

# Buzz Group Method to Improve Exclusive Breastfeeding Self-Efficacy in Pregnant Women

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**Abstract---** Exclusive breastfeeding for six months is an attempt to increase the benefits of breastfeeding and to reduce infant mortality rate. Pucang Sewu Community Health Center had exclusive breastfeeding coverage value of 48.08% in 2016, and has not yet reached the national target of 80%. This research is aimed to identify the level of self-efficacy before and after applying modified buzz group method and to analyze the influence of modified buzz group method about exclusive breastfeeding to self-efficacy of pregnant women. Modified buzz group method was conducted in Pucang Sewu Community Health Center. This study was designed using quasi-experimental design. The population was 42 pregnant women. A total sample of 38 respondents was taken using purposive sampling. BSES-SF (Breastfeeding Self-Efficacy Scale Short Form) questionnaire was administered at pre-test and post-test. Data analysis was performed using Wilcoxon Signed Rank test and Mann Whitney test. The results showed that Wilcoxon Signed Rank statistic test obtained p-value of 0.000 in the treatment group and p-value of 0.355 in the control group. Mann Whitney statistic test obtained significant value of  $p=0.000$  in treatment and control group. Modification of buzz group method took effect to improve self-efficacy about exclusive breastfeeding for pregnant women because this method is organized by four sources of self-efficacy - direct experience, indirect experience, verbal persuasion, and emotional condition. Modification buzz group method improved exclusive breastfeeding self-efficacy in pregnant women coverage in Surabaya, especially Pucang Sewu Community Health Center.

**Keywords---** buzz group, self-efficacy, breastfeeding

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## I. INTRODUCTION

Breastfeeding is the normative standard for infant feeding and is beneficial to the health of both mother and infant. In developed and developing countries, numerous studies provide strong evidence that breastfeeding decreases the incidence and/or severity of a wide range of diseases in infants and mothers [1][2]. Infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health [3]. Barriers to the success of exclusive breastfeeding are the beliefs and perceptions of exclusive breast feeding practices [4], mother's inadequate breastfeeding self-efficacy [5] and associated mother knowledge.

The Regulation of Government of Republic of Indonesia No.33 of 2012 concerning exclusive breastfeeding, namely the target of exclusive breastfeeding for infants aged 0-6 months was 80% [7]. The results of a survey conducted by the Indonesian Ministry of Health in 2015 obtained that the coverage of exclusive breastfeeding in Indonesia for infants 0-6

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months was 55.7% with an increase of 3.4% from the previous year, which was 52.3%. Although there was an increase, it still did not reach the target.

East Java experienced an insignificant increase of exclusive breastfeeding in 2014 by 74.0% and in 2015 by 74.1%, but still did not reach the government's target of 80%. A report from the East Java Health Service in 2014 stated that Surabaya City had an exclusive breastfeeding rate of 64.3%. The percentage of coverage of exclusive breastfeeding in Surabaya is low compared to other cities, such as Blitar (85.4%), Lumajang (83.2%), Jember (82.6%), and Ponorogo (82.3%). From the data of the health profile of Surabaya City in 2015, many Community Health Centers in Surabaya have a coverage of exclusive breastfeeding still below 80%, one of which was the Pucang Sewu Community Health Center, which only had exclusive breastfeeding coverage of 48.08% (Hardhana et al., 2017).

Breastfeeding self-efficacy, in particular, is a potentially modifiable variable that has been shown to predict longer breastfeeding duration and increased exclusivity. Breastfeeding self-efficacy is a concept based on Bandura's (1997) social cognitive theory [9]. It means a mother's confidence in her ability to breastfeed her child. In health promotion research, people must have motivation and maintain health behaviour and knowledge [10]. Evidence shows that increased duration of breastfeeding and exclusive breastfeeding increase breastfeeding benefits, while most women stop breastfeeding, which is counterproductive, especially in the first six months after delivery, for the mother, infant and society and protective effects of breastfeeding discontinuation. Self-efficacy can be affected by many factors, including personal-social factors such as mother's age, educational level, training, the number of pregnancies, employment, family income and previous breastfeeding experience [12].

Breastfeeding self-efficacy is affected by the following four main sources of information: (a) performance accomplishments (e.g., past breastfeeding experiences), (b) vicarious experiences (watching other women breastfeed, peer counselling), (c) verbal persuasion (e.g., encouragement from influential person such as friend, family, and lactation consultants), and (d) influence of one's physiological and/or affective states (e.g., pain, fatigue, anxiety, stress) [13]. Self-efficacy of mothers who get information about exclusive breastfeeding is higher than mothers who do not get information [14]. Pregnant women need to get interventions before the delivery to improve self-efficacy of exclusive breastfeeding. The buzz group method is considered the right way to improve self-efficacy because this method has never been used during a pregnant mothers' class, and is considered as an update of the way of teaching material. The buzz group method increases students' knowledge and self-confidence in solving problems. The results are expected to be applied to pregnant women so that they can provide exclusive breastfeeding after giving birth.

## II. METHODS

This study was designed using quasi-experimental design. The population was 42 pregnant women in Pucang Sewu Community Health Center area. This research was conducted on 7, 8, 14, and 15 July 2017. This research was conducted in Pucang Sewu Sub-district as the treatment group and Kertajaya sub-district as the control group. A total sample of 38 respondents was taken through purposive sampling consisting of 19 respondents for the intervention group and 19 respondents for the control group.

The inclusion criteria are as follows: pregnant women who can read, write, hear and third semester pregnant women recorded in Pucang Sewu Community Health Center. The exclusion criteria were: pregnant women with chronic or contagious diseases (HIV, tuberculosis, cancer or hepatitis) and pregnant women without permanent residence.

The tools used in this study were informed consent, questionnaire sheet, stationery and exclusive breastfeeding booklets. Modified BSES-SF (Breastfeeding Self-Efficacy Scale Short Form) questionnaire was administered at pre-test and post-test. BSES-SF contained 14 questions about confidence in breastfeeding. Each question has a 5-point Likert scale and is summed to obtain a score between 12-60, the total score is interval data which means the lower the score, the lower the level of self-efficacy, and vice versa, in which the higher the score, the higher the level of self-efficacy. The values range from 12 to 60, height: 48-60, medium: 36-48, low: 24-36, and very low: 12-24.

BSES-SF has been translated into Indonesian and validation and reliability tests were conducted. The results of the validity test of previous studies showed that only 12 questions were declared valid with a value of  $r \geq 0.3$ . The test results stated only 12 questions were valid, so researchers only used 12 questions and two questions that were invalid were deleted. The instrument reliability test in this study used Cronbach's Alpha. Data analysis was performed using Wilcoxon Signed Rank test and Mann Whitney test.

The independent variable in this study is the buzz group method, while the dependent variable is exclusive breastfeeding self-efficacy. Buzz group method is providing health information about exclusive breastfeeding. The learning of the buzz group method is equipped with a booklet. Material provided included: definition of exclusive breastfeeding, composition of breast milk, benefit of exclusive breastfeeding, proper breastfeeding position, steps to breastfeed, length and frequency of breastfeeding, techniques to release baby's suction, how to express milk, and storage of breast milk. This study was approved by the Faculty of Nursing of Universitas Airlangga ethics committee with a certificate number of 401-KEPK. This research was conducted in conjunction with a pregnant women class.

In the first meeting in the control group, the researcher gave an explanation, and the respondents agreed to sign an informed consent sheet, took the pregnant class as usual and filled out the questionnaire sheet for the pre-test. A week later, the researcher collected the post-test data by visiting the respondents' homes. In the first meeting of the treatment group, the researcher explained the research; after informed consent was approved and signed, the respondents then filled out the pre-test. Intervention by the buzz group method which was also equipped with the booklet spent 1x40 minutes. The treatment group was divided into small groups of 4-5 respondents.

Some of these small groups discussed experiences, knowledge and barriers faced when breastfeeding. Group members gave suggestions on how to overcome such barriers. The next activity gathered all the participants together and then the facilitator explained the obstacles felt while breastfeeding, how to overcome these resulting in small group discussions. After the intervention was completed, the pregnancy class activities were continued as usual by the sub-district midwife. A week later, the researcher gave a self-efficacy questionnaire to provide exclusive breastfeeding as post-test.

### III. RESULT

The characteristics found in the control group were that the majority aged 20-40 years was as many as 15 pregnant women (78.9%), last education of junior high school was as many as seven pregnant women (36.8%), and having one child was as many as eight pregnant women (42,1%). The characteristic found in the treatment group were that the majority aged 20-40 years as many as nine pregnant women (47.4%) and aged 31-40 years as many as nine pregnant women (47.4), last education of senior high school was as many as nine pregnant women (47.4%), and having two children was as many as nine pregnant women (47,4%).

Table 1. Respondents' Characteristics in the Control and Treatment Groups (n=38)

Characteristics	Control group		Treatment group	
	Frequency	Percentage	Frequency	Percentage
Age (years)				
20-30	15	78.9	9	47.4
31-40	4	21.1	9	47.4
>40	0	0	1	5.3
Last education				
Elementary school	2	10.5	5	26.3
Junior high school	7	36.8	5	26.3
Senior high school	6	31.6	9	47.4
University	4	21.1	0	0
Number of Children				
1	8	42.1	2	10.5
2	7	36.8	9	47.4
3	3	15.8	5	26.3
4	1	5.3	1	5.3
5	0	0	2	10.5

Table 2. Distribution of Respondents in the Control and Treatment Groups Based on Pregnant Women's Self-Efficacy about Exclusive Breastfeeding Before and after the Buzz Group Method (n=38).

Self-efficacy	Control group				Treatment group			
	Pre-test		Post-test		Pre-test		Post-test	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
High	3	15.8	5	26.3	3	15.8	18	94.7
Medium	13	68.4	14	73.7	15	78.9	1	5.3
Low	3	15.8	0	0	1	5.3	0	0
Very low	0	0	0	0	0	0	0	0
Total	19	100	19	100	19	100	19	100
Wilcoxon Signed Rank test	p= 0.355				p= 0.000			
Mann Whitney pre-test	p = 0.412							
Mann Whitney post-test	p = 0.000							

In a comparison of self-efficacy about exclusive breastfeeding before and after the intervention in the form of buzz group method. the level of self-efficacy in the pre-test data control group showed the majority is medium self-efficacy with a total of 13 pregnant women (68.4%), while the post-test data showed self-efficacy was also a medium of 14 pregnant women (73.7%). In the treatment group before getting self-efficacy with the buzz group method, it was found that 15 pregnant women (78.95%) had medium self-efficacy. After the intervention, 18 pregnant women (94.75%) had high self-efficacy.

The Wilcoxon Signed Rank test in the control group showed a significance value of  $p = 0.355$  which was greater than 0.05, meaning that in the control group there was no difference in the level of self-efficacy between pre-test and post-test. Wilcoxon Signed Rank test in the treatment group obtained self-efficacy results  $p = 0.000$ , which means that there are differences in the level of self-efficacy before and after the buzz group method is given.

The Mann Whitney test of pre-test data in the control group and the treatment group showed a significance value of  $p = 0.412$ , meaning that the characteristics of the research subjects between the control group and the treatment group were homogeneous. The results of the Mann Whitney test post-test data obtained a significance value of  $p = 0.000$  ( $<0.005$ ), which indicates the buzz group method influences the self-efficacy about exclusive breastfeeding. This shows the level of self-efficacy of pregnant women who get the buzz group method was significantly different compared to the self-efficacy of pregnant women not given the buzz group method.

#### IV. DISCUSSION

The results showed that in the control group and the treatment group before getting intervention, the majority had medium self-efficacy. Self-efficacy is a person's belief to do positive things, so that it leads to motivation, thought processes, emotional conditions, and social environment that shows a habit [13]. Self-efficacy for pregnant women is considered important for breastfeeding activities for pregnant women and can provide an overview, especially for health workers, about the readiness of pregnant women in providing breast milk nutrition for their babies [15]. The level of self-efficacy of a person in each task varies greatly [9]. This arises because of the influential factors in perceiving an individual's abilities, such as gender, age, level of education and experience.

The majority of pregnant women's age in the Pucang Sewu Community Health Center area was in the early adult category (25-35 years). This means that respondents are in the good age range for getting pregnant and giving birth. Maternal age is an important factor in pregnancy, both for pregnant women and fetus, in the formation of breast milk. The range of age 25-35 is the most ideal age group for pregnancy because they are physically strong and mentally mature enough. This is different from mothers who are pregnant and giving birth at age 35 years and above because of declining reproductive health and reduced milk production [16].

The majority of maternal education is senior high school. Level of education according to Law No. 20 of 2003 includes primary, secondary and higher education [17]. Mothers with elementary education have low to moderate self-efficacy levels. This is due to mothers being unable to read fluently and lack of knowledge about exclusive breastfeeding. Mothers in the control group with a high level of education are from tertiary institutions with high self-efficacy scores. This is due to the large amount of information that mothers have obtained from various books and internet sources. Individuals having a higher level of self-efficacy, receive more formal education, and also get more opportunities to learn in overcoming problems in life [18]. The number of children also influences the practice of breastfeeding. The majority of mothers had more than one child, this causes mothers to have higher experience in giving breast milk [19]. Pregnant women who have breastfed have experience in dealing with lactation problems.

The results showed that, after intervention in the treatment and control groups, their self-efficacy was different. The treatment group initially had an average level of self-efficacy, but then it became a high average after being intervened. In contrast, the control group had no significant changes in self-efficacy of pregnant women regarding exclusive breastfeeding after being given the buzz group method because, in pregnant women who followed the buzz group method in the treatment group there had been an exchange of opinions so that they were more expressive and easy to receive information from sources who had exclusively breastfeed.

Buzz group is a large group that is divided into several small groups, consisting of 4-5 people. An impromptu group of no more than five people will make all group members actively involved in the discussion [20]. In the first meeting, the place was arranged so that participants could face and exchange ideas easily. Buzz groups also assign each large group members a group leader. In the next meeting, the small group got together and discussed, then returned to the large group to convey the ideas that arose in the small group. At the end of the session, the facilitator asked each group to actively participate in delivering the results of the discussion. The purpose of the buzz group method is that participants are able to obtain information by discussing groups to solve problems by exchanging opinions, so that active, innovative, creative,

effective, and fun learning can be realized [22]. The benefits of buzz group are to motivate shy individuals to express their thoughts, create a pleasant atmosphere, save time, enable the division of leadership tasks, provide variety of learning activities, and can be used with other methods [20].

Learning outcomes obtained in the buzz group method are pregnant women compare perceptions that may vary about exclusive breastfeeding, comparing information obtained by each respondents so that respondents can mutually improve their understanding, perception, information, and interpretation so that errors can be avoided. Four factors that influence one's self-efficacy are direct experience, indirect experience, verbal persuasion and emotional condition [13]. The buzz group method provided includes these factors, so there was an increase in maternal self-efficacy in the treatment group. The experience of success or direct experience can increase self-confidence and strong desire in pregnant women. A sense of accomplishment can increase the persistence of the pregnant women during the process, so as to reduce failure. Mothers who have direct breastfeeding experience tend to be more confident to continue breastfeeding [23]. Breastfeeding experiences were conveyed in the buzz group method in small groups so other members could exchange opinions.

Indirect experience is the result of observing and studying the behavior and experiences of others who have succeeded in carrying out a particular action or behavior. Someone's self-efficacy can be increased, especially if they believe they can do the action because they see that other people have done it [24]. Small groups in the buzz group were given problems that were discussed in the larger groups, so that experienced pregnant women could tell the inexperienced ones, so as to increase the self-efficacy of the inexperienced pregnant women.

Verbal persuasion is a condition where verbal has influence, such as words, persuasion, seduction, or suggestion can be a source of strength for someone [9]. The buzz group method is a medium of verbal persuasion so that it increasingly shapes the pregnant women's thoughts about the importance of exclusive breastfeeding in infants, so self-efficacy can be high. Feelings (moods) can influence people's opinions about their self-confidence. A good mood can increase self-efficacy and vice versa [25]. Buzz group activities can encourage shy individuals to participate in discussions, and create a pleasant atmosphere so that pregnant women can receive information with happy feelings.

The control group did not experience a significant increase in self-efficacy about exclusive breastfeeding. The increase in self-efficacy about exclusive breastfeeding in the control group only slightly increased, because, after the pre-test, the control group followed the class of pregnant women which also coincided with discussing breastfeeding although only slightly. Pregnant women's age, number of children, and education level influence pregnant women's self-efficacy. The buzz group method increased the self-efficacy in pregnant women.

#### **IV. CONCLUSION**

Modification of buzz group method took effect to improve self-efficacy about exclusive breastfeeding for pregnant women because this method is organized by four sources of self-efficacy, direct experience, indirect experience, verbal persuasion, and emotional condition. The modification of buzz group method improved the giving of exclusive breastfeeding self-efficacy in pregnant women coverage in Surabaya especially Pucang Sewu Community Health Center.

#### **CONFLICT OF INTEREST**

The author(s) declared no potential conflicts of interest with respect to the research and authorship

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