



The Empowerment of Women of Childbearing Age through Participatory Action Research in Preventing Cervical Cancer

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Abstract

AIM: This study aims to explore and analyze the effect of empowering women of childbearing age through the participatory action research method on cervical cancer prevention.

SETTINGS AND DESIGN: This was qualitative and quantitative approaches.

METHODS: A participatory action research approach to empower women of childbearing age and a quantitative pre-test and post-test without control approach was used to assess the changes that occur. Statistical analysis used: Paired t-test, to find out the mean difference before and after empowerment. Empowerment affects social changes in women of childbearing age in the prevention of cervical cancer. The Perwiritan and Moria groups not only carry out religious activities but also socialization and cervical cancer prevention campaigns.

RESULTS: The results showed that empowerment had an effect on increasing the average score of knowledge, attitudes, and actions of women of childbearing age in preventing cervical cancer ($p < 0.05$).

DISCUSSION: Empowerment of women of childbearing age is very effective in creating awareness, knowledge, attitudes, and actions in cervical cancer prevention. Empowerment can also be done for women in other communities.

CONCLUSION: There is an increase in understanding of women of childbearing age and the situation in which PAR is carried out because of the emergence of change agents among women of childbearing age who continue to have dialectics.

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Introduction

Cervical cancer is cancer that occurs in the uterine cervix or the mouth of the uterus [1], [2]. Cervical cancer is the second most common cancer among women after breast cancer [3], [4]. This type of cancer is also the most cancer-related death for women. In the developing countries, cervical cancer is ranked as the first cancer that occurs in women after breast cancer, colorectum, and endometrium; while in developed countries, it is ranked at number four [5], [6]. Approximately 52 million Indonesian women are at risk of suffering from cervical cancer, 70% come for treatment when their health condition is critical or at an advanced stage. A research conducted by Suryapratama [7] shows that 78.1% of cervical cancer patients in East Java asked for medical treatment when they are at the Stage III B. This is in line with what Pradana's and Surbakti's [8], [9] research findings where 65.5% of cervical cancer patients came for medical treatment at the Stage III. Cervical cancer is actually a type of cancer that is easily detected at the early stage. In other words, it can be prevented or treated before it progresses to the advanced stage where many patients died because of too late to be diagnosed and treated [5], [8].

Cervical cancer is a multifactorial disease where the emergence of the disease is not a single cause [10]. Risk factors for cervical cancer are young marriage (<16 years), parity, hormones, socioeconomic, the use of contraceptives, the cleanliness of genital organs, and infections of sexually transmitted diseases including transmission of human papillomavirus (HPV) the result of changing sexual partners. Those are the main cause of cervical cancer [11]. The majority of women who are diagnosed with cervical cancer do not conduct screening and following up medical treatment after abnormal results are found [12]. Other obstacles for women who do not conduct screening are related to knowledge, helplessness in preventing cervical cancer, low socioeconomic conditions, lack of information and limited staff, as well as a lack of support from their husbands and cultural factors [13].

Low knowledge and lack of attitude causes women of childbearing age increasingly convinced to not take an early detection on cervical cancer (Surbakti) [8]. Barrow [14] stated that 52.8% of women of childbearing age have less knowledge, The same thing is that Surbakti *et al.* research lacks knowledge (44.4%) and lack of attitude (55.6%), so it is not motivated to carry out early detection [13], [15], [16], [17].

Cultural factor also becomes an obstacle in early detection process where women are reluctant to

carry out a medical examination. Feelings of shame or taboo regarding genitalia, contrary to religious values, treating by male doctors or nurses [14], [17] afraid on the positive results, fear of pain in examination, worried, and anxious for early detection are also several factors of women to not conduct an early detection program [16], [17]. Healthy behavior could overcome health problems individually. Some activities like women empowerment could also improve understanding of the community on cervical cancer [16], [18], [19]. Prevention of cervical cancer can be done through primary prevention such as preventing risk factors and conducting immunizations such as HPV vaccination, secondary prevention by screening through VIA or Pap smear, and through the empowerment of women and their families there is an increase in knowledge, attitudes, and healthy behavior [20], [21], [22]. Empowerment of women with a participatory approach can encourage or motivate and raise awareness of their potential and try to develop them, and not become a dependency (charity), because there is no WUS who is completely helpless. WUS experience helplessness in reaching health services, limited knowledge, and lack of health personnel as providers of communication, information, and education, so it is necessary to empower WUS (fertile aged women) in early detection of cervical cancer [21].

This study aims to explore and analyze the effect of empowering women of childbearing age on their knowledge, attitude, and action in the prevention of cervical cancer by participatory action research/PAR method in Padang Bulan Community Health Center (Pusat Kesehatan Masyarakat/Puskesmas) in Medan, Indonesia.

Subjects and Methods

The research carried out was participatory action research, namely research activities carried out in a participatory manner among residents at the research locus or wider social scope to encourage transformative actions (changes for better conditions). In this study, the changes measured were the knowledge and attitudes of women of childbearing age, with quantitative approach through pre-test and post-test without control approaches were conducted to gather the data. The locus of this research is the organization or association of women religious group/*Perwiritan* and a group of mothers in *Moria* organization. *Perwiritan* is a religious activity for Muslim women and *Moria* is a women's association in the Protestant Karo Batak Church (GBKP). These two organizations have strong character and behavior of women, especially Karo women.

The sample research in this study is women of childbearing age with having ages from 20 to 49 years old. Methods for collecting data

were through interview, observation, and focus group discussion (FGD) and the sampling technique was simple random sampling. Data analysis was conducted through descriptive analysis and bivariate between two variables using the significance test and the degree of confidence 95%, $p < 0.005$. Paired t-test was used to find out the difference between the average before and after the empowerment process in terms of knowledge, attitudes, and actions. Qualitative analysis method was done through interactive model analysis [23], [24].

Results

Empowerment on women of child-bearing age

Empowerment with the PAR method was begun with social research aimed to find problems, analyzing problems, exploring the potential of choosing solutions, and intervening problem in order to get solution together with women of childbearing age. All the processes can be explained as follows: Figure 1.

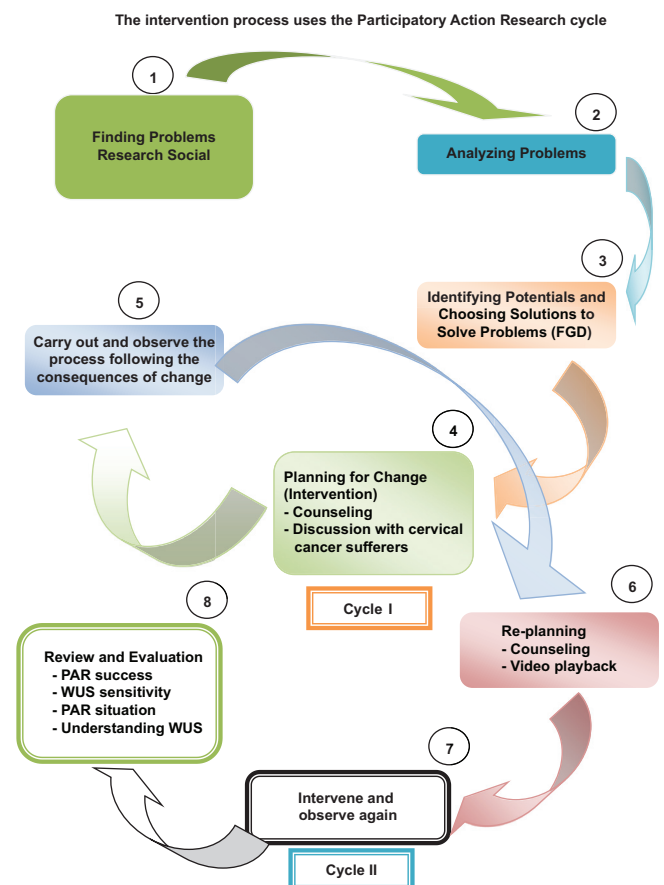


Figure 1: Schematic of research flow (intervention process)

First is finding problems, social research, which is dynamic and participatory in nature, can increase

the capacity of WUS not only in terms of knowledge, attitudes, and actions but also the habituation of how to think and act with their own awareness, willing to do cervical cancer prevention in culturally based health services.

The second is the problem analysis, fertile age women: Lack of knowledge about cervical cancer prevention, women who have not had IVA or Pap smear because of shame, fear of positive examination results, feel that they do not need early detection.

The third process is to explore the potential of women of childbearing age and choosing solutions. Recognizing the potential and choosing solutions to problems began with the focus group discussion/FGD, at the house of one of the women of childbearing age during Moria and Perwiritan activities. The potential of women of childbearing age is that they have the will and desire to prevent cervical cancer. They also have the willingness to spend some money if there is the cost caused by the treatment. There is also the community health service in the area for IVA on every Wednesday and Thursday. There is a willingness of cadres to participate. There is also support from family/husband of women of childbearing age including the wife of the head of village.

The fourth is setting up the plan to change. The plan is undertaken in empowerment which was counseling and inviting cervical cancer sufferers. Counseling was done repeatedly, aiming to increase knowledge, attitudes, and actions of women childbearing age. In each process, it motivates women childbearing age to be able to do an early detection of cervical cancer.

The fifth is to conduct and to observe the process and the consequences of the change (reflection/cycle). Empowerment activities with the PAR method in the first cycle have been carried out in accordance with the planned interventions. Each cycle is evaluated after the intervention whether women childbearing age have participated or not.

The sensitivity of women childbearing age

Perwiritan and Moria groups already have willingness to have an IVA test. This can be said that they have positive response. Activities carried out in this process were the counseling through presenting people who are suffering from cervical cancer, and playing videos related to the IVA examination process.

The situation where the PAR was taking place began with the process of blended process in the women childbearing age groups (Perwiritan and Moria). Researchers could see women childbearing age giving a good response and strong enthusiasm in participating in all the series of empowerment activities. The situation PAR was well received by women childbearing

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The understanding of women childbearing age

The understanding of women childbearing age in the prevention of cervical cancer was done by measuring knowledge, attitudes, and actions before and after the empowerment process. Measurement of knowledge, attitudes, and actions of women childbearing age in the first cycle evaluation 1 is shown

in Table 1. After the intervention of the empowerment of women childbearing age with PAR, the results of the post-test I in the first cycle were mostly lack of knowledge, attitudes, and actions. There are still women childbearing age who have not yet participated, so continue with cycle II.

Table 1: Distribution of knowledge, attitudes and actions of WUS in Cycle I PAR of Perwiritan and Moria groups in Padang Bulan the Community Health Center of Medan, Indonesia

Category	Intervention Perwiritan				Intervention Moria			
	pre test		Evaluation Cycle I		pre test		Evaluation Cycle I	
	F	%	F	%	F	%	F	%
Knowledge								
Well	3	10.0	21	70.0	2	6.7	20	66.7
Less	27	90.0	9	30.0	28	93.3	10	33.3
Attitude								
Positive	2	6.7	22	73.3	5	16.7	22	73.3
negative	28	93.3	8	26.7	25	83.3	8	26.7
Action								
Yes	5	16.7	19	63.3	6	20.0	12	40.0
No	25	83.3	11	36.7	24	83.3	18	60.0
Total Number	30	100	30	100	30	100	30	100

Source: Primary Data processing (2017).

In the step of replanning (Cycle II)

There was discussion between researchers and women childbearing age who both agreed to conduct counseling with different media. Counseling using a pocket book, video of screening of IVA examination, singing with a song to prevent cervical cancer in the Karo language was conducted. After empowerment, there was women childbearing age, which does IVA or Pap smear test. This reflects that there is a positive response from women childbearing age. If their response is lacking, then replanning should be carried out in different way.

The next step is the intervention and observation. Intervening and reobserving approaches to women childbearing age were agreed where counseling was carried out and motivating women who have not been examined. The IVA or Pap smear examination was already at 90.0%, with the additional number from their neighbors and passive members of Moria.

The next step is the review and evaluation. Reviewing and evaluating the success of empowerment of women childbearing age through the PAR method with the aims to measuring their knowledge, attitudes,

Table 2: Distribution of knowledge, attitudes and actions of women child-bearing age before and after the empowerment through the PAR method in preventing cervical cancer in the Community Health Center/Puskesmas of Padang Bulan in Medan, Indonesia

Variables	Intervention Perwiritan				Intervention Moria			
	Before		After		Before		After	
	F	%	F	%	F	%	F	%
Knowledge								
Well	5	8.3	53	88.3	2	6.7	27	90.0
Less	55	91.7	4	11.7	28	93.3	3	10.0
Attitude								
Positive	7	11.7	51	85.0	5	16.7	25	83.3
Negative	53	88.3	9	15.0	25	83.3	5	16.7
Action								
Yes	11	18.3	55	91.7	6	20.0	27	90.0
No	49	81.7	5	8.3	24	80.0	3	10.0
Total	60	100	60	100	30	100	30	100

and actions before and after the empowerment process through pre-test and post-test are shown in Table 2.

Furthermore, the effect of empowerment on knowledge and attitude of women childbearing age in preventing cervical cancer before and after empowerment is shown in Table 3.

Table 3: Differences in Mean of Knowledge and Attitudes of Women Child-Bearing Age After Empowerment in preventing Cervical Cancer in Perwiritan and Moria groups in he Community Health Service of Padang Bulan

Variables	Perwiritan		P value	Moria	
	Mean ± SD			Mean ± SD	P value
Knowledge					
Before	12.87 ± 3:31		0.001a)	12.60 ± 3:20	0.001a)
After	19:40 ± 2.97			19.87 ± 2:50	
Delta	6:53 ± 4.80			7:27 ± 3.70	
Attitude					
Before	63.20 ± 14.97		0001 a)	40.80 ± 16:32	0001 a)
After	78.13 ± 3.84			70.73 ± 13.92	
Delta	14.93 ± 15:43			29.93 ± 15:51	

a) P value within the group (Wilcoxon t test); b) P value between (Mann-Whitney).

The effect of empowerment to women childbearing age on their actions in the prevention of cervical cancer before and after empowerment with the PAR method can be explained through McNemar test as shown in Table 4.

Table 4: Differences in Actions of Women Child-Bearing Age Before and After the Empowerment in the Prevention of Cervical Cancer

Actions Before	After action		p value *
	Not Check	Check	
Perwiritan			0,001
Not Check	2	23	
Check	0	5	
Moria			0,001
Not Check	3	21	
Check	0	6	

Discussion

Empowerment with participatory action research (PAR)

Participatory action research (PAR) is a cycle of participation, research, and action. This research has been carried out in a participatory manner implemented into action followed by evaluations and reflections which become research action in regular pattern [25], [26], [27]. Stephen Kemmis depicts the process of action research as a cyclical model such as a spiral [25], [26].

The evaluation and success of participatory action research (PAR) in empowering women childbearing age against cervical cancer prevention can be divided as follows:

First is strong sensitivity or awareness to cervical cancer, early detection, and progress of actions and the situation where participatory action research (PAR) takes place. Women childbearing age becomes more active. This means that the criterion for success is the emergence of sensitivity or awareness. They have a desire and awareness to do health up at the community

health service, especially asking for IVA/Pap smear. Women childbearing age which previously had no access to information, knowledge, time, and even costs, currently they are sufficient enough. Moria group invites friends or neighbors, or even their daughters-in-law to participate in the prevention program of cervical cancer.

Understanding of women childbearing age on cervical cancer prevention (knowledge, attitudes, and actions)

Knowledge of women childbearing age

After empowerment process, there was an increase in knowledge of women childbearing age at the good level/category (90.0%) in the prevention of cervical cancer compared to situation before empowerment. Statistical test (paired t-test) shows that there is an effect of empowering women childbearing age in the prevention of cervical cancer in terms of knowledge between before and after the empowerment with $p < 0.001$. Similarly, a research conducted by Abiodun [26] found that empowerment of women childbearing age is an effective way to instill knowledge, and to increase awareness in the prevention of cervical cancer influenced by several factors: Education, mass/information media, social culture, economy, environment, and experience [28]. Empowerment of women childbearing age through counseling could increase knowledge and could improve the awareness for themselves, families and the community on the health-care improvement [29].

Attitude of women childbearing age

Results of this study, after empowerment, there is the emergence of positive attitude of women childbearing age at 81.7% compared to before empowerment. Statistical test (paired t-test) shows that there is an effect of empowering women childbearing age in the prevention of cervical cancer in relation to the attitude before and after empowerment, with $p < 0.001$. A positive attitude can support women childbearing age to prevent cervical cancer. Attitudes that arise from within of women childbearing age are generally followed by other factors such as the availability of facilities, attitudes, and behavior of health workers themselves. Some factors that influence changes in a person's attitude are personal experience, the influence of others who are considered important for them such as husband, cultural influences, and the influence of mass media, education, and emotional [29], [30], [31]. Empowerment can increase a positive attitude and can also motivate women childbearing age to prevent cervical cancer.

Action of women childbearing age

Results of this study, after empowerment process, there is the increase of action of women childbearing age in the prevention of cervical cancer in Perwiritan group

at 91.7% and in Moria group at 90.0%, compared to before empowerment. Statistical test results (McNemar test) show that there is an effect of empowering women childbearing age in the prevention of cervical cancer on actions before and after empowerment with $p < 0.001$. Interventions conducted with the empowerment process can increase the action of women childbearing age in the prevention of cervical cancer. Empowerment is part of activities for health education by spreading messages and instilling confidence so that the community is not only aware, knows, and understands but also they have willingness and they are able to prevent cervical cancer [17], [26], [29]. Positive actions occur through empowerment process followed by knowledge and attitudes of women childbearing age.

Conclusion

There is the increase on the understanding of women childbearing age and the situation where PAR was taken in improving participation the prevention of cervical cancer. Moreover, there is also the increase of the effect of empowerment on women childbearing age, especially on knowledge, attitude, and action in the prevention of cervical cancer before and after empowerment in Padang Bulan Community Health Center in Medan with $\alpha < 0.05$.

There is an increase in understanding of women of childbearing age and the situation in which PAR is carried out because of the emergence of change agents among women of childbearing age who continue to have dialectics. This research is contextual and cannot be generalized.

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