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Research Article
Impact of Violence on Health Reproduction Among Wives in Donggala

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Abstract

Background: This study aims to investigate the impact of violence and the relationship between the socio-demographic factors and health reproduction problems. It is important to identify the groups (via screening) that are vulnerable to the impact of violence. **Materials and Methods:** This study was conducted in Sunju village (rural) and the Tanjung Batu sub-district (urban) of Donggala Regency Central Sulawesi. The participants included 94 women and the sample consisted of married women of child bearing age who were pregnant, puerperium, had experienced pregnancy or had given birth in the last 2 years and had experienced violence. **Results:** The results of this study revealed that the violence of a husband toward his wife that occurs during pregnancy and puerperium affects reproductive health and it is associated with pregnancy complications, unwanted pregnancy, sexually transmitted diseases, unsafe abortions, premature birth/low birth weight and loss of sexual desire. Additionally, there are differences in the health reproduction problems (pregnancy complications) according to the socio-demographics of the wives. Wives who suffered from pregnancy complications were more likely to be <35 years of age, have an elementary school level education (SD>), have a total of <4 children and live in a village. Meanwhile, unwanted pregnancies were more common in the group of women who are <35 years of age, have a high school education, are dating, have <4 children and live in the city. **Conclusion:** In conclusion, violence towards wives during pregnancy and puerperium has variable health reproduction effects according to the socio-demographic conditions of the wife.

Key words: Violence, health reproduction, pregnancy complications

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INTRODUCTION

The ideal conditions for healthy reproduction involves liberation from pain and diseases, the performance and enjoyment of safe sex activities, the ability to have children and a safe pregnancy and child birth and fertility regulation without compromising their health[1]. This is consistent with the purpose of marriage, which is to have a happy, healthy family with physical and mental support, protection and affection. Contrary to those expectations, the number of domestic violence cases has been increasing annually. From 2010-2012, the prevalence of violence against women was only 71 cases, but it increased to 92 cases in a period of 2013-2015[2]. Pregnancy requires an extra attention and awareness from the husband, both physically and mentally. In fact, many expectant mothers experience violence. The data showed from 2010-2012, there were 11 cases of violence for expectant mothers, which in 2013-2015 increased to 27 cases[3]. Based on these data, the research problem can be formulated as "What are the consequences of violence against women's health reproduction? and What is the relationship between socio-demographic factors and health reproduction problems?"

Study by Salam *et al.*[4] found that respondents with parity less than 4 times (>4) are likely to experience pregnancy complication rates of 73.81% compared to 26.2% for respondents with parity of 2-3 times. A higher frequency of parity is riskier than a lower frequency. Research revealed by Luke and Brown[5] concluded that age factors and pregnancy complications can be described. Pregnancy complications tend to increase at a young age (<20), decrease at 20-30 years of age and increase again in old age (>30). This means that, younger and older pregnant women tend to be at risk for pregnancy complications.

The complication rate tends to be higher for women with a low education level because they probably do not understand the relationship between complications and other factors. They also have limited access and information about the complications of pregnancy and the ways of handling complications[6]. The result of this study supports the result of another study by Hutagalung *et al.*[7] in which the authors discovered that 64.5% of respondents with <SLTP (Junior High School) education experienced complications compared to 33.5% of women with >SLTA (Senior High School) education. This pregnancy complication problem is related to the community mind set about education. They assume that education is not a major priority for women. As a result, less educated women generally do not know about pregnancy complications.

Unwanted pregnancy is a health reproduction problem related to the age of women. Expectant mothers over 35 years of age tend to experience more unwanted pregnancies than those under 35 years[8]. Women over 35 years old of age likely do not want more children because it is very risky. A study Indonesia Demographic and Health Survey[9] showed that some older women desire the unwanted pregnancies. Educated women also desired the unwanted pregnancies. The level of a person's education is related to his or her knowledge as a result of rational in thinking, attitude and awareness, including of topics such as family planning[8]. Prihastuti[8], stated that as a result of someone' knowledge, people will have wide perspectives and experiences about everything, including their responsibility to have children. The significant rates of unwanted pregnancy categorized by education in women is 0.001%. This means that the education level affects the unwanted pregnancy rate. The data of Indonesian Demographic and Health Survey[10] revealed that the birth of unwanted children increased with increasing ages and education. It can be observed by the fertility rate that this number decreases with higher education. Women with ≥SLTA education showed had desired fertility numbers of 2.1, whereas those with <SLTP education had values between 2.3-2.4.

According to Hartono, the difference in the social economic level for the health facility affected different health qualities of urban and rural communities[11]. Health Department of Central Sulawesi Province[12] showed that the health facility in a city can improve the quality of pregnancy health care. Good pregnancy care is supported by an adequate health facility. Therefore, socio-demographic factors are related to several impacts of violence on women's reproductive health.

MATERIALS AND METHODS

Research method: Donggala Regency consists of 21 sub-districts and is geographically widespread over 10471.71 km^2. The study sample was based on purposive sampling. The sample of the sub-district and village was chosen based on the number of violence cases. The data on violence to women obtained by police officer reports of Donggala from January, 2004-December, 2006 revealed that the Banawa district had 15 cases, which is higher than the 9 cases in Marawola. Of these two districts, Sunju and Tanjung Batu were purposively assigned.

Technique of respondent retrieval: A list of all married women of child bearing age between 15-49 years old was

Table 1: Respondent distribution in Sunju village and Tanjung Batu based on the respondent characteristics

Respondent	Sunju village	Tanjung Batu village	Total
Pregnant mother	27	42	69
Puerperium mother	12	18	30
Mother who experienced pregnant and giving birth for maximum 2 years	31	57	100
Mother who experienced violence in period above based on preview information through the village midwifery, the headman and the traditional village council	14	17	12
Total	84	134	218

Source: Data collection results of the community health center of Tinggede and Banawa

Table 2: Pregnancy complications based on the ages affected by violence

Pregnancy complication	$\leq$24 years old		25-34 years old		$\geq$35 years old		Total	
	n	%	n	%	n	%	n	%
	1	2	3	4	5	6	7	8
Yes	11	42.3	5	10.9	11	50.0	27	28.7
No	15	57.7	41	89.1	11	50.0	67	71.3
Total	26	100	46	100	22	100	94	100

made to determine respondents in Sunju village and Tanjung Batu district; the criteria for inclusion were the following:

- Pregnant
- Puerperium
- Gave birth within 2 years
- Experienced violence in these periods based on information shared with the village midwife, headman and traditional village council

The Community Health Center of Tinggede and Banawa in Sunju village had 70 respondents, whereas the Community Health Center of Banawa in Tanjung Batu District had 117 respondents. Meanwhile, the preview temporary data obtained by the headman and midwives showed that 14 women in Sunju village and 17 women in the Tanjung Batu district experienced violence. There were a total of 218 respondents in both villages/districts (Table 1).

The data were collected through a structured interview, FGD, observation and in-depth interview. Then, they were analyzed using a descriptive percentage analysis method.

RESULTS AND DISCUSSION

Violence affects the reproductive health of women. These impacts could be very dangerous, resulting in pregnancy complications, sexually transmitted diseases, unwanted pregnancy, unsafe abortion, premature birth, low birth weight and loss of sexual desire. The most dangerous impact is maternal and infant mortality. Analysis of the socio-demographics factors affecting reproductive health was performed to identify the socio-demographic characteristics

of women who are vulnerable to violence. The analysis is very important for screening health reproduction problems caused by violence. There are some requirements for determining the health problems that are analyzed and counted using chi square testing. Based on the requirements, the analyzed health problem includes pregnancy complications and unwanted pregnancy.

Pregnancy complications

Age: Table 2 shows clear differences in the groups of women who did and did not experience pregnancy complications according to age. Older women ($\geq$35 years old) had complication rates of 50.0%, which was followed by rates of 42.1% for younger women (<25 years old). As a result, older women tend to experience more complications than younger women. Most of the time, women who were 25-34 years old experienced violence, but only 10.9% experienced complications. This finding is consistent with the analysis of Felly and Senewe[13] that the pregnancy complications tend to occur in older women (>35 years old). The low percentage of women who were 25-34 years old and experienced complications is closely related to the health reproduction maturity age. The age of 20-35 years is a healthy, safe reproduction age.

Wives who are <20 years old are less likely meet their nutritional needs during pregnancy, affecting their immune system. Meanwhile, women who are >35 years old can have deterioration and decreased endurance as well as many disease types, such as hypertension, kidney disease and elevated cholesterol. Both age groups are susceptible to pregnancy complications even if they are less likely to experience domestic violence.

The χ^2 value was 14.3 with df = 2 at a significant level of 0.05 and 0.01%. The age factor showed that there is a significant difference among the age groups in terms of pregnancy complications. This conclusion strengthens the study of Salam *et al.*[4] who stated that the age of the mother during pregnancy affects the pregnancy complication rate. Women who are under 20 years old or over 35 years old have a higher risk of pregnancy complications because these age groups have a low hemoglobin level. This study suggests that

the frequency of placental abruption caused the increase in pregnancy complications according to the mother's age, particularly for women over 35 years of age. Placental abruption can occur because of prior abdominal impact or from domestic violence during pregnancy. Therefore, there is a meaningful relationship between expectant mothers and the frequency of placental abruption causing pregnancy complications. The results from Jahanfar *et al.*[14] are not in agreement with this; the researchers found that there is no correlation between age and pregnancy complications for expectant women in Perak Malaysia who experienced violence. However, there is a correlation between the prevalence of violence and complications.

Education level: The education level of the expectant mother greatly influences the way they maintain their health and understand pregnancy complications. Women with low education levels tend to experience complications. This could happen because of the lack of understanding of pregnancy complications and other factors. Additionally, women with a low education level have low access to the information about complications. This study showed that the difference in the pregnancy complication status depends on the woman's education level. The rate of women who experienced a complication with a low education level is 41.3%, with a secondary education level is 17.9% and with a high education level is 15.0%. This observation is reinforced by the groups of women who do not experience complications. The group of women who are least likely to experience a complication is the group with $\geq$SLTA 85.0%, whereas the rate was lowest for those with $\leq$SD 58.7%. These numbers showed that women with the highest level of education had the lowest chances of experiencing complications. This means that a low education level can contribute to pregnancy complications (Table 3).

The χ^2 value is 7.0 with 2 df and a 0.05% of significant level. The wife's education level was significantly different between educated groups for the rate of pregnancy complications. This observation is in accordance with the research of that the education level affects pregnancy complications. Education can impact how mothers to think when assessing their bodies and reproductive health. Women with higher levels of education engage in more practical pregnancy care. Mothers with a low education level frequently underestimate symptoms or do not take symptoms like bleeding or signs of pregnancy complications seriously.

Total number of living children: Wives who experienced pregnancy complications tended to have $\geq$4 children (46.4%).

By contrast, women with 2-3 children were more likely to experience violence and in this group, only 14.6% experienced complications. This observation is in accordance with the ideas stated by Chowdhary and Patel[15] that the total number of children affects the pregnancy complication rate. Parity of >4 children has a 73.81% complication rate. Meanwhile, parity of 0-2 children has a 26.19% complication rate[7] and also said that the use of contraceptives to reduce the number of pregnancies and births is considered to support efforts to prevent pregnancy complications (Table 4).

The result of this study, after testing for statistical significance, revealed that there is a difference in the distribution of the total children based on the pregnancy complication status and that the score is $\chi^2 = 8.3$ and df = 2 for a significance level of 0.05. This result is consistent with the analysis of the Indonesian Demographic and Health Survey[10] that the parity of >4 increases the risk of experiencing pregnancy complications, which may be related to the mother not being sufficiently ready or physically and psychologically recovered to undergo pregnancy and give birth to the next child. Felly and Senewe[13] presented a different idea in analyzing the factors related to the pregnancy complications and the parity based on the data in the Indonesian Demographic and Health Survey[10]. The researchers found that there is no relationship between pregnancy complications and parity.

Residence: The expectant mothers residence (village or city) is related to the pregnancy complications. Wives in Sunju village had a 47.2% pregnancy complication rate, whereas the rate was 17.2% for women who lived in Tanjung Batu. In the

Table 3: Pregnancy complication caused by violence based on education level

Pregnancy complication	Education level							
	$\leq$SD		SLTP		$\geq$SLTA		Total	
	n	%	n	%	n	%	n	%
	1	2	3	4	5	6	7	8
Yes	19	41.3	5	17.9	3	15.0	27	28.7
No	27	58.7	23	82.1	17	85.0	67	71.3
Total	46	100	28	100	20	100	94	100

Table 4: Pregnancy complication caused by violence based on the total No. of living children

Pregnancy complication	Total No. of children alive							
	<2 AMH		2-3 AMH		$\geq$4 AMH		Total	
	n	%	n	%	n	%	n	%
	1	2	3	4	5	6	7	8
Yes	8	32.0	6	14.6	13	46.4	27	28.7
No	17	68.0	35	85.4	15	53.6	67	71.3
Total	25	100	41	100	28	100	94	100

village, 80.6% of mothers had not experienced a pregnancy complication and 82.8% of mothers in the city had not experienced a complication. This means that most of the mothers who experienced pregnancy complications lived in the village (Table 5).

The χ^2 obtained after significance testing was 9.7 with df 1 and significance levels of 0.05 and 0.01%. There was a significant difference between residence and the pregnancy complication rate. Pregnancy complications tend to occur in expectant mothers who work in intense jobs, such as sand mining in a river and raising sand into trucks. These jobs are draining and can cause pregnancy complications, such as fatigue, fever and headache. Pregnancy complications were more likely in Sunju village than in Tanjung Batu. This conclusion is consistent with Indonesian Demographic and Health Survey[10] and Prihastuti[8] that women who live in villages tend to experience complications because of their low socioeconomic status. The overall complication rate is low in Tanjung Batu village because recreational spots and entertainment facilities are available to expectant mothers. Expectant mothers who have experienced violence are at risk of experiencing pregnancy complications, such as headache or stress[16]. Therefore, the availability of relaxation facilities can reduce pregnancy complications.

Description of social demographics relative to pregnancy complications: In identifying the socio-demographic factors related to pregnancy complications caused by violence, age $\geq$35 is the most prominent with a violence rate of 50.0%.

Although, violence is likely experienced by women who are 24-34 years old, the vulnerable age for pregnancy complications tend to occur around >35 years because it is related to maturity of the reproductive age[12]. By contrast, the age of 20-35 years is a healthy, safe reproductive age. Pregnancy at <20 years of age is biologically, psychologically and economically unstable, making women vulnerable to emotional shocks. Felly and Senewe[13] stated that for ages >35 years, women are susceptible to deterioration and decreased body endurance and they have various diseases, such as hypertension, kidney disease and high cholesterol. Data presented in the Indonesian Demographic and Health Survey[10] showed for ages $\geq$35 years or older, 90.1% of women attended their regular pregnancy checkups, whereas 94.2% of those who were 20-34 years of age attended their regular checkups. Pregnancy complications will not be detected in the early stage if the expectant mother does not frequently go to checkups. Curry *et al.*[17] stated that the risky age groups participate in more intense checkup. The χ^2 value supported these findings that although all socio-demographic variables showed differences between the pregnancy complication group and non-pregnancy complication group, the highest χ^2 value was found for age, which was 14.7 at a significance level of 0.01 and 0.05 with a contingency coefficient (K) of 0.36. This means that the age variable is closely related to the pregnancy complication rate (Table 6). The relationship between the two variables is strong if the contingency coefficient[18] is high, around values of 0 and 1.00.

Unwanted pregnancy

Age: Age is an important variable influencing unwanted pregnancy because it can be used as a biological maturity indicator, particularly because it influences fertility. The fertility of women is at a level of 0 (zero) before menstruation. With first menstruation (menarche), women enter their reproductive period and the fertility level is no longer zero. Then, the fertility peaks at approximately age 25-29 before it

Table 5: Pregnancy complication caused by violence based on residence

Pregnancy complication	Residence					
	Sunju village		Tanjung Batu		Total	
	n	%	n	%	n	%
	1	2	3	4	5	6
Yes	17	47.5	10	17.2	27	28.7
No	29	53.8	48	82.8	67	71.3
Total	36	100.0	58	100	94	100

Table 6: Socio-demographic factors of the respondents who experienced pregnancy complications based on the highest frequency and chi square test according to variables

Variables	Highest frequency (n = 27)*		Chi square test (n = 94)**		
	Group/category	Percentage	Score χ^2	Significant level	Coefficient of contingency
Ages	$\geq$35 years old	50.0	14.7	0.05 and 0.01	0.36
Education level	$\leq$SD	41.3	7.0	0.05	0.26
Total of AMH	$\geq$4 children	46.4	8.3	0.05	0.28
Residence village-city	Village	47.2	9.7	0.05 and 0.01	0.30

Source: Processed from Table 2-5, *Total respondents who experienced pregnancy complications because of violence, **Total respondents included 27 respondents who experienced pregnancy complications and 67 who did not

slowly falls back. This means that the pattern of women's fertility according to their age forms an inverted U pattern. Fertility ends when women experience menopause. Fertility from menarche to menopause typically occurs in the age range of 15-49. But, it is currently assumed that women start their reproductive period earlier than 15 years of age and end at older than 49 years of age[19], which could be from improvements in the nutrition level of individuals and the community. Table 7 shows that the rate of unwanted pregnancy is higher in older age (54.5%). Younger women (15-24) did not experience unwanted pregnancy because they were still in the early stages of marriage. Normally, in this stage, women desire children. By contrast, older women, who are in the middle of their marriage (<34 years old) and already have one or two children, want to postpone another pregnancy. Then, women who are >35 years old do not want any more children and this age range is also included in the high-risk pregnancy group.

The χ^2 score is 17.4 after testing for significance with df 2 at significance levels of 0.05 and 0.01. There was a significant age factor difference in the rate of unwanted pregnancies. This finding is relevant to the analysis of SKDI 2007, which revealed that the unwanted pregnancy rate is often higher in older women. Prihastuti[8] stated that the age of the wife greatly affects the percentage of unwanted pregnancies.

Mother's education level: Table 8 shows that the total of unwanted pregnancies is dominated by women at a higher education level (60.0%) compared to those with a lower education level (8.7%).

There were significant differences in the distribution of the wife's education, which means that the status of unwanted pregnancy scored as $\chi^2 = 20.5$ with a df = 2 at significant levels of 0.05 and 0.01. This is in accordance with statements by Nur[2] that the unwanted pregnancy rate increases linearly with increased education. This means that women with a higher education level have a lower rate of desiring pregnancy. This symptom is easy to understand because high education enhances a person's knowledge, view and scope. Consequently, educated women can more easily receive new ideas, including negotiating with their husbands to use contraception. Additionally, education will improve women's awareness of the benefits of having fewer children. Therefore, women with a higher level of education tend to limit the number of children they have compared to women who have a lower level of education.

Total number of living children (amh): The distribution of children according to unwanted pregnancy showed that there is no difference in the distribution of the total children with a score of $\chi^2 = 5.6$, while the score is 6.87. Although, this relationship is not significant, women with many children women have the highest rate of unwanted pregnancy and then use the contraception. However, because their contraceptive needs are not being met, they continue to have unwanted pregnancies. This finding is relevant to the analysis in SDKI 2007 that 64.2% of married women did not want more children, which increased to 78.7% for women with 3 children. While, the unfulfilled need for KB increased from 9.9% according to SKDI 2003 to 10.0% according to SDKI 2007.

Table 9 shows that the more children women have, the higher the percentage of unwanted pregnancies. The percentage of women with >4 children is 39.3%, which is 17.1% for 2-3 children and 16% for less than 2. By contrast, the group of women desiring pregnancy was more likely to desire pregnancy when they had fewer children. This means that the factor of the total number of children can influence the unwanted pregnancy rate. Currently, women with low parity and women who are recently married do not desire early pregnancies.

Residence: There is a higher tendency toward unwanted pregnancy in Tanjung Batu (31.0%) compared to

Table 7: Unwanted pregnancy according to violence based on age group

Unwanted family	Ages							
	<24 years old		25-34 years old		>35 years old		Total	
	n	%	n	%	n	%	n	%
	1	2	3	4	5	6	7	8
Yes	6	23.1	4	8.7	12	54.5	22	23.4
No	20	76.9	42	91.3	10	45.5	72	76.6
Total	26	100	46	100	22	100	94	100

Table 8: Unwanted pregnancy with violence based on the education level

Pregnancy	<SD		SLTP		>SLTA			
	n	%	n	%	n	%	n	%
	1	2	3	4	5	6	7	8
Yes	4	8.7	6	21.4	12	60.0	22	23.4
No	42	91.3	22	78.6	8	40.0	72	76.6
Total	46	100.0	28	100	20	100	94	100

Table 9: Unwanted pregnancy caused by violence based on the total No. of AMH

Unwanted pregnancy	Total No. of alive children (AMH)							
	<2 AMH		2-3 AMH		>4 AMH		Total	
	n	%	n	%	n	%	n	%
	1	2	3	4	5	6	7	8
Yes	4	16.0	7	17.1	11	39.3	22	23.4
No	21	84.0	34	82.9	17	60.7	72	76.6
Total	25	100	41	100	28	100	94	100

Sunju (11.1%). There are two reasons for this. First, women who live in the city work in the public sector. They are facing responsibilities to manage their work and family time; as a result, they do not desire many children and they tend to use contraception to avoid pregnancy. The choice of productive work is determined by a woman's life cycle[20]. Women have the biological task of giving birth and breast feeding their children in addition to social tasks of parenting and managing the household. The life cycle of a woman is eventually passed. Getting married and having children belong to an important stage of womanhood and wifehood. A woman's decision in engage in a productive activity is followed by a decision to balance productive work and reproduction. To achieve this balance and reduce unwanted pregnancies, many women who work outside the home use contraception. Second, women who live in the city clearly tend to experience more unwanted pregnancies because they are mobile and socialize more outside the house instead of having a limited experience as a housewife (Table 10).

Another factor by which residence influenced the unwanted pregnancy rate is the burden of living in a larger city. The high burden of life in the city affects the high burden of childcare, which can impact the unwanted pregnancy rate. There are differences in the residence distribution with a score of $\chi^2 = 4.9$ and df = 1 at a significance level of 0.05. This result is relevant to the studies conducted by Irawan[21] and Chowdhary and Patel[15] in which they stated that women who live in villages and cities have different pregnancy complications.

Description of socio-demographic factors for unwanted pregnancy: The identification of socio-demographic factors

that are related to a reproductive health problem (unwanted pregnancy) demonstrated a high influence of the education level with $\geq$SLTA (60.0%). Women in the group of $\leq$SD experience the violence more frequently, but the impact of violence is higher in the group of women with $\geq$SLTA. Study from Salam *et al.*[4] stated that the unwanted pregnancy rate is linearly increase with the increase in education level. This means that more educated women have a lower percentage of desired pregnancy. This phenomenon is easy to recognize because high education increases women's knowledge, view and scope of social interactions. Data in the Indonesian Demographic and Health Survey[10] revealed a similar finding that the rate of undesired pregnancy increased with increasing age and education. The desired fertility number for women with an education level of $\geq$SLTA is 2.1, whereas that for $\geq$SLTP is between 2.3-2.4. The desired fertility number in the group with $\geq$SLTA is 2.5. The high gap in the actual fertility number and the desired fertility contributes to the high percentage of unwanted pregnancy. The nationally desired fertility number is 2.2, but the total fertility number is 2.6. As a result, the Indonesia Demographic and Health Survey[10] confirmed that if an unwanted pregnancy can be prevented, the total number of fertility in Indonesia would be 2.2 instead of 2.6. This means that the unwanted pregnancy rate affects the fertility number in Indonesia.

The unwanted pregnancy rate was 23.4% for 94 respondents from two villages. If the sample is more than 94, the complication rate will be higher. The χ^2 score showed that not all socio-demographic variables had differences between the groups of desired and unwanted pregnancies. The variable for total children did not show any differences[22]. The variable for the education level is clearly related to the unwanted pregnancy rate with an χ^2 score of 20.5, significance levels of 0.01 and 0.05 and a contingency coefficient (K) of 0.42. This shows that the education level is related to the unwanted pregnancy rate because the K score is higher than that for all other variables. The higher K means that there is a closer relationship between the two variables[17] (Table 11).

Table 10: Unwanted pregnancy caused by violence based on residence

	Residence					
	Sunju village		Tanjung Batu		Total	
Unwanted pregnancy	n	%	n	%	n	%
	1	2	3	4	5	6
Yes	4	11.1	18	31.0	22	23.4
No	32	88.9	40	69.0	72	76.6
Total	36	100.0	58	100	94	100

Table 11: Description of socio-demographic factors for respondents who experience violence based on the highest frequency and chi square test according to the variables

	Highest frequency (n = 22)*		Chi square test (n = 94)**		
Variables	Group/Category	Percentage	Score of χ^2	Significant level	K
Age	$\geq$35 years old	54.5	17.4	0.05 and 0.01	0.39
Education level	$\leq$SLTA	60.0	20.5	0.05 and 0.01	0.42
Total AMH	$\geq$4 children	39.3	5.6	***	0.23
Residence village/city	City	31.0	4.9	0.05	0.22

Source: Analyzed from Table 2-5, *Total respondents who experience unwanted pregnancy because of violence, ** Total No. of respondents included 22 women who experienced unwanted pregnancy and 72 who did not, ***Significant

Reproductive health issues (pregnancy complications) are related to the socio-demographic factors of the women. There are differences in the pregnancy complication rates of women according to their age, education level, total number of living children and location of residence (village/city). Reproductive health issues (unwanted pregnancy) had differences according to the age, education level and residence. There was no difference between the number of living children and unwanted pregnancy rate. This finding complements the theory by Heise[23] that pregnancy has a different impact on every woman and the differences are related to socio-demographic factors, such as age, education level, total number of living children and residence. Every woman has different types of socio-demographic factors; as a result, the level of suffering in response to violence is different in every individual.

CONCLUSION

Therefore, the impact of violence from the husband on the reproductive health of the wife is insufficiently explained by the theory of Heise. There is a need to consider other factors, such as the wife's socio-demographic background.

REFERENCES

1. United Nations, 1995. Report of the international conference on population and development Cairo, September 5-13, 1994. United Nations, New York. http://www.unfpa.org/sites/default/files/event-pdf/icpd_eng_2.pdf

2. Nur, R., 2015. Impacts of violence during pregnancy-post childbirth to reproductive health of women at rural and urban areas. Int. J. Sci. Basic Applied Res., 21: 16-26.

3. Statistics Indonesia, National Population and Family Planning Board, Ministry of Health, MEASURE DHS. and ICF International, 2013. Indonesia demographic and health survey 2012. BPS, BKKBN, Kemenkes and ICF International, Jakarta, Indonesia, August 2013.

4. Salam, M.A., M.A. Alim and T. Noguchi, 2006. Spousal abuse against women and its consequences on reproductive health: A study in the urban slums in Bangladesh. Maternal Child Health J., 10: 83-94.

5. Luke, B. and M.B. Brown, 2007. Elevated risks of pregnancy complications and adverse outcomes with increasing maternal age. Human Reprod., 22: 1264-1272.

6. MoH., 2012. Reproduction health information: The manual of prevention and violence handling to women in the level of basic service of antenatal in the level of basic service. Health Department Republic of Indonesia, Jakarta.

7. Hutagalung, L., R. Rame and M.M.S. Manurita, 2006. Socio-demography factors and sosio-psychology that related to anemia of expectant mother in Tanjung Balai city, North Sumatra province 2006. Health Department of North Sumatra, Medan.

8. Prihastuti, D., 2004. Advanced analysis of SDKI 2002-2003. The Tendency of Fertility Preference, Unwanted Pregnancy in Indonesia. National Family Planning Coordinating Board Published, Jakarta.

9. Statistics Indonesia (Badan Pusat Statistik-BPS) and Macro International, 2008. Indonesia demographic and health survey 2007. BPS and Macro International, Calverton, Maryland, USA., December 2008.

10. Ministry of Health, 2010. Indonesian demographic and health survey, 2010. Integrated Survey Supports Healthy Indonesia, Jakarta Indonesia.

11. Hartono, D., H. Rumdiarti and E. Djohan, 1999. The access of health service of reproduction health: Case study in Jayawijaya regency. Pulitbang Demograpghy and Work LIPI Collaborate to Australian National University (ANU-Canberra), Jakarta.

12. Ministry of Health, 2013. Basic health research. Agency for Healthcare Research and Development, Ministry of Health, Jakarta.

13. Felly, P. and Senewe, 2001. Factors relates to the pregnancy complication and the last three years of childbirth in Indonesia (The analysis of SKRT-sakernas 2001). Res. Bull., 32: 83-91.

14. Jahanfar, S., E.B. Kamarudin, M.A.B. Sarpin, N.B. Zakaria, R.B. Abdul Rahman and R.D.B. Samsuddin, 2007. The prevalence of domestic violence against pregnant women in Perak, Malaysia. Arch. Iran. Med., 10: 376-378.

15. Chowdhary, N. and V. Patel, 2008. The effect of spousal violence on women's health: Findings from the Stree Arogya Shodh in Goa, India. J. Postgraduate Med., 54: 306-312.

16. Hakimi, E.N. Hayati, U. Marlinawati and M.C.E.A. Winkvist, 2001. Silent for harmony, violence to wife and women's health in central Java. LPKGM-UGM, Rifka Annisa WCC., Yogyakarta, Indonesia.

17. Curry, M.A., N. Perrin and E. Wall, 1998. Effects of abuse on maternal complications and birth weight in adult and adolescent women. Obstet. Gynecol., 92: 530-534.

18. Efendi, Sofian and C. Manning, 1989. The principles of data analysis. Survei Research Method, Institution of Research, Education, Economic and Social, Jakarta.

19. Haryanto, 1993. Factor of the fulfilment of contraception needs in Sukoharjo regency. Ph.D. Thesis, Geography Faculty of Gadjah Mada University, Yogyakarta.

20. Hardyastuti, S., 1994. Production and Reproduction. PPK., Gadjah Mada Yogyakarta University.

21. Irawan, T.I., 2004. Factor of determined the fertility. National Family Planning, Coordinating Board Published, Jakarta.

22. Mallongi, A., P. Parkpian, P. Pataranawat and S. Chinwetkitvanich, 2015. Mercury distribution and its potential environmental and health risks in aquatic habitat at artisanal buladu gold mine in Gorontalo Province, Indonesia. Pak. J. Nutr., 14: 1010-1025.

23. Heise, D.R., 2001. Project magellan: Collecting cross cultural affective meanings via the internet. Electron. J. Sociol., Vol. 5 No. 3.