Differences in adolescent knowledge about Generation Planning (GenRe) based on the characteristics of adolescents in the Ngepring Family Planning Village

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Abstract. Adolescent reproductive health in Indonesia so far still has problems that need to be addressed. The high birth rate of the age group of 15-19 years shows the low understanding of adolescents about reproductive health as well as gaps in adolescent coaching regarding family planning. Concerning adolescent behaviour such as early marriage trends, premarital sex, and drug abuse encourage the National Population and Family Planning Agency to implement Generation Planning (GenRe) Program to prepare family life for adolescents. The very diverse characteristics of adolescents in the Ngepring Family Planning Village lead to the assumption that it will lead to differences in adolescent knowledge about GenRe. This study aims to determine differences in adolescent knowledge about GenRe based on the characteristics of adolescents in Ngepring. Methods of data collection through interviews 123 adolescents with questionnaires. The results of the interviews were processed by parametric difference test using Independent Samples T-Test and One-Way ANOVA with SPSS. The variable of GenRe knowledge that is most affected by the characteristics is knowledge of Maturing Marriage Age, Three Basic Risks of Adolescent Reproductive Health and Small, Happy, Prosperous Family. This raises assumption that delivery of information needs to pay attention to the characteristics so that it is right on target.

1. Introduction
Indonesia is currently in the period of demographic bonus and is expected to reach the peak of demographic bonus in 2035. One of the efforts that can be done to optimize the condition of demographic bonus is by increasing the knowledge and skills of adolescents. Adolescent reproductive health in Indonesia so far still has problems that need to be addressed. The high birth rate for adolescent girls aged 15-19 years is still high, which is 36 per 1,000 women aged 15-19 years [1] and the number of young marriages is still high, which is indicated by the low median age of first marriage of women which is 20.1 years. The high birth rate of the age group of 15-19 years shows the low understanding of adolescents about reproductive health as well as gaps in adolescent coaching regarding family planning.

The adolescents (10-24 years) population of the Special Region of Yogyakarta in 2018 is 830,200 people or 21.8% of the total population of Special Region of Yogyakarta [2]. The birth rate in adolescents (ASFR 15-19 years) in Special Region of Yogyakarta in 2018 shows the number 15 which
means that every 1000 girls in Special Region of Yogyakarta aged 15-19 years there are 15 births [3]. Adolescent birth rates in regions that are also still high are a further problem. These conditions affect adolescent premarital sexual behaviour is still high which results in unwanted pregnancies in adolescents have higher rates.

The low knowledge of adolescents about reproductive health and risk behaviour indicates the scope and role of the Adolescent / Student Information and Counselling Centre (PIK R / M) has not been carried out optimally. Concerning adolescent behaviour such as early marriage trends, premarital sex, and drug abuse encourage the National Population and Family Planning Agency to implement the Generation Planning (GenRe) Program to prepare family life for adolescents. This program provides opportunities for adolescents to pursue education and career planning in a planned manner. Furthermore, adolescents can get married and have a family planning according to the reproductive health cycle.

Sleman Regency has the highest number of births among other regencies in Special Region of Yogyakarta in 2017, amounting to 14,025 people [4]. The high number of births in the Sleman Regency raises the assumption that the Family Planning Village in the Sleman Regency is in dire need of increasing population quantity and quality control. Population control was measured using an adolescent knowledge approach about GenRe in the Family Planning Village that was assumed to get an intervention. The Family Planning Village in Sleman Regency which was chosen as the research area is in Ngepring. The characteristics of each individual are generally diverse so that it will cause differences in knowledge. Therefore, this study aims to determine differences in adolescent knowledge about GenRe based on the characteristics of adolescents in the Ngepring Family Planning Village.

2. Methods

Primary data and secondary data based on certain variables will be used in this study. Primary data are data obtained from a structured interview process for all adolescents in the Ngepring Family Planning Village. Secondary data is data on the number of adolescents in the Ngepring Family Planning Village and the Sturdy Adolescent (Tegar Remaja) variable according to the National Population and Family Planning Agency. The unit of analysis is in the form of individuals namely adolescents (aged 10-24 years) in Ngepring Family Planning Village. The adolescent interview in the Ngepring Family Planning Village was conducted to obtain quantitative data using a questionnaire.

Secondary data in the form of adolescent names in the Ngepring Family Planning Village was obtained through documents owned by the Ngepring Family Planning Village Office. The Sturdy Adolescent (Tegar Remaja) achievement variable was obtained from the official National Population and Family Planning Agency website and was used in the manufacture of questionnaires as a variable of adolescent knowledge about GenRe. The population in this study were 123 adolescents in the Ngepring Family Planning Village. The instruments used in this study were questionnaires, stationery, cameras, and SPSS software. Data from the adolescent interview were processed using the Statistical Package for the Social Sciences (SPSS) program. The results of the interviews were processed by parametric difference test with the Independent Samples T-Test for 2 categories of independent variables and One-Way ANOVA test for categorical scale independent variables of more than 2 categories.

The Independent Samples T-Test is a parametric test for identifying a difference between populations concerning their means divided by the standard error of the difference. This test is to determine two samples that have been drawn from the same population and necessity for normal data [5]. This test is also used to test the effect of independent variables on the dependent variable. The formula Independent Samples T-Test as follows:

\[ t - \text{test} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left(\frac{SD_1^2}{n_1}\right) + \left(\frac{SD_2^2}{n_2}\right)}} \]

where:
- \(\bar{X}_1\) = Average on sample distribution 1
- \(\bar{X}_2\) = Average on sample distribution 2
- \(SD_1^2\) = Variant value in sample distribution 1
The One-Way ANOVA test assesses \( k \) samples having been drawn from the same population by decomposing the total data variance into group component \([5]\). This test used to evaluate the size of the difference between sets of scores \([6]\). Analysis of Variance (ANOVA) is a statistical technique of analysis involving the comparison of variances reflecting different sources of variability. As a measure of deviation, variance is defined as sum of squares divided by degrees of freedom \([7]\) or:

\[
\text{Variance} = \frac{\text{sum of the squared deviation from the mean}}{\text{degrees of freedom}} = \frac{SS}{df}
\]

where:

\( SS = \text{sum of squares} \)
\( df = \text{degrees of freedom} \)

3. Results and Discussions

The very diverse characteristics of adolescents in the Ngepring Family Planning Village lead to the assumption that it will lead to differences in adolescent knowledge about Generation Planning (GenRe). Differences in adolescent knowledge about GenRe based on characteristics obtained through parametric difference test with a hypothesis. The hypothesis used in this study is that there are differences in knowledge based on characteristics. Different tests were performed between each characteristic variable with 5 knowledge variables.

3.1. Differences in knowledge about GenRe based on sex characteristics

Test results differ between knowledge of GenRe with sex characteristics indicating the results of the hypothesis were rejected in the five tests as presented in Table 1. This shows that there is no difference in the knowledge of adolescents in the Ngepring Family Planning Village based on sex characteristics. This condition raises the assumption that both boy and girl have the same knowledge or not significantly different. Knowledge about GenRe is important for adolescents regardless of sex so that both boy and girl have relatively the same knowledge of this test.

| Independent Variable | Dependent Variable | Asymp. Sig. | Results          |
|----------------------|--------------------|-------------|------------------|
| Sex                  | Knowledge of PUP   | 0.939       | Hypothesis rejected |
|                      | Knowledge of KesPro| 0.857       | Hypothesis rejected |
|                      | Knowledge of TRIAD KRR | 0.676   | Hypothesis rejected |
|                      | Knowledge of KKBS  | 0.128       | Hypothesis rejected |
|                      | Knowledge of Being a Role Model | 0.454 | Hypothesis rejected |

Source: Data Processing, 2019

3.2. Differences in knowledge about GenRe based on age group characteristics

Different test results between knowledge about GenRe with the characteristics of the age group indicate that all hypotheses were accepted except for knowledge about Reproductive Health (KesPro) as presented in Table 2. These results indicate that there are differences for knowledge about Maturing Marriage Age (PUP), Three Basic Risks of Adolescent Reproductive Health (TRIAD KRR), Small, Happy, and Prosperous Family (KKBS), and being Role Model for peers based on the characteristics of the age group. Adolescence is considered as a transitional period from the world of children to adulthood so it requires a maturing process in it \([8]\). This raises the assumption that the older adolescents, the more
knowledge and experience they have experienced so that their knowledge is higher than those of the younger age group. Knowledge variables about KesPro are not affected by age groups because this information is part of general information so that all adolescent age groups can find out.

**Table 2.** Different Test of Knowledge Variables about GenRe with Variable Characteristics of Adolescent Age Group in the Ngepring Family Planning Village

| Independent Variable | Dependent Variable   | Asymp. Sig. One-Way ANOVA Test | Results               |
|----------------------|----------------------|---------------------------------|-----------------------|
| Adolescent Age Group | Knowledge of PUP     | 0.004                           | Hypothesis accepted   |
|                      | Knowledge of KesPro  | 0.668                           | Hypothesis rejected   |
|                      | Knowledge of TRIAD KRR | 0.000                       | Hypothesis accepted   |
|                      | Knowledge of KKBS    | 0.000                           | Hypothesis accepted   |
|                      | Knowledge of Being a Role Model | 0.012             | Hypothesis accepted   |

Source: Data Processing, 2019

3.3. Differences in knowledge about GenRe based on the characteristics of recent education

Different test results between knowledge about GenRe with the recent education characteristics indicate that hypotheses are rejected for knowledge about Reproductive Health (KesPro) and being a role model as in Table 3. This shows that there are differences in knowledge based on the recent education by adolescents except for knowledge about Reproductive Health (KesPro) and becoming a role model. It is necessary to increase socialization from related institutions about GenRe by providing knowledge counselling to adolescents [9], so that adolescents gain population knowledge outside of school. Education is the main source of knowledge for adolescents so it is very influential on knowledge, but to be a role model of peers is not influenced by the education because they see the attitudes and daily behaviour of adolescents. Reproductive Health (KesPro) can also be obtained from information outside of school.

**Table 3.** Different Test of Knowledge Variables about GenRe with Variable Characteristics of Recent Education in the Ngepring Family Planning Village

| Independent Variable | Dependent Variable   | Asymp. Sig. One-Way ANOVA Test | Results               |
|----------------------|----------------------|---------------------------------|-----------------------|
| Recent Education     | Knowledge of PUP     | 0.000                           | Hypothesis accepted   |
|                      | Knowledge of KesPro  | 0.631                           | Hypothesis rejected   |
|                      | Knowledge of TRIAD KRR | 0.000                       | Hypothesis accepted   |
|                      | Knowledge of KKBS    | 0.000                           | Hypothesis accepted   |
|                      | Knowledge of Being a Role Model | 0.160             | Hypothesis rejected   |

Source: Data Processing, 2019

3.4. Differences in knowledge about GenRe based on the characteristics of activities of the past week

Different test results between knowledge about GenRe with the characteristics of the activities of the past week showed that two hypotheses were accepted, namely knowledge about TRIAD KRR and KKBS as in Table 4. This shows that there are differences in knowledge about TRIAD KRR and KKBS based on the activities of the past week. Knowledge about TRIAD KRR and KKBS is related to the readiness of family planning so that the activities of the past week influenced the different answers of respondents. Adolescents who are still in school tend not to think about family life so the knowledge of TRIAD KRR and KKBS is still less, it is different from those who are working or looking for work, of course, they are more concerned because they will enter the marriage stage. These conditions cause
differences in knowledge about TRIAD KRR and KKBS based on the characteristics of the activities of the past week.

**Table 4. Different Test of Knowledge Variables about GenRe with Variable Characteristics of Activities of the Past Week in the Ngepring Family Planning Village**

| Independent Variable | Dependent Variable          | Asymp. Sig. One-Way ANOVA Test | Results          |
|----------------------|-----------------------------|--------------------------------|------------------|
| Activities of the Past Week | Knowledge of PUP                  | 0,076                          | Hypothesis rejected |
|                      | Knowledge of KesPro           | 0,535                          | Hypothesis rejected |
|                      | Knowledge of TRIAD KRR        | 0,002                          | Hypothesis accepted   |
|                      | Knowledge of KKBS             | 0,000                          | Hypothesis accepted   |
|                      | Knowledge of Being a Role Model | 0,055                      | Hypothesis rejected   |

Source: Data Processing, 2019

3.5. Differences in knowledge about GenRe based on the characteristics of work experience

Different test results between knowledge about GenRe with work experience characteristics show that the hypothesis for knowledge about PUP, TRIAD KRR, and KKBS is accepted as shown in Table 5. This means that there are differences in knowledge about the PUP, TRIAD KRR, and KKBS based on the characteristics of work experience. Various experiences that experienced, reasoning processes and research conducted that will be taken by humans to satisfy their curiosity and at the same time be useful for understanding their environment [10]. This is according to adolescents who have different knowledge because the experiences of adolescents who ever and never worked will be different. The effect of work experience on knowledge is that several adolescents who have worked obtain information about the PUP, TRIAD KRR, and KKBS from their place of work so that they have better knowledge. This condition affects other adolescents who have never worked so that they do not have the opportunity to gain knowledge about the PUP, TRIAD KRR, and KKBS. Besides, the PUP, TRIAD KRR, and KKBS are related to the behaviour of late adolescents who are ready to move on to the next level of life, which is getting married. The situation formed the mindset of the older adolescents who were more aware of the knowledge of the PUP, TRIAD KRR, and KKBS.

**Table 5. Different Test of Knowledge Variables about GenRe with Variable Characteristics of Work Experience in the Ngepring Family Planning Village**

| Independent Variable | Dependent Variable          | Asymp. Sig. Independent Samples T-Test | Results          |
|----------------------|-----------------------------|------------------------------------|------------------|
| Work Experience      | Knowledge of PUP                  | 0,003                              | Hypothesis accepted |
|                      | Knowledge of KesPro           | 0,651                              | Hypothesis rejected |
|                      | Knowledge of TRIAD KRR        | 0,000                              | Hypothesis accepted |
|                      | Knowledge of KKBS             | 0,000                              | Hypothesis accepted |
|                      | Knowledge of Being a Role Model | 0,414                      | Hypothesis rejected |

Source: Data Processing, 2019

3.6. Differences in knowledge about GenRe based on the characteristics of media access information

Different test results between knowledge about GenRe with the characteristics of media for access to information indicating that the knowledge hypothesis about PUP, TRIAD KRR, and KKBS is accepted as shown in Table 6. Improving the quality of adolescents through providing access to information, education, counseling and services about family life [11]. This means that there are
differences in knowledge about PUP, TRIAD KRR, and KKBS based on access to information media. The influence of access to information media is because online mass media has more extensive information compared to electronic media so that knowledge of PUP, TRIAD KRR, and KKBS for internet media access users is higher than those accessing information from television.

Table 6. Different Test of Knowledge Variables about GenRe with Variable Characteristics of Media Access Information in the Ngepring Family Planning Village

| Independent Variable | Dependent Variable | Asymp. Sig. | Results |
|----------------------|--------------------|-------------|---------|
| Media Access Information | Knowledge of PUP | 0,012 | Hypothesis accepted |
|                        | Knowledge of KesPro | 0,695 | Hypothesis rejected |
|                        | Knowledge of TRIAD KRR | 0,003 | Hypothesis accepted |
|                        | Knowledge of KKBS | 0,001 | Hypothesis accepted |
|                        | Knowledge of Being a Role Model | 0,924 | Hypothesis rejected |

Source: Data Processing, 2019

3.7. Differences in knowledge about GenRe based on the characteristics of PIK-R / BKR participation

Different test results between knowledge about GenRe with the characteristics of PIK-R / BKR participation, namely the hypothesis of knowledge about TRIAD KRR and KKBS are accepted as shown in Table 7. This means that there is a difference in knowledge about TRIAD KRR and KKBS based on PIK-R / BKR participation. The implementation of the GenRe Program uses a two-sided approach, namely from the side of adolescents themselves through PIK R, and the approach from the family side through BKR [12]. This difference is due to the participation of PIK-R / BKR providing more information on population and family planning so that information about the TRIAD KRR and KKBS has increased.

Table 7. Different Test of Knowledge Variables about GenRe with Variable Characteristics of PIK-R / BKR Participation in the Ngepring Family Planning Village

| Independent Variable | Dependent Variable | Asymp. Sig. | Results |
|----------------------|--------------------|-------------|---------|
| PIK-R / BKR Participation | Knowledge of PUP | 0,463 | Hypothesis rejected |
|                        | Knowledge of KesPro | 0,389 | Hypothesis rejected |
|                        | Knowledge of TRIAD KRR | 0,000 | Hypothesis accepted |
|                        | Knowledge of KKBS | 0,000 | Hypothesis accepted |
|                        | Knowledge of Being a Role Model | 0,193 | Hypothesis rejected |

Source: Data Processing, 2019

3.8. Differences in knowledge about GenRe based on characteristics knowledge of population issues

The different test results between the knowledge of GenRe with the characteristics of knowledge on population issues which shows that the knowledge hypothesis about PUP, TRIAD KRR, and KKBS is accepted as in Table 8. This means that there is a difference in knowledge about PUP, TRIAD KRR, and KKBS based on knowledge about population issues. Knowledge is a term to state that someone knows something [13]. Adolescents who have good knowledge of population issues will have a better knowledge of the PUP, TRIAD KRR, and KKBS than those who have sufficient or insufficient
knowledge of population issues. Variable knowledge about population issues is a general description of adolescent knowledge which then gives an influence on the specific description of adolescents, especially about GenRe.

Table 8. Different Test of Knowledge Variables about GenRe with Variable Characteristics
Knowledge of Population Issues in the Ngepring Family Planning Village

| Independent Variable          | Dependent Variable | Asymp. Sig. | Results              |
|------------------------------|--------------------|-------------|----------------------|
| Knowledge of Population Issues | Knowledge of PUP   | 0,010       | Hypothesis accepted  |
|                              | Knowledge of KesPro | 0,310       | Hypothesis rejected  |
|                              | Knowledge of TRIAD KRR | 0,000   | Hypothesis accepted  |
|                              | Knowledge of KKBS   | 0,000       | Hypothesis accepted  |
|                              | Knowledge of Being a Role Model | 0,588 | Hypothesis rejected |

Source: Data Processing, 2019

4. Conclusion
The overall analysis of differences in adolescent knowledge in the Ngepring Family Planning Village based on the characteristics of adolescents showed different results between variables. This study shows that several knowledge variables about GenRe differ based on adolescent characteristics. The variable of GenRe knowledge that is most affected by the characteristics is the knowledge of Maturing Marriage Age, Three Basic Risks of Adolescent Reproductive Health and Small, Happy, Prosperous Family. This raises the assumption that delivery of information needs to pay attention to the characteristics of the subject of the recipient of the message so that it is right on target. Government programs especially about GenRe need to pay attention to the characteristics of adolescent in their delivery. Information about family planning and adolescent resilience delivered according to the unique characteristics of each adolescent can improve the material delivered.

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