

The Factors that Affecting the Use of Contraception on the Number of Children Born Alive in Bangli Regency

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ABSTRACT : Population growth in the region is due to several factors, fertility, mortality and migration and needs to be balanced for the welfare of the community which is the goal of the country's development. The population problem that occurs in almost all developing countries experiences it, the problem of fertility which increases every year. Therefore it is necessary to suppress fertility by controlling the population. Population growth is too fast and is not match by the quality of human resources and the provision of adequate facilities. As a result, population growth becomes a burden for development. This study aims to analyze the factors that influence contraceptive use on the number of children born alive.

Data collection was carried out by observation, structured interviews and in-depth interviews. The sampling technique used purposive sampling method with a sample of 123 respondents. The data obtained were analyzed using descriptive analysis techniques and path analysis. The results of the study found that the variable education (X1), income (X2), husband's support (X3) had a positive and significant effect on the duration of contraceptive use (Y1), the education variable (X1), income (X2), husband's support (X3), and duration of use of contraception (Y1) has a negative and significant effect on the number of children born alive (Y2), and the variable length of use of contraception (Y1) is a variable that fully mediates the relationship between education (X1), income (X2), husband's support (X3) to the number of children born alive (Y2)

KEY WORDS: fertility, contraception, population growth, education

I. INTRODUCTION

Indonesia as a developing country, in its development process, has experienced various population problems, one of which is the increase in fertility every year. The population problem that occurs in almost all developing countries in the world is the problem of fertility. In general, population growth in an area is affected by three demographic factors such as the number of births, deaths and migration. Of the three factors, some of them have a positive effect and some have a negative effect. This factor must be balanced to achieve community welfare which is the goal of development. The welfare of the community can be seen from the increase in economic growth and an even distribution of income (Yasa and Arka, 2015).

Fertility is a demographic factor that can increase population. The higher the birth rate, the higher the population growth. The factor that dominates population growth in developing countries as well as Indonesia is fertility. Within a country, residents can be used as objects and as subjects in development. However, population growth must be controlled, because when it is uncontrolled, it can be considered as an inhibiting factor for development (Uppun, 2016: 62). The results of the 2019 population census show that the population growth rate of Bali Province has increased from 2000 to 2010 valued at 2.14% and decreased in 2019 by 1.21%.

TABLE I: Population Growth Rate (LPP) Per Year by Regency / City in Bali Province from 1961 to 2020

Regency / City	1961	1971	1980	1990	2000	2010
	-	-	-	-	-	-
	1971	1980	1990	2000	2010	2020
Jembrana	2,91	1,77	0,60	0,63	1,22	1,88
Tabanan	1,85	0,44	0,19	0,73	1,13	0,90
Badung	2,60	2,34	1,23	2,33	4,62	0,09
Gianyar	1,58	1,20	0,96	1,56	1,80	0,90
Klungkung	0,87	0,66	0,12	0,31	0,94	1,89

Bangli	1,11	1,56	0,88	0,94	1,06	1,79
Karangasem	0,23	1,63	0,89	0,49	0,96	2,12
Buleleng	2,27	1,90	1,04	0,33	1,12	2,33
Denpasar	-	-	4,05	3,20	4,01	-0,81
B A L I	1,77	1,54	1,18	1,26	2,14	1,01

Sources: Central Bureau of Statistics Bali, 2020

Based on the table above, it is known that the highest population growth rate is achieved by Badung Regency. Even though Bangli Regency has a fairly low Population Growth Rate of 1.79%, the results of the 2010 National Economic Survey in Bangli Regency are still high compared to other districts at 2.97 children per woman and the district with the lowest TFR is Denpasar Regency at 1,99 children per woman. This can occur because it is caused by factors that determine population growth, not only fertility but also mortality and migration. High fertility rates and population growth can be controlled by the existence of government policies such as family planning programs by planning a good number of children using contraceptives to delay births. In implementing these efforts, the community is offered a contraceptive method which is expected to have optimal benefits and minimal side effects.

The contribution of the Bangli community in using contraceptives is still low at 41,192. The low number of couples of childbearing age using contraceptives is caused by low education, low family income and lack of support from their husbands. Based on the above background, it is necessary to conduct more in-depth research on what factors that affecting the use of contraceptive on the number of children born alive in Bangli Regency. In detail, the problems to be studied are presented in the research problem formulation as follows: 1) How are the effects of education level (X1), income level (X2), and husband's support (X3) on the length of time using contraceptives (Y1) in Bangli Regency ?, 2) How are the effects of education level (X1), income level (X2), husband's support (X3) and duration of use of contraceptives (Y1) on the number of children born alive (Y2) in Bangli Regency? 3) Does the length of time using contraceptives (Y1) mediate the effect of education level (X1), income level (X2), and husband's support (X3) on the number of children born alive (Y2) in Bangli Regency?

II. CONCEPTUAL MODEL AND HYPOTHESIS

Policy interventions in population control can be implemented and focus on fertility control programs. This is because population growth is related to the effect of demographic factors, such as fertility rates, mortality, and migration (Lucas and Meyer, 1994 in Wicaksono and Mahendra, 2016). According to Davis and Blake (1956), which states that the reproductive process experienced by women of childbearing age couples (PUS) goes through (3) three stages, such as through sexual intercourse, conception (contrasepsion), pregnancy and birth which are also referred as intermediate / intervening / mediation variables.

The level of education affects the desire of a person and a partner to determine the number of children they want to have. (Bongaarts and Judith, 1996 in Marhaeni and Saskara, 2015: 157) who said that highly educated women want to have fewer children who have higher survival rates, have higher income, and are more able to invest in children's nutrition and education. Likewise with the husband's support variable in the choice of contraceptives and suggesting the number of births which is a tangible form of the husband's care and responsibility in leading the household. Support from the husband in using contraception is very necessary because without support the wife will not feel comfortable, and the contraceptive method cannot be forced. Married couples must cooperate in choosing what contraceptive method is best to use, cooperate with each other in use, finance contraceptive expenses, and pay attention to signs and dangers (Mahampang and Indrawati, 2015: 82).

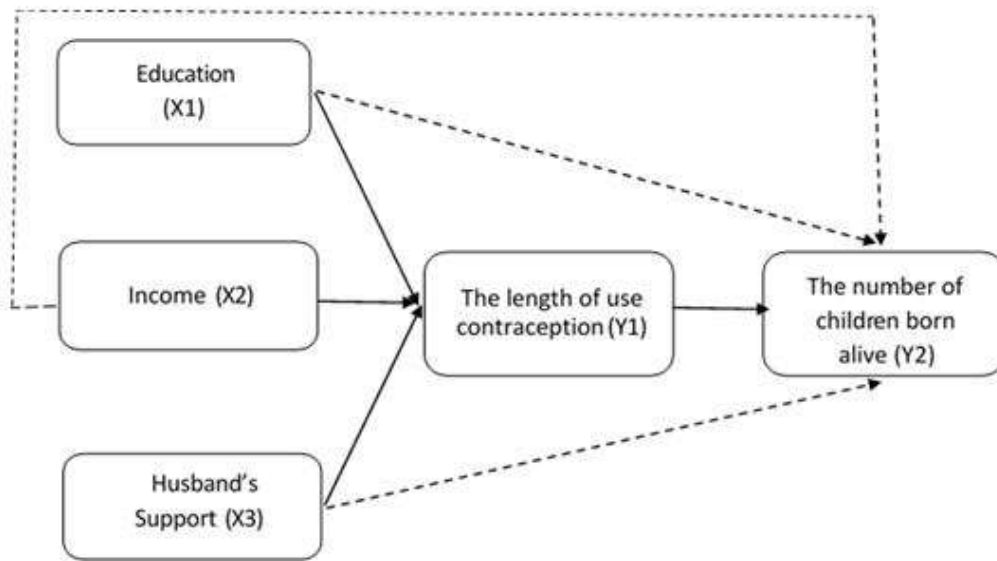


Figure 1. Research Conceptual Framework "The Factors that Affecting the Use of Contraception on the Number of Children Born Alive in Bangli Regency"

Explanation:

Partial Influence - - ->

Simultaneous Influence ->

Therefore, the hypotheses proposed in this study, such as : 1) Education level (X1), income level (X2), and husband's support (X3) have a positive effect on the length of time using contraceptives (Y1) in Bangli Regency. 2) Education level (X1), income level (X2), husband's support (X3) and duration of use of contraceptives (Y1) have a negative effect on the number of children born alive in Bangli Regency. 3) The length of time using contraceptives mediates the influence of the variable level of education (X1), income level (X2), husband's support (X3) on the number of children born alive in Bangli Regency.

III. RESEARCH METHODS

This study uses a deductive line of thought research design in the form of associative (relationship) which aims to determine the relationship or effect of several variables on certain variables. The location of this research is in Bangli district. The object of this research is the fertile age pair as seen from the level of education, family income, husband's support, the length of time using contraceptives, and the number of children born alive. This study uses 3 types of variables, such as the independent variable, the mediating / intervening variable and the dependent variable. In this study, the independent variable is education (X1), family income level (X2), husband's support (X3), the mediating or intervening variable is the use of contraceptives (Y1) and the dependent variable is the number of children born alive (Y2).

The level of education in this study is based on the last formal education completed by the respondent and is measured by years of success. Income in this study is seen from the amount of income or income (rupiah) obtained from all family members within one month which is measured in rupiah units. Husband support in this study, there are five indicators, such as support in the use of contraception, support in the form of delivering contraceptives, increasing the control schedule, support in the form of recommended number of children and birth spacing. Each indicator is measured by a Likert scale, such as 1 = strongly disagree, 2 = disagree, 3 = sufficient, 4 = agree, and 5 = strongly agree. The use of contraceptives in this study was measured by the length of time the respondent used contraceptives since their marriage in units of months. The number of children who were born alive (fertility) in this study was measured by how many babies had been born alive since marriage.

The instrument in this study used the validity test and the reliability test which aimed to measure the data that had occurred with the reported data and to measure the degree of accuracy, accuracy and solubility shown. Meanwhile, the data analysis technique used was descriptive statistical analysis technique and path analysis technique. Descriptive statistical analysis technique is a technique used by describing the collected data as it is more clearly and easily understood without making general conclusions. And the path analysis technique is used

in testing the magnitude of the contribution shown by the path coefficient on each path diagram of the causal relationship between the independent variables and the dependent variable. The main objective of path analysis is to predict the significance (magnitude) of the relationship between a variable and other variables, as well as the existence of an indirect effect.

IV. RESULT AND DISCUSSION

Before conducting the path analysis, the validity and reliability tests were calculated for the husband's support variable. The results of the validity test in this study indicate that the Pearson correlation value is greater than 0.3, this means that the variable is declared valid

No	Variable	Instrument Code	Pearson Correlation Value	Conclusion
1	Husband's Support (X3)	X3.1	0.823	Valid
		X3.2	0.867	Valid
		X3.3	0.837	Valid
		X3.4	0.515	Valid
		X3.5	0.862	Valid

Source: Primary data processed, 2020

The results of the reliability test of the husband's support variable get Cronbach's alpha value is 0.806 > 0.6, so that the husband's support variable is a reliable variable

No	Variable	Cronbach's Alpha Value	Conclusion
1	Husband's Support (X3)	0.806	Reliable

Sumber : Data primer diolah, 2020

After that, proceed with conducting path analysis. The initial step is structural testing 1 to determine the effect of education (X1), family income (X2), husband's support (X3) on the length of time using contraceptives (Y1) in Bangli Regency.

$$Y_1 = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e_1$$

$$Y_1 = 0,485 X_1 + 0,217 X_2 + 0,263 X_3 + e_1$$

$$Sb = (0,922) \quad (1,243) \quad (1,381)$$

$$T = (7,387) \quad (2,801) \quad (3,510)$$

$$R \text{ Square} = 0,763$$

$$Df = 122$$

$$F = 127,822$$

From the regression results above, it is known that the calculation results show the F-count 127.822 with a significant value of 0.000. This figure is much smaller than the 5 percent level of significance commonly used in economic research. This means that simultaneously the variables of education (X1), family income (X2), husband's support (X3) for the length of time using contraceptives (Y1). The R Square coefficient of 0.763 means that 76.3 percent of the length of contraceptive use (Y1) is affected by education (X1), family income (X2), husband's support (X3), while the remaining 23.7% is affected by other factors that are not included in the model.

Then there is structural 2 carried out to determine the effect of education (X1), family income (X2), husband's support (X3), and length of time using contraceptives (Y1) on the number of children born alive (Y2) in Bangli district. The results of structural equation 2 can be shown as follows:

$$Y_2 = \beta_4 X_1 + \beta_5 X_2 + \beta_6 X_3 + \beta_7 Y_1 + e_2$$

$$Y_2 = -0,301 X_1 + -0,234 X_2 + -0,169 X_3 + -0,292 Y_1 + e_2$$

$$Sb = (-0,138) \quad (-0,325) \quad (-0,214) \quad (-0,071)$$

$$T = (-4,253) \quad (-3,286) \quad (-2,401) \quad (-3,577)$$

$$F = 128,451$$

$$R \text{ Square} = 0,813$$

$$Df = 122$$

From the results above, it can be seen that the calculation results show the F-count of 128.451 with a significance of 0.000. This result is smaller than the level of significant 5 percent. This means simultaneously education (X1), family income (X2), husband's support (X3), and length of time using contraceptives (Y1) to the number of children who were born alive (Y2) in Bangli district. The coefficient of determination or R square as large as 0.813 means that 81.3 percent of the number of children born alive in Bangli district is influenced by education (X1), family income (X2), husband's support (X3), and length of time using contraceptives (Y1). While the remaining 18.7 percent is influenced by other factors not included in the model.

Regression	Standardized Coefficients	Standar Error	T-count	Significant	Information
X ₁ -> Y ₁	0,485	0,125	7,387	0,000	Siginifikan

$X_1 \rightarrow Y_2$	-0,301	0,033	-4,253	0,000	Signifikan
$X_2 \rightarrow Y_1$	0,217	0,444	2,801	0,006	Signifikan
$X_1 \rightarrow Y_2$	-0,234	0,099	-3,286	0,001	Signifikan
$X_3 \rightarrow Y_1$	0,263	0,393	3,510	0,001	Signifikan
$X_3 \rightarrow Y_2$	-0,169	0,089	-2,401	0,018	Signifikan
$Y_1 \rightarrow Y_2$	-0,292	0,020	-3,577	0,001	Signifikan

Source: Bangli Regency Path Analysis, 2020 (Processed Data)

Keterangan :

X1 = successful years of education

X2 = family income

X3 = husband's support

Y1 = the length of use of contraceptives

Y2 = the number of children born alive

The table above explains that the variables of education (X1), family income (X2), husband's support (X3) have a positive and significant effect on the length of use contraceptives (Y1). And the education variable (X1), family income (X), husband's support (X3), and length of use contraceptives (Y1) have a negative and significant effect on the number of children born alive (Y2) in Bangli Regency.

Based on the hypothesis and using significant level of 5 percent, the standardized coefficient value is 0.485 and the probability value is 0.000. This means that H0 is rejected and H1 is accepted. Thus, Sig. (0.000) < 0.05 means that education (X1) has a direct effect on the duration of contraceptive use (Y1). This shows a positive relationship between education and the length of time using contraceptives. Based on the results of this study it can be stated that the higher the successful year of education, the longer the respondent uses contraception. The results of this study are in accordance with the research of Saskara and Marhaeni (2015) "The Influence of Social, Economic and Demographic Factors on the Use of Contraception in Denpasar" which states that the education variable has a significant positive effect (significance level = 0.011) on the duration of contraceptive use in West Denpasar. This is in line with research conducted by Dina (2015) which states that there is a positive coefficient relationship between education level and " Selection of contraceptives for fertile aged couples in the village of Krakal in 2015"

Based on the hypothesis and using significant level of 5 percent, the standardized coefficient value is 0.217 and the probability value is 0.000. This means that H0 is rejected and H1 is accepted. Thus, Sig. (0.006) < 0.05 means that income (X2) has a direct effect on the length of use contraceptive (Y1). This shows a positive relationship between income and the length of time using contraceptives. Where every 1 million rupiah increase will increase the length of contraceptive use by 0.217 years. The results of this study were also strengthened by an in-depth interview conducted with one of the respondents, Anak Agung Rika Darmawati on January 5, 2020, who said that:

"Family income has an important role in the use of contraceptives, because someone with a low income will prefer not to use contraceptives because their income is only used for basic needs such as food and daily necessities even though they know the importance of using contraception".

Based on the hypothesis and using significant level of 5 percent, the standardized coefficient value is 0.263 and the probability value is 0.001. This means that H0 is rejected and H1 is accepted. Thus, Sig. (0.001) < 0.05 means that Husband's Support (X3) has a direct effect on the length of use contraceptive (Y1). This shows a positive relationship between husband's support and the length of time using contraceptives. Where every 1 million rupiah increase will increase the duration of contraceptive use by 0.263 years. Based on the results of the study it can be stated that the longer the successful years of education, the higher the husband's support for the use of contraception for the purposes to be achieved. according to one respondent, namely I Dewa Ayu Suci Wahyuni who was interviewed on January 5, 2020 who said that:

"My husband is very supportive of using contraceptives, because we have decided not to have any more children and only want 2 children. My husband also often reminded the midwife about the control schedule, delivered him when he was in control and paid for all the necessities to use the type of contraception I was using".

The results of this study are supported by research by Maryatun (2009) "Analysis of Factors in Mothers that Influence the Use of Iud Contraceptive Methods in Sukoharjo Regency" which states that the relationship between maternal perceptions of husband support and use of the IUD contraceptive method shows very significant results. This research is also in accordance with the research conducted by Puteri, et al. (2019) "The Relationship between Husband and Wife Communication Patterns with the Use of Long-Term Contraception Methods (Mkjp)" which states that there is a significant relationship between husband's support and the use of MKJP.

Based on the hypothesis and using the real level of 5 percent, the standardized coefficient value is -0.301 and the probability value is 0.000. This means that H0 is rejected and H1 is accepted. Thus, Sig. (0.000)

<0.05 means that the level of education (X1) has a direct effect on the number of children born alive (Y2). This shows a negative relationship between education level and the number of children born alive. Where every 1 year increase in successful education will reduce the number of children born alive by -0.301 years. The results of this study are in accordance with the research of Putri and Yasa (2015) showing that the variables of education and fertility have a negative and significant relationship. The higher the last education of women, the less the number of children who are born alive, and vice versa, the lower the education of women, the less likely the number of children to be cleansed to live.

Based on the hypothesis and using the real level of 5 percent, the standardized coefficient value is -0.234 and the probability value is 0.000. This means that H0 is rejected and H1 is accepted. Thus, Sig. O (0.001) <0.05 means that the level of family income (X2) has a direct effect on the number of children born alive (Y2). This shows a negative relationship between family income levels and the number of children born alive. Where every 1 million increase in family income will reduce the number of children born alive by -0.234 years. This research is in line with research conducted by Ririn (2018) "Analysis of factors affecting the fertility rate in Watang Sawitto Subdistrict, Pinrang District" states that income levels affect fertility where when income increases, the number of children wanted is less. The results of this study are also in line with the research conducted by Arialdi and Muhammad (2016) "The Effect of Urbanization, Education and Income on Fertility Rates in Five Cities in Aceh Province" which states that income has a negative and significant effect on fertility.

Based on the hypothesis and using the real level of 5 percent, the standardized coefficient value is -0.169 and the probability value is 0.018. This means that H0 is rejected and H1 is accepted. Thus, Sig. (0.018) <0.05 means that husband's support (X3) has a direct effect on the number of children born alive (Y2). This shows a negative relationship between husband's support and the number of children born alive. Where every increase in husband's support will reduce the number of children born alive by -0.169 years. The results of this study were also strengthened by an in-depth interview conducted with one of the respondents, namely Jero Ketut Sri Puspadi on January 5, 2020, who said that:

"My husband strongly advises me to regulate the birth spacing because it is very important in the welfare of children's affection later and will affect the quality of the child who is feared that there will be a lack of parental affection for the child due to the pregnancy distance that is too close."

Based on the hypothesis and using the real level of 5 percent, the standardized coefficient value is -0.292 and the probability value is 0.001. This means that H0 is rejected and H1 is accepted. Thus, Sig. (0.001) <0.05 means that the length of use contraceptives (Y1) has a direct effect on the number of children living in the family (Y2) This shows a negative relationship between the length of time using contraceptives and the number of children born alive. Where every 1 month increase in the length of time using contraceptives, it will reduce the number of children born alive by -0.292 years. The results of this study were also strengthened by an in-depth interview conducted with one of the Field Officers, Ulan Ariviani on January 5, 2020, who said that:

"I use family planning to control births and I don't want to have any more children because I think child 2 is enough according to the government's recommendation. Moreover, I already have 1 son and 1 daughter"

Research conducted by Maharani and Hardati (2018) "The Effect of Education, Age at First Marriage, and Length of Use of Contraceptives on Fertility in Buayan District, Kebumen Regency in 2017" states that the length of use contraceptives affects the fertility of women of childbearing age in Purbowangi and Semampir villages. Buayan Subdistrict, Kebumen Regency, has a large effect on fertility in Purbowangi Village by 27.9% and in Semampir Village by 53.7%. Then it is done by doing an indirect effect or testing the mediating variables. Based on the hypothesis using the 5% real level, it is found that Z (-3.7498) $<(-1.96)$, then the length of contraception use (Y1) is a mediating variable for the relationship between education (X1) and the number of children born alive (Y2). Indirectly, education (X1) affects the number of children born alive (Y2) through the duration of contraceptive use (Y1).

Based on the hypothesis using the 5% significant level, it is found that Z (-0.4884651302) $<(-1.96)$, then the length of use contraceptive (Y1) is a mediating variable for the relationship between income (X2) and the number of children born alive (Y2). Indirectly income (X2) affects the number of children born alive (Y2) through the length of use contraception (Y1).

Based on the hypothesis using significant level 5%, it is found that Z = (-0.66850930398) $<(-1.96)$, then the length of use contraceptive (Y1) is a mediating variable for the relationship between Husband's Support (X3) and the number of children born alive (Y2). Indirectly husband's support (X3) affects the number of children born alive (Y2) through the length of use contraceptive (Y1)

V. CONCLUSION

Based on the results of the previous discussion and description, conclusions can be drawn such as:

- 1) The level of years of success in education has a positive and significant effect on the length of contraceptive use and has a negative effect on the number of children born alive.

- 2) The level of family income has a positive and significant effect on the duration of contraceptive use and has a negative effect on the number of children born alive.
- 3) Husband's support has a positive and significant effect on the duration of contraceptive use and has a negative effect on the number of children born alive.
- 4) Education level, family income, husband's support have an indirect effect on the number of children born alive through the length of time using contraception. This means that the variables that mediate the level of education, family income, and husband's support for the number of children born alive.

5.1 Suggest

Based on the results of the analysis and the conclusions that have been presented, the following suggestions can be made:

- 1) Women's education must be improved in order to increase knowledge and change the mindset of society about the importance of using contraception and regulating pregnancy spacing.
- 2) Husband's support must be increased by providing direct counseling and socialization regarding the importance of providing support for husbands in using contraceptives, regulating spacing and number of births..

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