Research Article

The Impact of Educational Intervention of High-Risk Pregnancy and High-Risk Childbirth on Knowledge, Attitude, and Behavior in Recognizing Danger Signs in Pregnancy: A Single Blind Clinical Trial

Dampak Edukasi Mengenai Kehamilan Risiko Tinggi dan Persalinan Risiko Tinggi terhadap Pengetahuan, Sikap, dan Perilaku dalam Mengenali Tanda Bahaya Kehamilan: Sebuah Uji Klinis Tersamar Tunggal

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Abstract

Objective: To assess the impact of additional educational interventions given to pregnant women in identifying high-risk pregnancy and high-risk childbirth by measuring changes in knowledge, attitudes and behaviors in the pregnancy and after childbirth.

Methods: This study was a single blind clinical trial conducted at obstetrics out-patient clinic of Dr. Cipto Mangunkusumo Hospital, Jakarta. Total sample were 52 responders, for the 26 responders to the control group and 26 responders to the intervention group. The research instrument was a questionnaire form, which include knowledge, attitude and behaviour of a number of 48 questions. Analysis was performed using SPSS 20 with bivariate analysis.

Results: We did not found significant differences in a range of age (30.65 ± 29.38 with 1.20 ± 0.75), education (both groups showed a high level of education) and employment for both groups. We found significant differences on knowledge, behaviour (p = 0.001 and = 0.042, respectively) on the first antenatal care compared with after childbirth.

Conclusion: The educational intervention gives significant impact in attitude and behaviour.

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Keywords: attitude, behaviour, educational intervention, knowledge

Abstrak

***Tujuan**: Untuk menilai dampak intervensi edukasi tambahan yang diberikan pada ibu hamil dalam mengenal kehamilan risiko tinggi dan tanda bahaya persalinan dengan menilai adanya perubahan pada pengetahuan, sikap dan perilaku pada awal kedatangan dan sesudah persalinan.*

***Metode**: Penelitian ini merupakan penelitian uji intervensi tersamar tunggal yang berlokasi di poli kebidanan Rumah Sakit Dr. Cipto Mangunkusumo, Jakarta. Total sampel sebanyak 52 responder, masing-masing 26 responder untuk kelompok kontrol dan 26 responder untuk kelompok intervensi. Instrumen penelitian berbentuk kuisioner yang meliputi pengetahuan, sikap dan perilaku sejumlah 48 pertanyaan. Media edukasi tambahan yang diberikan pada kelompok intervensi menggunakan media lembar balik yang dikeluarkan oleh HOGSI dan USAID.*

***Hasil**: Penelitian didapatkan untuk karakteristik dari dua kelompok tidak didapatkan perbedaan bermakna dilihat dari rentang usia (30,65 ± 1,20 dengan 29,38 ± 0,75), pendidikan (kedua kelompok menunjukkan tingkat pendidikan tinggi) dan pekerjaan. Pada kedua kelompok didapatkan adanya perbedaan pengetahuan, sikap dan pengetahuan (nilai p <0,001). Perbandingan antara kedua kelompok kontrol dan intervensi sesudah persalinan memberikan hasil yang secara statistik berbeda bermakna pada sikap dan perilaku (p = 0,001 dan p=0,042).*

***Kesimpulan**: Asuhan antenatal dengan intervensi edukasi menggunakan alat bantu dapat meningkatkan sikap dan perilaku pada ibu hamil.*

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***Kata kunci**: intervensi edukasi, pengetahuan, perilaku, sikap*

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INTRODUCTION

According to data acquired by the Indonesian Demographic and Health Survey (IDHS) on 2007 and Riskesdason 2010, Maternal Mortality Rate (MMR) in Indonesia was 228 per 100,000 live births.[1-3] Compared with MMR years before, in 1991 as many as 390 per 100,000 live births and in 2002-2003 was 253 deaths per 100,000 births, the number had dropped, however the maternal

mortality rate in Indonesia was still relatively high. Indonesia's MMR is still quite far from the target of the fifth MDG (Millennium Development Goals) which in 2015 is expected only 102 per 100,000 live births.[2,4,5]

One of the interventions supposed to decrease the MMR are appropriate antenatal care services, delivery assistance by health provider, adequate care for high-risk pregnancies, family planning, reducing the rate of unsafe abortion and post abortion care, and programs for behavior change (raise awareness) among reproductive aged women.[3,5-8]

Antenatal care given by health care was expected to give result in a healthy pregnancy and delivery and decreased neonatal morbidity.[7,8-12] This study is aimed to look at the impact of additional educational intervention on high-risk pregnancy and childbirth danger signs.[13] We expect that the impact of giving the intervention will give changes in knowledge, attitude and behaviour in recognizing danger signs of labor and high-risk pregnancies.

METHODS

This study was a single blind randomized clinical trial with control group involving pregnant women who underwent a routine ANC at obstetrics clinic, Dr. Cipto Mangunkusumo Hospital during the period of August 2015 to August 2016. The responders were all pregnant women who underwent antenatal care at Obstetrics Clinic, Dr. Cipto Mangunkusumo Hospital.

Samples were divided into two groups; control group and intervention group. Sample allocation was performed by using block randomization. Both groups would receive antenatal care from the obstetrics clinic. The intervention group would be given additional education by using sheet issued by HOGSI and USAID, while the control group was not given additional education. After we obtained patients' consent, we would obtain the initial data derived from the interview. Patients would be followed during pregnancy and also participated in labor. After delivery, the patients would be interviewed again with a questionnaire to assess knowledge, attitude and behavior.

Data Analysis

Analysis the statistical differences between two groups would be analyzed using paired T-test/ Wilcoxon. The statistical differences in the control group before and after the intervention would also be analyzed using the same hypothesis tests. Data are presented in the mean, SD, mean difference, CI from the difference between the mean and the p-value.

RESULT

We obtained a total of 52 patients to be responders in this study. The responders met our inclusion criteria and were willing to follow the course of the study. Responders were divided into two groups randomly selected using excel windows, into a control group and the intervention group. Each of the group was consisted of 26 responders. The control group was provided with education in accordance with the provision of education in obstetric clinic while the intervention group was provided with additional education. The responders were guided to fill out a questionnaire consisted of 48 questions at the beginning of the ANC and after the childbirth.

The results of our study showed that the mean age of the control group was 29.38 ± 0.75 years and the treatment group was 30.65 ± 1.20. Education revealed high-level education in both groups (57.6% of control group and the treatment group 50%). In the control group 38.5% of responders are primigravid and 23.1% of responders in the treatment group was primigravida.

Having obtained two sets of questionnaires from each responder, we continued the process of coding and data processing using Microsoft Excel and for statistical calculations performed with the SPSS program. We made the classification level of knowledge, attitudes and behaviour of responders into categories of good, average and bad based on a subjective judgment.

We performed data analysis of the knowledge, attitudes and behaviour of both groups, to find out any significant difference between each groups. There were significant differences in knowledge, attitude, and behaviour of the control group compared on the first visit and after childbirth ($p<0.001$). We also obtained a significant difference result in knowledge, attitude and behavior among intervention groups ($p<0.001$).

We analyzed between two groups on the 1st time visit and after childbirth. We found significant difference in attitude and behavior.

Table 1. Knowledge and Behavior Comparison of both Groups

Parameter	Mean (SD)	Deviation (SD)	CI 95%	p
Knowledge of control groups	14.42 (2.74)	4.73 (0.87)	2.97 - 6.48	0.336
Knowledge of intervention group	19.15 (3.5)			
Behaviour of control groups	19.34 (3.12)	2.57 (3.12)	0.27 - 4.87	0.042
Behaviour of intervention group	21.92 (4.93)			

Table 2. Attitude Comparison of both Groups

Parameter	Median (min-max)	p
Attitude of control groups	18 (11 - 26)	0.001
Attitude of intervention group	22 (15 - 34)	

DISCUSSION

Knowledge is defined as the result of knowing that occurs after a person perform the sensing process of an object, which will underlie her perform a specific action. The higher the education level, the greater ability to receive information.[14] Prior knowledge in both groups was poor, amounted to 92.3% and 100% for the intervension group and control, respectively. Our result was aligned with Athanaseet al in Tanzania[15], that the majority of pregnant women who did not receive antenatal care did not know the risk and complication possibly occur due to hypertension in pregnancy. Our research revealed that the knowledge of the responders was in the middle and high level, thus making the responders able to receive counseling and education given to antenatal care quickly.

Knowledge between the two groups after intervention were collected after the mother gave birth showed that antenatal care performed by using the print media can help improve the mother's knowledge. In each group there is an increased level of knowledge before and after the antenatal care, but there is no significant increase between the two.

The use of the print media tools antenatal care can help health care providers, yet so far there has been no study comparing the group given the tools and the control group who underwent antenatal care without tools.[16] In our study, there was an improvement of knowledge in each group, where we found intervention group had higher knowledge than the control group (9.96 vs. 4:57). We found significant differences between the two groups with $p = 0.001$ for the attitude and $p = 0.042$ for behavior. In literature searches, we could not find any research that follow - include changes in attitudes and behaviour at antenatal care using media tools.

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