International Journal of KIU

Journal home page : https: //ij.kiu.ac.lk/
DOI: https://doi.org/10.37966/ijkiu2022032033

Original Article

Knowledge and Attitude Towards the use of Contraceptive Methods Among Undergraduates of a Selected Higher Education Institute in Sri Lanka

Aadel U. S. M.,[1] Perera G. A. G.,[1] Dilshani B. M.,[1] Fernando W. L. L.,[1] Kumari M. S. S.,[1] Perera N. M.,[2] Kulatunga K. M. H. H.[1*]

1 - Department of Bio Medical Science, KIU, Sri Lanka
2 - National Army Hospital, Colombo, Sri Lanka

Article history:
Received: 31.10.2022
Received in revised form - 21.12.2022
Accepted - 21.12.2022

Cite as: Aadel U. S. M., Perera G. A. G., Dilshani B. M., Fernando W. L. L., Kumari M. S. S., Perera N. M., Kulatunga K. M. H. H. (2022)'Knowledge and Attitude Towards the use of Contraceptive Methods Among Undergraduates of a Selected Higher Education Institute in Sri Lanka ' International Journal of KIU, 3. (2), 136-142. https://doi.org/10.37966/ijkiu2022032033
#Corresponding author: hiroshani@kiu.ac.lk

Abstract

Unintended pregnancies and sexually transmitted diseases are some of the major reproductive health issues commonly encountered globally. As a developing country in South Asia, Sri Lanka has a prevalence rate of 23-46% of unplanned pregnancies. Two percent (2%) of government clinic attendees are detected with sexually transmitted diseases (STDs) and it is continually increasing among the young population. Poor knowledge, awareness and undesirable attitude towards contraception usage are some of the major factors associated with unintended pregnancies and transmission of STDs. Undergraduates are a vulnerable population to unintended pregnancies and sexually transmitted diseases. Therefore, this study was conducted with the objective of assessing the knowledge and attitudes towards the use of contraceptive methods among undergraduates of KIU. A descriptive cross-sectional study was conducted enrolling 304 undergraduates of 18 to 30 years of age using the simple random sampling method. Data were collected using a pre-tested self-administered questionnaire consisting of socio-demographic details and questions to assess participants' knowledge and attitudes. The knowledge section of the questionnaire was marked out of 34 points, ones who obtained 0-12 marks were considered to have poor knowledge 13-24 as average knowledge and above 25 as good knowledge. The likert scale was used to assess the attitude section of the questionnaire. The results of the study revealed that the majority were females 62.5% (n=190) and 76.32% (n=232) of the study participants were from the age category of 23-27 years. Eighty-four percent (84%, n=255) of the study sample possessed a satisfactory level of knowledge in contraceptive methods and females showed a higher level of knowledge than males (p=0.002). Health science students had a higher level of knowledge than non-health science students (p=0.001). In conclusion, though the study population displays an overall positive attitude towards family planning methods, knowledge in this regard is average.

Keywords: Knowledge, Attitude, Contraceptive methods, Higher education

Introduction

Contraception is a topic that has been used since the dawn of human civilizations (Abdul-Zahra et al., 2016). In simplest terms contraception can be defined as the act of preventing pregnancy (Bansode et al., 2021). Family planning is defined as "a way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples" (WHO, 2019). According to WHO, family planning enables individuals to have the number of children they desire with an adequate birth spacing which is accomplished by contraception and the treatment of infertility.

In today's world variety of contraceptive methods are available in forms of medications, devices, procedures or even behaviours which are aimed at preventing conception or interrupting implantations (Bansode et al., 2021; Rakhi & Sumathi, 2011). Contraceptive methods prevent unintended pregnancies and also provide additional benefits of preventing maternal/infant morbidity and mortality, unsafe abortions, transmission of sexually transmitted diseases (STDs) which ultimately contribute to the economic and social well-being of a country (WHO, 2019). Despite the existence of a variety of safe contraceptive methods with evidence of their benefits, there still exists a gap in the knowledge, attitude, and practices regarding contraception (Gothwal et al., 2017). Therefore, unintended pregnancies and sexually transmitted diseases have become one of the major reproductive health issues commonly encountered by individuals globally (Akintade et al., 2011). Global estimates reveal that over 210 million pregnancies occur each year, but 75 million (or almost 36% of the 210) are unintended or undesired births (Gbagbo & Nkrumah, 2019). According to Akintade et al., (2011) in underdeveloped nations, the number of young women reporting unwanted pregnancy is high. As a developing country in South Asia, Sri Lanka also has a prevalence rate between 23-46% of unplanned pregnancies within the country (Ranatunga & Jayaratne, 2020) and the prevalence of STDs among Sri Lankan youth was found to be increasing (Batagalla & Manathunge, 2020). Poor knowledge, awareness and undesirable attitude towards contraception usage are some of the major factors associated with unintended pregnancies and transmission of sexually transmitted diseases (Semachew Kasa et al., 2018). Undergraduates could be considered as an educated group of individuals who are the future of a country's development. Therefore, it is important to assess the knowledge and attitude towards contraception methods among undergraduates to provide them with the information and attitudes that they need regarding contraceptive methods to make responsible decisions in their life, which ultimately benefit social as well as the economic aspects of the country.

Methodology

A descriptive cross-sectional study was conducted at KIU, Sri Lanka; enrolling 304 undergraduates aged between 18 to 30 years using random sampling method. The sample size was calculated using Yamane formula (Adam, 2020). Data were collected using a pre-tested self-administered online questionnaire and it was distributed using students' emails. The questionnaire consisted of three sections with 40 questions. The first section consisted of socio demographic details. The seconf section included 27 questions to assess the knowledge of the participants regarding family planning methods and a total of 34 marks were given for participants who answered all the questions. The ones who scored 0-12 marks were considered to possess "poor"knowledge, while ones who obtained 13-24 were considered to possess "average" knowledge and those who scored 25 or above were considered to possess "good" knowledge regarding family planning methods according to Bloom's cut-off values.

The third part of the questionnaire consisted of 18 questions. Likert scale was used to assess the participants' attitudes toward the family planning method.

Ethical approval was obtained from the ethics review committee of KIU (KIU/ERC/21/197) and informed consent was taken from every participant. Data analysis was done using a statistical package for social sciences software (SPSS version 25). Descriptive statistics such as frequencies, percentages, means, standard deviations and statistical tests such as independent t-test, One-way ANOVA, Chi-square test were used for the data analysis

Results

Out of the total 304 participants majority were females (62.5%, n=190). Seventy-six-point three two percent (76.32%, n=232) of the study participants were from the age category of 23-27 years. Forty-one-point eight percent (41.8%, n=127) were non-employed while 36.2% (n=110) were employed and from the employed participants 22.0% were training as interns. The majority (45.1%, n =137) of the participants were from the department of Biomedical science. Further, (73.7% n=224) of the undergraduates were pursuing a degree in the study area of health sciences (Medical Science in Acupuncture, Bio-Medical Science, Nursing, Psychology) while the rest were pursuing (26.3%, n=80) a non-health science degree (Management) (table 1).

Table 1: Socio-demographic characteristics of the study participants

Socio-demographic factors		Frequency	%
Age	18-22	45	14.8
	23-27	232	76.32
Age	28-30	27	8.88
Gender	Female	190	62.5
	Male	114	37.5
Study area	Health science	224	73.7
	Non – health science	80	26.3
Study program	Med. Sc. Acupuncture	4	1.3
	BMS	137	45.1
	Nursing	34	11.2
	Psychology	49	16.1
	Management	80	26.3
Current year of study	1st year	66	21.7
	2nd year	37	12.2
	3rd year	84	27.6
	4th year	117	38.5
Province	Central Province Eastern province	20	6.6
	Eastern province	17	5.6
	North Central Province	6	2.0
	North-western Province	16	5.3
	Northern province	5	1.6
	Sabaragamuwa province	28	9.2
	Southern province	26	8.6
	Uva province	19	6.3
	Western province	167	54.9
Employment status	Employed	110	36.2
	Training	67	22.0
	Non- employed	127	41.8

Statistically significant associations were observed between knowledge of participants and each of the variables namely the age (p=0.001) (cl=95%), gender (p=0.008), study program (p=0.001), province (p=0.002), current year of the study (p=0.001), employment status (p=0.009) and study area (p=0.001).

A value of 0.757 was used as the Cronbach's Alpha value with a "Good" internal consistency. Out of the 304 study participants, 72.7% (n=221) participants possessed an average knowledge regarding contraceptive methods while 16.1% (n=49) and 11.2% (n=34) possessed a poor level and good level of knowledge respectively regarding the contraceptives (table 02).

Table 2: Knowledge regarding contraceptive methods

Knowledge	Frequency	Percentage
Average	221	72.7
Good	34	11.2
Poor	49	16.1

The mean knowledge between male and female students were 17.24±5.55 and 19.13±4.89 respectively. A statistically significant difference in the level of knowledge was observed between the male and female students (p=0.002) towards the use of contraceptive methods. Therefore, among the study participants, female students possessed a higher level of knowledge regarding contraceptive methods than male students.

In addition, a statistically significant difference in the knowledge towards contraceptive methods was observed between the study areas of health science and non-health science students (p=0.001). The mean knowledge of health

science students and non-health science students was 19.96±4.60 and 14.10±4.37 respectively (Table 2) (figure 2).

Table 3: Mean knowledge values of different study programs

1	Bio-Medical Science	19.85±4.77
2	Med. Sc. Acupuncture	26.25±2.50
3	Management	14.10±4.37
4	Psychology	19.20±4.59
5	Nursing	20.76±3.46

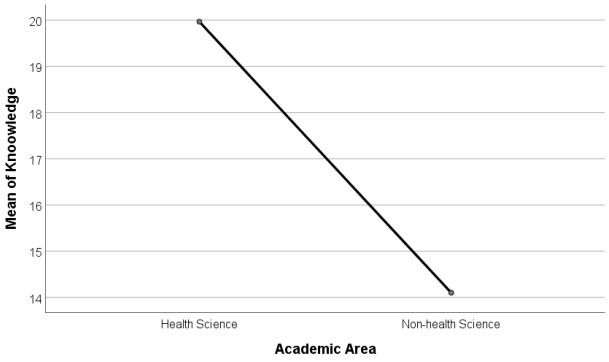

Figure 2: Mean plot between study area and knowledge

A statistically significant difference in knowledge score among students who are following different academic programs (F (4,299) = [27.707], (p=0.001) was observed using the one-way ANOVA test. Turkey's HSD Test for multiple comparisons found that the mean value of knowledge was significantly different between the study program (Management) and itself as well as all the other study programs (Table 3) (Figure 3).

Table 4: Multiple Comparisons

Dependent Variable: Total						
Tukey HSD						
(I) 1.3. Study program	(J) 1.3. Study program	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
BMS	Med.Sc. Acupuncture	-6.396*	2.279	.042	-12.65	-.14
	Management	5.754*	.632	.000	4.02	7.49
	Psychology	.650	.748	.908	-1.40	2.70
	Nursing	-.911	.861	.828	-3.27	1.45
Med.Sc. Acupuncture	BMS	6.396*	2.279	.042	.14	12.65
	Management	12.150*	2.302	.000	5.83	18.47
	Psychology	7.046*	2.336	.023	.63	13.46
	Nursing	5.485	2.375	.145	-1.03	12.00
Management	BMS	-5.754*	.632	.000	-7.49	-4.02
	Med.Sc. Acupuncture	-12.150*	2.302	.000	-18.47	-5.83
	Psychology	-5.104*	.815	.000	-7.34	-2.87
	Nursing	-6.665*	.920	.000	-9.19	-4.14
Psychology	BMS	-.650	.748	.908	-2.70	1.40
	Med.Sc. Acupuncture	-7.046*	2.336	.023	-13.46	-.63
	Management	5.104*	.815	.000	2.87	7.34
	Nursing	-1.561	1.003	.527	-4.31	1.19
Nursing	BMS	.911	.861	.828	-1.45	3.27
	Med.Sc. Acupuncture	-5.485	2.375	.145	-12.00	1.03
	Management	6.665*	.920	.000	4.14	9.19
	Psychology	1.561	1.003	.527	-1.19	4.31

***. The mean difference is significant at the 0.05 level.**

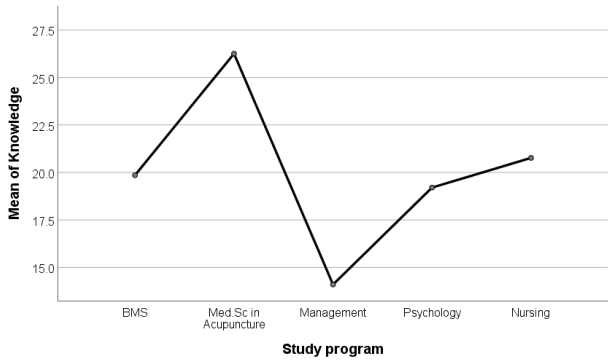

Figure 3: Mean plot between study program and knowledge

Students following the study program of medical science in acupuncture possessed the highest mean level of knowledge regarding contraceptive methods (26.25±2.50) while students following the study program of management possessed the lowest mean knowledge regarding contraceptive methods (14.10±4.37).

It was found that majority of the students (68.4%, n=207.9) possessed a favourable attitude towards the use of contraceptive methods. In assessing attitudes towards contraceptive methods, 84.9% (n=258) of undergraduates selected health care centers as the best place to get contraceptive services. Fifty six point nine percent of the participants (56.9%, n=173) selected "condoms" as the contraceptive method, which can possibly be the most popular in Sri Lanka. Further, 51.97% (n=157) of participants had a favorable attitude towards regular oral pills while 26.64% (n=80) had a favorable attitude towards emergency oral pills. Majority of the students (78.7%, n=239.24) agreed that

it is a requirement to possess knowledge about the use of contraceptives. Seventy five percent (75%, n=228) of the students agreed that some contraceptive methods help to reduce sexually transmitted diseases.

Discussion

Contraception is an important topic to be addressed in the contemporary world with its ability to bring about increased health, social and economic benefits to individuals, families, communities and societies (Hock- Long et al., 2003). Methods of contraception aid individuals and couples to avoid unintended pregnancies and achieve their desired number of children with a preferred spacing between births while enhancing the maternal health, infant and child survival. Further, they prevent and reduce the transmission of STDs, decrease the number of legal or illegal abortions, slow down the growth rates of populations and empower women with an increased sense of autonomy regarding their life decisions (Butler & Clayton, 2009; Mahadeen et al., 2012; Mahaini & Mahmoud, 2005). Furthermore, World Health Organization stresses the importance of providing comprehensive and thorough education regarding sexuality for the younger population in order to prepare them to lead secure, productive, and fulfilling lives in a world where sexually transmitted diseases, unplanned pregnancies, gender-based violence, and gender discrimination are highly prevalent (Herat et al., 2019).

In assessing knowledge towards contraceptive methods among undergraduates in KIU, the current study observed that 83.9% of the study participants possessed an adequate knowledge regarding contraceptive methods. Statistically significant difference was found in the level of knowledge between male and female students ($p=0.002$) and female students possessed a higher level of knowledge than male students did. The possession of better knowledge regarding contraceptive methods among females is further confirmed by a similar study conducted by Abdul-Zahra et al., (2016) in Iraq. However another study conducted among undergraduates in Sri Lanka contradicts the present study findings as it showed male undergraduates had better knowledge of contraceptive methods (77.5%) compared to female undergraduates (18%) (Herath et al., 2008).

The results of the study further revealed that studying in the area of health sciences was a significant factor associated with possession of an adequate knowledge regarding contraceptive methods. Further, the mean knowledge levels of health science students were found to be higher (19.96±4.607) than the non-health science students (14.10±4.37) which is consistent with the findings of a similar study conducted in Sri Lanka in which undergraduates who were following a bioscience degree program had good knowledge regarding contraception than other students (Perera & Abeysena, 2019).

The study also shows that the majority of the participants expressed a positive attitude towards contraceptive methods. Current study further observed that most of the undergraduates (84.9%) thought that health care centers are the best place to get contraceptive services. This is in line with findings reported in studies conducted by Gothwal et al., (2017) and Tilahun et al., (2013)

Condoms offer protection from both sexually transmitted diseases as well as pregnancy (Perera & Abeysena, 2019). Correct and regular usage of condoms is considered as one of the best approaches to prevent the HIV transmission in both local and international contexts (National STD/AIDS Control Programme, Ministry of Health & Medicine, Colombo, 2016). In the present study, condoms were chosen by 56.91% of the participants as the contraceptive method, which can possibly be the most popular in Sri Lanka, followed by regular oral pills (51.97%) and emergency oral pills (26.64%). According to Thalagala & Rajapakse, (2004), condoms (29%) were also the most popular contraceptive method followed by pills (24%) among adolescents in Sri Lanka.

Conclusion

In conclusion, the present study population possessed an average knowledge regarding contraceptive methods. With regards to the area of study, there is a significant difference in knowledge levels between health science and non-health science undergraduates and also their currently pursuing study program has also impacted the level of knowledge they possess regarding contraceptive methods. The student also displayed an overall favourable attitude towards the use of contraceptive methods. Assessing the level of knowledge and attitudes toward family planning methods are equally important for other age categories such as adolescents and adults. Further studies should be carried out to assess the knowledge and attitudes towards family planning methods in different age groups and required educational sessions and awareness programs to raise the level of knowledge among such age categories.

Conflicts of Interest:

Authors declare that no conflicts of interest

References

Abdul-Zahra, N. H., Habib, O. S., & Al-Mulla, A. Y. (2016). *Knowledge of university students about contraceptive programme*. *November*. https://doi.org/10.13140/RG.2.2.36340.96645

Adam, A. M. (2020). Sample Size Determination in Survey Research. *Journal of Scientific Research and Reports*, *June*, 90–97. https://doi.org/10.9734/jsrr/2020/v26i530263

Akintade, O. L., Pengpid, S., & Peltzer, K. (2011). Awareness and use of and barriers to contraceptive services among female university students in Lesotho. *South African Journal of Obstetrics and Gynaecology*, *17*(3), 72–78.

Bansode, O. M., Sarao, M. S., & Cooper, D. B. (2021). Contraception. *Statpearls*. https://www.ncbi.nlm.nih.gov/books/NBK536949/

Batagalla, P. S. K., & Manathunge, A. (2020). Riks and Vulnerabilities of Youth Towards STIs and HIV Infection; A Cross Sectional Study among Youth Attending 'Youth Corps Centres' in Western Province of Sri Lanka. *Sri Lanka Journal of Sexual Health and HIV Medicine*, *6*(0), 47. https://doi.org/10.4038/joshhm.v6i0.95

Butler, A. S., & Clayton, E. W. (2009). *A review of the HHS Contraceptive Program : mission, management, and measurement of results*. http://www.nap.edu/openbook.php?record_id=12585&page=1%5Cnhttp://www.nap.edu/catalog.php?record_id=12585

Gbagbo, F. Y., & Nkrumah, J. (2019). Contraceptive among undergraduate university students: A CASE study of a public university in Ghana 11 Medical and Health Sciences 1117 Public Health and Health Services. *BMC Women's Health*, *19*(1), 1–9. https://doi.org/10.1186/s12905-019-0708-3

Gothwal, M., Tak, A., Aggarwal, L., Rathore, A. S., Singh, P., Yadav, G., & Sharma, C. (2017). Universal health coverage - There is more to it than meets the eye. *Journal of Family Medicine and Primary Care*, *6*(2), 169–170. https://doi.org/10.4103/jfmpc.jfmpc

Herat, J., Plesons, M., Castle, C., Babb, J., & Chandra-Mouli, V. (2019). Correction to: The revised international technical guidance on sexuality education - a powerful tool at an important crossroads for sexuality education (Reproductive Health (2018) 15 (185) DOI: 10.1186/s12978-018-0629-x). *Reproductive Health*, *16*(1), 1–4. https://doi.org/10.1186/s12978-019-0675-z

Herath, H. M. R. ., Dissanayake, D. M. A. ., Hilmi, M. A. ., & Pathmeswaran, A.; Wijesinghe, P. S. (2008). Adolescent sexual practices and contraceptive usage. *A Collection of Research Papers on Adolescent Sexual and Reproductive Health. Faculty of Medicine, University of Kelaniya*, 169–196.

Hock- Long, L., Herceg-Baron, R., Cassidy, A. M., & Whittaker, P. G. (2003). Access to Adolescent Reproductive Health Services: Financial and Structural Barriers to Care. *Perspectives on Sexual and Reproductive Health*, *35*(03), 144–147. https://doi.org/10.1363/3514403

Mahadeen, A. I., Khalil, A. O., Hamdan-Mansour, A. M., Sato, T., & Imoto, A. (2012). *Knowledge, attitudes and practices towards contraceptive among women in the rural southern region of Jordan*. Eastern Mediterranean Health Journal. https://doi.org/10.26719/2012.18.6.567

Mahaini, R., & Mahmoud, H. (2005). Maternal health in the Eastern Mediterranean Region of the World Health Organization. *Eastern Mediterranean Health Journal*, *11*(4), 532–538.

National STD/AIDS Control Programme, Ministry of Health, N. & I., & Medicine, Colombo, S. L. (2016). *National Condom Strategy Sri Lanka 2016- 2020*. http://www.aidscontrol.gov.lk/web/images/web_uploads/Resource_materials/National Condom Strategy.pdf

Perera, U., & Abeysena, C. (2019). Knowledge and attitudes on contraceptives among undergraduates in the state universities of the Western Province. *Journal of the College of Community Physicians of Sri Lanka*, *25*(2), 72. https://doi.org/10.4038/jccpsl.v25i2.8180

Rakhi, J., & Sumathi, M. (2011). Contraceptive methods: Needs, options and utilization. *Journal of Obstetrics and Gynecology of India*, *61*(6), 626–634. https://doi.org/10.1007/s13224-011-0107-7

Ranatunga, I. D. J. C., & Jayaratne, K. (2020). Proportion of unplanned pregnancies, their determinants and health outcomes of women delivering at a teaching hospital in Sri Lanka. *BMC Pregnancy and Childbirth*, *20*(1), 1–15. https://doi.org/10.1186/s12884-020-03259-2

Semachew Kasa, A., Tarekegn, M., & Embiale, N. (2018). Knowledge, attitude and practice towards contraceptive among reproductive age women in a resource limited settings of Northwest Ethiopia. *BMC Research Notes*, *11*(1), 1–6. https://doi.org/10.1186/S13104-018-3689-7/TABLES/2

Thalagala, N., & Rajapakse, L. (2004). National Survey on emerging issues among adolescents in Sri Lanka. *UNICEF Sri Lanka*, 309. http://www.unicef.org/srilanka/Full_Report.pdf

Tilahun, T., Coene, G., Luchters, S., Kassahun, W., Leye, E., Temmerman, M., & Degomme, O. (2013). Contraceptive Knowledge, Attitude and Practice among Married Couples in Jimma Zone, Ethiopia. *PLoS ONE*, *8*(4), 1–8. https://doi.org/10.1371/journal.pone.0061335

WHO. (2019). Contraception. Evidence brief. *Sexual and Reproductive Health and Research*, 1–4. https://doi.org/10.1136/bmj.2.3892.265