

The Effects of Text Messaging for Increasing the Rate of long-acting Reversible Contraception use in Teenage Pregnancy: A Randomized Controlled Trial

Kusuma Meesin¹, Nirun Intarat², Nidhikul Temeiam³, Kunthida Kingsawad⁴

¹Ph.D. student, Health Science Program, Faculty of Medicine, Mahasarakham, University, Mahasarakham province, ²Assistant Professor, Faculty of Medicine, Mahasarakham University, Mahasarakham province, ³Physician, Medical Physician in Epidemiology, Expert Level, Sisaket Hospital, Si SaKet province, ⁴Lecturer, Sirindhorn College of Public Health Suphanburi, Suphan Buri province.

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Abstract

Background: A teenage pregnancy rate is a one of SDGs goal. Thailand had a teenage pregnancy rate higher in Asia-Pacific from less developed regions. A one of cause is a sex when they was young. This study is aimed to study an effective of a text messaging of teenage pregnant to the long-acting reversible contraception.

Materials and Methods: This is a randomized controlled trial. The study was an effective of a text messaging of teenage pregnant to the long-acting reversible contraception. A samples had 2 group from teenage pregnant in Si SaKet hospital. The control group was 212 samples. The trail group was 212 samples.

Result: The control group had a standard care of postpartum. The trial group had a standard care of postpartum and a text message about long-acting reversible contraception. The researcher were following a both sample. They found a trial group had a reversible contraception higher than a control group at a significant level. (P-value<0.001)

Conclusion: Present, a communication is important onthe digital time especially in teenager. A one of measurement postpartum teenager in this time is a text message. It will be reducing a repeat pregnant among teenage.

Keywords: Teenage pregnancy, Repeat pregnant, Long-acting reversible contraception, Text message

Introduction

The United Nation (UN) was determine goal of teenage pregnancy. It is a one of goal for Millennium Development Goals "MDGs" and Sustainable Development Goals "SDGs".¹ The incidence rate of teenage pregnancy between 15 - 19 year old was 47 per 1,000 population in 2014. It's higher in Asia and Pacific region that was incidence rate

amount 35 per 1,000 population. A preterm birth in teenage pregnancy in Thailand was specified in less developed regions.² The problem is a repeated teenage pregnancy between 10 - 19 years old.³ A cause of repeated teenage pregnancy was a younger sex and un-contraception. They didn't had a good performance in a physical and mental.⁴ The teenager had a sex who had been pregnant within 1 year amount 90%. It's 78-85% of uncontrolled.⁵ A cause of

Corresponding Author: Nirun Intarat, Assistant Professor, Faculty of Medicine, Mahasarakham University 79/99 Talad, Muang, Mahasarakham.

Email: nirun.i@msu.ac.th

repeated pregnancy of teenage is a teenage mother un-used a reversible contraception. They did not use because the attitude, believe and loss information. A teenage mother was receive a sex education and an experience from friend who did not known in a core knowledge.⁶ In 2017, Si Sa Ket province found a repeated pregnancy in teenage 14.88%. It's higher more over in Thailand. The teenage mother had a reversible contraception 56.52%. It's under a standard value in Thailand.⁷

Present, a text message by a mobile phone is a one of technology of communication. It can send information about health promotion knowledge and support an access a reversible contraception in teenage mother. It is a one of measurement to improvement a repeated pregnancy in teenage. A text message from a mobile phone can be read in every time, everywhere and comfortable for teenage mother.

This study conducted an effect of a text message to increase a reversible contraception. It was protect a repeated pregnancy in teenage in Si SaKet province. The study aimed to study an effective of a text messaging of teenage pregnant to the long-acting reversible contraception.

Materials and Methods

The study was a randomized controlled trial.

The study conducted an effective of a text messaging of teenage pregnant to the long-acting reversible contraception. A samples had 2 group from teenage mother who got a postpartum care within 24 hours at Si SaKet hospital. A sampling was a block randomization. The control group was 212 samples. The trail group was 212 samples. The sample in group was a block of 4. The study was prepare randomization list. Data were collect from May 2019 to April 2020.

The study used a questionnaire as a tool for research. It consisted of 2 parts. First, it is individual character covering age, a family, a contraception before pregnancy, family planning. Second, the data of teenage mother and her new born.

In analysis, this study used both descriptive statistic; frequency, percentage, mean, S.D., maximum and minimum. An inferential statistics were use a logistic regression at a significant level 0.05.

Result

Characteristic of teenage mother at Si SaKet province

The almost samples was 19 years old. (= 17.85, S.D. =1.46) More than half of sample was a student. (60.68%) The income was receive from a husband and a parent. As shown in a Table 1.

Table 1: A characteristic of teenage mother at Si SaKet province (n = 412)

Characteristic	Control group (n=206)		Trial group (n=206)	
	Numeric	Percentage	Numeric	Percentage
1. Age (years)				
Under 15	23	11.17	17	8.25
16	21	10.19	14	6.80
17	24	11.65	32	15.53
18	34	16.50	42	20.39
19	104	50.49	101	49.03
Mean (SD)	17.79 (±1.55)		17.92 (±1.36)	
Min : Max	13:19		13:19	
2. Occupation				
Student (Formal education)	126	61.17	124	60.19
Student (Unformal education)	4	1.94	7	3.40
House wife	24	11.65	27	13.11
Employee	44	21.36	38	18.45
Merchant	8	3.88	9	4.37

Contd... Table 1: A characteristic of teenage mother at Si SaKet province (n = 412)				
Officer	—	—	1	0.49
3. A source of income				
Working	30	14.56	19	9.22
Parent	75	36.41	93	45.15
Husband	100	48.54	87	42.23
Mean (SD)	5734 (±5043.22)		4762 (±3711.06)	
Min : Max	500:32000		500:20000	
4. Income (Baht)				
Under 5,000	24	17.52	16	12.5
5,001 - 10,000	68	49.63	76	59.37
10,001 - 15,000	32	23.36	22	17.19
More than 15,000	13	9.49	14	10.94
Mean (SD)	10316 (±5695.59)		10419 (±6336.47)	
Min : Max	1000:50000		1000:60000	

Information before a pregnancy

More than half of sample was not focus a pregnancy. (74.03%) They did not use a reversible contraception because they did not know a reversible

contraception method. (51.76%) The sample used an oral pill. (60.67%) Almost of sample was a first pregnancy. (88.11%) The sample was a first pregnancy in 19 years old. (39.32%). As shown in Table 2.

Table 2: An information before a pregnancy. (n=412)

Characteristic	Control group (n=206)		Trial group (n=206)	
	Numeric	Percentage	Numeric	Percentage
1. A focus to pregnancy				
Focus	51	24.76	51	24.76
Not focus	153	74.27	153	74.27
Did not answer	2	0.97	2	0.97
2. A contraception				
Condom	14	11.67	20	16.81
Oral contraception pill	80	66.67	65	54.62
Injectable contraception	2	1.67	2	1.68
Emergency contraception pill	16	13.33	20	16.81
Periodic abstinence	-	-	1	0.84
Coitus interruptus	8	6.67	11	9.24
3. A cause of pregnant				
Did not know a contraception	43	51.20	45	52.32
Complication of contraception	8	9.52	10	11.63
Focus a pregnancy	33	39.28	31	36.05
4. A frequency of pregnancy				
First pregnancy	181	87.86	182	88.35
Second pregnancy	25	12.14	24	11.65

Contd... Table 2: An information before a pregnancy. (n=412)				
5. Age of a first pregnancy (years)				
Under 15	32	15.53	22	10.68
16	28	13.59	24	11.65
17	29	14.08	35	16.99
18	40	19.42	40	19.42
19	77	37.38	85	41.26
Mean (SD)	17.41 (± 1.64)		17.64 (± 1.49)	
Min : Max	13:19		13:19	
6. A spontaneous abortion				
Yes	10	4.85	6	2.91
No	196	95.15	200	97.09

The effective of text message to a reversible contraception

The sample was evaluation of effective of a text message to a reversible contraception in teenage mother. The control group was teenage mother 206 samples. The trial group was a teenage mother from a simple random sampling 206 samples. The study found the control group used a reversible contraception 71.36%. The trial group used a reversible contraception 60.19%. As shown in Table 3. The rate of an access to a reversible contraception in teenage

mother was an effective to a reversible contraception to the sample 71.31% (P-value < 0.001). The trial group was access to a reversible contraception 49.03% (P-value < 0.015). As shown in Table 4. The control group was not a reversible contraception 8.74% and the trial group was not a reversible contraception 21.36%. The control group had a text message that affect to a reversible contraception was a different amount 1.45 at a significant level. (95%CI :1.23 to 1.71 ; p-value <0.001). As shown in Table 5.

Table 3: An effective of a text message to a reversible contraception (n = 412)

An effective of a reversible contraception of teenage mother	Control group (n=206)		Trial group (n=206)	
	Numeric	Percentage	Numeric	Percentage
1. A reversible contraception	147	71.36	101	49.03
2. An another contraception				
Condom	3	1.46	6	2.91
Oral contraception pill	8	3.88	9	4.37
Injectable contraception	30	14.56	46	22.33

Table 4: The rate of a reversible contraception of teenage mother (n = 412)

An effective of a reversible contraception of teenage mother	Control group (n=206)		Trial group (n=206)		P-value
	Numeric	Percentage	Numeric	Percentage	
1. A reversible contraception	147	71.36	101	49.03	
An another contraception	41	19.90	61	29.61	0.015
Did not used	18	8.74	44	21.36	

Table 5: A comparative of a text message to a reversible contraception of teenage mother after 3 month; binary logistic regression analysis.

A reversible contraception	Risk Ratio	95% CI	P-value
A control group	1.45	1.23-1.71	<0.001
A trial group	0.49	0.42-0.56	

Discussion

From the result of the effects of text messaging for increasing the rate of long-acting reversible contraception use in teenage pregnancy study found a pregnancy of teenage or teenage mother within 24 hours at Si Sa Ket hospital during December, 2020 – September, 2021 who was not focus a pregnancy, un-planning and un-contraception. It was a pregnancy among study. A school could be helping a teenage mother if they want to back to study again. It can help to decrease their quality of life.⁸ They had not an income. A teenage mother was rejected a study and became to take care their child. When a teenage mother was take care a new born who found a lot of problem such as they had not a hygienic, not a breast feeding etc.⁹ Their husband had not an occupation, no income and no working. A teenage mother was back to her family. The study found a problem from teenage mother. The problem was an abnormal of new born infant; low birth weight and weakness. The researcher was comparative a sample who got a text message and did not got a text message about a reversible contraception. It found a teenage mother who got a message, it can promotion to receive a reversible contraception. A counselling can help teenage mother to getting a contraception as soon as them want.¹⁰ Health service office can improve a health education method from a new technology especially a health education by mobile phone.¹¹ It can help teenage to understand in technical term of sex education.¹² The mobile application is a one of method which attraction a lot of people to interesting. It can help a people to knowing and understand about real knowledge and developing their skill.^{13,14}

In the present, people can access information from a mobile. Teenage were addicted a lot of information from a mobile phone. A health education such as sex, contraception, consumption or driving etc. should be adapting in a text message from mobile application.

Recommendation

1. A pregnancy in teenage is not a focus, planning, contraception. It is a pregnancy on the study. She did not have a family. The hospital should be change a name of a family planning office from “Family Planning clinic” to “A contraception clinic”. It could be helping teenage mother got a safe contraception.
2. A pregnancy in teenage affect to a study. They will be skip an education between studied in the school. The school should be preparing a sex education class in a primary subject in every level. An information of teenage pregnancy will be reported to health system. School should be support a teenage pregnancy to study.
3. A Government should be preparing care plan of a new born from teenage mother. It affect a quality of life of a new born.
4. Health service office should be preparing a technology to warning, communication, support and health promotion. It will be warning a right of health of teenage mother. It can be easily to use from mobile phone for a teenage.

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