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SCHOOL OF PUBLIC HEALTH
MASTER OF PUBLIC HEALTH

**Assessment of risk factors associated with teenage pregnancy among young women
Between 15-19 Years in RWANDA: RDHS Analysis 2014-2015**

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Kigali, September 2019

DECLARATION

I state that this dissertation is my own original work and has not been submitted before to any organization for assessment purposes. Furthermore, I have recognized all sources used and these have been cited in the reference section.

Signature:

Date:

DEDICATION

This dissertation is dedicated to my God Jesus Christ on behalf of His grace and sufficient provision for all that I needed to complete this master's degree .Secondly to my dear Wife MICOMYIZA Aimée, thank you for your vast love, perseverance, assurance and support during this time.

To those who helped me to accomplish this work, I dedicate this dissertation.

ACKNOWLEDGEMENT

My heartfelt thanks go to all those who helped me complete this modest research. I would like to thank all the staff and faculty members of the School of Public Health for their support and encouragement throughout my academic journey.

My deepest gratitude goes to my supervisor, **Prof: Laetitia NYIRAZINYOYE** and my **co-supervisor Mrs Stella Matutina UMUHOZA**, for the time dedicated to improve the content of this dissertation. I am grateful for their invaluable guidance, helpful comments and suggestions, patience and encouragement during this research.

ABSTRACT

Background: Teenage pregnancy in Rwanda is public health concern, a social and development problem. Adolescents and youth now comprise the largest share of the Rwandan population and represent about 50% of the population. The few studies documented factors associated contributing to teenage pregnancies in Rwanda, especially among women between 15-19 years old. The aims of this research is to fill this knowledge gaps by assessing factors associated with teenage pregnancy among young adolescents aged between 15-19 years in Rwanda using the Demographic Health Survey data DHS 2014/15.

Objective: The aim of this research is reduction of risk factors associated with teen pregnancy among young women between 15-19 years in RWANDA .

Methodology: The study design is the cross-sectional study that is based on the secondary data from RDHS 2014/2015 .Data analysis was done using STAT 13 Descriptive analysis for distribution of pregnant proportion .,Bivariate and multivariate logistic regression were used to assess the relationship between the independent variables and the outcome and risk factor associated with teen pregnancies in Rwanda. Association with P-Value<0.05% was considered significant. , OR, CI for determine association between independent and outcome of study..

Results : The results showed that study participants those who was started having sexual intercourse at ages under 14 and 15-19 years old are statistically significant means that there is negative association means that having this age is protecting to be pregnancy 15-19 (pv= 0.006. CI at 95% = 0.012. ,0.69 OR= 0.29 and <14 (OR=0,07 CI at 95% =0.01,0,27 , p.v= 0.000). and Teen pregnancy was significantly statically associated with teen pregnancies compared to those who Currently living with a partners with PV=0.000 and living in Eastern province is also statistically significant compared to others province.

Conclusion: Recent sexual active and early sexual is associate to teen pregnancies, living in eastern province and currently not living with partner has association with teen pregnancy. Furthermore, study participants who started having sexual intercourse at ages under 14 years old there is negative association means that having this age is protective to be pregnancy compared to this age.

Key wards: Teenage, Pregnancies, DHS Rwanda, Reproductive health, sexual health and Adolescent.

ACRONYMS AND ABBREVIATIONS

ASRH	: Adolescent sexual reproductive health
DHS	: Demography health survey
GBD	: Global Burden of Disease
HIV /AIDS	: Human immunodeficiency virus
NIS	: National institute of statistics
PF	: Family planning
PHD	: Doctor of Philosophy
RDHS	: Rwanda Demographic and Health Survey
SDGs	: Sustainable Development Goals
STIs	: Sexually Transmitted Infections
TV	: Television
USA	: United States of America
USAID	: United States Agency for International Development
WHO	: World Health Organization

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CHAPTER: 1. INTRODUCTION

1.1. Background

Teenage pregnancy as one of the global burden issues which affect both developed and developing country. Adolescent fertility has become considerably more problematic today than in the past. The increasing birth rate among teenagers requires relevant policies as well as targeted and multidimensional interventions. According to the 2014 World Health Organization report, about 11% total births worldwide occurred among adolescent between 15 -19 years and about 95% of these teen young mothers were found in developed and developing countries. Also, worldwide evidence indicated 5.6 million of teenagers gave birth before the age of 15 while 36,4 million of teenage became pregnant under 18 year old Although the number of pregnancies teenage has declined considerably in most in developed countries, it remains high in low and middle income countries. (1).

In 2017, the birth rate among teenagers aged 15-19 years reduced considerably in the United States of America and reached a low adolescent fertility rate of 18.8 birth per 1,000 ,reduction of 7% from 2016 (2) (3). In in sab Sahara countries, teenage pregnancy has increased drastically in most of countries. In 2013, the teenager births mothers account more than 50 % of all the birth in this region; predict number is 101 birth per 1000 teenagers aged between 15-19. The proportion on teen young mothers aged below 18 years has doubled in many African countries including Mozambique ,Niger Malawi ,Uganda and Cameroon (4). A study conducted in South Africa reported a high rate of pregnancy among Adolescents' women aged 15-19 years This was estimated at 71 birth per 1000 from 68 /1000 in 201 reported by south Africa demography survey of 1018 .(5)(6).

In Rwanda, evidence from the demography health survey of Rwanda 2014-2015 showed an increase in the prevalence of teenage pregnancy. The rate of teenage pregnancy increased from 4.1% in 2005 to 7.3% in 2014/14 (7).

In May 2018, Rwanda Investigation Bureau (RIB) reported 222 adolescents' woman aged less than 18 years in Rwanda they are rape and some of them become pregnant. Minister of Gender

and Family Promotion (MIGEPROF) reported that in 2016 the 17000 adolescents women aged 15-19 years become pregnancy.(7)

The other studies indicated that from 2013-2016 there were 818 adolescents become pregnancy in a sampling of all-district. (8)

In 2014, the Gender monitoring officer of Rwanda (GMO) investigated the magnitude of teenage pregnancy in all districts in Rwanda and found that this problem has reached alarming levels: in 2014 alone, about 522 schools going learners under 18 years old had given birth and dropped out of school. The number of unwanted pregnancy among young girls was alarming and very high in some districts such Karongi (Western Province), Gatsibo and Kayonza (Eastern province) and Gasabo (Kigali City).

Teenage pregnancy in Rwanda is not only a health concern but also a social and development issue. Adolescents and youth now comprise the largest share of the Rwandan population and represent about 50% of the population The Government of Rwanda (GoR) in collaboration with its partners has implemented several interventions which aimed at curbing teenage pregnancies since the early 2000s. This initiative included the integration of adolescent and reproductive health service in all health Facilities as well as the establishment of youth-friendly centers in most of districts in Rwanda. One Stop centers were also put in place in different district hospitals to provide psychological support, prophylactic and contraceptive of emergence counseling and justice support to victims of rape and sexual violence. However, the large size of the incoming youth cohorts is likely to result in increases in the absolute number of teenage births, even if adolescent birth rates remain constant. To date, few studies documented factors contributing to teenage pregnancies in Rwanda, especially among those aged between 15-19 years old. This study aims to fill this knowledge gaps and investigate factors associated with teenage pregnancy among young adolescents aged between 15-19 years in Rwanda using the Demographic Health Survey data DHS 2014/15 .(9)

1.2 .Problem statement

The high rate of unwanted pregnancy problems among teenage in sub- Saharan Africa is alarming(10) .

Adolescents and youth constitute a significant percentage of the population MOH Report of 2018 that young youth between 10-24 years old are 3.406.530 in percentage is 32.4% means that is a future of our country, leaders parent .the prevalence of teenager accordingly DHS2015 is 7,3% for all country . Report of MOH 2016 show that 17444 of teenage between 15-19 years old become pregnancy and 15 % of them they hand been raped(11) .

These issues put them at high risk of sexual and reproductive health problems Such as problems include marriage before age, unwanted pregnancies for teen, voluntary abortion performed by none professions, sexually transmissible infections, HIV and AIDS, and other life-threatening adolescent problems. Our country has the highest prevalence of adolescents with unwonted pregnant issues. The top province wit high prevalence of pregnancy of adolescent is City of Kigali and Eastern province has the high prevalence of unwonted pregnant to adolescent one is 10,7% other 10 % that Rwanda is committed to improving RH status of the adolescents and youth throughout the integration of this service in all country and isange one Stop center in every DH but the issues of teenage pregnancy stile as burden of country and word wide problem, and we know that Rwanda is among some countries have been Achieved MDGS but the prevalence is increasing for this cases .That is way I choose to conduct this research in all countries because of others study done in eastern province the result did not applied for all country because of different variety like social demographic status and others characteristics of demographic and culture area. The results will be used to plan interventions for reducing teenage pregnancies in our country and draw the attention to reduce the number of early marriage in teenagers, also this study will have the appropriate among contributions nationwide for achieving the Sustainable Development Goal (SDG-3) which is to ensure promotion of well-being for all at all ages and reduction of unwonted pregnancy in Teenager witch is among cause of maternal death in adolescent. (5)

Then is very interesting to assess the Risk factors associated with teenage pregnancy among young women between fifteen to nine teen years in Rwanda that were not recognized to assess..(4)

1.3. Objective

1.3.1. Main Objective

The main objective is to assess the risk factors associated with teenage pregnancy among young women between 15-19 years in Rwanda.

1.3.2. Specific objective

- To identify socio-demographic characteristics of teen young women aged 15-19 who got pregnant in Rwanda (DHS 2014/2015).
- To determine the behavioral risk factors in relation with pregnancy among teenagers pregnant (15 to 19 years) in Rwanda.
- To Determine the risk factors association with teen pregnancies aged 15.19 years in Rwanda

1.4. Research questions

- What are the social demographic characteristics of women adolescents who got pregnant in Rwanda?
- What are the determine of behavioral of risk factors in relation with pregnancy among teenagers pregnant (15 to 19 years) in Rwanda.
- What are the risk factors associated with teenage pregnancy among young women between 15-19 years in Rwanda?

1.5. Significance of the study

This is the crucial study on assessment of risk factors associated to teenagers pregnancies in Rwanda this generated a positive impact and more benefit to researcher to be able to protect the teenager against pregnancies, Government in increasing awareness, Policy development and community behavior change toward teen pregnancies and reduction of Risk Factors associated.

CHAPTER: 2.LITERATURE REVIEW

2.1. Definition of some concepts

2. 1.1.Pregnancy

Pregnancy is referred to as the condition of having fetus or embryo in the uterus after sexual intercourse between men and women when the fusion of sperm and the egg cell has been done and it was fertility period after menstruation of women and successful conception done .(1)

2.1.2. Teenager

Generally, teenager is synonym of Adolescent. WHO defined a teenage as a person aged between 10 and 19 years (12). The teenage Period is characterized by different changes including physiologic and psychosocial changes as well as temporal and cultural imitation. (1). Adolescence is categorized into three stages including early adolescence (10-12 ages) which is categorized by growth along with sexual maturation. The second category is mid- adolescent characterized by the development of a stronger sense of identity, this category of adolescents comprises adolescents aged 13-14 years (4). The third category of adolescents is late adolescent that constitutes the adolescents aged 15-19 ages' years. This stage is characterized by the development of the adult form (13). The period of adolescence is the period characterized by the biological, psychological, sexual, and social changes which can cause different sexual reproductive problems in which the adolescents face in their lives (14).

2.1.3. Teenage pregnancy

Accordingly to WHO, teenage pregnancy is defined as any conception of pregnancy of women or girls who is in a range of 10-19 years old in Rwanda is age between 10-18 years old. Teenage pregnancy is also known as Adolescent pregnancy and these two terms can be used interchangeably. Rate of birth and gestation are accounted per 1000 of a specific population, statistically, do a comparison of the incidence of the country at a given rate of 1000 teenage (adolescent) between 15-19 years old. The Gestation period may end up in birth or abortion. The abortion rate is the number of abortions per 1000 women of a specific age. The abortion ratio is the percentage of pregnancies ending in (induced) abortion.(15)

2.1.4. Sexual health.

According to WHO, sexual health is a state of wellbeing physical, emotional, mental and social wellbeing in relation to sexuality but it is not necessarily the absence of disability or morbidity, and dysfunction (14). Sexual health requires a respectful approach to sexuality and sexual relationships as well as a safe sexual life free of coercion, discrimination and violence. Sexual health can only be attained and maintained if sexual rights of all persons are fully respected and protected (16).

2.2. Factors Associated with Teen Pregnancy and Childbearing

Teenage pregnancy is not a new phenomenon worldwide ; the situations under which teenagers develop sexually active behavior , conceive and give birth, as well as the the result of these behaviors, have evolved considerably over time and in all cultures. In many countries traditional relationship-based societies, such as in South Asia, the Middle East and North Africa, teenage girls marry as soon as they reach menarche and begin to have children soon after. Early conception of early marriage in early marriage has been culturally appropriate, usually planned, and has therefore never been considered a problem for the young woman or her children. On the contrary, in the 18th and 19th centuries in Western Europe and North America, young women do not get married very early and are strongly discouraged from having sex before marriage; however, when the design took place, the wedding followed quickly. Early pregnancy legitimized by marriage was not considered problematic for young women, even if the pregnancy was unplanned (17).

In countries with significant income inequality, such as the United States, a number of individual characteristics of adolescent girls at higher risk of childbearing are: early age of onset of sexual activity; low expectations, low attachment and poor academic performance; participation in problematic behaviors such as drug and alcohol abuse, as well as various types of crime; be easily influenced by peers who have problematic behaviors; and problematic family contexts, such as the presence of domestic violence and low parental involvement. Recent research has shown that adolescents living in rural communities, especially those with limited economic resources, are at significant risk of early conception, indicating that the same conditions that lead to early childbearing are identical to those that reduce the chances of Youth life(18).

2.2.1 Sexual and reproductive health.

The international conference on population and development 1994 and 2016, held in Cairo was a landmark even in SRH they focused on positive sexually and responsible and consensus among 179 of government that individual human right and dignity, including the equal right and equal access to reproductive health and sexual right, are the necessary precondition for sustainable development.(19)

2.2.2. Communication Gap with Guardians and Adult.

The parents do not need to talk to the children about SRH they consider this topic like sensitive information for young people, at the same time the man can talk to boys and women talk to girls even if it is like taboos, they don't prefer the opposite sex. This is an issue of ASRH the adolescent needs information from the bay source it becomes a Cause of much consequence facing this age some of the parents are not educated means and no enough information about this topic and those who are educated don't have time for talking with the children (16)

2.2.3. Early Marriage and teenage pregnancy

In many countries, the age of marriage is very key to determining the period in which the first conception of pregnancy. Early marriage in a developing country is high more than in developed countries. The period at which 50% of woman adolescent are married marriage media age) is about 16 for South Asia, 17 in sub- Saharan Africa, 18 in Western Asia and 19 in North Africa to above 20 in Latin America Countries with the earliest median age at marriage are Bangladesh (14.1), Niger (15.1), Yemen (15.8), India (16.1) and Senegal, in sub- Saharan Africa and some South-Asian countries there is now a trend towards increased age at marriage. Worldwide Report of 2016 shows that 20 000 girls in developing countries are given birth every day in the year of 15-19 years old one of tree monger them are marinate in age between 18 and 20 years. The majority of them are poor none educated (20).

In Rwanda normally it allowed for a girl to be married at 21 years old ,according to the national statistical institute report of the 2018 mother's mean age at first birth is 23 years the median age of 2014-2015 is 25-29 years. The DHS 2014/2015 shows a high number of childbearing among teenage girls in our countries 6.1 % in 2010 to 7.3 %t in 2015.

Although still low compared to the near countries in the region, the small increase highlights. Accessibility of quality sexual and reproductive health care services and safe Sexuality Education can resolve the issues of to protect adolescent girls ((21).

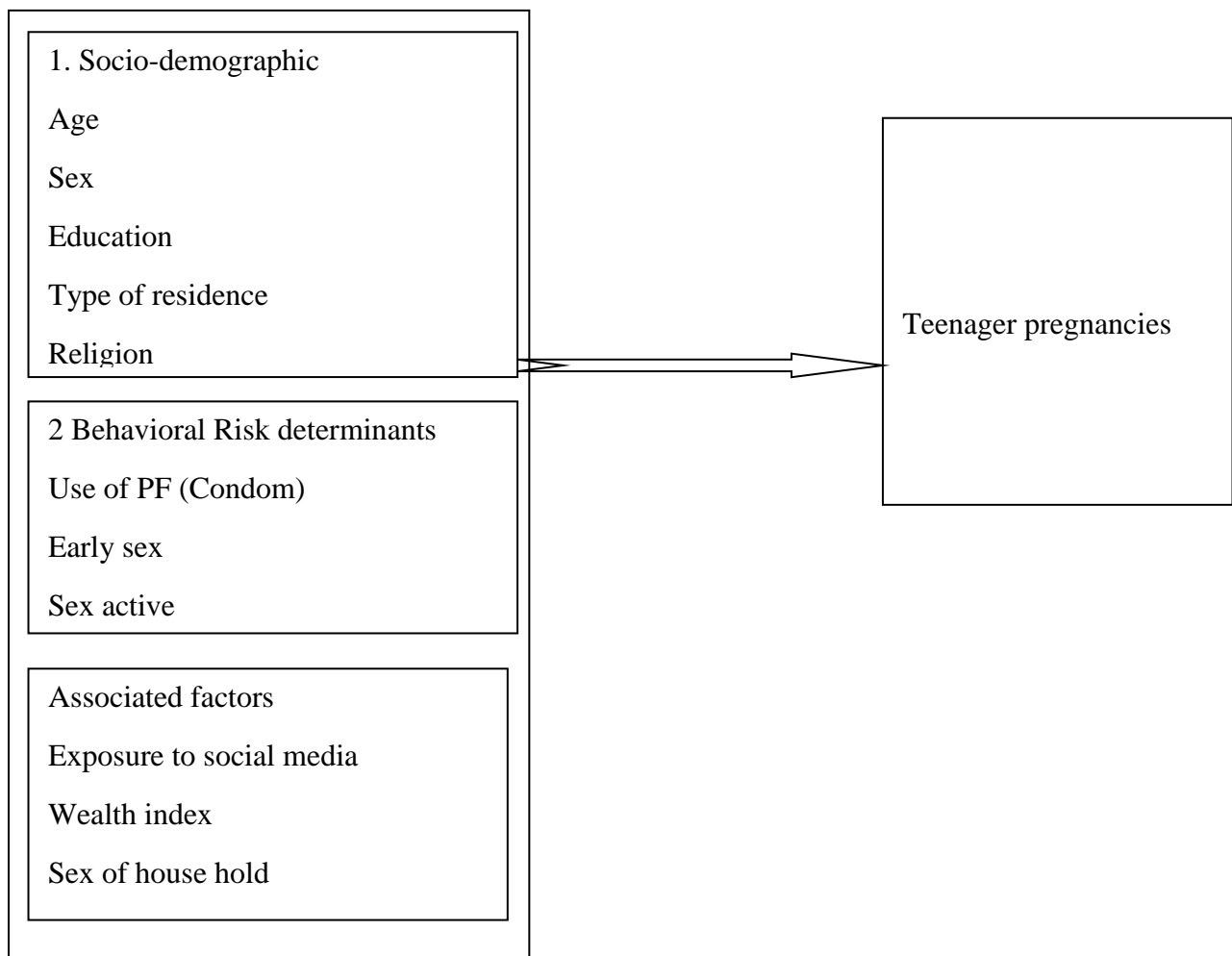
2.3. Conceptual framework

This conceptual framework relates independent variables which are demographic related factors, family related factor such as , type of residence (Urban or rural) relationship with household head education factors: No education, primary, secondary and higher, wealth related factors(Poor, Middle and Rich) and religion related factors (Catholic, Protestant, Adventist, Muslim, Other or No religion) to one dependent variable which is teenage pregnancy

Figure 1. Conceptual Framework

INDEPENDENT VARIABLES

DEPENDENT VARIABLE



CHAPTER 3: METHOD

3.1. Study design

The study design is the cross-sectional study that will base on the secondary data from RDHS 2014/2015 for Sexual reproductive health on teenage pregnancy among young women between 15-19 years in Rwanda,(22)

3.2. Study settings

Rwanda is the country located in East Africa and has a population of about 11,901,484 million reports of 2018 by NIS of Rwanda. It is a landlocked country of 26,338 km². It has four provinces and the city of Kigali. The adolescents are found in these provinces and Kigali city. Rwanda has a single city and four provinces: there are 30 districts, 416 sectors, 2,148 cells, and 14,837 villages. Rwandans speak Kinyarwanda in addition to English and French. The data from the studies were collected in Rwanda by the National Institute of Statistics of Rwanda (NISR) in collaboration with the Demographic and Health Surveys Program; my study will be focusing on data of DHS 2015 for this age said above in all country.(11) .

3.3. Study population

The case study of ASRH and meet the criteria taken into account by the RDHS 2014-2015 with categories age 15-19 years old. The target population includes this population from the City of Kigali of the 2014/ 2015. The study includes young adolescents aged 15-19 years who were interviewed in the RDHS 2014/15. All these adolescents are included in my research.

Inclusion criteria:

A woman teenager of 15-19 years

Who was living in Rwanda during the survey?

The exclusion criteria:

All teenage males

A women teenager aged 15-19 years, living in Rwanda during the survey without information about pregnancy status or childbearing

3.4. Sample size

In the 12,699 households surveyed, 13,564 women age 15-49 were identified as being eligible for the individual interview; interviews were completed with 13,497 of these women, yielding a response rate of 99.5% women.

Respondent rates were almost the same in rural and urban areas. However, during analysis, only women aged between 15-19 years were considered and this led to our study population totaling 2779

3.5. Sample procedures

Data from 2014-2015 Rwanda Demographic and Health Surveys (RDHS) was used to analyze, assessment of factors associated with teenage pregnancy in Rwanda. The NIS and MOH implemented the RDHS surveys. ICF International provided technical assistance for the surveys through the USAID-funded MEASURE DHS program. RDHS samples were nationally representative, household-based surveys, designed to provide population and health indicator estimates at the national, urban-rural, and district levels. The sampling method used was two-stage cluster sampling. The first stage consisted of selecting clusters from each stratum (district), 492 enumeration areas were selected with probability proportional to the enumeration area size and with independent selection in each sampling stratum.

The second stage was a systematic sampling of households from each cluster selected. Then selected households were visited and interviewed. The household response rate was 98%; the women's response rate was 99%, and the men's response rate was 99%.

3.6. Variables Measurement

The variables of this study include dependent and independent variables: Dependent variable: teenage pregnancy among young women between 15-19 years Reported by DHS 2015.

Independent variable: The risk factors associated with teenage pregnancy among young women between 15-19 years:

- Age

- sex of household head

- Education level of household chief
- Type of Residency (Urban and rural) -
- Household has radio
- Household has television
- Religion (Catholic, Protestant, Adventist, Muslim, Other or No religion)

3.7. Data collection

We will extract data for the adolescents aged 15-19 and years after obtaining information on SRH for the whole of Rwanda. To have accessibility to the dataset, the investigator uses the website of DHS program to request the access of data set and was approved in 24 hours.

3.8. Data analysis

A secondary data analysis of RDHS 2010 and 2014/15 was done using STATA version 13 and different types of analyses were performed. Descriptive analysis was used to describe social and demographic characteristics of the teenagers. These include age, marital status, education attainment, religion, residence (rural versus urban). Bivariate analysis was also performed using chi-square in order to assess the association between the independent variables and the outcome as well as identify significant variables to include in the model. A multivariable analysis was also conducted using multiple logistic regressions in order to examine the most important and significant risk factors associated with teenage pregnancies in Rwanda. It is important to note that independent factors that were significant in bivariate analysis were only included in the final model. The association was considered statistically significant if the p-value is <0.05 . Sampling weights were applied in all steps of the analysis to ensure the actual representativeness of the survey results at the national level as well as at the domain level.

3.9. Data management

Confidentiality of data is not necessary because this is secondary data is usefully online and the benefit of the participant is not necessary because the name of the participant does not exist in my study.

3.10. Materials

Demographic and health surveys in Rwanda collect data using different tools and derived technologies are questionnaires these questionnaires were translated from English into Kinyarwanda. Rwanda Demographic and Health Surveys collect data using different tools and techniques, including questionnaires

3.11. Ethical considerations

The approval to download the DHS dataset has been obtained from NISR. There was no possibility to identify the study participants and thus not potential risks for participants. I and the mentor had access to the data and the file used for analysis but normally, the dataset is publically available and anyone who needs it for the research purpose can access it. DHS data are collected on line with international ethical guidelines. The data bears no personal identifiers and thus greatly limits the risk of breaking confidentiality. Since this is secondary analysis there will be no direct benefits to participants.

CHAPTER 4: GENERA FINDINGS

This chapter presents the main results of this research in line with research objectives among the study participants and the results are presented in tables. The findings of this study were presented in form of tables with respect to the study objectives where table 2 summarized the findings about objective one which was to identify socio-demographic characteristics of teen young women aged 15-19 who got pregnant in Rwanda (DHS 2014/2015, table 3, 4 demonstrated the results about objective two which was to determine the behavioral risk factors in relation with pregnancy among teenagers pregnant (15 to 19 years) in Rwanda., table 5 shows the results about objective three which was to Determine the risk factors association towards the pregnancy of teenagers among women between 15-19years old.

4.1. Social demographic characteristics of respondents

Table 1, shows the distribution of teenagers by socio-demographic characteristics during the interview of RDHS 2014-2015. We considered all women who gave birth while she was a teenager or were pregnant during survey period. As indicated 97.09 % of teenage were are currently not living with a partner, living with a partner no legally was 2.9%.Majority of them are catholic and protestant with 44% and n42 % .

The result presented indicate 57.5% of participant had at least Primary education level ,41 %with secondary education level and high level o.1% and no education with 1% without formal education . Majority of participant living in eastern province with 20 % and some of *them living in* rural area with 73,5%,. Richest with 29% and Sex of House hold is dominated by men with 65,5% .The Exposure to mass media at least one a week is 88.2%

Table 1. Socio-demographic characteristics for teens n=2,779

Variable	N	Percentages (%)
Marital status		
Current living with a partner	81	2.91
Currently not living with a partner	2,698	97.09
Religion		
Catholic	1,221	44.02
Protestant	1,170	42.18
Adventist	299	10.78
Muslim	60	2.16
Jehovah witness	19	0.68
No religion	5	0.18
Level of education		
No education	32	1.15
Primary	1,598	57.5
Secondary	1,145	41.2
Higher	4	0,14
Province		
Kigali city	374	13.46
South	715	25.73
West	618	22.24
North	515	18.53
East	557	20.04
Place of residence		
Urban	731	26.3
Rural	2,048	73.7
Wealth index		
Poorest	429	15.44
Poorer	488	17.56
Middle	478	17.2
Richer	566	20.37
Richest	818	29.44
Sex of household head		
Male	1,821	65.53
Female	958	34.47
Exposure to mass media		
At least once a week	2,452	88.23
Less than once a week	104	3.74
Not at all	223	8.02

4.2. Health risk behaviors characteristics for teen pregnancies

Condom users where 84.21%, not sexually active for at least 4 weeks 79.9%), among these participant in the study, not pregnant were (98.1%) and pregnant were 1, 8%

Table 2. Health risk behaviours characteristics for teen pregnancies

Variable	N	Percentages (%)
Consistent condom		
No	18	15.79
Yes	96	84.21
Recent sexual activities		
Never had sex	2,221	79.95
Active in last 4 weeks	143	5.15
Not active in last four weeks – postpartum	65	2.34
Not active in last 4 weeks- not postpartum	349	12.56
Never had sex	2,221	79.95
Age of sexual debut		
<14	186	6.7
15-19	317	11.41
When living with partner	54	1.94
Knowledge on ovulation cycle		
During her period	170	6.12
After period ended	928	33.42
Middle of the cycle	528	19.01
Before period begins	455	16.38
At any time	438	15.77
Other	11	0.4
Don't know	247	8.89
Outcome factor		
Currently pregnant		
No	2,728	98.16
Yes	51	1.84

4.3. Bivariate of Socio-demographic characteristic related with teen pregnancies.

The PV of **Marital status** is **PV=0.000** is statistically significant means that : Currently not living with partner has relationship with teen pregnancies compared to Currently living with a partner .PV of original province PV=0.023 is statistically significant means that there is relationship between living in eastern province and teen pregnancies compared to living in others provinces.

Table 3. Bivariate of Socio-demographic characteristic related with teen pregnancies.

Variable	Not-pregnant		pregnant		P.value
	n	%	n	%	
Marital status					
Currently living with a partner	57	70.37	24	29.63	0.000
Currently not living with partner	2,671	99.00	27	1.00	
Religion					
Catholic	1,202	98.44	19	1.56	0.776
Protestant	1,145	97.86	25	2.14	
Adventist	294	98.33	5	1.67	
Muslim	59	98.33	1	1.67	
Jehovah witness	18	94.74	1	5.26	
No religion	5	100.00	0	0.00	
Level of education					
No education	32	100.00	0	0.00	0.164
Primary	1,561	97.68	37	2.32	
Secondary	1,131	98.78	14	1.22	
Higher	4	100.00	0	0.00	
Province					
Kigali city	361	96.52	13	3.48	0.023
South	703	98.32	12	1.68	
West	613	99.19	5	0.81	
North	508	98.64	7	1.36	
East	543	97.49	14	2.51	
Place of residence					
Urban	714	97.67	17	2.33	0.250
Rural	2,014	98.34	34	1.66	
Wealth quintile					
Poorest	421	98.14	8	1.86	0.998
Poorer	479	98.16	9	1.84	
Middle	469	98.12	9	1.88	
Richer	555	98.06	11	1.94	
Richest	804	98.29	14	1.71	
Sex of household head					
Male	1,786	98.08	35	1.92	0.63
Female	98.33	98.33	16	1.67	
Exposure to social media					
At least once a week	2,410	98.29	42	1.72	0.418
Less than once a week	101	97.12	3	2.88	
Not at all	217	97.31	6	2.69	

4.4. Bivariate of Health risk behavior determinants by teen pregnancies.

Recent active sexual in not active in last 4 weeks a p.v =0,000 is statistically significant and sexual deb it at 15-19 is related to teen pregnancy compare to age under 14 year old with P.V of 0.003.

Table 4. Bivariate of Health risk behavior determinants by teen pregnancies.

Variable	Not Pregnant		Pregnant		P.value
	N	%	n	%	
Consistent Condom use within the last 12 months					
No	18	100.00	0	0.00	0.447
Yes	93	96.88	3	3.13	
Recent sexual activity					
Never had sex	2,221	100.00	0	0.00	0.000
Active in last 4 week	115	80.42	28	19.58	
Not active in last 4 weeks-postpartum	65	100.00	0	0.00	
Not active in last 4 weeks- not postpartum	326	93.41	23	5.59	
Early Sexual Debut					
Never had sex	2,221	100.00	0	0.00	0.000
<14	182	97.85	4	2.15	
15-19	289	91.17	28	8.83	
When living with partner	35	64.81	19	35.19	
Knowledge about ovulation					
During her period	167	98.24	3	1.76	0.750
After period ended	905	97.52	23	2.48	
Middle of cycle	520	98.48	8	1.52	
Before period begins	448	98.46	7	1.52	
At any time	432	98.63	6	1.37	
Other	11	100.00	0	0.00	
Don't know	243	98.38	4	1.62	

4.5. Multivariate analysis: factors associated with teen pregnancies.

In multivariate analysis, binary logistic regression was applied to examine the prediction factors of teenage pregnancy in Rwanda. The result presented using odds ratio (OR) and their confidence interval (CI) doesn't not overlap the null value (OR=1) and P-Value <0, 05. All variables considered in the bivariate analysis were considered in the full model and the reduced model was obtained by using the stepwise logistic regression method where all variables entered into the model and are removed sequentially if they are statistically not significant. Furthermore, study participants who started having sexual intercourse at ages under 14 and 15-19 years old they are statistically significant means that there is negative association means that having this age is protecting to be pregnancy 15-19 (pv= 0.006. CI at 95% = 0.012. ,0.69 OR= 0.29 and <14 (OR=0,07 CI at 95% =0.01,0,27 , p.v= 0.000). Concerning other variables there was no significant association.

Table 5. Multivariate analysis of factors associated with teen pregnancies.

Full Model			Reduced Model					
Pregnancy status	Odd Ratio	P. value	CI at 95%		Odd Ratio	P.value	CI at 95%	
Marital status								
Currently living with a partner	1.0							
Currently not living with a Partner	0.02	0.000	0.01	0.0	0.43	0.125	0.15	1.26
				4				
Religion								
Catholic	1.0							
Protestant	1.38	0.293	0.76	2.5				
				2				
Adventist	1.08	0.885	0.39	2.9				
				1				
Muslim	1.07	0.946	0.14	8.1				
				5				
Jehovah witness	3.51	0.233	0.45	27.				
				69				
No religion	**	**	**	**				
Level of education								
No education	1.0							
Primary	1.91	0.040	1.03	3.5	0.90	0.785	0.43	1.88
				6				
Secondary	**	**	**	**				
Higher	**	**	**	**				
Province								
Kigali city	1.0							
South	0.47	0.066	0.21	1.0	1.13	0.796	0.45	2.86
				5				
West	0.23	0.005	0.08	0.6	0.44	0.159	0.14	1.38
				4				
North	0.38	0.043	0.15	0.9	0.64	0.407	0.23	1.82
				7				
East	0.72	0.393	0.33	1.5	0.85	0.730	0.35	2.09
				4				
Place of Residence								
Urban	1.0							
Rural	0.71	0.252	0.39	1.2				
				8				
Wealth quintile								
Poorest	1.0							
Poorer	0.99	0.982	0.38	2.5				
				9				
Middle	1.01	0.984	0.37	2.6				
				4				

Richer	1.04	0.928	0.42	2.6				
				2				
Richest	0.92	0.845	0.38	2.2				
				0				
Sex of Household Head								
Male	1.0							
Female	0.87	0.639	0.48	1.5				
				7				
Exposure to social media								
At least once a week	1.0							
Less than once a week	1.70	0.379	0.52	5.5				
				9				
Not at all	1.59	0.297	0.67	3.7				
				7				
Consistent use of condom								
No	**	**	**	**				
Yes	**	**	**	**				
Recent sexual activity								
Never had sex	1.0							
Active in the last 4 weeks	3.45	0.000	1.91	6.2	1.20	0.691	0.48	3.02
				3				
Not active in the last 4 weeks- postpartum	**	**	**	**				
Not active in the last 4 weeks-not postpartum	**	**	**	**				
Age of sexual debut								
Never had sex	1.0							
<14	0.04	0.000	0.01	0.1	0.07	0.000	0.01	0.27
				3				
15-19	0.18	0.000	0.09	0.3	0.29	0.006	0.12	0.69
				5				
Living with a partner	**	**	**	**	**	**	**	**
Knowledge about ovulation								
During her period	1.0							
After period ended	1.41	0.576	0.42	4.7				
				7				
Middle of the cycle	0.86	0.820	0.22	3.2				
				7				
Before period begins	0.87	0.841	0.22	3.4				
				0				
At any time	0.77	0.718	0.19	3.1				
				3				
Other	**	**	**	**				
Don't know	0.92	0.910	0.20	4.1				
				5				

CHAPTER 5. DISCUSSION

The present chapter presented the summary of the study where the main findings were presented according to the study objectives.

The main objective of this study is to assess the risk factors associated with teenage pregnancy among young women between 15-19 years in Rwanda ,DHS 2014/2015 data showed that 2015 In Rwanda, teen pregnancy prevalence was 7.3%, less than in most neighboring countries of Eastern community African I think that it's the role of government of Rwanda put this issue in government priorities even Justice were is stipulate that someone who will do this kind of crime shall be special provisions life imprisonment (23) .

Socio-demographic characteristics related with teen pregnancies

Majority of participant 97.09 % of them was not living with a partner witch is significantly were this age is not allowed by our civil registration to do marriage at this age before 21 years old for girls (23) but in others countries the research done by UNFPA showed that 50% of woman adolescent are married under this age and media age is about 16 for South Asia, 17 in sub-Saharan Africa, 18 in Western Asia and 19 in North Africa to above 20 in Latin America Countries with the earliest median age at marriage are Bangladesh (14.1), Niger (15.1), Yemen (15.8), India (16.1) and Senegal, in sub- Saharan Africa and some South-Asian countries there is now a trend towards increased age at marriage. (20)

In social -demographic factors the result show that no living in union is statically significant means that has relationship with teen pregnancies compare to those who living in union was significantly statically associated with teen pregnancy and Currently living with a partners $PV=0.000$ and living in Eastern province with $PV=0.023$ less than $PV < 0,05$. This study is similar with other study conducted in 2016 in eastern province conformed that high prevalence of teen pregnant in Rwanda is in eastern province this findings was similarly to study conducting in Nepale 2016 found that ear marriage was among risk factor to teen pregnancy (24).

But study conduct in Ethiopia 2017 showed that living in rural aria is also among risk factor associated to teen pregnancy (25). this can be explain by different variability like social demographic economics factors but in Rwanda I think that can be explained by refuge living in

this province also is among beg province with high population more than others in Rwanda report of National institute of statistics 2012 .(26)

Health risk behavior determinants by teen pregnancies.

Recent sexual active p.v =0,000 is statistically significant associate to teen pregnancies and early sexual debit at 15-19 is related to teen pregnancy P.V of 0.003. is the similar with findings of researcher conducted in Nepal (24)

Risk factors associated towards the pregnancy of teenagers among women between 15-19 years old

Furthermore, study participants who started having sexual intercourse at ages under 14 and 15-19 years old are statistically significant means that there is negative association means that having this age is protective to be pregnancy compared to this age 15-19 (pv= 0.006. CI at 95% = 0.012. ,0.69 OR= 0.29 and <14 (OR=0,07 CI at 95% =0.01,0,27 , p.v= 0.000). This is explain by Physiological in normal function, this is different with others study some of them found that poverty is associated with teen pregnancy research conducted in University of Witwatersrand in Johannesburg 2016 for factor associate with pregnancy teen in sab Sahara Africa. (17) I think that is explained by Development of our country government have put measures of fitting against poverty like VUP ,UMURENGE SACO Girinka munyarwanda and now Rwanda is in Middle country income.

CHAPTER: 6.CONCLUSION AND RECOMMENDATION

6.1. Conclusion

This Study aimed at investigating the factors associated with teenage pregnancies using demographic health survey data. , were age of coital sex and marital status, this study found that teenager who were living with a partner non legal married, get pregnant so early, Also, teenagers in this study are found to be pregnant due to early engagement into sexual activities probably with low knowledge or being misled on the use and importance of contraceptive method to prevent them from these pregnancies and educational level means that there association between teenage pregnancy and early marriage ,aery sex intercourse and education level , were the primary education age was become pregnancy more than secondary level. This was explained by awareness of information; those who living in rule area are also high rate of pregnant more that urban area we encourage the stake holder and local government to emphasizing in 12 educations to bring all children at school. Also community health works and parents must teach their children about pregnancy prevention if possible providing the contraceptive and condom in community for free and accessible for every on and to change behavior about culture of not talking about reproductive health in our family.

This can contribute in reduction of teenage pregnancy.

6.2. Recommendations

My Recommendation is focusing to contributing in reduction of teenage pregnancy and risk factors associate to teenage pregnancy;

- Working with health facilities and follow up all GBV cases of teenage about management and use of service of ASRH..

- To the MOH increase education and communication in rural area about reduction of teen pregnancy especially in eastern province.

- Responsibilities of Parent Do conversation with children about reproductive health and teaches them about culture and various

-Responsibilities of teenagers- providing information at time about any case of violence (sexuality) or others act related to rap of teenage.

- Visiting ASRH program at health centers, school and in the community,

6.2. Limitations of the study

The study is not free from limitations. The study is limited in its analysis where secondary data were used to determine inferences on teenage pregnancy collected by the Rwandan Demographic Health Survey 2014/15.

The fact of using secondary data, our list of variables was not exhaustive, and maybe there are further factors that their variables may be not available in RDHS 14-15 that could be potential predictor of teen pregnant.

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