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RESEARCH ARTICLE

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Difficulty-Usefulness Pyramid (DUP) as a Method of Selecting Priority Elements in the Use of Long-Term Contraceptive Methods

Sunarto¹, Risky Ika Septiana Puspitasari², Myrna A. Mercado³, Heru Santoso Wahito Nugroho⁴,
 Suparji⁵, Ayesha Hendriana Ngestiningrum^{6(CA)}

¹Department of Midwifery, Poltekkes Kemenkes Surabaya, Indonesia; sunartoyahyamuqaffi@gmail.com

²Private Midwife, Madiun, Indonesia; riskyikaseptianan108@gmail.com

³Nursing Faculty, Mountain View College, Philippines; myrnamercado67@yahoo.com

⁴Department of Midwifery, Poltekkes Kemenkes Surabaya, Indonesia; heruswn@gmail.com

⁵Departement of Midwifery, Poltekkes Kemenkes Surabaya, Indonesia; suparjiyozabri@gmail.com

^{6(CA)}Departement of Midwifery, Poltekkes Kemenkes Surabaya, Indonesia; ayeshahendriana.n@gmail.com
 (Corresponding Author)

ABSTRACT

Family Planning is a program of the Indonesian government to regulate the rate of population growth by using contraceptive methods. Contraception is divided into two types, namely long-term contraceptive methods (MKJP) and non-long-term contraceptive methods (Non-MKJP). Factors that influence the use of contraception are fertile age couple knowledge about MKJP, costs, skills of officers, availability of tools, counseling-information and family planning education, husband's support, access to services, satisfaction with using contraceptives, and history of use. This research was conducted to determine what factors influence the selection of MKJP methods in Bulugunung Plaosan Village, Magetan Regency. The difference with other similar studies lies in the method, selection of influence factors used the Difficulty-Usefulness Pyramid (DUP) method. This study was a descriptive study involving 64 women of family planning Non-MKJP participants in Bulugunung Plaosan Village, Magetan Regency from January to May 2020. The data analysis used the calculation of the mean score of difficulty and usefulness for each element of the MKJP and calculated the range starting from the mean difficulty score up to the mean usefulness score. Focus group discussion method has been used to determinate of elements. The elements that were categorized as high priority were availability of family planning services, service fee of family planning, and communication, information and education of family planning.

Keywords: elements; long-term contraception method; Difficulty-Usefulness Pyramid

INTRODUCTION

Background

The medium-term national development priority for 2020-2024 related to family planning is to increase quality human resources, to be competitive and to support mental revolution and cultural development. The role of family planning lies in controlling the population and strengthening population governance and increasing access and quality of health services. The government's priority activities in population control are improving maternal and child health, family planning and reproductive health. ^(1,2)

The low use of long-term contraceptive methods (MKJP) has been the cause of the stagnation of the birth rate over the past decade ⁽³⁾. The MKJP failure rate is reported to be 0-2 per 1000 users, while the Non MKJP method is reported to be more than 10 per 1000 users ⁽⁴⁾. Nationally, active family planning participants show a figure of 63.6% ⁽⁵⁾. The coverage of active family planning participants in East Java has increased in 2016 by

68.7% to 75.3% in 2018 ⁽⁶⁾. In Magetan Regency, out of 106,926 couples of childbearing age registered as active family planning participants, 83,978 (78.5%). From 78.5% of KB participants in Magetan Regency, it was donated by fertile age couple in the Plaosan Health Center area, around 5.15% (5,517 participants) ⁽⁷⁾. In 2018, 772 (23.6%) users used MKJP contraception, which decreased to 19.6% in 2019. While active family planning participants who used non-MKJP contraception were 2,875 (76.4%) and increased to 80.7% in 2018. 2019 ⁽⁸⁾. In Bulugunung Village, Plaosan District in 2018, 375 (20.3%) used MKJP contraception, which decreased to 18.5% in 2019. Meanwhile, 1,245 (80.2%) active family planning participants used non-MKJP contraception, increasing to 82.5% in 2019.

In theory, there are several factors that cause people not to choose long-term contraceptive methods, including; afraid of side effects, afraid of surgery, unhealthy body condition and not having children ^(9,10). Different from the research results ^(11,12) who reported that the low use of MKJP was due to factors; age, education level, occupation, source of family planning services and area of residence. This research report is supported by research ⁽¹³⁾, who reported that the level of education, knowledge of contraception, husband's support, local culture, level of family welfare, and IEC influenced the low choice of MKJP as a family planning method. This research report is supported by research ⁽¹⁴⁾ who reported that age, knowledge, and husband's support influenced the low use of MKJP. Several factors causing the low MKJP from various research results can be understood or accepted when referring to Green's behavioral theory. According to Green's theory in ⁽¹⁵⁾, a person's behavior towards health is influenced by three factors, namely; 1) predisposing factors include knowledge, benefits, perceptions, beliefs, values, traditions, socioeconomic, and difficulties; 2) enabling factors include the availability of facilities and infrastructure; 3) reinforcing factors include family support, behavior of community leaders, religious leaders and the role of health workers.

The solution to narrowing down the main factors that cause couples of childbearing age not to choose a long-term contraceptive method for family planning is using the Difficulty-Usefulness Pyramid (DUP) approach. This method emphasizes that changes to the elements that affect the system can be seen from the pyramid that is formed. The lowest element because it provides the widest range/distance is a top priority for changes/improvements ⁽¹⁶⁾. The choice of method in determining the cause of the low factor influencing the effect is a new method that needs to be applied in various studies. Therefore, the difference and advantage of this research compared to previous similar studies lies in the use of the analytical method. The use of the DUP method is directed at determining the priority elements seen from the pyramid. The pyramid graph is formed from the average of the widest distances of the difficulty element and the benefit element.

Purpose

The purpose of the study was to select the prioritized elements in the use of long-term contraceptive methods using the method Difficulty-Usefulness Pyramid (DUP).

METHODS

This type of research was descriptive study. This research was describe the causes of the low use of long-term contraceptive methods (MKJP) using the DUP method. The Difficulty-Usefulness Pyramid (DUP) method was a newly developed method to determine and/or select elements that need to be prioritized to improve the achievement of long-term contraceptive used by family planning participants. ⁽¹⁶⁾

The research location was in Bulugunung Plaosan Village, Magetan Regency. The size was 64 women of fertile age couple Non MKJP. The study period was five months, from January to May 2021. The research variables were elements of the selection of the MKJP contraceptive method. The research instrument was a questionnaire. The method of data collection used a guided interview. Focus Group Discussion (FGD) method was used to set the element type. Data analysis was use the DUP method. This research have permitted from the Office of the National Unity and Politics of Magetan Regency, also passed the ethical review at the Health Poltekkes, the Ministry of Health, Surabaya.

RESULTS

Subject Characteristics

The subject characteristics of this research shown here.

Table 1. Subject characteristics

No	Characteristics	Category	Frequency	Percentage
1.	Age	1. Reproductive age is not at risk	34	60
		2. Reproductive age at risk	30	40
		Amount	64	100
2.	Education	1. Lower secondary education	38	75
		2. Upper secondary education	26	25
		Amount	64	100
3.	Work	1. Work	45	80
		2. Does not work	19	20
		Amount	64	100
4.	Parity	1. Primipara	24	35
		2. Multipara	40	65

Results of Focus Group Discussion (FGD)

The results of the focus group discussion (FGD) conducted by researchers with several women of non-MKJP fertile age couple regarding the reluctance to use long-term contraceptive methods for their family planning options, initially provided nine elements, including: 1) knowledge about MKJP, 2) cost of MKJP family planning services, 3) Midwife's skills/competencies, 4) availability of family planning devices, 5) communication, information and education of family planning, 6) husband's support, 7) access to services, 8) satisfaction with contraceptives and 9) history of family planning use. The results of FGD activity concluded that there were only 5 (five) elements that needed to be followed up as a research instrument to determine the priority elements considered by prospective family planning participants not to choose the long-term contraceptive method (MKJP), namely: 1) fertile age couple's knowledge about MKJP, 2) communication, information and education of family planning, 3) service fees of family planning, 4) availability of tools at family planning services and 5) husband's support. These five elements were then used as research instruments for further analysis.

Analysis of Prioritized Elements Using DUP by Fertile Age Couple Women Non-MKJP

Table 2. Mean score and range

Mean score of difficulty	Elements	Mean score of usefulness	Range
-7.08	Availability of family planning services (A)	8.80	15.89
-4.48	Communication, information and education of family planning (B)	7.47	11.95
-3.51	Husband support (C)	7.32	10.83
-2.92	Fertile age couple's knowledge about MKJP (D)	6.55	9.48
-5.29	Service fee of family planning (E)	7.88	13.17

To make it easier to interpret table 2 above, it is necessary to build a pyramid as a continuation of the DUP method, with the results as shown in Figure 1.

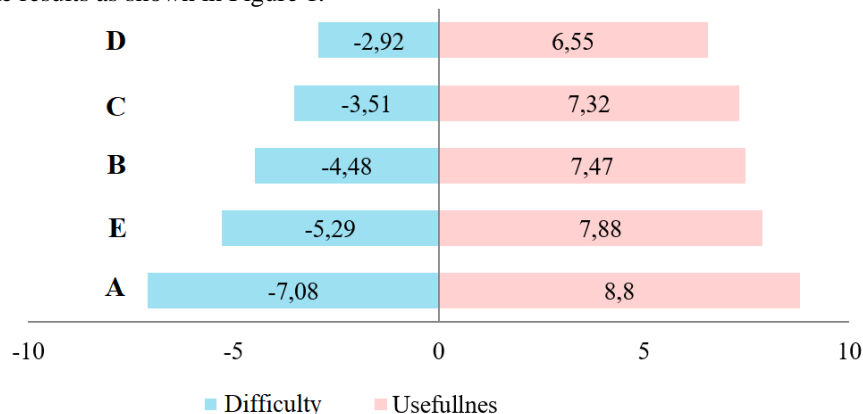


Figure 1. Results of the Difficulty-Usefulness Pyramid of MKJP elements analysis

High Elements Analysis

Table. 3 Mean score and range for high elements

Mean score of difficulty	Elements	Mean score of Usefulness	Range
-7.08	Availability of family planning services (A)	8.80	15.89
-5.29	Service fee of family planning (E)	7.88	13.17
-4.48	Communication, information and education of family planning (B)	7.47	11.95

The elements of the availability of family planning services, service fee of family planning, and communication, information and education of family planning had very high usefulness and high difficulty.

Low Elements Analysis

Table 4. Mean score and range for low elements

Mean score of difficulty	Elements	Mean score of usefulness	Range
-2.92	Fertile age couple's knowledge about MKJP (D)	6.55	9.48
-3.51	Husband support (C)	7.32	10.83

Elements of Fertile age couple's knowledge about MKJP (D) and husband's support (C) had low usefulness but high difficulty.

DISCUSSION

Based on the research results, the high priority element is the availability of family planning services. The factor of availability of family planning devices is the main cause of the low interest of prospective family planning participants to choose the long-term contraceptive method. From the results of the BKKBN research, it is stated that the unmet need of 12.2% is still quite high from the 2019 target of 9.9% ⁽³⁾. The availability of family planning services in this case is the availability of infrastructure, distance, and the availability of complete equipment. The main cause of unmet need is the human factor (labor) who deliberately provides other alternatives besides the factor of not having contraceptives available ^(9,17). The level and type of consumer involvement in purchasing a product is influenced by; the importance of the product to consumer image, product appeal, consumer emotional appeal to the product, and symbols from the environment/outside as well as post-purchase risks ⁽¹⁸⁾. Prospective family planning participants before deciding to use one of the contraceptives must begin with awareness because of a need or desire. The next stage, after realizing the need for family planning, the prospective participants will seek information about the types of contraceptive products to be selected and evaluated. Consumers or prospective family planning participants who have high emotional involvement with a product or contraceptive that are in accordance with their self-image and in accordance with the selection of information obtained, make decisions faster. After using one of the contraceptives, the family planning participant will give an assessment in the form of satisfaction or dissatisfaction with the selected contraceptive product or device. Access to services is not a factor influencing usage or purchase decisions. However, many research reports state that service accessibility is directly related to the fulfillment of contraceptives ^(19,20).

Apart from Indonesia, the factor of access to family planning services also has an influence, such as in Uganda and Pakistan ^(21,22). The results of research conducted by the BKKBN show that most of the participants of family planning services are served by the private sector, government and private practice midwives, meaning that access to family planning services in Indonesia is relatively close and affordable ⁽¹⁾. The distance for fulfilling the MOW or MOP family planning is further, because this type of family planning service can only be carried out at a hospital that is a bit far from the prospective family planning participants house. This study is in line with research conducted by Choiriyah, et al. (2019) which stated that there was a relationship between the completeness of contraceptives and distance from home with the selection of MKJP and in line with research conducted by Herowati & Sugiharto (2019) which stated that there was a relationship between There is a significant relationship between the completeness of contraceptive facilities and infrastructure and the selection of MKJP ^(14,23).

Based on the results of the research, the elements that influence the selection of MKJP are in high priority after the first element, namely the cost of family planning services. If the MKJP installation fee that must be paid is high enough for women with low income, so that women who are economically unable to access MKJP installation fees will tend not to be interested in using MKJP. However, according to the results of a survey in Bulugunung Village, the installation of the MKJP family planning has been included in the BPJS (health

insurance), but medical personnel have not informed the public so that people think that using MKJP is expensive or there is no assistance from the government.

The third element that contributes significantly to the low interest of prospective family planning participants in choosing MKJP is the element of family planning information, education, communication (IEC). The results of this study are supported by Dewi Fransisca's research which was published in 2019, that health counseling in the family planning program, this activity is carried out mainly by clinical officers both medical, paramedic, or non-medical who work specifically for family planning.⁽²⁴⁾ People know about family planning information, family planning services and everything else about family planning that comes from their habits of reading newspapers, magazines, watching television, listening to the radio, and reading information on social media. The results of the 2019 BKKBN research stated that the highest information on adolescent knowledge about family planning contraceptives came from watching television, reading banners and posters and finally from social media via the internet. While the highest sources of information came from friends or neighbors, teachers, midwives and finally from family planning field officers (PL-KB). Basically, health education efforts carried out by health workers who are in direct contact with the community or target are very significant in increasing public knowledge (adolescents) related to family planning. The purpose of IEC of family planning is to increase knowledge, attitudes, and family planning practices so as to achieve the addition of new participants and direct the family planning movement to the entire community. Foster an enabling environment for increased contraceptive use. In each sub-district, the district population and family planning office has assigned an officer who provides family planning information and counseling services, namely the Village Family Planning Sub-Aid Cadre (PPKBD) who is fostered by the Family Planning Field Extension Officer (PPLKB). From the results of the 2019 East Java BKKBN Program Accountability Work Survey (SKAP) women who received most of the information on family planning came from PPKBD and PL-KB cadres. In each sub-district, the district population and family planning office has assigned an officer who provides family planning information and counseling services, namely the Village Family Planning Sub-Aid Cadre (PPKBD) who is fostered by the Family Planning Field Extension Officer (PPLKB). From the results of the 2019 East Java BKKBN Program Accountability Work Survey (SKAP) women who received most of the information on family planning came from PPKBD and PL-KB cadres. In each sub-district, the district population and family planning office has assigned an officer who provides family planning information and counseling services, namely the Village Family Planning Sub-Aid Cadre (PPKBD) who is fostered by the Family Planning Field Extension Officer (PPLKB). From the results of the 2019 East Java BKKBN Program Accountability Work Survey (SKAP) women who received most of the information on family planning came from PPKBD and PL-KB cadres.

Based on the research results, the element that influences the selection of low priority MKJP is knowledge fertile couple age about MKJP. The results of this study are in line with the research of Iswari Hariastuti (2017), Gandhis Novita, et al (2019) which states that the level of knowledge, education level has an indirect influence on the interest of prospective family planning participants in determining their choice of the MKJP contraceptive method.^(11, 25) The previous explanation explained that before making a decision, a consumer selects information, so that they gain knowledge of the product they want to buy. However, from a different perspective, it turns out that the level of knowledge about contraceptives is a factor that is not a priority to be improved. According to the researcher, this is due to the difficulty of obtaining services, the lack of availability of contraception so that participants agree with the available non-MKJP contraceptive methods, and the very high cost. Actually, the more information that comes in, the higher the knowledge about the MKJP method. On the other hand, the low knowledge of prospective family planning participants will certainly affect the decision to use the MKJP method of family planning. This behavior can be caused by respondents considering the side effects and effectiveness of the use of their choice of contraception. The low use of MKJP can also be caused by the fact that respondents know that there are other contraceptives that they think are more effective and efficient, such as injectable contraceptives, PIL and others.

Based on the research results, the elements that influence the selection of priority MKJP the lowest is the element of husband's support. In line with House's opinion in Smet (1994), that obtaining support, criticism from family, coworkers, community leaders, religious leaders as well as health workers themselves are factors that strengthen but also weaken certain behaviors. According to Lewin (1951) cit. Brightman (1991), has formulated a behavioral relationship model which says that behavior (B) is a function of individual characteristics (P) and the environment (E) with the equation $B = f(P, E)$. In this model, individual characteristics (P) include various components, namely: motives, values, personalities, and attitudes that interact with each other. Each of these individual characteristic components interacts with the environmental component (E) in determining a person's behavior. Environmental factors (E) are sometimes more dominant in influencing human behavior, so that the response of human behavior to stimulation becomes more complex. The study conducted by Zhao, et al stated that the highest effective contraception was PIL, injection and ring use in women and men (MOW/MOP).⁽²⁶⁾ Based on this study, it can be justified that the husband's support to provide decision support for the selection of long-term contraceptive methods is very low.

CONCLUSION

Based on the results of research that has been carried out, most of the subjects are over 35 years old, have a lower secondary education level, are already working and are multiparous. Elements that are categorized as high priority are availability of family planning services, service fee of family planning, and communication, information and education of family planning.

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