was used to evaluate the association between the knowledge and attitude of the respondents. A *p*-value of <0.05 was considered statistically significant.

RESULTS

Demographic characteristics

A total of 406 participants who met the study criteria participated in the study. The majority were female respondents (n=323, 79.6%) with an average age of 21.45 ± 1.73 (18-35) years. Details of the demographic characteristic are listed in Table I.

Awareness of contraception

All of the study respondents (n=406, 100%) were aware of at least one contraceptive method with the most popular being condoms (n=390, 96.1) (Table I). Awareness of other contraceptive methods is listed in Table I. A small number of participants admitted to having had sexual intercourse (n=47, 11.6%; 30 females and 17 males). Most had their first sexual intercourse at the age of 18 years and above (n=42, 89.4%), while the remaining admitted to having had sexual intercourse below the age of 18 years. More than half of the 47 participants (n=29, 61.7%) used contraceptives during their first sexual intercourse. Among the users, the most common contraceptive method used during their first sexual intercourse was condoms (n=24, 82.8%). Moreover, the majority of those who did not use any contraceptives during their first sexual intercourse stated that sex was unplanned (n=13, 72.2%), which was followed by self/partner opposed to contraception (n=3, 16.7%). Furthermore, it was described that from the 47 participants that had sexual intercourse, more than half of them were currently sexually active (n=27, 57.4%) and slightly less than half frequently used contraceptive methods (n=23, 48.9%). Of 30 females who had sexual intercourse, 3 (6.4%) had an unintended pregnancy. No STDs were reported.

Knowledge of contraception

Knowledge of contraception is demonstrated in Table II. Almost three-quarters of the participants claimed that the internet was their source of contraception knowledge (n=291, 71.7%) which was higher than books/magazines (n=255, 62.8%) and school/teachers (n=252, 62.1%). Family/relatives were noted to be the last source of information on contraception (n=124, 30.5%). Overall, the mean total knowledge score obtained by the participants was 4.76 ± 2.90 (maximum knowledge score of 12). The older the respondents were, the higher the knowledge ($p=0.3$, $p<0.001$). Participants of other ethnicities (7.11 ± 2.33) had a higher contraception knowledge ($p<0.001$) compared to Malay (4.16 ± 2.98), Chinese (5.85 ± 2.61) and Indians (4.80 ± 2.66). Participants with a college/university degree (5.07 ± 2.93) had higher knowledge than those with only diplomas (3.88 ± 2.77) or secondary school education (4.10 ± 2.58) ($p=0.002$). A higher level of knowledge was also observed among those with a background in healthcare (6.12 ± 2.76) compared to non-healthcare-based background (3.35 ± 2.43) ($p<0.001$).

Table I. Demographic characteristics and awareness of contraceptive methods of the study participants (n=406)

Characteristics	n (%)
Age, mean $\pm$ SD	21.45 ± 1.73
Gender	
Male	83 (20.4)
Female	323 (79.6)
Ethnicity	
Malay	201 (49.5)
Chinese	62 (15.3)
Indian	124 (30.5)
Others	19 (4.7)
Highest education level	
Secondary school	49 (12.1)
Diploma	68 (16.8)
Degree	289 (71.2)
Course background	
Healthcare	194 (47.8)
Non-healthcare	158 (38.9)
Employment status	
Working	65 (16.0)
Students	341 (84.0)
Awareness of contraceptive methods	
Male condoms	390 (96.1)
Female barriers (diaphragm, cervical cap, female condom)	347 (85.5)
Vaginal ring	179 (44.1)
Transdermal patch	122 (30.0)
Depo/injection	247 (60.8)
Contraceptive pill	383 (94.3)
Intrauterine device (IUD)	293 (72.2)
Emergency contraception	138 (34.0)
Contraceptive implant	160 (39.4)
Male sterilization/vasectomy	308 (75.9)
Female sterilization	322 (79.3)
Natural family planning	335 (82.5)
Withdrawal	205 (50.5)
Breast feeding contraception	124 (30.5)

Attitude towards contraception

The total attitude score of the participants was 29.92 ± 4.12 (maximum score of 50) (Table III). The older the patients, the more positive their attitude towards contraception ($p=0.15$, $p=0.002$). Other ethnicities had a more positive attitude (32.32 ± 3.76) towards contraceptives compared to Malay (29.45 ± 3.82), Chinese (30.66 ± 4.04) or Indians (29.94 ± 4.52) ($p=0.011$). Those with a degree (30.35 ± 4.04) were also found to be more positive in attitude compared to participants with a diploma (28.81 ± 4.13) or secondary school education (28.90 ± 4.16) ($p=0.002$). A more positive attitude was also observed among participants with a healthcare-based background (30.85 ± 3.60) compared to those without (29.05 ± 4.41) ($p<0.001$).

Association between contraception knowledge and attitude

There was a significant positive correlation between knowledge and attitudes towards contraception ($p=0.317$, $p=0.000$). Those with higher knowledge demonstrated a more positive attitude towards contraception.

Table II. Knowledge of contraception among the study participants (n=406)

Statements	Correct, n (%)
Intrauterine device (IUD)	
An IUD may cause infertility	137 (33.7)
To insert an IUD, a woman must undergo an operation	154 (37.9)
Depo/Injectable	
Women using depo must get injected every 3 months	102 (25.1)
Negative effects from the injection can last a lifetime	107 (26.4)
Vaginal ring	
Women must have a healthcare provider insert the ring every month	81 (20.0)
The ring is placed in the vagina for three weeks, and then removed during menstruation	80 (19.7)
Birth control pill	
Pills are effective even if a woman misses 2-3 days in a row	196 (48.3)
If a woman stops taking pills, she cannot get pregnant for more than 2 months	188 (46.3)
Condom	
Condoms have an expiration date	256 (63.1)
It is OK to reuse a condom	355 (87.4)
Emergency contraception	
Emergency contraception pill must be taken within 24-72 hrs after unprotected sex	186 (45.8)
You need a doctor's prescription to obtain emergency contraception pill in the pharmacy	89 (21.9)

DISCUSSION

Social problems such as STDs, unintended pregnancies, and unsafe abortions are issues that can be prevented through an appropriate understanding of contraception [20-22]. Interestingly, all of the study population were aware of at least one method of contraception, in stark contrast to what had been previously reported [9]. The current work also demonstrates that the number of sexually active young adults was slightly higher than in the previous work [13, 14], with only a portion being exposed to more than one partner. Among them, the most recognised contraceptive methods were male condoms,

contraceptive pills, and female barriers, which corresponds with other findings [22, 23]. The popularity of these methods is quite possibly due to the ease of accessibility and their effectiveness in preventing STDs [23, 24]. Furthermore, other methods were found to be less publicised, difficult to use and expensive, making them less known among the public [23].

Unsurprisingly, the knowledge of contraception was low among the study participants, similar to previous findings [25, 26], despite awareness among all the respondents. Without adequate knowledge of contraceptive methods, myths and misconceptions about contraception are perpetuated [27]. This could explain the limited choice of contraceptives used among the study population as evidenced by the use of mostly condoms, contraceptive pills, and female barrier methods. Furthermore, the limited knowledge regarding contraception could partly be due to the sensitivity of the issue in Asian society, which leads to less open talks about available methods of contraception [23]. This makes young adults especially those who are unmarried, receive insufficient knowledge and advice. This makes them much more vulnerable to STDs, unplanned pregnancies, as reported by a few within the study population, unsafe abortions and social problems such as the abandoning of babies [22, 28, 29].

Favourable attitudes towards contraception are generally observed among those with good contraceptive knowledge [20], similar to current findings. The advantage of possessing correct and accurate facts about various contraceptive methods directly leads to a more positive attitude regarding the importance of premarital contraception. Mutual responsibility and the need for effective methods with regard to birth control were found to be important among the respondents, demonstrating positive attitudes, similar to previous work [25]. However, the overall contraceptive attitude among the study population remains poor. One contributing factor towards the poor attitude could be due to sensitivities to sexual-related issues in the Malaysian community that imposes various obstacles towards access to

Table III. Attitudes towards contraception among study participants (n=406)

Statements	Participants' response, n (%)				
	Strongly disagree	Disagree	Unsure	Agree	Strongly agree
It is mainly a woman's responsibility to make decisions about birth control	203(50.0)	97(23.9)	48(11.8)	33(8.1)	25(6.2)
Contraceptives must be effective at preventing pregnancy	5(1.2)	23(5.7)	85(20.9)	148(36.5)	145(35.7)
Contraceptives must be affordable	35(8.6)	66(16.3)	145(35.7)	90(22.2)	70(17.2)
Contraceptives must be easy to use	9(2.2)	27(6.7)	84(20.7)	137(33.7)	149(36.7)
Fear of infertility influence the use of contraceptives	20(4.9)	32(7.9)	95(23.4)	139(34.2)	120(29.6)
It is important that the contraceptives do not contain hormones due to their side effects	18(4.4)	39(9.6)	135(33.3)	110(27.1)	104(25.6)
Contraceptive use must be acceptable to partner	13(3.2)	21(5.2)	75(18.5)	140(34.5)	157(38.7)
Religious reason influences contraception practice	47(11.6)	54(13.3)	91(22.4)	124(30.5)	90(22.2)
It is important that the contraceptives prevent STD	14(3.4)	20(4.9)	67(16.5)	108(26.6)	197(48.5)
Contraceptives interfere with sexual pleasure	46(11.3)	41(10.1)	215(53.0)	64(15.8)	40(9.9)

sexual and reproductive health information, support and practices [23, 30]. However, the right amount of contraception education can successfully help reduce negative attitudes, especially the public's perception concerning the effects of contraception.

At present, there is limited information regarding awareness, knowledge and attitude towards contraception among unmarried young adults in Malaysia. The current work was able to bridge this gap albeit with a few limitations. As with all survey-based studies, the results of this work are dependent on the honesty of the participants. Furthermore, it should be noted that we did not gather information from young adults in rural areas. Future work performed on a national scale, that addresses young adults of various backgrounds could reduce the bias of the current study. Therefore, the generalisability of the current work should be done with caution.

CONCLUSION

The present work was able to demonstrate that young adults require further education to improve their knowledge and attitude towards contraception. As such, healthcare personnel are well placed in their role as community healthcare specialists in playing a vital role in promoting basic contraceptive education. Healthcare professionals should also amplify their roles to reduce misconceptions associated with contraception in order to reduce negative health and social problems in the long run. Thus, this study serves as a basis for promoting contraception education among young adults in Malaysia.

ACKNOWLEDGEMENTS

The authors would like to thank all the respondents for participating in the study.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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