

Contraception Knowledge, Contraception Self-Efficacy among University Students

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Abstract

Background/Objectives: This study was attempted to provide university students with basic data necessary for establishing proper contraception knowledge and settling sound sex culture with descriptive research to check the degree of university students' contraception knowledge and contraception self-efficacy.

Methods/Statistical analysis: The subjects of this study were 458 first-year students of a university and the data were collected from May 1 to May 20, 2019. The collected data were analyzed by t-test, ANOVA, Pearson's correction, χ^2 test, and multiple regression analysis. According to the research,

Findings: University students had 8.87 points for contraception knowledge and 44.68 points for contraception self-efficacy, showing low contraception knowledge and more than moderate of contraception efficacy. The relationship between contraception knowledge and contraception self-efficacy ($r=.270$, $p=.000$) has been shown to be positively correlated. The general characteristics that affect the contraception self-efficacy of university students were gender ($\beta=.106$ $p=.023$).

Improvements/Applications: Therefore, the development and application of sex education and contraception-related education programs that are viable and suitable for university students to settle sound and healthy sex and sex culture are very necessary.

Keywords: Contraceptive, Knowledge, Self-efficacy, Sex education, University Student,

1. INTRODUCTION

College students are youngsters whose ages range from 20 to 40 years old, and they are in the first stage of adulthood. University period is the time that matured from fully developed of mind and body in their life cycle, and the individual potential abilities are at their peak. Plus, college days are also the period when they form identity for sexual role in addition to psychological and social identities. Erikson explains the development task youngsters in this age period should achieve with the concepts of intimacy vs. isolation. While forming comfortable, intimate, and sexually satisfactory relationships with other sex, they acquire intimacy. In contrast, when they cannot form such these intimate relationships, a sense of isolation may result. Accordingly, the establishment of proper sex identity attitude in this period greatly affects personality building, couple life in marriage, and sex culture in the society[1].

According to the Korea Centers for Disease Control and Prevention (KCDC), in 2016, the number of sex-mediated infectious disease cases was 24,526, 32.9% increase from 18,444 cases in the previous year[2]. Given that the attack rate is the highest among those in their 20s[2], we know that it is urgent to give sex education

including contraception education to college students who belong to this age group.

Such as rapidly developing information service and the inflow of Western culture have led to indiscriminate information on sex through various environments and media, emphasizing that university students are showing a remarkably different attitude and behavior toward sex than previous generations [3]. A nationwide survey on sex attitude to 6,000 college students[4], 33.0% had sex experiences. In contrast, only 55.6% of male students and 62.8% of female students said they use contraceptive devices[4]. A research by Kim et al.[5] reported that only 35.9% of college students used contraceptive devices. Foreign studies have also found that the proportions of using contraception among college students are not high[6, 7]. Such findings prove that, while experiences of sexual relationships among college students with open attitudes on sex have increased, they are not very active in trying to prevent conception. If one does not apply contraception, one can experience various physical, mental, and social problems ranging from unwanted conception, sex-mediated infectious diseases, various complications and after effects caused by artificial abortion, to abandonment of baby or sending baby to adoption agency. Therefore, to prevent college students from doing impulsive sexual intercourse and facing unwanted results, it is urgent to educate them properly.

Contraception knowledge and practice have a high value for healthy individuals and societies because contraception allows one to exercise sexual autonomy in that one or one's partner can control pregnancy and childbirth etc, and they can protect themselves from sexually transmitted diseases[8]. Elements affecting contraceptive behavior have been found to be knowledge on contraception, attitudes, and self-efficacy[9]. A study emphasizes necessity to use condom to prevent sexual diseases[10].

Knowledge on contraception works as cognitive frame to help youngsters to use contraception, and correct knowledge on contraception can lead to action to avoid conception, and low knowledge on contraception can lead to reduction of practice of contraception, and other problems like unwanted conception and abortion, etc.[11]. Contraception self-efficacy plays an important role in improving contraception practice of university students by leading to successful implementation of contraception. Accordingly, to establish sound and healthy sex and sex culture among college students, it is strongly required to develop and apply viable and appropriate education programs related with sex education and contraception.

Thus, it is important to educate correct knowledge on contraception, and help them to develop correct attitudes. Therefore, this study aims to identify the degree of contraception knowledge and contraception efficacy of university students and provide basic data necessary for establishing proper contraception knowledge and settling a sound sex culture.

2. MATERIALS AND METHODS

2.1. Research design

This study is a descriptive research study to identify the degree of knowledge and efficacy of contraception depending on the gender of university students. The subjects of this study were 458 first-year students of a university.

2.2. Subjects of Research

Subjects of this study were conveniently sampled from unmarried students who agreed to participate in this study in a university located in K region. The number of students who filled up the questionnaire was 480. Excluding

21 copies which had many missing values, this study used 458 copies for final analysis. The proper number of copies which can be used to examine difference in means in knowledge on contraception was calculated using the GPOWER 3.1.2 system. When the criteria of significance level .05, test power .80, and mid-level effect size 0.5, one needs to have at least 64 objects in each of two independent groups. So, the number of respondents in this research is sufficient for analysis.

2.3. Research Tool

2.3.1. Contraception Knowledge

To test knowledge on contraception, this study used the questions developed by Kim[8]. The set of questions consisted of 15 questions on principle of contraception, merits and demerits, and appropriate ways to use it, and the scores range from 0 at minimum to 15 at maximum. The higher the score means that the higher degree of contraception knowledge. In Kim's research, Cronbach's alpha was .73, while the value was .785 in this research.

2.3.2. Contraception Self-Efficacy

To measure self-efficacy, this study used what Kang[12] developed to measure self-efficacy on using condom by changing expressions into terms for contraception. This tool has 11 questions, which ranges from at least 11 points to a maximum of 55 points, and the higher the score, and the higher the score means that the higher degree of contraception self-efficacy.

2.4. Data analysis Method

The survey was conducted from May 1 to 20, 2019. After explaining the purpose of this survey to students and that there would be no disadvantage for not participating in the survey, and that personal information would be treated anonymously, students filled out the questionnaire. Students were asked to voluntarily fill out the structured questionnaire. The data were analyzed using SPSS/WIN 22.0. General characteristics of respondents were calculated as real number, percentage, mean, and standard deviation using descriptive statistics. χ^2 test and t-test were used to analyze differences between groups. The analysis of rates of correct answers to the question on contraception was done first by real number and percentage, and, then differences between groups were analyzed with χ^2 test and t-test. The relationship between contraception knowledge and contraception efficacy of the subject was used by Pearson correlation coefficients and was analyzed using multiple regression analysis to identify the factors affecting contraception knowledge and contraception efficacy.

3. RESULTS AND DISCUSSION

3.1. Contraception Knowledge and Contraception Self-Efficacy according to Characteristics of Subjects

The differences in knowledge on contraception and self-efficacy on contraception depending on general characteristics are shown in Table 1. Residential type made significant difference in knowledge on contraception ($F=3.50$, $p=.015$), and gender did on self-efficacy on contraception ($t=-2.26$, $p=.024$).

Table 1: Contraception knowledge and Contraception self-efficacy according to characteristics of subjects

Characteristics	N(%)	Contraception knowledge		Contraception self-efficacy	
		M±SD	t or F(p)	M±SD	t or F(p)

Gender	Male	109(23.8%)	9.31±2.57	1.936(.053)	43.82±4.86	-2.26(.024)
	Female	349(76.2%)	8.73±2.77		44.95±4.48	
Religion	Yes	168(36.7%)	9.06±2.59	1.124(.262)	44.67±4.78	-.03(.976)
	NO	290(63.3%)	8.76±2.81		44.69±4.49	
Place of residence	Living with parents	109(23.8%)	8.82±2.55	3.50(.015)	44.40±4.41	1.27(.284)
	Dormitory	291(63.5%)	8.75±2.78		44.68±4.70	
	Self-boarding	55(12.0%)	9.80±2.61		45.434±4.38	
	Other	3(0.7%)	6.00±3.46		41.00±4.00	

3.2 . Percentage of Correct Answer in Contraceptive Items by Sex

Percentage of correct answer in contraceptive items by sex are shown in Table 2. Male students showed the highest percentage of correct answers in order of ‘There is a chance of pregnancy when using coitus interrupt although ejaculation was not inside vagina’(89.9%), ‘Vaginal douche right after sexual intercourse without contraceptives can prevent pregnancy’(88.1%). Female students showed the highest percentage of correct answers in order of ‘Vaginal douche right after sexual intercourse without contraceptives can prevent pregnancy’(88.5%), ‘There is a chance of pregnancy when using coitus interrupt although ejaculation was not inside vagina’(84.5%). But male and female students showed the lower percentage of correct answers in order of ‘Time for inserting spermicide is right after sexual intercourse’.

The mean score in knowledge on contraception was relatively low with 8.87. Male students (9.31 points) scored higher than females (8.75 points). In contrast, in self efficacy on contraception, the mean score of females (44.96 points) was higher than that of males (43.82 points)[Table 3].

Table 2: Percentage of Correct Answer in Contraceptive Items by Sex

Items		male(n=109) n(%)	Female(n=349) n(%)	χ^2	p
1	The effect of vasectomy begins from one week right after operation.	40(36.7%)	75(21.5%)	10.215	.001
2	Use a condom after taking air out by twisting the end of the condom.	94(86.2%)	280(80.2%)	2.003	.157
3	When over 12hours have passed after missing oral contraceptive pills,, have to use other contraceptives as well as take extra ones right away.	53(48.6%)	196(56.2%)	1.902	.168
4	Intrauterine device is the convenient method which doesn't need follow up after taking procedure.	88(80.7%)	276(79.1%)	.139	.710
5	Emergency contraceptive pills is the way to disturb the embryo's development after implantation.	59(54.1%)	191(54.7%)	.012	.913
6	The day of ovulation is 14days before the starting day of next menstruation.	64(58.7%)	231(66.2%)	2.024	.155
7	Vaginal discharge is getting more as well as clearer at the time of ovulation.	57(52.3%)	203(56.8%)	1.167	.280
8	Intrauterine device can prevent pregnancy, but can't prevent AIDS or sexually transmitted disease	90(82.6%)	265(75.9%)	2.099	.147

9	Vaginal douche right after sexual intercourse without contraceptives can prevent pregnancy.	96(88.1%)	309(88.5%)	.018	.895
10	There is a chance of pregnancy when using coitus interrupt although ejaculation was not inside vagina.	98(89.9%)	295(84.5%)	1.975	.160
11	Time for inserting spermicide is right after sexual intercourse.	27(24.8%)	49(14.0%)	6.910	.009
12	Lubricant should be used for sexual intercourse after vasectomy because semen is not secreted any more.	79(72.5%)	157(45.0%)	25.13 3	.000
13	There is a chance of pregnant after childbirth even though menstruation has not restarted.	28(25.7%)	82(23.5%)	.219	.640
14	The duration of sperms' life inside vagina is about between 48 to 72 hours.	89(81.7%)	249(71.3%)	4.561	.033
15	The period right after menstruation is safe time for sexual intercourse because there is a relatively low chance of pregnant.	53(48.6%)	187(53.6%)	.819	.366

Table3: Average of Contraception Knowledge and Contraception Self-Efficacy

	Male	Female	Total
Contraception Knowledge Total	9.31±2.57	8.75±2.76	8.87±2.731
Contraception Self-Efficacy Total	43.82±4.86	44.96±4.49	44.681±4.596

3.3. Correlation between Contraception Knowledge and Contraception Self-Efficacy

The relationship between the subject's contraception knowledge and contraception efficacy is as shown in Table 4. Contraception knowledge and contraception efficacy ($r=.270$ $p=.000$) showed a positive correlation.

Table 4: Correlations of Resilience, Depression and Stress

	Contraception Knowledge	Contraception Self-Efficacy
Contraception Knowledge	1	
Contraception Self-Efficacy	.270(.000)**	1

* $p<0.05$, ** $p<0.01$

3.4. Factors that affect the subject's contraception knowledge and contraceptive efficacy

The general characteristics factor that affects contraception knowledge and contraception efficacy of the subjects are as shown in Table 5. When contraception efficacy was used as a dependent variable, gender was explained as a statistically significant variable ($p=.023$).

Table 5: Influencing Resilience factors on Depression and Stress

Variables	Contraception Knowledge			Contraception self-efficacy		
	β	t	p	β	t	p

Sex	-.087	-1.859	.064	.106	2.275	.023
Religion	-.047	-.998	.319	-.003	-.068	.946
Place of residence	.049	1.054	.293	.041	.874	.383

This study was performed to examine knowledge on contraception and self-efficacy on contraception among college students, and to suggest direction on contraception education.

In this research, the mean score in knowledge on contraception was relatively low with 8.87. Previous researches have shown that the scores of females are higher than those of males in such knowledge[9, 13]. But, in this research, the score of males was higher than that of female, even if the difference was not significant. Such findings seem to reflect problems in current education on contraception which is not very realistic, and show the necessity to prepare concrete and practical contraception education program. Von et al.[14] points out that ideal education on contraception is not "to scare students", but "to teach what they should know in realistic, correct, and comfortable ways." Hur[9] points out that the major problem of the current sex education is that it is boring and superficial. In America, contraception is actively recommended to reduce pregnancy of adolescents. John et al. [15] reports that the crucial element in reducing pregnancy rate is contraception. Consequently, it seems necessary to change the contents of sex education program from focusing on textbook knowledge to something which can influence actual attitudes on contraception.

On each question on contraception, while both male and female respondents scored high in correct answers on outside ejaculation and on condom use, both of two groups scored low in vasectomy and spermicide. In researches of Hur[9]& Song & Chae[16] and as well, students were low in knowledge on vasectomy and spermicide. The reason seems to be caused by the fact that such means are rarely used by college students. Females scored higher than males in questions on menstrual cycle method and emergency contraception, which seems to reflect the fact that those are the means which can be led by females, and that females who have become more autonomous in sexual problems than before must have paid attention to them and acquired such knowledge on them.

In this research, scores of females were higher than males in self efficacy on contraception. Self-efficacy on contraception is the ability to refuse sexual intercourse when contraceptive is not ready to protect oneself from conception[17]. As females are directly influenced by unwanted conception as results of sexual intercourse, their self-efficacy on contraception must be higher than that of males. And, this research showed positive relationship between knowledge on conception and self-efficacy on contraception, which means that to improve such a self-efficacy, it is necessary to give students education on contraception to establish correct sexual attitudes and values.

Knowledge on contraception works as cognitive frame which can prevent improper results caused by ignorance on contraception and help use of contraceptive means. To educate correct method of contraception, to help youngsters build correct attitudes on contraception, and improve self-efficacy on contraception will play very important roles to settle healthy sex culture besides aspects of demographic health science. Lee, Tsai, Tsou & Chen[18] found that education on contraception has positive effect on self-efficacy on contraception. Therefore, this research views that improvement of self-efficacy on contraception will be an important variable to affect actual contraception.

Accordingly, given the current situation where various sexual behaviors including light sexual behavior

are increasing, it is necessary to develop contents reflecting reality and systematic education programs to settle healthy and sound sex culture. This research showed that gender is a variable affecting self-efficacy on contraception. Thus, this research suggests that it is important to develop education programs to improve self-efficacy on contraception which are different for male and female college students.

4. CONCLUSION AND SUGGESTION

This research was performed to examine knowledge on contraception and self-efficacy on it among college students. Data analysis showed that their knowledge on contraception is low with females lower than males. In contrast, females were higher than males in self efficacy on contraception, and there was positive relationship between knowledge on contraception and self-efficacy on it. Therefore, the findings of this research support the idea that it is necessary to develop different contraception education program on sex for males and females. Thus, this research suggests further researches on developing such programs and examining the effects of them.

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