

Relationship Between Knowledge and Self-Efficacy with IUD Choice in Active Family Contract Acceptors Based on Social Cognitive Theory

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ABSTRACT

The use of long-acting reversible contraceptives (LARC) such as IUDs is still low in Indonesia, especially among active contraception acceptors. One of the influencing factors is knowledge and self-efficacy. Based on social cognitive theory, a person's behavior, including choosing contraception, is influenced by personal, behavioral, and environmental factors. The purpose of this study was to determine the relationship between knowledge and self-efficacy with the choice of IUD in active contraceptive services acceptors based on social cognitive theory. This study used an observational analytical approach with a cross-sectional design. The study population consisted of 577 active contraception acceptors, and the sample consisted of 150 active contraceptive services acceptors selected by simple random sampling. The study was conducted at the Candi Sidoarjo Health Center. The independent variables in this study were knowledge and self-efficacy and the dependent variable was the choice of IUD in active contraceptive services acceptors. The research instrument was a questionnaire that had been tested for validity and reliability. Data analysis was carried out using the Spearman-rank statistical test, with $\alpha \leq 0.05$. The results of the study showed that there was a relationship between knowledge and IUD selection p-value = 0.044 ($\alpha \leq 0.05$) which had a coefficient value of $r = 0.265$ which means it has a moderate correlation. In addition, there was a relationship between self-efficacy and IUD selection p-value = 0.035 ($\alpha \leq 0.05$) which had a coefficient value of $r = 0.232$ which means it has a moderate correlation. It was concluded that knowledge and self-efficacy were related to IUD selection in active contraceptive services acceptors. This is in line with the social cognitive theory which emphasizes the influence of personal factors, so that health workers are needed to improve education about long-term contraception, especially IUDs and strengthen self-efficacy through effective counseling by health workers to contraceptive services acceptors.

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1. INTRODUCTION

The Planned Parenthood program is important for national development and overcoming population problems. This program offers short-acting reversible contraceptives and long-acting reversible contraceptive methods, including IUDs, implants, female sterilization, and male sterilization. IUDs are recommended because they can reduce birth rates (1). The choice of contraception is influenced by individual understanding and beliefs (2). Currently, the use of IUDs among women of childbearing age is still uneven, especially in the public health population. Myths and a lack of information about long-term contraceptive methods influence people's choices (3).

In East Java, the target for contraceptive coverage in 2022 was 26.75%, but only 22.6% was achieved (BKKBN East Java Province, 2020). In 2023, the target increased to 27.57%, yet the actual achievement decreased to just 20.6% (BKKBN, 2023). Similarly, in Sidoarjo, the target in 2022 was 20.2%, but the achievement was slightly lower at 20%. In 2023, the target rose to 21.07%, but the achievement reached only 21.0%. (4).

Factors influencing the choice of IUD contraception include health knowledge, self-efficacy, and perceived barriers (5). According to Social Cognitive Theory, personal factors and self-efficacy influence health promotion behavior. Interpersonal influences related to the knowledge and attitudes of others, an unsupportive environment, and negative perceptions of IUDs also play a role. Low IUD use can increase births, and health risks increase in mothers over 35 years or under 19 years. High unemployment rates can lead to poverty and affect the quality of future generations (6).

Knowledge is the result of the process of "understanding," which arises after a person perceives an object. This perception is carried out through the five human senses, namely the senses of sight, hearing, smell, taste, and touch. The majority of human knowledge is obtained through the senses of sight and hearing. Thus, knowledge is the result of an individual's learning process, which can be obtained through both the senses of sight and hearing (7). Knowledge is the result of the process of understanding that occurs after the act of imagining something. A person's behavior supported by knowledge will be better. Knowledge is an important component that influences how a person behaves and chooses the right contraceptive (8). Learning is the process of acquiring knowledge or skills through experience, study, or teaching. The information acquired will be stored in long-term memory, especially if it involves repetition and active involvement (9).

The level of knowledge about contraceptives and reproductive health plays an important role. Lack of information or misunderstanding can lead to ineffective or inappropriate choices. The higher a person's level of understanding about something, the greater their influence in choosing the most appropriate contraceptive for them. Knowledge related to understanding the procedure for installing or using the chosen contraceptive, the duration, benefits, and side effects obtained. Good knowledge of contraception acceptors regarding IUD contraception is associated with high levels of anxiety in the process of installing IUD contraception (10).

Several factors can influence a person's level of knowledge, including education, which plays a vital role in shaping attitudes and behaviors through formal learning and training. Information or mass media also contributes significantly by utilizing technology to gather, process, and disseminate data, thereby enhancing one's understanding. Social, cultural, and economic factors, such as traditional values and economic status, can also impact knowledge acquisition, even if actions based on such knowledge are not always critically evaluated (11). The environment, especially one that provides feedback, supports or limits the absorption of information. Additionally, experience serves as a foundation for problem-solving by drawing on previously applied methods, while age influences cognitive abilities, such as reasoning and comprehension, thus affecting how knowledge is processed and understood (12).

Self-efficacy is a person's belief in their capacity and in the outcome of a desired outcome. Self-efficacy also regulates a number of cognitive processes that can enhance or inhibit their ability to perform actions or behaviors that lead to the development and maintenance of behavior (13). Bandura describes the formation of a person's self-efficacy through four main sources: first, previous mastery experiences. Second, vicarious experiences. Third, social persuasion. Fourth, emotional and physical states (14). Increased self-efficacy in acceptors contributes to the tendency to choose long-term contraceptive methods (LMPs), because this method is considered more effective and efficient in preventing pregnancy. A person's level of self-efficacy also influences their ability to make decisions, especially those related to certain impacts or consequences (15).

There are three main dimensions of self-efficacy: level, strength, and scope. The level dimension refers to how difficult a task is perceived to be by an individual, which is closely related to their belief in their ability to perform it. The strength dimension describes the degree of confidence or expectation a person has in their own capabilities to successfully complete a task. Meanwhile, the scope or generality dimension pertains to the extent to which individuals believe in their ability to perform a wide range of behaviors across different situations (16). Therefore, it is important to provide encouragement and motivation to acceptors so that they have good self-efficacy in determining the choice of contraceptive method. According to the results of a study conducted by Noviani in 2024, it was found that most respondents had medical considerations as the basis for their self-efficacy when choosing a type of contraception. The study indicated that there was a moderate relationship between medical factors and the level of self-efficacy in choosing a contraceptive. (17).

2. METHOD

This study uses a quantitative approach using an observational analytical design with a cross-sectional approach. This study was conducted in the Candi Health Center area, Sidoarjo Regency. The independent variables in this study are Knowledge and Self-Efficacy. The dependent variable in this study is the Selection of IUD in Active contraception Acceptors (18). The population of this study was all active acceptors who visited the Candi Health Center Area, Sidoarjo, totaling 577 people, with a sample size of 150 people, the sample size according to Slovin (19). This sample is considered a representation of the population on a smaller scale, so the number of samples must be sufficient to represent the population accurately (20). The inclusion criteria were those who were willing to be respondents, women of childbearing age, 25-50 years, able to communicate effectively, able to read and write, and active acceptors. The Exclusion Criteria were pregnant women and contraception acceptors who were reluctant to provide answers. These criteria follow the ethical statement No. EA/3156/KEPK-Poltekkes_Sby/V/2025. This study uses a probability sampling method with a simple random sampling technique (21). With the sampling method, each member of the population has an equal chance of being selected randomly, taking into account social aspects. This technique is used when the population is considered to have uniform or homogeneous characteristics (22). The instrument used for data collection in this study was a structured questionnaire. The questionnaire comprised two sections: a knowledge questionnaire and a self-efficacy questionnaire.

The first section assessed the knowledge of active family planning (FP) acceptors regarding intrauterine device (IUD) contraception and consisted of 20 multiple-choice items. The scoring system was calculated by dividing the number of correct answers by the total number of questions, then multiplying the result by 100. The categorization of knowledge levels was as follows: a score of 76–100 indicated a good level of knowledge, 56–75 indicated a moderate level, and below 56 was categorized as low (7).

The second section measured the self-efficacy of active FP acceptors concerning IUD contraception, comprising 10 items based on a Likert scale. The response options were scored as follows: "very appropriate" (4), "appropriate" (3), "inappropriate" (2), and "very inappropriate" (1). The total score was used to classify self-efficacy levels as follows: a score of 32–40 was categorized as high, 24–31 as moderate, and less than 23 as low (23).

3. RESULTS AND DISCUSSION

Presenting the results of research using the Spearman rank (24) test, including: general data consisting of a description of the research location and the percentage of contraceptive use (contraception) in the Candi Health Center work area, based on data obtained from 150 respondents. Specific data containing the results and data analysis based on the objectives that have been set, including knowledge about the selection of IUDs in active contraception acceptors based on social cognitive theory, and self-efficacy of IUD use decisions by active contraception acceptors based on the social cognitive theory approach. IUDs in active contraception acceptors based on social cognitive theory.

3.1. Characteristics of Contraception Acceptors

Table 1. Characteristics of contraception Acceptors in the Candi Health Center Area, Sidoarjo Regency in March 2025

Characteristics	Frequency (f)	Percentage (%)
Age		
25-33 years	50	33,3
34-42 years	45	30,0
43-50 years	55	36,7
Total	150	100
Education		
Elementary School	6	4,0
Middle School	5	3,3
High School	93	62,0
University	46	30,7
Total	150	100
Paritas		
Primipara	34	22,7
Multipara	110	73,3
Grandemultipara	6	4,0
Total	150	100

Based on the characteristics of contraception acceptors, it can be explained that more than a third (36.7%) of contraception acceptors are aged 43-50 years, the majority (62.0%) of contraception acceptors have a high School education, and the majority (73.3%) of contraception acceptors' parity is multiparity.

3.2. Knowledge of IUD Selection in Contraception Acceptors

Table 2. Frequency Distribution of Family Planning Acceptors' Knowledge in the Candi Health Center Area, Sidoarjo Regency in March 2025

Knowledge	F	%
Good	62	41.3
Enough	69	46.0
Less	19	12.7
Total	150	100.0

Explaining the results of 150 contraception acceptors, almost half (46.0%) of contraception acceptors have sufficient knowledge.

3.3. Self-Efficacy in Selecting IUDs in Family Planning Acceptors

Table 3. Frequency Distribution of Self-Efficacy of Family Planning Acceptors in the Candi Health Center Area, Sidoarjo Regency in March 2025.

Self Efficacy	F	%
Good	36	24.0
Enough	92	61.3
Less	22	14.7
Total	150	100.0

Explaining the results of 150 contraception acceptors, the majority (61.3%) of contraception acceptors had sufficient self-efficacy.

3.4. Contraceptive Selection for Active Contraception Acceptors

Table 4. Distribution of Frequency of IUD Selection in Family Planning Acceptors in Candi Health Center Area, Sidoarjo Regency in March 2025

IUD birth control selection	F	%
Yes	59	39.3
No	91	60.7
Total	150	100.0

Explaining the results of 150 contraception acceptors, the majority (60.7%) of contraception acceptors did not choose IUD contraception.

3.5. Relationship between Knowledge and IUD Selection in Contraception Acceptors

Table 5. Cross-Table of Relationship between Knowledge and IUD Selection in Active Acceptors in Candi Health Center Area, Sidoarjo Regency in March 2025

Knowledge	IUD selection in active acceptors						Test results <i>Sperman Rank</i>
	IUD		Not IUD		Total		
	f	%	F	%	f	%	
Good	30	48,4	32	51,6	62	100,0	$p\text{-value}= 0,044$ $r = 0,265$
Enough	24	34,8	45	65,2	69	100,0	
Less	5	26,3	14	73,7	19	100,0	
Total	59	39,3	91	60,7	150	100,0	

Explains that almost half (48.4%) of having adequate knowledge, contraception acceptors choose IUD. Meanwhile, most (65.2%) of having adequate knowledge of contraception acceptors do not choose IUD. In addition, most (73.7%) of having adequate knowledge of contraception acceptors do not choose IUD. Based on decision-making of the Spearman rho statistical test, there is significance (real) in terms of knowledge and IUD selection. The p-value for IUD is 0.044, which is smaller than the set limit, which is $p < 0.05$. While the coefficient (r) obtained is 0.265, which indicates a correlation with a moderate level of strength.

3.6. Relationship between Self-Efficacy and IUD Selection in Contraception Acceptors

Table 6. Cross-Table of the Relationship between Self-Efficacy and IUD Selection in Active Acceptors in the Candi Health Center Area, Sidoarjo Regency in March 2025

Self-Efficacy	IUD selection in active acceptors						Test results <i>Spearman Rank</i>
	IUD		Not IUD		Total		
	f	%	F	%	F	%	
Good	17	47,2	19	52,8	36	100,0	<i>p</i> -value= 0,035 <i>r</i> = 0,232
Enough	31	33,7	61	66,3	92	100,0	
Less	11	50,0	11	50,0	22	100,0	
Total	59	39,3	91	60,7	150	100,0	

Explains that Most contraception acceptors (66.3%) with sufficient self-efficacy levels chose not to use IUDs. Meanwhile, more than half of contraception acceptors (52.8%) with good self-efficacy also did not choose IUDs. On the other hand, half of contraception acceptors (50.0%) with poor self-efficacy tended not to choose IUDs. Based on the Spearman rho statistical test used to analyze the basis for decision making, a significance was found between knowledge and IUD selection, with a p-value of 0.035, which is smaller than the set limit, which is $p < 0.05$. The coefficient (r) obtained was 0.232, indicating a correlation with a moderate level of strength.

4. CONCLUSION

Based on the research findings and discussions in the previous chapter, the following can be concluded, first almost half of active contraception acceptors' knowledge is sufficient. Second most active contraception acceptors' self-efficacy is sufficient. Third, most active contraception acceptors' contraceptive

choices do not choose IUD. Fourth, there is a relationship between active contraception acceptors' knowledge and IUD contraceptive choices. Fifth, there is a relationship between active contraception acceptors' self-efficacy and IUD contraceptive choices.

The level of knowledge about contraceptives and reproductive health plays an important role. Lack of information or misunderstanding can lead to ineffective or inappropriate choices. The more knowledge a person has about something, the wider their influence in choosing the right contraceptive. Knowledge related to understanding the procedure for installing or using the chosen contraceptive, the duration, benefits, and side effects obtained. Good knowledge of contraception acceptors regarding MKJP contraception is related to high levels of anxiety in the process of installing IUD contraception (25).

Women of childbearing age who use intrauterine contraception (IUDs) are more likely to choose them if they are more effective. The role of self-efficacy in influencing a person's behavior is closely related to the outcome of that behavior, namely the choice of contraceptive method. Those who have a high level of self-efficacy will be more confident in their ability to make behavioral changes towards a more positive direction. Acceptor self-efficacy towards contraception influences the choice of contraceptive method (26).

According to the researcher's assumption, some family planning (contraception) acceptors who have sufficient knowledge about various contraceptive methods are still reluctant to use intrauterine contraceptive devices (IUDs). This is due to various factors, one of which is their understanding of the IUD installation procedure, which involves a medical procedure in the form of opening the female reproductive organs, which for most acceptors is considered an uncomfortable experience, causing shame, and psychological discomfort. In addition, although some acceptors have adequate levels of self-efficacy, they still choose not to use IUDs because of significant fear. This fear generally comes from the assumption that the use of IUDs can be harmful to health, thus causing concerns that hinder decision-making in choosing this contraceptive method.

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