

## Contraceptive Use in East Timorese Ex-Refugee Women in Indonesia: Determinants and Barriers

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### ABSTRACT

**Background:** Poor access to contraceptive services is a global health problem, especially in the marginal community order. Refugee camps and areas with weak community order are the groups with the lowest prevalence of contraceptive use. This study aimed to determine the factors affecting contraceptive use in East Timorese ex-refugee women.

**Subjects and Method:** This was a cross-sectional study conducted at 3 ex-refugee camps Noelbaki village, Kupang, East Nusa Tenggara, Indonesia, from April to May 2019. A total of 76 women of reproductive age were selected by fixed disease sampling. The dependent variable was contraceptive use. The independent variables were education, family income, accessibility, and social culture. The data were collected by a set of questionnaire and analyzed by a multiple logistic regression.

**Results:** The likelihood of contraceptive use increased with high education (OR= 7.05; 95%

CI= 1.16 to 42.76; p= 0.034), family income (OR= 9.36; 95% CI= 0.88 to 99.01; p= 0.063), accessible (OR= 27.53; 95% CI= 2.62 to 288.88; p=0.006), and supportive social culture (OR= 14.15; 95% CI= 2.14 to 83.63; p= 0.006).

**Conclusion:** The likelihood of contraceptive use increases with high education, family income, accessible, and supportive social culture.

**Keywords:** contraceptive, social culture, ex-refugee

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### BACKGROUND

WHO reported that there were 214 million women of reproductive age in the world had unmet needs for contraception, especially in poor and developing countries (World Health Organization, 2018b). Indonesia reported that a contraceptive prevalence rate (CPR) in women of reproductive age (15-49 years) was 63.6% (UNDESA, 2017).

Poor access to contraceptive services is a global health problem, especially in the

marginal community order (Agbemenu et al., 2019). WHO reported that there were health gaps between social groups in society (World Health Organization, 2016). Conflicted countries, refugee areas, and areas with weak social order were the groups with the lowest prevalence of contraceptive use by <30% (United Nations High Commissioner for Refugees, 2019).

The East Timorese ex-refugee women in Kupang Regency, Indonesia, is one of the groups that is vulnerable to health pro-

blems. This related to the common problems often faced by refugees and ex-refugees such as conflicts of land tenure (Dhosa and Ratumakin, 2019), poverty (Gagnon et al., 2002), stigmatization (Meo and Nahak, 2020), discrimination (World Health Organization, 2018a), sociodemographic problems (Agbemenu et al., 2019), and other socioeconomic issues (Nakirijja et al., 2018). It affected reproductive health issues, namely contraceptive use. Refugee women did not use contraception for various reasons such as difficult geographical and financial access, conflict in decision making, misinformation related to contraception (Haider and Sharma, 2012; Ackerson and Zielinski, 2017), status as refugees (Adebowale et al., 2013), ethnicity (Kabagenyi et al., 2016), as well as physical and psychological violence (Bishwajit and Yaya, 2018).

Contraception as one of the reproductive health problems of refugee women (Gagnon et al., 2002) was a component in sexual and reproductive health. This was a human right established in the International Conference on Population and Development since 1994 (IAWG, 2018). It also contained in SDGs related to universal access to sexual and reproductive health services (Government of South Australia & World Health Organization, 2017). The rights of sexual and reproductive health ensure that women have the right and responsibility to determine freely the amount, distance, when to have children, and the right to obtain information and standards of sexual and reproductive health to the highest (United Nations Fund for Population Activities, 2016). In addition, wide access to information about contraceptive methods must be provided. The women also have freedom to choose contraceptives without coercion, discrimination, or violence (Uni-

ted Nations Fund for Population Activities, 2016).

Contraception as a human right should be an essential service for marginalized groups including ex-refugee women. However, nowadays, 53.1% of women of reproductive age in West Timor, Indonesia, have not used contraception (Meo and Nahak, 2020). Kupang Regency Government in 2018 reported that the Kupang Regency CPR rate was 59.6%. It shows that the access to contraception is still an important issue in ex-refugee women of reproductive age who are still living in the settlement in Noelbaki Village, Kupang Regency, Indonesia.

As a major problem in poor and developing countries, not using contraception affected unwanted pregnancy, repetitive teenage pregnancy, high abortion rates, and sexually transmitted infections (Bishwajit & Yaya, 2018).

This study aimed to determine the factors affecting contraceptive use in East Timorese ex-refugee women in Noelbaki Village, Kupang Regency, Indonesia.

## SUBJECTS AND METHOD

### 1. Study Design

This was a cross-sectional study conducted at 3 refugee camps in Noelbaki Village, Kupang, East Nusa Tenggara, Indonesia, from April to May 2019.

### 2. Population and Sample

The population of this study was East Timorese ex-refugee women of reproductive age aged 15-49 years. A sample of 76 women was selected by fixed disease sampling. This method was a sampling technique based on disease status. Besides, exposure status varied according to the subject's disease status. The fixed disease sampling method emphasized that there were sufficient subjects in the case and control groups.

### 3. Study Variables

The dependent variable was contraceptive use. The independent variables were education, family income, accessibility, and social culture.

### 4. Operational Definition of Variables

**Contraceptive use** was the practice of using contraceptives to prevent pregnancy and keep the duration of birth. The data were collected by questionnaire, containing the choice of using contraceptive or not. If the women used contraceptive, it would be followed by a choice of contraceptive type and duration. The measurement scale was categorical, coded 0 for did not use contraceptive and 1 for use contraceptive.

**Education** was a formal education level reached by women of reproductive age. The data were collected by questionnaire. The measurement scale was categorical, coded 0 for low education and 1 for high education.

**Family income** was a cumulative income from all family members used to meet shared and individual needs. The data were collected by questionnaire. The measurement scale was continuous, and transformed into dichotomous, coded 0 for low income (<Rp 1,800,000) and 1 for high income ( $\geq$ Rp 1,800,000).

**Accessibility** was the involvement of ex-refugees women of reproductive age in the Integrated Service Post for women of reproductive age, and the affordability of women of reproductive age in accessing information and services regarding contraception. The data were collected by questionnaire. The measurement scale was continuous, and transformed into dichotomous, coded 0 for poor accessibility and 1 for good accessibility.

**Socio cultural** was the community's point of view, the family values and norm, the perceptions of the surroundings about the benefits and the advantages of contraceptive use, and the local customs habits

about contraceptive. The data were collected by questionnaire. The measurement scale was continuous, and transformed into dichotomous, coded 0 for poor accessibility and 1 for unsupportive and 1 for supportive.

### 5. Data Analysis

**Univariate analysis** generally described the variables and the characteristics of the study subjects such as the education of women of reproductive age, family income, accessibility, social culture, age of women of reproductive age, occupation of women of reproductive age, number of children that still alive, and the number of family members living in the same house. Univariate analysis was described in the frequency and percentage form.

**Bivariate analysis** explained the effect of each independent variable on contraceptive use. The data were analyzed using a Chi-square Test.

**Multivariate Analysis** aimed to explain the effect of all independent variables on contraceptive use. The data were analyzed using a multiple logistic regression run.

## RESULTS

### 1. Univariate Analysis

Table 1 described the categorical data for each variable and the characteristics of the sample such as age, education, family income, accessibility, social culture, occupation, number of children, and number of family members who lives in the same house.

Table 1 showed that half of sample were at age 26-35 years (55.3%). One third of sample (36.8%) completed high school education. Most of the sample worked as housewives (89.5%). Half of sample had family income <the minimum wage of Kupang Regency (59%). Half of women (55.3%) had  $\geq 2$  children who still alive and 67.1% of the sample had  $\geq 4$  family members who lived together in the same house.

As many as 69.7% women had poor access to the health service. Half of sample

received unsupportive social cultural 56.6%.

**Table 1. Sample Characteristics**

<b>Characteristics</b>	<b>n</b>	<b>%</b>
<b>Maternal age (years)</b>		
17-25	19	25.0
26-35	42	55.3
36-45	14	18.4
46-55	1	1.3
<b>Maternal Education</b>		
Ungraduated	14	18.4
Primary School	18	23.7
Junior High School	13	17.1
Senior High School	28	36.8
Bachelor	3	3.9
<b>Maternal Occupation</b>		
Housewife	68	89.5
Labor	2	2.6
Private Employee	5	6.6
Honorary worker	1	1.3
<b>Family Income</b>		
<Rp 1,800,000	59	77.6
≥Rp 1,800,000	17	22.4
<b>Number of family members</b>		
<4	51	67.1
≥4	25	32.9
<b>Number of children that still alive</b>		
<2	42	55.3
≥2	34	44.7
<b>Accessibility</b>		
Poor	53	69.7
Good	23	30.3
<b>Social culture</b>		
Unsupportive	43	56.6
Supportive	33	43.4

## 2. Bivariate Analysis

Table 2 showed the results of bivariate analysis using Chi-square. Table 2 showed that contraceptive use increased with high education (OR= 32.66;  $p < 0.001$ ), high family income (OR= 26.90;  $p < 0.001$ ), good accessibility (OR= 22.23;  $p < 0.001$ ), and supportive social culture (OR=4.29;  $p = 0.005$ ).

## 3. Multivariate Analysis

Table 3 shows that high education of (OR= 7.05; 95% CI= 1.16 to 42.76;  $p = 0.034$ ), good accessibility (OR= 27.53; 95% CI= 2.62 to 288.88;  $p = 0.006$ ), supportive social culture (OR= 14.15; 95% CI= 2.14 to 83.63;  $p = 0.006$ ), and high family income (OR= 9.36; 95% CI= 0.88 to 99.01;  $p = 0.063$ ) increased contraceptive use.

**Table 2. The Result of Bivariate Analysis**

Independent Variables	Contraceptive Use				Total		OR	95% CI	p
	Not Use		Use		N	%			
	n	%	n	%					
<b>Maternal Education</b>	35	46.1	10	13.1	45	59.2	32.66	8.1 to	<0.001
Low	3	3.9	28	36.7	31	40.8		130.1	
High									
<b>Family Income</b>									
<Rp 1,800,000	37	48.7	22	28.9	59	77.6	26.90	3.3 to	<0.001
≥Rp 1,800,000	1	1.3	16	21	17	22.4		217.1	
<b>Accessibility</b>									
Poor	36	47.3	17	22.4	53	69.7	22.23	4.6 to	<0.001
Good	2	2.6	21	27.6	23	30.3		105.9	
<b>Socio Cultural</b>									
Unsupportive	28	36.8	15	19.6	43	56.64	4.29	1.6 to	0.005
Supportive	10	13.1	23	30.3	33	3.4		11.3	

## DISCUSSION

### 1. The effect of education on contraceptive use in ex-refugee women

The education of women of reproductive age had a positive effect on contraceptive use. The women of reproductive age with higher education used contraception 7.05 times higher than the women of reproductive age with low education. It showed that education was one of the factors affecting the decision of the women of reproductive age to use contraception. The higher the education reached by a woman, the higher the awareness to use contraception. Vice versa, the lower the education of a woman, the smaller the desire to use contraception.

Education was related to the ability to sort out information including the advantages and disadvantages of using contraception. WHO stated that education problems increased the risk of poor access to contraceptive services (World Health Organization, 2019). Women with higher education were three times more likely to use contraception than women who have never taken formal education (Rada, 2014; Adeyemi et al., 2016). This is in line with a study conducted by Wado (2017), that

women with a higher level of education were more likely to use contraception.

The complexity of the reproductive health problems in East Timorese Ex-Refugee Women was difficult to describe. Poverty made this unfavorable cycle unavoidable. Besides, with high education, a woman became educated, so that she was able to make choices based on the information about contraception. In addition, education made a woman have a proper job and earned a good income, thus having the opportunity to improve her reproductive health.

### 2. The effect of family income on contraceptive use

Family income had a positive effect on contraceptive use. Women of reproductive age with high family income had likelihood to use contraception 9.36 times higher than those with low family income. It showed that high family income is in line with good financial access to contraceptive use. Vice versa, if the family income was low, it would affect the low contraceptive use.

Based on a previous study, the socio-economic component could give an impact on women's access to contraceptive use (Nakirijja et al., 2018). Women with a good

family finance could access contraception (Wado, 2017). In addition, women with low incomes were 1.6 times more likely to have unmet needs compared to women with higher education (Nakirijja et al., 2018).

Low income occurred due to the occupation that did not give a proper wage (Yesgat et al., 2020). This study showed that the majority of women of reproductive age worked as housewives. Based on the result of a previous study conducted by Dhosa and Ratumakin (2019), ex-refugee women in the 3 settlements worked as day workers for landowners to support the family economy. The women cleaned up the vegetables before being sold to the market. The daily wages received by these women ranged from Rp. 5000-8000 each day depending on the price of vegetables in the market.

This low income was getting worse with a large number of children that still alive. by a large number of living children. The result showed that most of the women of reproductive age had more than 2 children who still alive. This affected the family economy, both the fulfillment of daily needs, children's education costs, and respondents' financial access to contraception. Gebresilassie and Woldu (2018) proved that the number of children that still alive affected contraceptive use. Furthermore, Mahumud et al., (2015) proved that contraception discontinuity mostly occurred in poor people who lived in rural areas.

### **3. The effect of accessibility on contraceptive use**

Accessibility had a positive effect on contraceptive use. Women of reproductive age with good accessibility used contraception 27.53 times higher than those with poor accessibility.

Integrated Services Post was a center of community activities that was conducted regularly. This activity was a form of health

effort managed by the community. Through the involvement at the Integrated Services Post, the women of reproductive age could obtain information and services of KB through appropriate contraceptive selection counseling. The result of this study showed that most of the women of reproductive age had poor accessibility. This showed that women of reproductive age did not get sufficient information about contraception.

Meo and Nahak (2020) reported that there were differences in the level of respondents' participation in the Integrated Services Post held in the 3 settlements. The highest level of participation was the Integrated Services Post of BBI. In the Integrated Services Post of BBI, women of reproductive age were served by fellow ex-refugee residents. Besides, the Integrated Services Post of Terminal was served by the local residents. The low level of participation was caused by different feelings in terms of the service received. In addition, the attitude of health service providers also contributed to the low participation of the community in the Integrated Services Post for women of reproductive age. According to Meo and Nahak (2020), refugee women were described as "lazy groups" and "unmanageable" by health workers. This is in line with a study conducted by (Merki-Feld et al., 2018), that both cadres and health workers tend to ignore the rights of refugee women to information of contraception in general. This is supported by the result of a study (Lowe, Griffiths and Sidhu, 2007; Pazol et al., 2016; Finlay and James, 2017), that service provider attitude affected contraceptive use. This omission disguised the main intervention that contraceptive counseling was the main key to increase contraceptive use and reduce the unmet need (Cavallaro et al., 2019).

In addition, other obstacles were poor service quality (Sinai et al., 2018) and

misperceptions related to modern contraception (Tran et al., 2018) which made the reproductive health problems of ex-refugee women getting worse, especially in the contraceptive services.

Therefore, the approach that needs to do is a service that is respectful and non-discriminatory, so that the refugee women have the motivation and willingness to access Integrated Service Post services. In addition, the women are able to make choices regarding contraception based on information received. Integrated Service Post as a community-based health effort should empower more refugee groups to provide information regarding contraception with language styles and counseling techniques that are in accordance with refugee conditions.

#### **4. The effect of social cultural on contraceptive use**

Socio cultural had a positive effect on contraceptive use. Women of reproductive age with a supportive socio-cultural to use contraception was 14.15 times higher than women of reproductive age with unsupportive socio-cultural. It showed that women with supportive socio-cultural, tend to use contraception compared to women of reproductive age with unsupportive socio-cultural.

Nowadays, even though there are many improvements related to the availability of contraceptives, women still face persistent obstacles related to reproductive autonomy and informed choice (Dehlendorf et al., 2018; Pleasants et al., 2019).

Based on a previous study, there was a prohibition by husband, mother, and mother-in-law because contraceptive use was considered to limit the offspring. In addition, there were wrong perceptions that were built based on the experience of family members who had used contraception. Based on the study result on the persistent

barriers and unmet need for contraceptive use, women were reluctant to use contraception due to cultural and language barriers between women of reproductive age and health providers (Tanabe et al., 2017), lack of husband's agreement (Richardson et al., 2016), and fear or previous experience related to side effects of contraceptive use (Wyatt et al., 2014). In addition, discrimination from fellow refugee women also inhibits access to contraception.

The description of women's greatest fears is low self-esteem and fear of being criticized by fellow women under the statement "the woman does not want to give a child to her husband anymore" or "she is not a woman and the stigma given by fellow women that using contraception means being unable to manage the family (Alspaugh et al., 2019).

Family (Thapa et al., 2018), husband (Hodgson et al., 2013), as well as the desire to maintain culture were factors that inhibit a woman from using contraception. It often occurred in crisis and ethnocentric areas (World Health Organization, 2019). Therefore, a KB counseling by involving husband and family members is very useful. Open discussion between families and health service providers was the key to increase contraceptive use among ex-refugee women (Gebresilassie and Woldu, 2018) because the opinions of husbands and mothers affected the health value of a woman (Bell et al., 2020; Richards et al., 2020) al., 2020). Well-informed husbands and family members were expected to have an impact on making the right decisions (World Health Organization, 2016; Jain et al., 2017; Dadi et al., 2020).

The problems faced by East Timorese ex-refugee women are complex. Poverty, lack of land, and barriers to health services are a life cycle that will occur repeatedly. Refugee women who are mostly live in the

poverty chain should be given the wide right to become agents of change in their communities. Women of reproductive age must be given the same right to receive education, to find proper job without any discrimination and verbal violence. This cycle is expected to stop. In addition, the ex-refugee groups have a decent life, thus affecting the optimization of their sexual and reproductive health.

#### **AUTHOR CONTRIBUTION**

Maria Paula Marla Nahak collected the data and wrote the manuscript. Maria Lupita Nena Meo and Maria Getrida Simon did data analysis and read the data interpretation.

#### **CONFLICT OF INTEREST**

The authors declare that the study was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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