

THE RELATIONSHIP OF THE REPRODUCTIVE HEALTH MESSAGES TOWARD HEALTHY REPRODUCTION PRACTICE

Hubungan Pesan Perilaku Kesehatan Reproduksi terhadap Praktik Reproduksi Sehat

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Abstrak

Latar belakang: Penggunaan kontrasepsi yang tidak konsisten memberikan tantangan tambahan kepada pemerintah dalam pengendalian pertumbuhan penduduk.

Tujuan: Penelitian ini bertujuan untuk menjelaskan hubungan keterpaparan pesan perilaku kesehatan reproduksi (PPKR) terhadap praktik reproduksi sehat (PRS) di antara wanita menikah berusia 20 sampai 35 tahun dan untuk mengidentifikasi faktor-faktor yang membuat wanita tersebut mudah menerima PPKR.

Metode: Sebanyak 134 orang dipilih sebagai responden dimana 24 orang diantaranya kemudian dipilih sebagai informan. Data dikumpulkan dengan menggunakan kuesioner dan Diskusi Kelompok Terarah. Tiga PPKR yang digunakan yaitu kriteria reproduksi sehat, metode KB dan manfaat KB. Responden didefinisikan memiliki PRS positif apabila menggunakan alat kontrasepsi jangka panjang.

Hasil: Studi menemukan bahwa peningkatan pengetahuan kesehatan reproduksi responden tidak meningkatkan PRS positif. Responden yang menggunakan alat kontrasepsi jangka panjang lebih memilih menggunakan saluran komunikasi pribadi daripada media massa.

Kesimpulan: Tak satu pun dari PPKR yang digunakan membuktikan keberadaan hubungan antara keterpaparan PPKR dengan PRS. Studi mengidentifikasi enam faktor yang dapat membuat wanita mudah menerima PPKR yaitu informasi yang disampaikan harus mengandung informasi risiko dan manfaat, sumber informasi itu dapat dipercaya, informasi memiliki daya tarik visual, mudah dikenali, interaktif, dan intensif.

Kata kunci: pesan kesehatan reproduksi, keluarga berencana, praktik reproduksi sehat, komunikasi personal

Abstract

Background: Inconsistent in contraceptive usage gave additional challenges to the government to control population growth.

Objective: This study aimed to explain the relationship of reproductive health behavioral messages (RHBM) exposure to healthy reproduction practice (HRP) among married women of 20 to 35 years old and to identify factors that made these women receptive to the RHBM exposure.

Method: One-hundred-and-thirty-four respondents were selected which 24 of them then selected as informants. Data were collected using questionnaire and a Focus Group Discussion. Three RHBM have used i.e. the healthy reproduction criteria, the methods of the family planning (FP) and the benefits of FP. The respondents were defined as having a positive HRP if used long-acting contraceptive.

Result: The study found an increasing on respondent's reproductive health knowledge did not increase positive HRP. The respondents who used long-acting contraceptive preferred use a personal communication channel rather than a mass media.

Conclusion: None of these RHBM had proved the relationship of the RHBM exposure to the HRP did exist. The study identified six factors could make women receptive to the RHBM exposure i.e. the delivered information should contain the risk and the benefits, the source of information's was credible, the information had visual attractiveness, was easy to spot, interactive, and intensive.

Keywords: reproductive health message, family planning, healthy reproduction practice, personal communication

INTRODUCTION

The Indonesia Demographic and Health Survey (IDHS) 2012 revealed two phenomena that should be concerned by the South Sumatera (SS) Province Government. There were a substantial contribution of unintended birth to the SS total fertility rate (TFR) and the slightly increased of TFR though the contraceptive prevalence rate also had increased at the same time.¹ These phenomena suggested there was a lack of awareness of the family planning (FP) participants in this province. The FP participants that were inconsistent in a contraceptive usage found very common² which in many cases led to increase the maternal death risk. The Indonesian family commonly thought a contraceptive as a tool to limit the number of children only, though a contraceptive could be used to give a birth-space too. Cases of the Indonesian women that started to use a contraceptive after having second or third children were well documented in many surveys. On the other side, the FP participants often used a contraceptive for a childrearing reason, not for the health sake. This contraceptive usage behavioral gave additional challenge to government in attempt to control population growth.

The contraceptive usage behavior is a complex issues that related to many factors.³ A contraceptive usage behavior has known had a relation to personal's knowledge, attitude, subjective norms, intentions, and other factors. Modification to these any factors would result to contraceptive usage behavioral change. Unfortunately, previous

studies had found the relationship of these any factors to contraceptive usage behavioral change did not always linear suggested the local context characteristics played a role. Thus, the relationship of the influencing factors of contraceptive usage behavioral to the healthy reproduction practice (HRP) could be considered as a grey-box process (i.e. a process did not fully understood yet, but some of its element had already known).

The current study conducted based on the institutional demand of the Population and Family Planning National Board to understand the HRP among married women of 20 to 35 years old. For Indonesian context where the actual fertility happened in married women, understanding the factors that influence women's HRP would be useful in maternal health program development at the local government context. The study used the Knowledge-Attitude-Behavior (KAB) Model to test the relationship of the RHBM exposure to the HRP (Figure 1). Of the RHBM content was commonly exposed to the FP participants, three messages would be used to reveal the effect of the RHBM exposure to the HRP namely 1) the criteria of healthy reproduction, 2) the methods of the FP, and 3) the benefits of the FP. Thus, the study aimed to explain the relationship of the criteria of healthy reproduction, the methods of the FP, and the benefits of the FP messages reception to the HRP among married women of 20 to 35 years old and to identify the factors that made these women receptive to the HRBM exposure.

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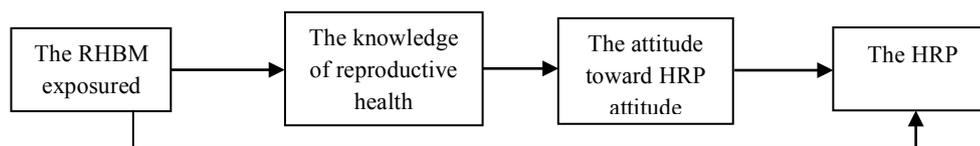


Figure 1. The Knowledge-Attitude-Behavior Model

METHODS

Study Location

The study was held in rural area at two locations i.e. 1) the Musi Rawas (MURA) Regency (represented by the Tegalrejo Village and its nearby village: the Wonorejo), and 2) the Ogan Komering Ulu Timur (OKUT) Regency (represented by the Aman Jaya Village and its nearby village: the Cipta Muda). These villages were selected as the study location based on the recommendation of the local authority that recognized the FP program successfully implemented in these villages.

The majority of households in these villages were relied on an agricultural sector as income sources predominantly paddy/rice with a little amount of them relied on a rubber or palm oil plantation. People who lived in the MURA enjoyed better infrastructure rather than their counterpart. The household electrification rate of the MURA was around 71.33% whereas the OKUT was at a level of 66.58%. The average distance to the nearest health facility for the MURA and the OKUT respectively were 18.2 and 25.0 km to a general hospital, 6.65 and 25.0 km to a maternity hospital, and 3.3 and 3.75 km to a Community Health Center. The residents had to travel about 7.0 km for the MURA and 2.5 km for the OKUT to their respective sub-district center. The study location was a place for at least 2,067 of households with 1,144 of households located in the MURA and the rest in the OKUT. The total population domiciled in the study location in 2011 was 7,851 persons (4,324

persons in the MURA and 3,527 persons in the OKUT).⁴

Study Design

The study used a quantitative-qualitative approach held in May to June 2016. The respondents were married women of 20 to 35 years old with its total population in each locations were 244 persons in the MURA and 226 persons in the OKUT. The sample size of the study were determined by a formula of the Sample Size for a Hypothesis Test of the Odds Ratio.⁵ The study assumed the proportion of the control group in the population equal to 50% with a significant level (α) at .05, power size (β) equal to .5 and expected Odds Ratio (OR) at least equal to 2.0. As much as 134 persons were randomly selected as the respondents, which 24 of them then selected for a Focus Group Discussion (FGD). Among these respondents, 100 persons belong to the case group while 34 persons belong to the control group. The case group referred to a group of respondent that had children below or equal to two persons, while the control group referred to a group of respondent that had children over two persons.

Definition of variables

The term of the healthy reproduction referred to reproductive activities that meet the safe standard (the criteria of healthy reproduction), namely: a) mother's age when pregnant/delivery is between 20 to 35 years old, b) birth interval of two consecutive deliveries is over two years, and c) frequency of pregnancy/delivery is no more than three

times. Definition of variables used in the study described as follow:

- The RHBM exposure were defined as the respondent had received the information, education, and communication about the criteria of healthy reproduction, the methods or the benefit of the FP through a variety of media and communication channels in the last six months. The RHBM exposure variable divided into three sub-variables:

- Received the information, education, and communication of the healthy reproduction criteria (IEC-CRT);
- Received the information, education, and communication of the methods of the family planning (IEC-MFP);
- Received the information, education, and communication of the benefits of the family planning reception (IEC-BFP).

Each of sub-variables treated as a metric variable during analysis.

- The Knowledge of Reproductive Health (KRH) was defined, as the respondent knew about the criteria of healthy reproduction, the methods or the benefit of the FP. The KRH divided into three sub-variables:

- The knowledge of the healthy reproduction criteria (KRH-CRT).
- The knowledge of the methods of the family planning (KRH-MFP).
- The knowledge of the benefits of the family planning (KRH-BFP).

Each of sub-variables treated as a metric variable during analysis.

- Practice (ATHRP) was defined as the respondent agreed or disagreed with the healthy reproduction practices. The ATHRP treated as a metric variable during analysis.
- The HRP were defined in the kind of contraceptive used by the respondent. The respondent classified as having the positive practice of the healthy reproduction if using the Intrauterine device (IUD) or the implant, classified as

having moderate practice if using the pills or the injectable, and classified as having the negative practice if not using any contraceptive. The HRP treated as ordinal variable during analysis.

Study framework and data analysis

The study contained two-part analysis (Figure 2). In the first part, we tested whether the relationship of the RHBM exposure to the HRP in this two studies location was different. In the second part, we tested whether the relationship of the RHBM exposure to the HRP was different among the case and the control.

The quantitative data collected using the questionnaire while the qualitative data collected using the FGD. The questionnaire composed of eight groups of questions i.e. 1) the IEC-CRT, 2) the IEC-MFP, 3) the IEC-BFP, 4) the KRH-CRT, 5) the KRH-MFP, 6) the KRH-BFP, 7) the Attitude to the HRP, and 8) the HRP. The answer for questions in the group of questions of 1 to 3 was never received, seldom received, and frequently received of RHBM messages; the group of questions of 4 to 6 was did not understand, quite understood, and well understood about the RHBM messages had been informed. Questions in the group of 7 had a choice of a five-categories-ordinal answer i.e. very disagree, disagree, moderate, agree, and very agree.

The score of variables that used in the analysis was formed by aggregated value of questions answered within the same group of questions. The score then tested by using the Independent Sample T-test and Correlation test to find whether the relationship of the RHBM exposure to the HRP did exist. The statistical test results then interpreted by its coefficient correlation. On the other side, the qualitative data derived from semantic analysis of the informant's keyword answer.

The keywords then tabulated and mapped to find a relationship using the input-process-

output approach. The result then synthesized and interpreted based on the theory.

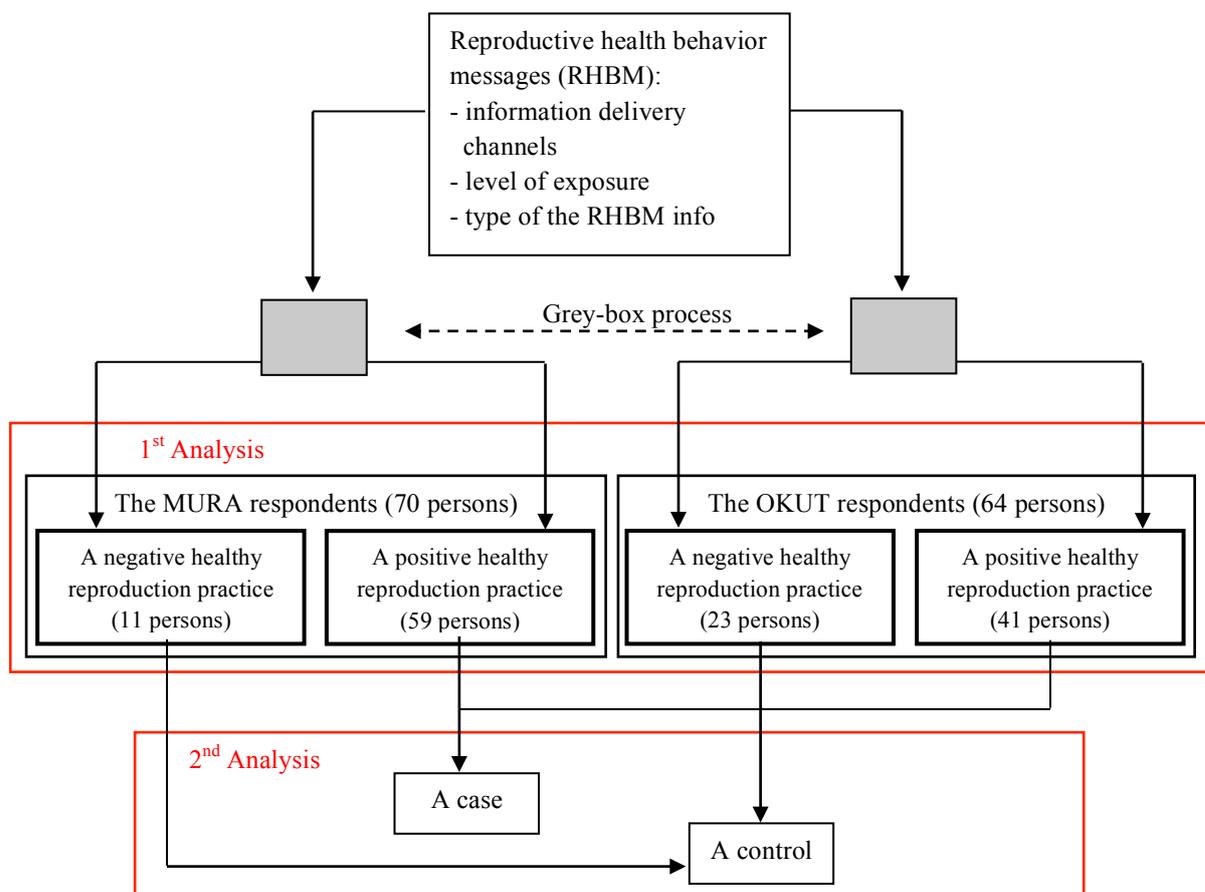


Figure 2. Study framework

RESULT

The background characteristics of the respondent in the case group were statistically not different to the control group albeit the case group had a better education level than their counterpart. The case group also dominated by the respondents who do not work (self-identified as a housewife). Based on the study location, the respondent in the MURA had better education level and better occupation compared to their counterpart (see Table 1).

The OKUT's respondents relatively had better the RHBM exposure rather than their counterpart in the MURA. The OKUT's respondents also had better attitude response to the HRP rather than the MURA's

respondents. However, the KRH of the OKUT's respondents had slightly lower score than the MURA's respondent with one exception on the method of FP sub-variable. For the group of respondent, the case group found had better the RHBM exposure and the KRH compared to the control group. However, the case group had a slightly lower score in the attitude on HRP than the control group (see Table 2). The respondent in the control group or lived in the OKUT has tended to use the type of contraception that known as a long-acting contraceptive method (see Table 3).

Table 1. The statistical summary of the respondent's demographic and background characteristics

Demographic parameter	The group of respondents		The study location	
	The Case	The Control	The MURA	The OKUT
Current age of respondents (in years)	28.78 ± .37	32.88 ± .46	29.48 ± .46	30.16 ± .49
Respondent's age at first marriage (in years)	20.41 ± .22	18.67 ± .43	20.00 ± .33	19.95 ± .24
Respondent's age at first delivery (in years)	21.70 ± .23	20.00 ± .44	21.30 ± .34	21.24 ± .25
Background characteristics	Distribution of resp. based on the group of resp. (%)		Distribution of resp. based on the study location (%)	
	The case	The control	The MURA	The OKUT
Education Level				
Elementary School	16.0	14.7	25.7	4.7
Junior High School	24.0	44.1	25.7	32.8
Senior High School	45.0	32.4	32.9	51.6
College	7.0	5.9	5.7	7.8
University	7.0	0	8.6	1.6
No answer	1.0	2.9	1.4	1.6
Total	100.0	100.0	100.0	100.0
Chi-Square value (p-value)	7.43 (.160)		16.79 (<.01)	
Occupations				
Housewife	66.0	54.8	54.4	73.3
Employee	9.3	6.5	10.3	6.7
Merchant and other	8.2	12.9	16.2	1.7
Farmer	16.5	25.8	19.1	18.3
Total	100.0	100.0	100.0	100.0
Chi-Square value (p value)	2.46 (.486)		9.83 (.018)	

Table 2. The summary of the variables' score

Variables	The group of respondents		The study location	
	The Case	The Control	The MURA	The OKUT
The RHBM*				
Criteria of healthy reproduction reception score	4.35 ± .20	4.06 ± .38	3.58 ± .26	5.00 ± .22
Method of the family planning reception score	3.13 ± .16	2.68 ± .22	2.56 ± .20	3.48 ± .16
Benefits of the family planning reception score	1.43 ± .06	1.44 ± .09	1.27 ± .07	1.60 ± .07
The KRH*				
Criteria of healthy reproduction knowledge score	3.18 ± .06	3.06 ± .11	3.30 ± .07	2.99 ± .07
Method of the family planning knowledge score	5.26 ± .16	5.15 ± .24	4.86 ± .21	5.62 ± .15
Benefits of the family planning knowledge score	3.07 ± .11	2.74 ± .16	3.01 ± .14	2.95 ± .12
Attitude on HRP* score	4.73 ± .15	4.80 ± .27	4.62 ± .18	4.88 ± .20

* RHBM: reproductive health behavioral messages; KRH: knowledge about reproductive health; HRP: healthy reproduction practice

Table 3. The type of contraceptive used by respondents

Descriptions	Distribution of resp. based on the group of respondent (%)		Distribution of resp. based on the study location (%)	
	The Case	The Control	The MURA	The OKUT
The type of contraceptive used				
The IUD*	7.1	16.7	6.8	12.5
Implant	15.3	33.3	11.9	28.6
Injectable	70.6	50.0	79.7	50.0
Pills	7.1	0	1.7	8.9
Total	100.0	100.0	100.0	100.0
Chi-square value (p-value)	8.70 (.026)		11.50 (<.01)	

*IUD: Intrauterine device

The positive sign of correlation coefficient indicated a better input would result in better output. The RHBM exposure found having statistically significant relationship to the HRP via dissemination of the benefits of FP but limited for the group of respondent only, while a reception of other sub-variables of the RHBM exposure had found statistically insignificant. The reception of the methods of FP had a negative correlation to the HRP. In other words, the respondent who received the methods of FP had a tendency not to use a contraceptive or at least a short-acting one. On the relationship of the KRH toward attitude on HRP section, the study found that the KRH did have a relation toward attitude on HRP. Knowing about the method and the benefits of FP was associated with increases of a positive attitude on HRP of respondents. Nevertheless, having knowledge of healthy reproduction criteria predicted would not change the respondent attitude on HRP (see Table 4).

Table 5 summarized the RHBM communication's channel frequently used by respondents. Of ten communications' channel, the television, the radio, and the newspaper were media that statistically significantly found to be more used by respondents in the case group for gathering the RHBM information. In contrast with the statistical result in the case-control analysis, the use of

the television, the radio, and the magazine as the RHBM information sources at these two studies location was statistically not different. In general, the respondents lived in OKUT or the respondents in the control group preferred to use personal communication channel (i.e. talk to friends, to neighbor or to the FP officers) rather than to use mass-media channel (i.e. watching television, reading newspaper, etc.) to gather the RHBM information compared to their counterpart in the MURA or the case group, respectively.

Based on the case-control analysis findings, we focused on exploring the factors that made the respondents preferred to use the television to gather the RHBM information. We asked 12 of the RHBM keywords (see Table 6) to the FGD's informants and recorded their response about how meaningful these keywords to influence their knowledge of and attitude toward the HRP. The FGD informant said preferred to use the television to gather the RHBM information because the information comprehensively delivered contained an explanation of the benefits and the risks, and how to do a something properly.

Table 4. The summary of correlation coefficient

Variables	Correlation coefficient (p-value)	
	The group of respondents	The study location
The relationship of the RHBM* toward the KRH*		
a. Receive the IEC* of the healthy reproduction criteria	.088 (.317)	.196 (.025)
b. Receive the IEC of the method of the family planning	.464 (< .01)	.416 (< .01)
c. Receive the IEC of the benefits of the family planning	.323 (< .01)	.338 (< .01)
The relationship of the KRH toward the attitude on HRP*		
a. Knowing the healthy reproduction criteria	-.034 (.695)	-.014 (.874)
b. Knowing a method of the family planning	.366 (< .01)	.352 (< .01)
c. Knowing the benefits of the family planning	.312 (< .01)	.307 (< .01)
The relationship of the attitude on HRP toward the current HRP		
	.126 (.151)	.110 (.212)
The relationship of the RHBM toward the HRP		
a. Receive the IEC of the healthy reproduction criteria	.131 (.137)	.035 (.697)
b. Receive the IEC of the method of the family planning	-.028 (.753)	-.133 (.133)
c. Receive the IEC of benefits of the family planning	.151 (.087)	.086 (.335)

* IEC: information, education, and communication; RHBM: reproductive health behavioral messages; KRH: knowledge about reproductive health; HRP: healthy reproduction practice

Table 5. The summary of the RHBM communication's channel frequently used by respondents

No	The RHBM communication's channel frequently used by respondents*	Distribution based on the group of respondents (%)			Distribution based on the study location (%)		
		The case	The control	Chi-Square value (p-value)	The MURA	The OKUT	Chi-Square value (p-value)
1	The family planning officer	13.0	5.9	1.877 (.428)	11.4	10.9	23.718 (<.01)
2	The family planning cadre	10.0	14.7	.546 (.791)	7.1	15.6	12.302 (<.01)
3	Social gathering	9.0	2.9	2.164 (.355)	1.4	14.1	25.820 (<.01)
4	Radio	5.0	0	6.501 (.047)	2.9	4.7	1.063 (.638)
5	Television	40.0	17.6	7.122 (.031)	40.0	28.1	3.230 (.216)
6	Newspaper	4.0	2.9	4.525 (.083)	4.3	3.1	8.418 (<.01)
7	Magazine	3.0	0	2.561 (.301)	1.4	3.1	1.603 (.480)
8	Friends	43.0	41.2	2.008 (.384)	27.1	59.4	15.592 (<.01)
9	Neighbor	43.0	35.3	1.302 (.529)	28.6	54.7	10.918 (<.01)
10	Family	42.0	44.1	.187 (.931)	31.4	54.7	13.101 (<.01)

* Respondent allowed to answered more than one of the reproductive health behavioral messages (RHBM) communication's channels

Table 6. The list of the reproductive health behavioral message keywords that asked to the informant in the Focus Group Discussion

The reproductive health behavioral message keywords	
1. Contraceptive's effectivity	7. Time the information delivered
2. The information about the family planning benefits and risks	8. The information interactively delivered
3. The information is able to be cross checked	9. Information covered specific issues
4. Communication's style	10. Source of information's credibility
5. Places when receiving the information	11. Information's attractiveness
6. The information's content	12. Information intensively delivered

As said by FGD informant (Mrs. D, 31 years old, lived in the MURA),

"Televisi ada gambar, ada penjelasannya, jadi lebih dimengerti" ("the television showed a picture with some explanation that made easier to understand").

Other the FGD informant (Mrs. R, 27 years old, lived in the OKUT) said,

"Televisi lebih jelas karena ada yang dipraktikannya" ("television showed information more clearly because had some practical demonstration within").

The FGD's informant also preferred to use the television to gather the RHBM information because it could immediately recognize and check the credibility of the information source. The authors agreed to this statement as some of the RHBM information in the television program commonly delivered by a medical expert (The Dr. Oz Show, for example). The FGD's informant highlighted that the attractiveness of the RHBM information was important. FGD informant (Mrs. N, 28 years old, lived in the MURA) said,

"Informasi disampaikan kayak iklan partai ... ada lagunya, ada kegiatan-kegiatannya jadi lebih menarik" ("the information should deliver just like a political party advertisement ... accompanied by a jingle, had shown some activities so it would be more interesting").

Another reason why the FGD's informant preferred to use the television to gather the RHBM information is that the information was able to be cross-checked especially if the

information delivered through a talk show that had an interactive dialogue session.

The study, briefly, found six factors that could make women receptive to the RHBM exposure i.e. the delivered information should contain the risk and the benefits in a single frame, the source of information's was credible, the information had visual attractiveness, was easy to spot, interactive, and intensive. The FGD's informant worked as a farmer also added a recommendation to the stakeholder to place the RHBM poster as near as possible to their working area as they spend almost entire daytime at farmland site.

DISCUSSION

The findings demonstrated that none of three of the RHBM types had used in the study could statistically prove that the relationship of the RHBM exposure to the HRP does exist. Though, the study had showed the existence of the relationship of the RHBM exposure to the KRH. On the relationship of the RHBM exposure to the KRH section, the study found that all correlation coefficients significantly had a positive sign - with one exception at the IEC-CRT to the KRH in the group of respondent's part that found insignificant - was consistent to the previous study.³ The correlation coefficients of the IEC-CRT to the KRH at the group of respondent's part found to be a relatively small in a magnitude

that probably resulted from an information bias occurred in society. The existence of the facts and the myth regarding health information in society were known had an effect to personal knowledge gain.⁶ The positive correlation of the RHBM exposure to the KRH could be explained by two reasons. For the respondent that preferred to use personal communication channel to gather the RHBM information, the emotional closeness and the possibility of having similar experiences between the respondent and peer could be the factors that made knowledge transfer become more easily.⁷ For the respondent that preferred to use the mass-media communication channel to gather the RHBM information, the comprehensiveness and attractiveness of RHBM information could consider as factors that increased the respondent's knowledge.⁸ Contrasted to Tebbets and Redwine⁹ that found a peer had an effect of increasing the contraceptive usage via advancing healthy reproduction knowledge, the current study showed that increasing on the KRH was not followed by an increasing on positive HRP. The influence of local midwives to the FP participants on contraceptive method choice was probably one of the explanations. Over time, for the FP participants, the midwives were associated with increased odds of the injectable contraceptive use and decreased odds of the oral contraceptive and implant use.¹⁰

The study found that the healthy reproduction criteria exposure seemed had not effect to the respondent's knowledge, to their attitudes, or to their HRP. This result probably was driven by the cultural perceptions that shaped women to believe a childbirth and motherhood as their grand duty^{11,12} and sometimes putting them in a disadvantageous position. The findings also showed a gap between the respondent's attitudes on HRP to the HRP. The correlation coefficient indeed had a positive sign but statistically insignificant that was probably caused by the confounding variables such societal norms.

The respondent seemed to adopt a *pronatalist* norm. In a *pronatalist* society, women are expected to have high fertility rate to maintain family's welfare (that sometimes also called as a *pronatalist* pressure). The *pronatalist* norms usually adopted by a family who lived in a rural area that highly depended to the agricultural sector. This *pronatalist* pressure - one of many forms of psychosocial dimension - in many cases had an ability to suppress an individual psychological strength.¹³ The differences in socioeconomic status also regarded as a cause of the gap. As depicted in Table 1, the majority of respondents had a low educational level and an economically inactive. As shown in Table 4, the best option to improve reproductive health development was via disseminating the method of FP and followed by spreading the benefits of FP. The findings also showed a primacy of using a personal communication channel over a mass media channel in respect to attitudes change and HRP, either in the group of respondents or by the study location. However, using personal communication channel to increasing positive HRP in society would give some challenges to the local authority.

Regardless of its flexibility for being tailored to improve the effectiveness of health messaging,¹⁴ providing human resources with proper qualities in personal communication skill become serious problems for the local authority. The attractiveness of the FP program at local government level had fallen gradually since the reformation era. Many of the FP field officers had been assigned to do others job while a new recruitment could be said none. In some areas, the continuation of the inter-generations knowledge transfer of the FP field officer had disturbed especially in the soft skill ones, like a communication skill, and a commitment establishment skill. Fortunately, the central government had taken corrective actions recently to avoid the decrease in the availability of human resources by taking over responsibilities of

the local authority concerning the provision and development of the FP field officer.¹⁵ Aside from human resources problems, another potential obstacle in using a personal communication channel to improve reproductive health development came from the RHBM exposure intensity. The motivational interviews had increased effective contraceptive use but lasting not more than four months after.¹⁶ The statement implied that the government should allocate budget in sufficient amount and provide adequate operational transportation for the FP field officer to reach out some remote areas to ensure the target community still keep in touch, considering Indonesia has vast territory.

The study suggested three recommendations. First, the local government should strengthen women's empowerment group and ensure its mobilization complements other local development programs.¹⁷ Indonesia has an essential social capital to use this recommendation that is the Family Welfare and Empowerment Movement (FWEM) or commonly called as PKK. The FWEM has a massive organizational structure from a national level to a village level and explicitly mentioning a health sector as a priority program. Empirical evidence showed that the FWEM has strong structural command but weak in program execution at an operational level. It was understandable because the driving team of the FWEM at village level commonly views the FWEM as a supplementary task. The local government perhaps should make cooperation with a higher education institution to provide continuous human resource development of the local FWEM.

Second, the local government could use a mobile application to deliver the reproductive health information¹⁸ to anticipating the time constraints of the professional health worker and health educator have had, especially for consultative services¹⁹. Nowadays, people

use the internet as a major source to access health information, especially teen. However, the telecommunication service coverage that is still limited in many areas becomes the first problem that has to be solved.

Third, the local government should develop women's gender equity awareness through various activities to educate and to create an enabling environment for fully accessing reproductive health care services.²⁰ One of the concrete examples was *Generasi Berencana* (intended to adolescent to preparing a plan for their own married). The local government should be aware of social norms in certain society that regarded a sexual talk still as taboo matter, even for educational purpose ones. For that reason, the local government should give continuous advocacy to the parent regarding the importance of sexual education for their children to overcome the problem.

Of all the issues that mentioned, the main problem faced perhaps to establish a commitment and to integrate the existing social capital to achieve a collective goal. In the autonomy era, each of the local government has own policy and development agenda. Conflict of interests between one local government with other local government (at the same level or with a higher level) often discovered. Hopefully, the Ministry of the Home Affairs can optimize momentum enactment of Government Regulation Number 18 of 2016 to harmonize the local government agency that handling population and family planning affairs. The current study's findings should interpret with a caution. The representativeness of the population in the samples at the district level had not tested.

CONCLUSION

The study concluded that of the three RHBM types had used to find a relationship of the RHBM exposure to the HRP among married women of 20 to 35 years old, none of these RHBM had proved that its relationship did exist. The study identified six factors could make women receptive to the RHBM exposure i.e. the delivered information should contain the risk and the benefits in a single frame, the source of information's was credible, the information had visual attractiveness, was easy to spot, interactive and intensive.

RECOMMENDATION

The study recommended that the local government should optimize a women's empowerment group, and the role of a mobile application to deliver the RHBM, especially by redesigning the RHBM content to meet women's needs.

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REFERENCES

1. Statistics Indonesia, National Population and Family Planning Board, Ministry of Health, ICF International. Indonesia Demographic and Health Survey 2012 [Internet]. Jakarta, Indonesia; 2013. Available from: www.bps.go.id
2. Speizer IS, Irani L, Barden-O'Fallon J, Levy J. Inconsistent fertility motivations and contraceptive use behaviors among women in Honduras. *Reprod Health* [Internet]. 2009 Dec 19 [cited 2016 Aug 21];6(1):19. Available from: <http://reproductive-health-journal.biomedcentral.com/articles/10.1186/1742-4755-6-19>
3. Wijayanti N, Thaweesit S, Sunpuwan M. Contraceptive Use Among Married Adolescent Women in Indonesia. *J Heal Res* [Internet]. 2015 [cited 2016 Aug 21];29(5). Available from: <http://www.jhealthres.org>
4. Statistics Indonesia. *Potensi Desa 2011*.
5. Lemeshow S, Hosmer Jr DW, Klar J, Lwanga SK. Adequacy of Sample Size in Health Studies. 1990 [cited 2016 Aug 17];247. Available from: <http://www.who.int/iris/handle/10665/41607>
6. Cameron KA, Roloff ME, Friesema EM, Brown T, Jovanovic BD, Hauber S, et al. Patient knowledge and recall of health information following exposure to "facts and myths" message format variations. *Patient Educ Couns* [Internet]. 2013 [cited 2017 Jun 11];92(3):381–7. Available from: <http://www.sciencedirect.com/science/article/pii/S0738399113002620>
7. Kang M, Hau YS. Multi-level analysis of knowledge transfer: a knowledge recipient's perspective. *J Knowl Manag*. 2014;18(4).
8. Patton EW, Moniz MH, Hughes LS, Buis L, Howell J. National network television news coverage of contraception — a content analysis. *Contraception* [Internet]. 2017 [cited 2017 Jun 11];95(1):98–104. Available from: <http://www.sciencedirect.com/science/article/pii/S0010782416301469>
9. Tebbets C, Redwine D. Beyond the clinic walls: empowering young people through Youth Peer Provider programmes in Ecuador and Nicaragua. *Reprod Health Matters*. 2013;21(41):143–53.
10. Weaver EH, Frankenberg E, Fried BJ, Thomas D, Wheeler SB, Paul JE. Effect of village midwife program on contraceptive prevalence and method choice in Indonesia. *Stud Fam Plann* [Internet]. 2013 Dec [cited 2016 Aug 21];44(4):203–13. Available from: <http://www.jstor.org/stable/2353213>

- 21];44(4):389–409. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24323659>
11. Barona-Vilar C, Más-Pons R, Fullana-Montoro A, Giner-Monfort J, Grau-Muñoz A, Bisbal-Sanz J. Perceptions and experiences of parenthood and maternal health care among Latin American women living in Spain: A qualitative study. *Midwifery*. 2013;29(4):332–7.
 12. Serizawa A, Ito K, Algaddal AH, Eltaybe RAM. Cultural perceptions and health behaviors related to safe motherhood among village women in Eastern Sudan: Ethnographic study. *Int J Nurs Stud*. 2014;51(4):572–81.
 13. García-cadena CH, Moral J, Rubia D, Díaz-díaz HL, Martínez-rodríguez J, Sánchez-reyes L, et al. Effect of Family Strength Over The Psychological Well-being and Internal Locus of Control. *J Behav Heal Soc Issues [Internet]*. 2014;5(2):33–46. Available from: <http://dx.doi.org/10.5460/jbhsi.v5.2.422> 51
 14. Garbers S, Meserve A, Kottke M, Hatcher R, Chiasson MA. Tailored health messaging improves contraceptive continuation and adherence: results from a randomized controlled trial. *Contraception*. 2012;86(5):536–42.
 15. State Employment Agency. Pelaksanaan Pengalihan Pegawai Negeri Sipil Daerah Kabupaten/Kota Yang Menduduki Jabatan Fungsional Penyuluh Keluarga Berencana dan Petugas Lapangan Keluarga Berencana Menjadi Pegawai Negeri Sipil Badan Kependudukan dan Keluarga Berencana Nasional. Peraturan Kepala Badan Kepegawaian Negara No 6 Tahun 2016.
 16. Wilson A, Nirantharakumar K, Truchanowicz EG, Surenthirakumaran R, MacArthur C, Coomarasamy A. Motivational interviews to improve contraceptive use in populations at high risk of unintended pregnancy: a systematic review and meta-analysis. *Eur J Obstet Gynecol Reprod Biol*. 2015;191:72–9.
 17. Nair N, Tripathy P, Costello A, Prost A. Mobilizing women’s groups for improved maternal and newborn health: Evidence for impact, and challenges for sustainability and scale up. *Int J Gynecol Obstet*. 2012;119:S22–5.
 18. L’Engle KL, Vahdat HL, Ndakidemi E, Lasway C, Zan T. Evaluating feasibility, reach and potential impact of a text message family planning information service in Tanzania. *Contraception*. 2013;87(2):251–6.
 19. Sridhar A, Chen A, Forbes ER, Glik D. Mobile application for information on reversible contraception: a randomized controlled trial. *Am J Obstet Gynecol*. 2015;212(6):774.e1-774.e7.
 20. Wang L, Cui Y, Zhang L, Wang C, Jiang Y, Shi W. Influence of gender equity awareness on women’s reproductive healthcare in rural areas of midwest China. *Int J Gynecol Obstet*. 2013;123(2):155–9.