# A STUDY TO DETERMINE THE RELATIONSHIP BETWEEN PREGNANCY AND KNOWLEDGE OF PREGNANCY RELATED COMPLICATIONS AMONG ADOLESCENTS AGED 13 TO 19 YEARS IN MARONDERA URBAN.

A DISSERTATION PRESENTATION

By

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ABSTRCT

Adolescents' pregnancy is a global concern because they are biologically and emotionally immature. Pregnancy predisposes them to pregnancy related complications. Knowledge on pregnancy related complications are of importance to empower and promote good health behaviour in adolescents. The purpose of the study was to examine the relationship between pregnancy and pregnancy related complications among adolescents. A revised Health Promotions Model (HPM) by Pender N. (1996) was used as the guiding framework. A descriptive correlation study design was used with the pregnancy as the dependent variable and knowledge of pregnancy related complications as the independent variable. A sample size of 66 adolescents pregnant and with children was randomly selected. The sample size was estimated using power analysis, power .80, medium effects size of 0.05 and the significance level of 0.5. A structured interview schedule with three sections questions namely demographic data, pregnancy and knowledge of pregnancy related complications utilizing face to face interview was carried out to obtain data. Data was analysed using statistical package of social sciences (SPSS). Descriptive and inferential statistics (Pearson Moment Product, Correlation Co-efficient) was used to determine the relationship. The results of the study indicated that 11(16.7%) were pregnant at the time of the interview. 54(81.8%) had one child while 1 (1.5%) had two children. The birth interval was 63 (95.5%) had only one child, 2(3.0%) had a birth interval of one year while 1 (1.5%) birth interval was two years. With regards to knowledge of pregnancy related complications 39(59.1%) had no information while 27(40.1%) knew the pregnancy related complications. The study showed a weak negative significance between pregnancy and knowledge of pregnancy related complications. Recommendations were made to add to the body of knowledge in Maternal and Child Welfare/Midwifery.

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## Dedication

I dedicate this dissertation to my husband Make, two beautiful daughters Tariro and Rufaro, not forgetting my lovely sister Rebecca who took care of my daughters while I was at school. My social thanks go to my brothers Gabriel, Chris and sister mai Nyasha for their financial support and encouragement during the course of this study. Sister-in-law mai Kuda thank you for the accommodation and meals provided as well Mr Chitambo of Ross flats. Father and mother thank you very much for your support.

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# CHAPTER 1

# BACKGROUND AND ORGANIZING FRAMEWORK

## Introduction

This chapter covered the background, problem statement, purpose of study, theoretical framework, definition of terms, research objectives, research questions and significance to nursing.

## Background

Adolescence is defined by World Health Organization (WHO) as the period between ages of 10 to 19 years (Zimbabwe reproductive Health Service Delivery Guidelines, 2001). Adolescence is a wide range of experience and transitions to adulthood laden with risks and challenges (Nugent, 2006). According to United Nations International Children Education Fund (UNICEF) (2001) world wide every fifth child is born to an adolescent mother and 80 % of the adolescent pregnancies occur in the third world countries. The 'star shock report' of November 27, 2007 highlights adolescent pregnancy as a serious problem in South Africa with 40 % of all pregnancies involving adolescents where Human Immuno- deficiency Virus (HIV) and Acquire Immuno Deficiency Syndrome (AIDS) prevalence is high. In South Africa 1:4 of the adolescents will have a child by 19 years. Zimbabwe is no exception to adolescent pregnancy as a third world country. The adolescent pregnancy rate is about 20 % (Zimbabwe Demographic health Survey, 2002).

In today's world 'growing up' is not what it used to be. Modern adolescents come face to face with numerous health risks along the path to adulthood. Many of the health risks affect the quality of their lives. Early sexual activity and early child bearing also have long term effects on the quality of life (Nugent, 2006). Unfortunately, the number of adolescents' pregnancies has increased and could continue to persist because adolescents are becoming

sexually active at early ages (Simon, 2005) and if no effective intervention is given on prevention of pregnancy.

According to Zimbabwe Demographic Health Survey (2002), WHO (2002) and UNAIDS (2002) 46.5 % of adolescents aged 19 years have children or will be pregnant. Zimbabwe's health programmes have been targeted to meet, needs of child bearing women and under fives, leaving out adolescents on the assumptions that adolescents constitute the healthiest segment of population. An early menarche, insufficient education, early sexual activity and insufficient use of planned parenthood facilities set the stage for an unplanned first pregnancy (UNAIDS, 2002).

The majority of adolescents' pregnancies are socially desired in sub-Saharan Africa but adolescent pregnancies are extremely risky, (Magach, 2004). Hence, in Ghana a brand new war has been waged against adolescents' pregnancy despite the fact that the rate has reduced from 43 % to 31 % (Magadi, 2004). An estimated 11.8 million adolescents aged 13 to 19 years are living HIV and AIDS (Magadi, 2004). The rate of HIV infection in 13 to 19 age group was 29 % by 2001 (National AIDS Control Programme (NACP) and Ministry of Health and Child Welfare (MoCHW), 2000). This remains an alarming rate and indicates that adolescents are indulging in unprotected sex due to lack of knowledge. Various ways of information dissemination need to be put in place to reduce the adolescents' pregnancies.

Bonistra (2007) stated that childbirth especially of the first baby carried potential health risks. For adolescents who had not reached physical maturity the risks are heightened (Atuyambe *et al*., 2005). Adolescents are more likely than older women to experience premature labour, abortion, post partum haemorrhage, still birth, infertility and develop some cancers. They are four times likely to die from pregnancy related causes (Myers, 2002). The babies born by adolescents have greater chance of being under weight at birth and of dying by

the age of one (Magadi, 2004). The high HIV prevalence in adolescents enhances high sero prevalence resulting in giving birth to HIV positive child (UNICEF, 2002 update). The complications increase morbidity, mortality and disease burden deranging the meogre resources. So the adolescents need information on pregnancy related complications to prevent pregnancy early in life.

Throughout the world, some pregnant adolescents receive no prenatal care due to lack of knowledge on its importance or economic problems. Even in an affluent population many get no prenatal care or seek antenatal services only late in their pregnancy predisposing themselves to pregnancy related complications (Bonistra, 2OO7). Pregnancy in adolescence has been noted to be associated with significant biologic, psychological, social and cultural alterations. They experience crisis of self confidence resulting in pregnancy related complications due to stress in sub Saharan Africa and worldwide (UNICEF, 2OO4). Adolescents need sexual and reproductive health and life skills education and information whether they are in school or not IUNAIDS, 2004).

Various behaviours of adolescents have long-term implications for their health. These include sexual behaviour which carries ultimate degree of pregnancy risk. Risk taking is considered to be a characteristic of adolescents. Experimentation and exploration are valuable parts of growing up globally. However, adolescents commonly underestimate their risk or vulnerability. They often lack knowledge about the consequences of their action, thereby exposing themselves to serious pregnancy and pregnancy related complications (WHO, 2002).

The health needs of adolescents are best addressed though multi-sectoral strategies that respond to varying social and economic circumstances that different adolescents experience today. Programs that reduce maternal deaths and help prevent HIV /AIDS in Zimbabwe and sub Saharan Africa have the greatest promise of improving adolescents' lives (WHO, 2002).

Programs should not be embedded only in health sector but are more successful across multiple sectors (Nugent 2006). Such programs are more effective in impacting knowledge, which reduces early sexual indulging and incidence of pregnancy and pregnant related complications. When the programs are repeated, consistent and well targeted they offer a potential to reach large numbers of adolescents. Married adolescents are often neglected in designing interventions but they present an especially target group (UNICEF, 2002 update).

Despite a lot of programs in place to impact knowledge on adolescence about pregnancy and pregnancy related complications many adolescents are still indulging in unprotected sex resulting in unwanted pregnancies and poor pregnancy outcome (Magadi, 2004). This prompted the researcher to embark on the study to determine the knowledge that the pregnant adolescent has.

## Problem statement

Adolescents' pregnancy has health, social and economic consequences in rural, urban and farm setting in Marondera, Zimbabwe. World wide, regionally and locally adolescents are becoming sexually active and indulge in sexual activity at tender age. This results in unwanted pregnancy and delivery while themselves are still developing physically and emotionally. Biologically, socially and culturally this is a global concern as adolescent pregnancy is not acceptable as it carries a lot of health risks, (Atuyambe et al., 2005). The consequences in most cases are due to lack of information and knowledge in sexual and reproductive health. Adolescent pregnancies are on increase and are estimated to continue regardless of the adolescents sexual reproductive health programs put in place to achieve the millennium development goals because of scanty information adolescents have an pregnancy and pregnancy related complications.

This has also led to legally accepting and incorporating adolescents to be consent adolescents (International Federation of Women Lawyers, 1998). This prompted most of the society to accept adolescent pregnancy even though it is associated with pregnant related complications. This notion is supported by UNICEF (2001), which states worldwide every 5$^{th}$ child is born to an adolescent mother. Eighty per cent of adolescent pregnancies occur in the developing countries where Zimbabwe is located. Zimbabwe DHS (2005/06) also reported a high prevalence rate of 20 % adolescent pregnancies. The adolescent reproductive health assessment done in July 2008 did not spare Marondera in Mashonaland East province on the high prevalence rate of adolescent pregnancies and adverse pregnancy outcome. Twenty-five percent of the 8 deliveries done daily at Marondera Hospital are first child birth of adolescents aged 13 to 19 years (Marondera Hospital records 2009), and of these 10% of the deliveries had poor pregnancy outcomes.

Marondera Hospital is the provincial hospital where most of the adolescents pregnant for assessment and delivery are referred. The general outlook showed that there is an increase in adolescent pregnant and pregnancy related complications. They also tend to seek antenatal care late in pregnancy leading to pregnancy related complication. This was indicated by the Marondera Hospital records which shows that most of the adolescents are unbooked or book late. The central hospitals in Zimbabwe had seen a steady increase in adolescents' deliveries and pregnancy related complications as well. Harare Maternity Hospital conducts about 33 % of the adolescents' first birth out of the 30 deliveries done every day (Godzongere, 2005). Most of the adolescents lacked information on the importance of ANC in adoption to other factors that contributed to no or late ANC booking.

## Purpose of the study

The purpose of this study was to determine the relationship between knowledge of pregnancy related complications and pregnancy among adolescents aged 13 to 19 years in Marondera urban.

## Theoretical framework

Pender's (1996) revised Health Promotion Model (HPM) was used to explain and predict health promotion behaviour. The model addresses the determinants of health promotion behaviour as individual characteristics and experiences and specific cognitions and affect.

## Individual characteristic and experiences

Individual characteristics and experience, which affect subsequent action, are prior related behaviour and personal factors. Prior related behaviour refers to the frequency of the same behaviour in the past, Pender (1996). In this study past behaviour has direct effect on the knowledge of pregnancy related complications. An adolescent with in depth knowledge of pregnancy related complications is likely to avoid sexual activity or use protection to prevent pregnancy at a tender age 13 to 19 years.

Personal factors in the HPM are biological, psychological and socio cultural. Personal factors affecting adolescents are demographic (age, marital status), bio psychosocial (self esteem, motivation and perceived health status), economic pressures, lack of information, peer and need to be loved (Nugent, 2006). Behaviour specific cognition and affect are considered to be of major motivational significance and a core for nursing intervention (Pender, 1996). These are perceived benefits of action, perceived barriers to action, perceived self efficacy, activity related and interpersonal influences of family ,peers ,providers norms, support and models.

The perceived benefits of action towards knowledge of pregnancy related complications are avoiding sexual activity and relations whilst an adolescent. The use of protection if sexually active to prevent unwanted pregnancies is another perceived benefit of action. Perceived barriers to action affects the intentions to engage in particular behaviour and the actual execution of the behaviour. Barriers that affect adolescent perception of knowledge are immaturity, abstract messages on televisions, radios, and media on pregnancy and pregnancy related complications, lack of youth friendly, bad role models, and misinformation from peers and hostile family members and providers who do not want to discuss reproductive issues with adolescents.

Perceived self-efficacy is a judgement of ones ability to carry out a particular course of action. Self-efficacy in acquiring knowledge of pregnancy related complications and pregnancy are coping good sexual behaviour from good role models, peer education and counselling and seeking appropriate information on family planning services and sexual reproductive health from appropriate provider.

## Interpersonal influences

Interpersonal influences are cognitions concerning the behaviours, beliefs or attitudes of others. The primary sources of interpersonal influences on health promoting behaviour are families, peers, and health care providers. Interpersonal influences include norms (expectations of significant), social support and modelling. The acquirement of knowledge of pregnancy related complications in adolescents dwell mostly on social pressures and modelling or encouragement to commit to a plan of action.

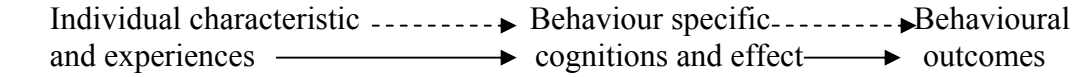
## Behaviour outcome

The behaviour outcome addresses the commitment to a plan of action and health promoting behaviour (Pender, 1996). Commitment to a plan of action involved the

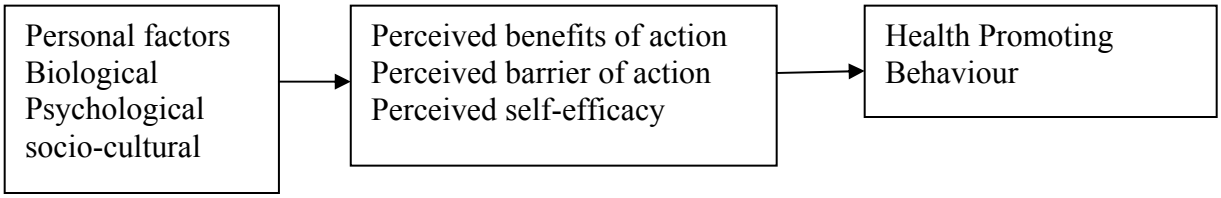
adolescents' commitment to seek appropriate knowledge and interventions that prevent pregnancy and pregnancy related complications. Adolescents should be part parcel in planning and formulation of strategies that promote information delivery and acquirement. The adolescents should advocate for youth friendly services in settings they live, learn or play.

Health promoting behaviour is the end point or action outcome in the Health promoting Model. Health promotion behaviour is ultimately directed towards attaining positive health outcomes for the adolescent that is they make informed decisions, improve self identity, self care and protection thereby preventing unwanted pregnancy and pregnancy related complications (UNICEF, 2002). This will improve the quality of life (sexual reproductive health) throughout the lifespan (Pender, 1996).

THE THEORETICAL FRAMEWORK




Model Concepts




Study Concepts

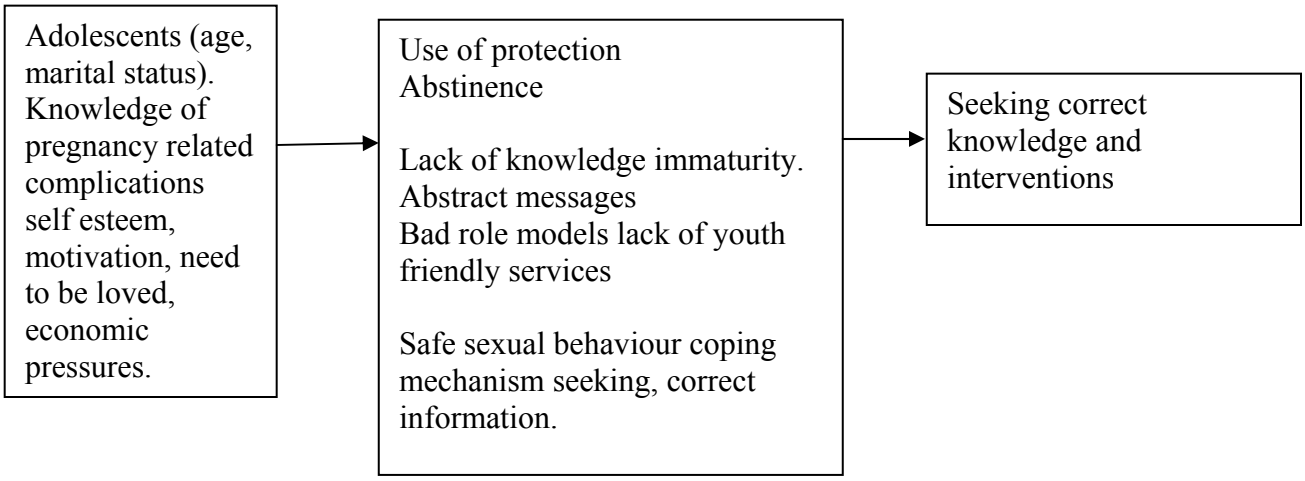



Figure 1: Conceptual framework adopted and adapted from Pender (1996)

## Definition of terms

Adolescence: is the transitional period from childhood to adulthood.

Adolescent: is the young woman aged 13 to 19 years.

Knowledge: is all that the adolescent knows about risks associated with pregnancy.

Pregnancy: is the presence of the developing foetus in the uterus.

Pregnancy related complications are risks the adolescents will have.

## Research objectives

1. To determine the knowledge of pregnancy among related complications among adolescents.
2. To determine the occurrence of pregnancy among adolescents.
3. To identify the relationship between knowledge of pregnancy related complications and pregnancy among adolescents.

## Research questions

1. What is the level of knowledge of pregnancy related complications among adolescents aged 13 to 19 years in Marondera urban?
2. What is the occurrence of pregnancy among adolescents aged 13 to 19 years in Marondera urban?
3. What is the relationship between knowledge of pregnancy related complications and pregnancy among adolescents aged 13 to 19 years in Marondera urban?

## Significance to nursing

Adolescents' pregnancies expose the young girls to complications of pregnancy, some of which are fatal .The researcher hopes to identify factors perceived by adolescents themselves as associated with adolescent pregnancies in order to make recommendations, which will effectively reduce adolescent pregnancies. The significance of a research study is

to increase body of knowledge or improve quality of care for the consumers of health (Polit and Hungler, 1999). The adolescent mothers will benefit through empowerment on reproductive health and rights during the study and will improve their lives.

The nursing fraternity will benefit a new and improved nursing image that will be created by delivering the recommended youth friendly services tailor made to suit the adolescents. The millennium development goals will be achieved, reducing child mortality and improve maternal health. Nursing research and education will benefit from the new identified factors which will be included in the curriculum in order to fully equip the nurse to effectively handle adolescents. More researches will be prompted to prove the relationship and this will add the body of knowledge of nursing.

## Summary

The chapter covered background, problem statement, theoretical framework, definition of terms, purpose, research objectives, research questions and significance to nursing.

# CHAPTER 2

# LITERATURE REVIEW

This chapter reviewed and critiqued research findings on knowledge of pregnancy related complications and pregnancy among adolescents aged 13 to 19 years. The theoretical framework guiding the study, the revised health promotion model was reviewed and discussed particularly to its application to this study.

## Pregnancy among adolescents aged 13 to 19 years

Adolescent pregnancy is not a new topic but every country is worried about this age group (13 to 19 years) because the health of this age group has a direct bearing on a country's future health and development. Adolescent pregnancies have many problems like concealing, leading to lack of antenatal care, poor eating habits leading to anaemia, malnutrition and premature deliveries, lack of employment leading to poverty, school drop outs and early marriages (WHO health reports, 2002). With the advert of HIV and AIDS an adolescent can get both HIV infection and a wanted or unwanted pregnancy. Empowerment on negotiating skills and self-control are paramount if adolescent pregnancy is to be effectively reduced. During adolescence there is a lot of role confusion and uncertainty and many adolescents succumb to peer pressure (UNICEF, 2002).

Adolescence is generally considered as a time of transition from childhood to adulthood, a period of physical and psychological changes associated with puberty. This is a time of preparation of the roles, privileges and responsibilities of adulthood. The nature and experience of adolescents vary tremendously by marital status, class, religion and cultural context. As a group, however, adolescents are generally recognised to have sexual and reproductive health needs that differ from those of adults. The needs are still poorly understood in the world (UNAIDS, 2008; Nugent, 2006).

Adolescent pregnancies occur within all cultural and socio-economic groups. Adolescents find it difficult to deal with the tension between their emotional needs and their developing sexuality. During this time of sexual development and exploration of a sexual role, pregnancy may occur. Babies born to adolescent mothers are at risk of low birth and related problems. If both parents are not committed to caring for the child, this complicates the already difficult situation. Frequently, the adolescent mother is left with little support to take on an enormous burden of raising a child while she is still developing herself (UNICEF, 2002).

Adolescent pregnancies have increased over the past years and are considered as significant social and reproductive cancer (Enrique *et al.*, 2008). This increase of pregnancies in adolescence is due to early marriage, social changes and relative social freedom or emancipation of women in society. A pregnant adolescent is subjected to greater psychological and physical stress in relation to elder woman (Tripathy & Das, 2003). The highest levels of adolescent are in the sub-Saharan Africa where women give birth to a child by 19 years of age (WHO, 2008).

The Zimbabwe Demographic Health survey (DHS) (2005/6) reported a high prevalence rate of 21 % pregnancies. Worldwide 1:10 babies are born to an adolescent mother (WHO, 2008). According to the DHS (2005) 20 % of adolescents were found to be pregnant and had given birth to one or more children. Adolescent pregnancy was also highlighted by UNAIDS (2002) as a serious problem in South Africa with 40 % of all pregnancies involving adolescents.

A study done in Nigeria revealed that the incidence of adolescents' pregnancy is high (50 %). In many states the mean age at marriage has already moved to 19.3 in adolescents. The study also revealed that there has been a decline in child (below 13 years old) marriages

but adolescents are still marrying at almost higher rates resulting in increased adolescent pregnancies (Nigeria Adolescent Reproductive health, 2005).

Throughout the world, some pregnant adolescent receive no prenatal care (Nugent, 2006). Even in affluent populations many get no care or seek services late in pregnancy leading to high pregnancy risks (Bonistra, 2007).

## Knowledge of pregnancy related complications

Worldwide health reports state that adolescents are exposed to reproductive risks. The facts are that the period of sexual activity before marriage is increased in adolescents but are denied the information they need about avoiding unwanted pregnancy and pregnancy related complications. The age of marriage has also gone up. One of the 260 million adolescents age 13 to 19 years worldwide which is 11 % or 29 million lack access to effective contraception yet 9.8 % of them are married but would wish to delay childbirth (WHO health reports, 2002).

Globally adolescents commonly under estimate their risk of pregnancy related complications. They often lack knowledge about consequences of their actions thereby exposing themselves to serious reproductive health problems. The 1992 population census in Zimbabwe revealed that adolescents continue to start to give birth at a relatively young age. Close to 40 % of adolescents are already mothers by the time they are 19 years. A 199 UNICEF study "Report on health and development needs among out of school youth in Zimbabwe found out that sexual behaviour change is lagging behind even though HIV and AIDS and STI awareness are considered very high. This indicates that the adolescent had the knowledge but do not practice what they know.

In Nigeria 'Advocates for Youth' (2002) stated that lack of sexual health information and services places adolescents (aged 13 to 19) at risk of pregnancy, abortion, STIs, HIV and AIDS. According to Magadi (2004) in the developing world, the problem of poor pregnancy

outcome among adolescents is exacerbated by poor maternal health care. This is especially so in cases of unintended premarital pregnancies. The problem is particularly critical in sub-Saharan Africa where the incidence of adolescents' pregnancies is highest mainly due to lack of effective contraception and reproductive health information (Magadi. 2004).

UNICEF (2002) stated that continuing high rates of adolescents' childbearing in sub-Saharan Africa indicate a need for improved understanding of factors which affect adolescents' sexuality. The study indicated that adolescents lack information from unreliable and ill-informed sources such as peers. The discussions by Smith *et al* (2007) focussed on the adolescent's knowledge of sex and sexual risks, perceived vulnerability to sexual risks, use of protection, self-efficacy and societal expectations. The study indicated that knowledge of sexual risks among adolescents was low and often erroneous. UNICEF (2002) stated that many adolescents do not consider that they are personally at risk of contacting HIV and other STIs or becoming pregnant. Therefore, they do not acquire knowledge on pregnancy related complications.

A study done by Bankole *et al* (2007) in Burkina Faso, Ghana, Malawi and Uganda on sexual behaviour, knowledge and information sources about HIV, STIs and pregnancy prevention and sources of sexual and reproductive health information reviewed that adolescents have high levels of awareness but have little in depth knowledge about pregnancy and HIV prevention. This results in adolescent having unwanted pregnancy and pregnant related complications.

The sexual behaviours and attitude of adolescents are largely a product of limited knowledge about biology, sexual development, sex related risks, limited preparation to cope with feelings and relationship. Weak negotiation skills and social pressures and cultural expectations are also handles met by adolescents (UNICEF, 2002). Educating adolescents

about sexuality, birth control and realities of parenting is very important in avoiding unwanted pregnancies (WHO, 2002).

## Relationship between knowledge of pregnancy related complications and pregnancy among adolescents

Increasing knowledge of pregnancy related complications will decrease the incidence of pregnancy among adolescents as little or reduced knowledge increases the incidence of pregnancy (Barker and Rich, 2002). Global health reports state that adolescents are exposed to reproductive health risks. The facts are that adolescents are sexually active early and the period of sexual activity is increased during the transition period resulting in pregnancies wanted or unwanted. Societally, the adolescents are denied the information they need about pregnancy. They also lack information and access to effective contraception yet 9.8 % of the adolescents married wished they had delayed child-birth (WHO, 2008).

DHS (2005-2006) stated that children born to adolescents are at increased risk of sickness and death. Adolescent mothers are more likely to experience adverse pregnancy outcomes. They are also, more constrained in their ability to pursue educational opportunities. The 2001 sentinel surveillance of antenatal clinic attendees held in Zimbabwe's 24 districts revealed that HIV prevalence in Adolescent is still high (25.2 %) and risk giving birth to HIV positive child.

Findings from an assessment done by UNFPA, WHO and MoCHW (2005) indicated a sharp rise in pregnancy and pregnancy related complications. This was due to current harsh economy and drought. There has been a sharp increase in adolescent pregnancies, abortions, baby dumping, STIs and complicated deliveries. Factors that account for the trends discussed above included lack of economic opportunities, inadequate knowledge and empowerment skills, and socio-cultural issues including gender and power relations (UNICEF, 2002).

Some studies show that babies born to adolescent mothers face greater health hazards than those born to older mothers. The lack of knowledge had also resulted in high infant and maternal mortality in adolescents (WHO, 2008). The adverse outcomes were identified in the adolescent mother were high caesarean section rates, puerperal infections, and intrapartum complications. In the foetus the risks are preterm birth, low birth weight and small for gestational age (Enrique *et al*, 2008). A study done in India also reviewed that a pregnant adolescent is subjected to greater psychological and physical stress which may be taken perceived barriers in obtaining relevant information such as antenatal care services when pregnant (Tripathy & Das, 2003).

In Zimbabwe there are no standard packages for the provision of adolescent sexual and reproductive health (ASRH) services at all facilities selected for assessment (ASRH assessment, 2008). This indicated that there are not youth friendly services being rendered resulting in adolescents not accessing the essential information on pregnancy and pregnancy related complications in most health centres including Marondera Hospital. The results from a study done by Atuyambe *et al* (2005) stated that medically adolescents and their children are prone to complications during pregnancy delivery and post delivery due to lack of reproductive health knowledge. The reported complications are obstructed labour, low birth weight, stillbirth, neonatal death, eclampsia and sometimes vaginal vesicle fistula formation. It is not surprising that adolescents and their babies are more likely to die early in their life (Nugent., 2006).

Magadi (2004) and Treffers (2005) added that adolescent mothers are more prone to low birth weight and increased neonatal mortality and morbidity. Antenatal care is often inadequate indication that no reproductive health education is obtained leading to behaviours that lead to pregnancy related complications. The most important risk is the increased

incidence of preterm labour and delivery. Adolescents often have no control over who they marry when pregnant and where they live, which cut them off from education, social networks and media. This lead to limited exposure to essential information regarding reproductive and maternal health (UNAIDS 2002). The adolescent family planning knowledge and use is generally low as they face many obstacles when seeking a method leading to pregnancy and giving birth while still young risking themselves (WHO, 2008).

Mugadi (2004) stated that studies in various settings of the world have established a positive association between adolescent pregnancy and poor pregnancy outcomes such as low birth weight, premature births and abortion. Lack of knowledge was the main attribute to the adolescent pregnancy and pregnancy related complications.

## Theoretical framework

Pender's (1996) revised Health Promotion Model is of potential applicability across lifespan since individuals have inherent capability of modifying their behaviours and choosing health-promoting activities. The source of health behaviour in this study is the obtaining of knowledge of pregnancy related complications to prevent adolescent pregnant, which is not socially, culturally and medically desired.

The Health promotion Model has been used as a framework for research aimed at predicting overall health promoting lifestyles. Pender (1996) cited that a team of scientists at the University of Michigan Child/Adolescent Health Behaviour Research Centre explored the determinants of health promoting behaviours and risk behaviour among pre- adolescents and adolescents using the model.

Duffy (2008) used the Health Promotion Model to find the determinants of health promoting midlife women. The health locus of control, self esteem and health status were analysed for their impact on health promoting life style activities in 262 women between 35

and 65 years of age. The two economical variants explained 72.5 % of the variance in the anterior set, the sub- scale scores of the health promoting lifestyle profile. Internal health locus of control, self-esteem and current health status and future health status explained 36. Health locus of control, health worry/ concern and negative prior health responsibility, nutrition stress management subscales. The correlations for the two variants were 0.78 and 0.66 respectively.

In this study, nine variables namely, prior related factors, perceived benefits of action, perceived barriers to action, perceived self efficacy, activity related affect, personal factors (biological, psychological and socio-cultural), inter-personal influences (family, peers, norms, providers), commitment to a plan of action and health promoting behaviour were used to identify factors affecting knowledge of pregnancy related complications and pregnancy among adolescent

## Summary

This chapter covered the literature review of the study. It was categorized as pregnancy among adolescents, knowledge of pregnancy related complications among adolescents and the relationship between knowledge of pregnancy and the relationship between knowledge of pregnancy related complications and pregnancy among adolescent. The theoretical framework by Pender (1996) was used to provide a theory based motivation on prevention of pregnancy in adolescents in a couple of studies.

# CHAPTER 3

# METHODOLOGY

## Introduction

This chapter addressed the research design to be employed in the study, sampling plan, sample size, sampling procedure, variables under study, instruments to be used, data collection plan, ethical issues pertaining to protection of human subjects, data collection procedure and data analysis.

## Research design

This study employed a correlation descriptive design. It is a systematic process that describes, tests, relationships and examines cause and effect interactions among variables (Burns & groove, 1997). The study aimed at showing the relationship between knowledge of pregnancy related complications and pregnancy among adolescents aged 13 to 19 years.

## Sampling plan

Sampling refers to the selection of a subset of the population to represent the entire population (Polit & Hungler, 1999). A sampling plan describes the strategies that will be used to obtain a sample for a study (Burns & Grove, 2001), it is developed to measure representativeness, decrease systematic bias and decrease the sampling error. The aggregate population is the adolescents aged 13 to 19 years who obtain treatment at health centres countrywide. The target population will be all adolescents aged 13 to 19 years and obtain health services from Marondera Hospital.

## Inclusion criteria

The inclusion criteria referred to adolescents aged 13 to 19 years and obtaining health services at Marondera Hospital. The participants were fully conscious and able to comprehend questions and answer all questions in English. They had a pregnancy and/or their first baby.

## Exclusion criteria

Exclusion criteria referred to adolescent below the age of 13 and above the age of 19 years. Single and non-pregnant adolescents were also excluded from the study. The reason for the exclusion was that the single and non-pregnant adolescents did not have the attributes to be studied. This resulted in many questions not answered. An inclusion and exclusion criteria ensures homogeneity as well as similarity of subjects (Burns & Grove, 2001).

## Sampling method

The sampling method used in this study was simple random sampling which is a probability sampling method. Probability sampling is a process in which each element of the population has an equal chance of being chosen for the sample (Polit & Hungler, 1999).

## Sample size

A sample size is a subset of population selected to participate in a research study (Polit & Hungler, 1999). The larger the sample the more representative of the population is likely to be (Polit & Hungler, 1999). In this study the population were adolescents aged 13 to 19 years. According to Woods and Catanzaro (1988) in calculation of the sample size the researcher should consider the power, effect size and statistical test selected as criteria. Power is the capacity of the study to detect relationships that actually exist in the population (Burns & Groves, 1997). The minimum accepted power for the study is .80 and power analysis verifies that the sample size is sufficient (Cohen, 1988). In this study the power level of 80 was selected. The power level results in a 20 % chance of type II error in which study fails to detect existing relationships (Burns & Groove, 1990). The effect size is the extent to which a phenomenon is present in the population being studied (Woods & Catanzaro, 1988). The effect size must be determined in order to perform a power analysis for the purpose of determining samples size. If the effect size is large, it is easy to detect the relationship between

variables and often requires a small sample (Burns & Grove, 2001). The small effect size would be about .20, the medium effect size is .50 and a large effect size is .8, (Burns & Grove, 2001). Effect size varies depending on the statistical test to be used, (Cohen, 1988). Significance level of the study was placed at 0.05. The sample size was determined by using the power chart (Lipsey, 1990). Chart gave a desired sample size of 65 participants. However, the researcher aimed to recruit 85 participants in order to compensate for potential attrition during data collection. There were 66 participants in the study.

## Sampling procedure

The study participants were selected through probability sampling. The simple random sampling was done. Probability sampling ensures that every member has the probability higher than 200 of being selected for the sample (Burns & Grove, 2001). The subjects were obtained from a sampling frame which is a list of the participants meeting the sampling criteria from which the sample will be chosen, that is the attendance register. The table of random numbers was used to draw the designed and sample size of 66 participants were obtained. Selected subjects were from Marondera Urban, although some of them were from Marondera rural areas who were referred to Marondera Hospital. This resulted in participants having different backgrounds thereby increasing generaliability. Small folded process of paper written one or zero were put in a box. Only those who proceed participated in the study.

## Conceptual and Operational Definitions

Pregnancy: As the dependent variable was conceptualised as it has 2 items Number of births and their interval.

## Variables

Three variables were measured in the study. These were demographic, pregnancy and pregnancy related complications. The information asked for from the participants was the

number of pregnancy and the interval between each pregnancy. Pregnancy which was the dependent variable is the one which the investigator is interested in understanding, explaining or predicting (Polit & Hungler, 1991).

Knowledge of pregnancy related complications which was the independent variable was sought. Independent variable according to Polit and Hungler (1991) is the variable which is believed to cause or influence the dependent variable and is the variable that is manipulated in an experimental research. It had 11 items, which sought information on pregnancy related complications adolescents had. Knowledge on complications known was sought and in some questions adolescent approved or disapproved the statement given.

## Conceptual and Operational Definitions

Pregnancy as the dependent variable is conceptualised as having young developing inside the uterus, (New Cambridge advanced learners dictionary, 2004). Pregnancy was operationlised as adolescents aged 13 to 19 years having a young developing inside their womb.

Knowledge of pregnancy related complications as the independent variable was conceptualised as the information understanding and skill that one gains through education or experience, (Oxford Advanced Learners Dictionary, 2005). Knowledge of pregnancy related complications was operationalised as the information, understanding and experience the adolescents gained through education and experience.

Demographic Variables: the data sought information about the adolescents background status, age, age of menarche, marital status, level of education, occupation, religion, sources of information and the adequacy of the information, age of first pregnancy and methods of contraceptives used.

## Instruments

An instrument is referred to by Polit and Hungler (1999) as a device or technique that a researcher uses to collect data. Data was collected from the participants by the means of a structured interview questionnaire. Questions used were closed and open format in English. A questionnaire method was used because it is cheap, quick to execute and ensures anonymity. Use of both open ended and closed ended questions have the advantage of not restricting the participants (in the form of open ended questions) and also of keeping participants within context (close ended questions). The possible limitations of this instrument included not being available to illiterate people, response rates may be low and does not allow probing of questions. It also has high refusal rate.

The instrument used in this study had three sections, Section B: pregnancy, which was the dependent variable. It consisted 2 items which were number of children and their interval. The items had one correct answer from the choices given. Score of 0 indicated pregnant, score of 1 indicated 1 child and score of 2 indicated 2 children.

Section C: Knowledge of pregnancy related complications, which was the independent variable. It consisted of 11 items, which measured the level of knowledge adolescents had on the pregnancy related complications. The known dangers of having early pregnancy and the extent to which adolescents agreed on the given statements. A Licket sale was used to measure the extent of agreement, 0 strongly disagree, 1 disagree, 2 uncertain, 3 agree and 4 strongly agree. The other 2 items on complications and dangers where coded 0 and 1. The score 0 indicated no knowledge and score 1 indicated the complication or danger known by the adolescent. The known where then added to give the final score.

Section A: Demographic data section captured personal data. These are age, age of menarche, marital status, level of education, occupation, religion, education received, the sources of information, adequacy of information, age of first pregnancy and methods of contraceptives used. The 11 items had one correct answer from the choices given.

## Validity

A valid instrument measures what the researcher set out to measure at the beginning of the research (Burns & Groove, 1997). Use of experts in the field of study will enhance content validity. The questionnaire was easily understood language (English) and shona to enable participants to comprehend the questions. The questionnaire was pre-tested to ensure it has no biases, ensure clarity, cultural relevance of questions and length of time required to respond to the questionnaire.

## Reliability

Reliability of an instrument is the degree of the dependability and consistency with which it measures the attributes it is designed to measure (Polit & Hungler, 1999). To enhance reliability, the instrument was highly structured and standardized. A pre-test was done and necessary modification was made to further strengthen reliability.

Before the actual data collection, the questionnaire was pre-tested on a sample of 5 clients on adolescents who were not included in the study sample and who met the inclusion criteria from Marondera health centres. Modifications ware made on the questionnaire accordingly.

## Data collection plan

## Ethical considerations

### Permission

Permission to conduct the study was obtained from the Medical Research Council of Zimbabwe and the Department of Nursing Science, University of Zimbabwe. Clearance from the Provincial Medical Director of Mashoanaland East and Marondera Medical Superintendent was obtained to carry out the study at the institution. The sister in charge at Family and Child Health reviewed the study proposed to determine whether or not the study had apparent risks for the subjects.

## Consent

Informed consent means that the subjects have adequate information about the study that they have power and choice to voluntarily participate or decline to participate in the study (Polit & Hungler, 1999). In Zimbabwe the legal age of majority is 18 years. Although minors require parent consent to obtain medical treatment, many health and family planning services to adolescents are not restricted under law. A minor may therefore, receive treatment or counselling without parental consent or knowledge (International Federation of Women lawyers, 1998) in all reproductive services. For this reason parental consent was not be sought to interview these participants under the age of 18 years. In the study, before sampling, participants was informed about the study and given the opportunity to decide whether to participate in the study or not. The researcher ensured that disclosure of information about the designed consent form (see Appendix).

The information disclosed to the participants included the researcher, status and credentials and the study purpose. The participants were informed of the reasons why they were selected to participate in the study and that their participation was voluntary and that they could withdraw from the study or refuse to answer any questions without fear or victimization. The participants were informed the time the interview could take, the type of information to be obtained from them and that there was no risk associated with participating in the study.

The investigator disclosed that there would be no immediate benefits to be accrued from participating in the study but obtained information on pregnancy and pregnancy related complications to improve the adolescent sexual reproductive health. An address where the participants will contact the researcher if they had further questions or comments relating to the study will be provided.

## Confidentiality

The researcher assured the participants of confidentiality by explaining that the data collected will be kept in the strictest confidence. This was ensured by marking the questionnaire by numbers and not participant's names. The forms were kept in a lockable bag to which only the researcher would have access. The data was recorded as aggregate data, after which the forms were destroyed.

## Data collection procedure

Data was collected at Marondera hospital over a period of 4 weeks. This was done during week days from 1000 to 1300 hours in March 2009. The researcher got the adolescents on the waiting bench to be attended to so as to identify those who met the eligibility criteria. The purpose and the procedure for the study was explained and informed consent sought. The simple random sampling method was used in selecting the participants to be interviewed. The interview was conducted in a private room. Each interview lasted 20 minutes. At the end of each interview session the researcher thanked the participants and gave them room to ask questions on any "grey" areas. The completed questionnaires were kept under lock and key by the researcher to ensure confidentiality and safety of the data.

## Data analysis

This is the systemic organization and synthesis of research data (Polit & Hungler, 1999). In this study the data collected was be quantitative. The data was coded and categorized

in preparation for analysis. The data was entered into the computer and processed using Statistical Package for the Social Sciences (SPSS) programme. Descriptive statistics was used to analyze the demographic variable, pregnancy and knowledge among pregnancy related complications. The Pearson's product moment correlation coefficient test was used to determine the relationship between the two variables. A regression analysis was done to confirm the nature of the relationship between knowledge of pregnancy related complications and pregnancy among adolescents aged 13 to 19 years. The study findings were presented in the narrative format. Frequency tables were used to illustrate the major points of the report.

## Summary

The chapter covered and described the research design, sampling plan, sample size, sampling procedure, instrument, data collection plan, ethical considerations, data collection procedure and data analysis.

# Chapter 4

## Study Results and Summary

### Introduction

This information presents findings from the data. The purpose of the study was to determine the relationship between pregnancy and pregnancy related complications among adolescents aged 13 to 19 years in Marondera urban in Zimbabwe.

The questions of the study:-

What is the occurrence of pregnancy among adolescents aged13 to 19 years in Marondera urban?

What is the level of knowledge of pregnancy related complications among adolescents aged 13 to 19 years in Marondera urban?

What is the relationship between pregnancy and knowledge of pregnancy related complications among adolescents aged 13 to 19 years in Marondera urban?

The data was analysed using SPSS. Descriptive statistics were used to describe the sample characteristics. The Pearson correlation was used to determine the relationship between pregnancy and pregnancy related complications among adolescents aged 13 to 19 years. Sixty-six subjects were interviewed.

### Sample demographics

Table 1 shows the ages of adolescents, ranging from 13 to 19 years of age with a mean age of 16.89 years and a standard deviation of 1.962 years. Table 1 also provided information of menarche age for adolescents. 1 (1.5%) had menarche at the age of 9 years. 11(16.7%) at the age of 10 years. 4 (6.1%) at the age of 11 years. 8 (12.1%) at the age of 12 years. 12 (18.2%) at the age of 13 years. 14 (21.2%) at the age of 14 years. 13 (19.7%) at the age of 15 years. 3 (4.5%) at the age of 16 years. Table 1 also indicated the marital status of the

adolescents. 18 (27.3%) were single, 38 (57.6 %) were married, 2 (3.0%) were divorced, 2 (3.0%) were separated while 6 (9.9%) were co-habiting.

Table 1

Sample demographics (1)

N = 66

| Age in years | Frequency | Percentages |
|---|---|---|
| 13 | 5 | 7.6 |
| 14 | 6 | 9.1 |
| 15 | 6 | 9.1 |
| 16 | 8 | 12.1 |
| 17 | 7 | 10.6 |
| 18 | 17 | 25.8 |
| 19 | 17 | 25.8 |
| Total | 66 | 100.0 |
| Age at menarche | | |
| 9 | 1 | 1.5 |
| 10 | 11 | 16.7 |
| 11 | 4 | 6.1 |
| 12 | 8 | 12.1 |
| 13 | 12 | 18.1 |
| 14 | 14 | 21.2 |
| 15 | 13 | 19.2 |
| 16 | 3 | 4.5 |
| Total | 66 | 100 |
| Marital status | | |
| Single | 18 | 27.3 |
| Married | 38 | 57.6 |
| Divorced | 2 | 3.0 |
| Separated | 2 | 3.0 |
| Co-habiting | 6 | 9.1 |
| Total | 66 | 100.0 |

Table 2 provides information on the adolescents' level of education. 19 (28.8%) had grade 7 and below. 22 (33.3%0 went up to form 2. 20 (30.3%) went up to form 4 and 3 (4.5%) up to form 6. 2 (3.0%) received tertiary education. Table 2 also illustrates results on adolescents' occupation. Most of the adolescents were unemployed, 40 (60.6%). 14 (21.2%) were self employed. 5 (7.6%) were professionals, 2 (3.0%) were general workers. 1 (1.5%) was a farmer. 4 (6.1%) were engaged in various type of jobs. Table 2 also presents the religion the adolescents belong to. 4 (6.1%) belonged to African tradition. Most of the adolescents interviewed were Christians that is 60 (90.9%). 2 (3.0%) were non denominational.

Table 2

Sample demographics

N = 66

| Variable | Frequency | Percentage |
|---|---|---|
| Level of education | | |
| Grade 7 and below | 19 | 28.8 |
| Form 2 | 22 | 33.3 |
| Form 4 | 20 | 30.3 |
| Form 6 | 3 | 4.5 |
| Tertiary education | 2 | 3.0 |
| Total | 66 | 100.0 |
| Occupation | | |
| Unemployed | 40 | 60.6 |
| Self employed | 14 | 21.2 |
| Professional | 5 | 7.6 |
| General worker | 2 | 3.0 |
| Farmer | 1 | 1.5 |
| Any other | 4 | 6.1 |
| Total | 66 | 100.0 |
| Religion | | |
| African tradition | 4 | 6.1 |
| Christianity | 60 | 90.9 |
| Non-denominational | 2 | 3.0 |
| Total | 66 | 100.0 |

Table 3 results indicate the educational received by adolescents on pregnancy and pregnancy related complications. 49 (74.2%) had received education, whilst 17 (25,8% 0 did not receive any education. Table 3 also displays the sources of information adolescents had. 18 (27.3%) got the information from the school teachers, 5 (7.6%) got the information from the peers. 26 (39.4%) got it from their families. 5 (7.6%) got it from the church while 4 (6.1%) got the information from the nurses. 8 (12.1%0 stated that they were not informed. Table 3 also shows the adequacy of the information the adolescents received. 37 (56.1%) stated that they received inadequate information whilst 29 (43.9) received adequate information. Table 3 also presents the information at which the adolescents got their first pregnancy. 6 (9.1%) got pregnancy at the age of 13 years. 4 (6.1%) got pregnant at the age of 14 years. 11 (16.7%) got pregnant at the age of 15 years4 (6.1%) got pregnant at the age of 16 years. 16 (24.2%) got pregnant at the age of 17 years. 18 (27.3%) got pregnant at the age of 18 years.7 (10.6%) got pregnant at the age of 19 years. Table 3 also illustrates the contraceptive methods used by the interviewed adolescents. 66 (100% of the adolescents did not use4 any method of contraceptive listed.

Table 3

Sample demographics

N = 66

| Variable | Frequency | Percentage |
|---|---|---|
| Education received | | |
| No | 17 | 25.8 |
| Yes | 49 | 74.2 |
| Total | 66 | 100.0 |
| Sources of information | | |
| None | 8 | 12.1 |
| School teachers | 18 | 27.3 |
| Peers | 5 | 7.6 |
| Family | 26 | 39.4 |
| Church | 5 | 7.6 |
| Nurses | 4 | 6.1 |
| Total | 66 | 100.0 |
| Adequacy of information | | |
| No | 37 | 56.1 |
| Yes | 29 | 43.9 |
| Total | 66 | 100.0 |
| Age at first pregnancy | | |
| 13 years | 6 | 9.1 |
| 14 years | 4 | 6.1 |
| 15 years | 11 | 16.7 |
| 16 years | 4 | 6.1 |
| 17 years | 16 | 24.2 |
| 18 years | 18 | 27.3 |
| 17 years | 7 | 10.6 |
| Total | 66 | 100.0 |
| Contraceptive method used | | |
| Non | 66 | 100.0 |
| Total | 66 | 100.0 |

## Pregnancy

Table 4 displays the number of birth the adolescents had. The number of children ranged from 0 to 2 children with a maximum of 2 children. 11 (16.7%) were pregnant at the time of interview. 54 (81.8%) had one child while 1 (1,5%) had two children. Table 4 also shows the birth interval. 63 (95.5%) had only one child. 2 ( 3.0%) had a birth interval of one year. 1 (1.5%) birth interval was two years

Table 4

Pregnancy

N = 66

| Variable | Frequency | Percentage |
|---|---|---|
| Number of births | | |
| Pregnant | 11 | 16.7 |
| 1 | 54 | 81.8 |
| 2 | 1 | 1.5 |
| Total | 66 | 100.1 |
| Birth Interval | | |
| 0 year | 63 | 95.5 |
| 1 year | 2 | 3.0 |
| 2 years | 1 | 1.5 |
| Total | 66 | 100.0 |

Knowledge of pregnancy related complications

Table 5 presents the adolescents' knowledge on pregnancy related complications. They were asked to state the pregnancy related complications they know. 39 959.1%) knew none. Twelve (18.2%) knew preterm labour. Eight (12.1%) knew obstructed labour. Six (9.1%) knew anemia while 1 (1.5%) knew other complications like small for dates. Table 5 also illustrates the known dangers of falling pregnant early. Two (3.0%) had none. Twenty-one (31.8%) stated school drop out. Nine (13.6%) stated career disturbance. Ten (15.2%) stated social neglect/ rejection, 5 (7.6%) stated financial problems, 18 (27.3%) stated early marriage. While 1 (1.5%) stated infection such as HIV, STIs.

Table 5

Knowledge on pregnancy related complications

N = 66

| Variable | Frequency | Percentage |
|---|---|---|
| Pregnancy related complication | | |
| None | 39 | 59.1 |
| Preterm labour | 12 | 18.2 |
| Obstructed labour | 8 | 12.1 |
| Anemia | 6 | 9.1 |
| Others | 1 | 1.5 |
| Total | 66 | 100.0 |
| Dangers of falling pregnant early | | |
| None | 2 | 3.0 |
| School drop out | 21 | 31.8 |
| Career disturbance | 9 | 13.6 |
| Social neglect/ rejection | 10 | 15.2 |
| Financial problems | 5 | 7.6 |
| Early marriage | 18 | 27.3 |
| Infections (HIV) | 1 | 1.5 |
| Total | 66 | 100.0 |

Table 6 results increase the adolescents' knowledge of pregnancy related complications. The adolescents were asked to respond to 6 questions on the extent they agree that early childbirth can lead to. On the knowledge on preterm labour 4 (6.1%) strongly agree 12 (18.2%) agree, 16 (24.2%) were uncertain, 25 (37.9%) disagree and 9 (13.6%) strongly disagree. On preterm delivery 3 (4.5%) strongly agree, 12 (18.2%) agree, 15 (22.7%) were uncertain. 25 (37.9%) disagree while 11 (16.7%) strongly disagree. On obstructed labour 8 (12.1%) strongly agree, 4 (6.1%) agree, 24(36.4%) were uncertain, 18(27.3%) disagree while 12 (18.2%) strongly disagree. On abortions all the 66 (100%) strongly disagreed. On still birth 1(1.5%) strongly agree, 9 (13.6%) disagree while 16 (24.2%) strongly disagree. On anemia 5 (7.6%) strongly agree, 14 (21.2%) agree, 13 (19.7%) were uncertain. 19 (28.8%) disagree and15 (22.7%) strongly disagree.

Table 6

Knowledge on pregnancy related complications

N = 66

| Variable | Frequency | Percentage |
|---|---|---|
| Preterm labour | | |
| Strongly agree | 4 | 6.1 |
| Agree | 12 | 18.2 |
| Uncertain | 16 | 24.2 |
| Disagree | 25 | 39.9 |
| Strongly disagree | 9 | 13.6 |
| Total | 66 | 100.0 |
| Preterm delivery | | |
| Strongly agree | 3 | 45 |
| Agree | 12 | 18.2 |
| Uncertain | 15 | 22.7 |
| Disagree | 25 | 37.9 |
| Strongly disagree | 11 | 16.7 |
| Total | 66 | 100.0 |
| Obstructed labour | | |
| Strongly agree | 8 | 12.1 |
| Agree | 4 | 6.1 |
| Uncertain | 24 | 36.4 |
| Disagree | 18 | 27.3 |
| Strongly disagree | 12 | 18.3 |
| Total | 66 | 100.0 |
| Abortions | | |
| Strongly agree | 66 | 100.0 |
| Total | 66 | 100.0 |
| Still birth | | |
| Strongly agree | 1 | 1.5 |
| Agree | 9 | 13.6 |
| Uncertain | 20 | 30.3 |
| Disagree | 20 | 30.3 |
| Strongly disagree | 16 | 24.2 |
| Total | 66 | 100.0 |
| Anemia | | |
| Strongly agree | 5 | 7.6 |
| Agree | 14 | 21.2 |
| Uncertain | 13 | 19.7 |
| Disagree | 19 | 28.8 |
| Strongly disagree | 15 | 22.7 |
| Total | 66 | 100.0 |

Table 7 provides information on knowledge of pregnancy related complications. The adolescents were asked how much they do agree with the given statement. Three questions were asked. The first was, the 13 to 16 years age group is associated with the highest frequency of pregnancy related complications. 24 (36.4%) strongly agreed, 18 (27.3%) agreed, 2 (3.0%) were uncertain. 16 (24.2%) disagreed and 6 (9.1%) strongly disagreed. The second question was that pregnancy related complications diminish with age. 46 (69.7%) strongly agree, 11 (16.7%) agreed. 4 (6.1%) were uncertain. 4 (6.1%) disagreed while1 (1.5%) strongly disagreed. The third question was that pregnancy related complications are less frequent if pregnant woman is above 20 years. The adolescent response were 42 (63.6%) strongly agree, 16 (24.2%) agreed, 2 (3.0%) were uncertain, 5 (7,6%) disagreed while 1 (1.5% strongly disagreed.

Table 7

Knowledge on pregnancy related complications

N = 66

| Variable | Frequency | Percentage |
|---|---|---|
| Pregnancy related complications' frequency highest at 13 – 16 years | | |
| Strongly agree | 24 | 36.4 |
| Agree | 18 | 27.3 |
| Uncertain | 2 | 3.0 |
| Disagree | 16 | 24.2 |
| Strongly disagree | 6 | 9.1 |
| Total | 66 | 100.0 |
| Pregnancy related complications diminish with age | | |
| Strongly agree | 46 | 69.7 |
| Agree | 11 | 16.7 |
| Uncertain | 4 | 6.1 |
| Disagree | 4 | 6.1 |
| Strongly disagree | 1 | 1.5 |
| Total | 66 | 100.0 |
| Pregnancy related complications' frequency least above 20 years | | |
| Strongly agree | 42 | 63.6 |
| Agree | 16 | 24.2 |
| Uncertain | 2 | 3.0 |
| Disagree | 5 | 7.6 |
| Strongly disagree | 1 | 1.5 |
| Total | 66 | 100.0 |

The relationship between pregnancy and knowledge of pregnancy related complications among adolescents aged 13 to 19 years.

Numbers of adolescents interviewed were 66.

Inferential statistics was used to find the correlation between pregnancy and knowledge of pregnancy related complications among adolescents aged 13 to 19 years. The statistics was done by using SPSS. The Pearson's correlation coefficient analysis was performed and the results were negative significant at 0.05, which means there is a weak negative relationship between pregnancy and knowledge of pregnancy related complications among adolescents aged 13 to 19 years.

| | Y |
|---|---|
| | 1.000 |
| x | -.124 |

* pl 0.05 ** pl 0.1 *** pl 0.01

Y – Pregnancy

X – Knowledge of pregnancy related complications

## Summary

This chapter covered the results of the data collected in descriptive statistics and tables. The Pearson correlation core efficient analysis was performed to determine the relationship between pregnancy and knowledge of pregnancy related complications among adolescents in Marondera urban.

# CHAPTER 5

# DISCUSSION, IMPLICATIONS &RECOMMENDATIONS

## Introduction

This chapter presents a summary of the results and discusses the findings focusing on the study questions addressed in the study on pregnancy and knowledge of pregnancy related complications among adolescents in Marondera urban. The implications of the study are discussed in relation to maternal and nursing research. Recommendations and limitations of the study are also present.

## Discussion, Conclusions and Implications

### Sample demographics

The target population was adolescents in the reproductive age, who were pregnant and those who had given birth. The adolescents were targeted because they are prone to pregnancy related complications since they are biotically, physically and emotionally immature (Atuyambe et al 2005). So any incidence of pregnancy results in adolescents being susceptible to pregnancy related complications. Magadi (2004) did the same study and targeted adolescents of the same age. The adolescents' ages were 16-19 years. This age group was suitable for the study they were susceptible to early pregnancy related complications. They need knowledge so that they are empowered to overcome these problems (Nugent 2006).

The participants had early menarche with the minimum age of 9 years and maximum 16 years. This shows that adolescents had early menarche and this predispose them to early sexual activities resulting in pregnancy and pregnant related complications. This corresponded with Nugent (2006) studies done in many countries, where early sexual activity and early child bearing was indicated as having long term effects on the quality of life. Simon (2005) also stated that the number of adolescents' pregnancies has increased due to early sexual activity.

The participants' marital status were categorized as single, married divorced, separated and co-habiting 38(57.6%) were married. Enrique et al (2008) stated that the increase of adolescent pregnancies is due to early marriage. The participants in this study concurred with them as stated that early pregnancies has resulted in early marriages. None of them were widowed. Eighteen (27, 3%) were single but having children, which means that they all had the responsibilities to care for the babies whilst they also needed care from parents (UNICEF 2002 update).

The educational level of the participants ranged from grade 7 below to tertiary education 19 (30%) attained tertiary education. The obtained results correspond with Nugent (2006) who stated that adolescents' continued, education was disturbed by pregnancy. Only one participant stated that she was continuing with her studies privately after she got pregnant whilst in form 6. The study results indicated that most of the participants were unemployed 40 (60.6%) and indicated that they have serious financial problems which resulted in not attending ANC or late booking at term. This was also stated in Zimbabwe Times (2007) that adolescents had financial problems that resulted in no or late booking (ANC) and raising their children.

Most of the participants were Christians with 60 (90, 9%). 4(6, 1%) believed in African tradition, 2(3,0%) were non denominational. The highest percentage of Christians illustrate that they have knowledge on good moral behaviour including abstinence. This demonstrate that where knowledge has been substantially increased "knowing" is not necessary doing. According to Perrcher [1996], knowledge is one of the factors related to health promotion behavior, but there are also other factors to be considered to achieve it. Many people do not connect knowledge and risk perception with behavior especially sexual behavior

The study results revealed some of the participants had received some form of education on pregnancy related complications. This corresponds with a study done by Bankole et al (2007) in Burkinafaso, Ghana, Malawi and Uganda which indicated that adolescents have high levels of awareness on sexual behavior, knowledge and information sources. The study also revealed that adolescents had limited knowledge, about, pregnancy and pregnancy related complications resulting in unwanted pregnancy. The knowledge they had was also affected by the educational level, which means the lower the educational level the limited information they had.

The sources of information of the participants were that 18 (27,3%) got their information from the school teachers ,while 26(39,4%) got their information from their families, and 5(7,6 %) got their information from peers and 5(7,6%) from the church. Only 4(6,1%) got information from the nurses, and 8(12,1%) were not informed and large percentage of participants had knowledge from their families as compared to other studies that indicated that information was obtained from peers (Nugent 2006). The social aspect of the participants 60 (90,9%) were Christians. The study findings indicated that the church is doing little in information dissemination in relation to pregnancy and pregnancy related complications. Nurses with 4(6,1%) provided the least information when they are the best people to provide information.

The participants also indicated that the information they were given was inadequate to prevent pregnancy and pregnancy related complications. This may also show that the sources of information had inadequate information as well, so there is no need for the nurses to scale up the dissemination of information to adolescents using the youth friendly services. The family being the largest informants they need to be well educated on the pregnancy and pregnancy related complications. ASRH assessment (2008) indicated that there are no youth

friendly services rendered in most health centres, resulting in adolescents not accessing the essential information on pregnancy and pregnancy related complications.

Early marriages 19 (21.2%) was shown by study results .The highest frequency 14(21,2%) were married by the age of 17 years. UNAIDS (2002) stated that that adolescents are married at the age of19 years. Most of the adolescents stated that they got early marriage as a result of pregnancy. The study findings concurred with the study done in South Africa where 1:4 of the adolescents would have a child by the age of 19 years. In Zimbabwe the adolescent rate is about 20% (Zimbabwe DHS, 2002). This early marriage resulted in married adolescents not involved in designing interventions resulting in knowledge deficit.

All the 66 participants interviewed knew one or more modern methods of contraception available. These study results concur with results revealed by the Zimbabwe DHS (2002) that adolescents had higher knowledge of contraceptives. The study findings indicated that the participants had trouble with accessing the contraceptives. The 50(75,8%)who were unable to accessing contraceptives while 16 (24,2%) accessed the different methods of contraceptives .The 50(75,8%) who were unable to access the contraceptives stated that they were too young to use contraception. Others were afraid of the side effects of hormonal methods as they thought they affect their fertility. This also concurred with the studies done by MOCHW (2000) that adolescents indulge in unprotected sex .WHO (2002) also stated that adolescents under estimate their risk or vulnerability by indulging in unprotected sex resulting in unwanted pregnancy and pregnancy related complications.

Pregnancy

The study findings provided information that some participants had a child by the age of 19 years .The number of children ranged from 0 to 2.11(16,7%)were pregnant during the time the study was done. The study findings concurred with UNAIDS (2002) study which

stated that 46, 5% of adolescents at 19 years had children or were will be pregnant. According UNICEF (2001) worldwide every fifth child is born to an adolescent mother.

The child is born to an adolescent pregnancies occur in the third world countries. In South Africa 1:4 of the adolescents will have a child by 19 years. Zimbabwe the adolescent pregnancy, the rate is 20% (Zimbabwe DHS 2002). Harare Maternity Hospital conducts about 33% of the adolescent's first birth of the deliveries done every day (Godzongere 2005).

Most of the participants were pregnant or had one or more children by the age of 19 years as indicated by studies done in South Africa, Ghana and Zimbabwe. The birth interval(s) were 63 (95.5%) had one child, 2(3%) birth interval was 1 year and 1 (1.5%) was 2 years. The study findings indicate the possibilities of adolescents having more children in their tender age thereby risking their lives. This also indicates there is need to provide the knowledge of the contraceptives to prevent unwanted pregnancies as indicated by Magadi (2004), Ghana.

Knowledge of pregnancy related complications

WHO (2002) stated that adolescents' lack of knowledge about the consequences of their action, pregnancy and also associated risks. Bonistra (2007) also indicated that childbirth especially of the first baby carries potential health risks which are unknown by most adolescents. The study results illustrated that 39 (59.1%) had no knowledge of pregnancy related complications, (18.2%) knew about pre-term labour, 8 (12.1%) knew about abortion while 6 (9.1%) knew about anemia. The highest percentage was unknowledgeable and concurred with the previous studies done.

The study results provided information on the risks of falling pregnant early known by participants. Their responses were 2 (3.0%) knew none, 21(31.8% knew about school drop out, 9 (13.6%) knew about career disturbance, 5(7.6%) knew about financial problems, 18(27.3%) knew about early marriage while 1(1.5%) knew infections including HIV. This

raises a concern as the least percentage knew about infections including HIV which would result in not using protection and could be infected. Deductively 97.5% are not cogniscent of the susceptibility and vulnerability that they have to HIV infection by not changing their sexual behaviour as evidenced by pregnancy. As indicated by WHO (2002), and UNICEF (2004) that adolescents had the risks associated with pregnancy. They commonly underestimate their risk and vulnerability resulting in pregnancy and pregnancy related complications.

Knowledge that childbirth can lead to pregnancy related complications was assessed using the Licket scale. In terms of preterm labour 25(37.9%) agreed whilst 9(13.6) strongly agreed and 16(24.2%) were uncertain, 12(18.2%) disagreed whilst 4(6.1%) strongly disagreed. The study finds concur with Bankele et al (2005) that adolescents had some knowledge about pre-term labour as a risk.

The majority of the participants 25(37.9%) disagreed that preterm labour is a risk of early childbirth whist 11(16.7%) strongly disagreed. This indicated that participants lacked knowledge of the complication and this concurred with a study by the Zimbabwe Times (2007) which reported that adolescents lacked knowledge on pregnancy related complications.

With regard to knowledge on obstructed labour, the highest frequency 24(36.4%) were uncertain. 12(18.2%) strongly disagreed whist 18(27.5%) disagreed. 4(6.1%) agreed whilst 8(12.1%) strongly disagreed. The summative 82.1%b which is a high percentage of adolescents not having knowledge on obstructed labour raised a concern as it indicates their unawareness of the risks and vulnerability they have. Obstructed labour also results in VVF which is a danger to them. No study noted on the knowledge of obstructed labour. All the 66 participants strongly disagreed that abortion is a risk of early child pregnancy. Most of adolescents indicated that most abortions that occur in adolescents are criminal and not related

to early child pregnancy. This shows ignorance and lack of maturity on the part of participants since abortion causes high morbidity and mortality. The study by Magadi (2004) indicated that abortion is one of the risks of early childbirth and nothing was stated on the knowledge the adolescents had.

Most of the participants did not agree that stillbirth was a risk. 16(24.2%) strongly disagreed while 20(30.3%) were uncertain. 9(13.6%) agreed while 1(1.5%) strongly agreed. The still birth are a result of late booking or no ANC. This has also some cultural, social and psychological implications as most in laws suspect fornication and that pregnancy is not of the family. The study findings indicated that adolescents had little knowledge on stillbirth as a risk of early childbirth.

With regard to the anemia as a risk to early childbirth, the participants response, was 15(22.7%) strongly disagreed, 19 (28.8%) disagreed while 13(19.7%) were uncertain. 14(21.2%0 agreed and 5(7.6%) strongly agreed. The study findings revealed most of the participants did not agree that anemia is a risk.

Studies done only illustrate the poor pregnancy outcome and risks adolescents have when they get pregnant but none indicated the knowledge adolescents have on pregnancy and pregnancy related complications. This indicate the need for more researches to quantify the knowledge level adolescents have and increase the body of knowledge in adolescents reproductive health.

On the age group 13 to 16 years associated with the highest frequency of pregnancy related complications, 6(9.1%) strongly disagreed while 16(24.2%) disagreed. 2(3.0%) were uncertain. 18927.3%) agreed while 24(36.4%) agreed. The highest frequency agreed indicating the knowledge the participants had.

With regard on pregnancy related complications diminishing with age, the participants'

response was that 1(1.5%) strongly disagreed, 4(6.1%) disagreed, 4(6.1%) disagreed and 4(6.1%) were uncertain. Eleven (16.7%) agreed while 46(69.75) strongly agreed. The study findings revealed the highest frequency strongly agreed revealing adequate information of less risk as the adolescents grow up.

On pregnancy related complications being least frequent if pregnant woman is above 20 years. The response were that 1(1.5%) strongly disagreed while 2(3.0%) uncertain and 52(78.8%) agreed while 11(16.7) strongly agreed. The study findings indicate that the participants agreed that pregnant women above the age 20 years had the least risks as stated by Myers (2002) that adolescents are more likely than older women to experience poor pregnant outcome. The study did not indicate the knowledge levels the adolescents have. That indicate the need to do more research to ascertain the knowledge level adolescents have on pregnancy related complications in relation to their age group (13 to 19 years)

The relationship between pregnancy and knowledge of pregnancy related complications among adolescents aged 13 to 19 years in Marondera urban.

The relationship between pregnancy and knowledge of pregnancy related complications was analyzed using the Pearson's correlation coefficient. The results were a weak negative significant of -.124, which means that as the knowledge of pregnancy related complications increases, the pregnancy decreases among adolescents. The results concur with Magodi (2004)'s results which indicate that despite a lot of programmes in place to impact knowledge on adolescents, many of them are still indulging in unprotected sex resulting in unwanted pregnancies and poor pregnancy outcome. This means that there is a weak negative relationship between pregnancy and knowledge of pregnancy related complications as indicated by R2 of .015. This means 1.5% of knowledge of pregnancy related complications is related to pregnancy. This indicates that there are other factors besides knowledge that are

related to pregnancy among adolescents.

## Theoretical framework

Pender's (1990) health promotions model was used to guide the study. The variables were pregnancy the dependent variable and knowledge of pregnancy related complications the independent variable with adolescents in Marondera urban as the target group. The assumption was that there is a relationship between pregnancy and knowledge of pregnancy related complications. The selected components of the study were individual characteristics and experience, which affect subsequent action: - are prior related behaviour and personal factors. In the study an adolescent with in-depth knowledge of pregnancy related complications is likely to practice abstinence or use protection to prevent pregnancy at a tender age of 13 to 19 years. Personal factors are the sample demographic characteristics obtained in the study which also affect the adolescents' perception of information about pregnancy and pregnant related complications.

Perceived benefits of action towards knowledge of pregnancy related complications result in avoiding sexual activity early in adolescence were cited. Also perceived self efficacy was related to acquiring knowledge appropriated to prevent risks. Interpersonal influences were related to families, peers and health care providers. The study results indicate that most of the participants had information from their families. Penders (1996) states that social support is viewed as an interpersonal influence. Interpersonal influence focuses on behaviour, beliefs or attitude of other individuals.

The behaviour outcome addresses the commitment to a plan of action and health promoting behaviour (Pender 1996). Commitment to a plan of action relates to adolescents' commitment to seek appropriate information and intervention that prevents pregnancy and pregnancy related complications. Adolescents must be part and parcel of planning and strategy

formulation which are youth friendly. Health promotion behaviour relate to the positive health outcome for the adolescents, to make informed decisions, improve self-identity, self care and protection thereby preventing unwanted pregnancy and pregnancy related complications (UNICEF 2004). This improves the quality of life that is the sexual reproductive health throughout the life span.

The study findings supported the guiding framework that if the adolescent had knowledge of pregnancy related complications they should be able to prevent pregnancy.

## Implications for MCH/ Midwifery Practice

The results of the study indicate that adolescents had the knowledge of pregnancy related complications. Regardless of the knowledge the adolescents have adolescents pregnancies are increasing and there is need for change in sexual behaviour. Midwives and nurses have a critical role in promoting positive sexual behaviour and empowering the adolescents. Youth friendly services should be offered to improve health promotions services rendered to adolescents using the multisectoral approach as was also indicated by Nugent (2005).

## Implications to Nursing Education

The findings revealed that families are taking a leading role in information dissemination as compared to nurses. The midwives and nurses should take a leading role in providing correct information to the families and adolescents to compliment the families' effort. It is important to train student midwives and nurses to appreciate the importance of giving health education to families and adolescents. In service training is also needed for the qualified staff to appreciate the importance of health education and change attitudes towards adolescents.

## Implications to Nursing Research

The findings from the study have, positively indicated shortcomings pertaining to the services rendered to adolescents on information dissemination by nurses and midwives. As low numbers of studies done in Zimbabwe on adolescents' pregnancy and knowledge of pregnancy related complications. Therefore, midwives need to carry out more studies to expand the body of knowledge for maternal and child health and midwifery practice

## Recommendations

The following recommendations were based on the study findings:-

1. Multisectoral approach is to be implemented so that the key stake holders like Ministry of Education, Sports and Culture Youth and Women and gender are also involved in information dissemination on pregnancy and pregnancy related complications to adolescents in the schools health programmes at various educational levels.
2. All health centers in Zimbabwe should create youth friendly services, where adolescents can drop in at any given time to access reproductive health information and treatment of other ailments.
3. Offering affordable and accessible services to the adolescents especially ANC, deliveries and post natal care.
4. Midwives and nurses changing their attitudes towards adolescents so as offer appropriate services to them.
5. Increasing training services to midwives and nurses in the management of adolescents reproductive health in youth friendly manner.
6. Encouraging midwives and nurses to research more on adolescents, pregnancy, and knowledge of pregnancy related complications and other factors related to the sexual reproductive health and behaviour.

## Limitations

1. The study was done in Marondera urban where a weak negative significant was revealed on pregnancy and knowledge of pregnancy related complications. This could have been due to the fact that the time frame for the study was governed by requirements of the course. Therefore, generalization of the study is that it is limited to the adolescents who were able to visit the hospital for services.
2. The presence of the investigator when the adolescents were answering the structured questionnaires may have resulted them responding with the socially acceptable responses to some items.
3. The instrument was used for the time hence unproved reliability and validity of the instrument.

## Summary

In Zimbabwe, the Ministry of Health and Child Welfare stated that the adolescents' prevalence rate of pregnancy is 20% (UNFPA 2001).

Close to 40% of adolescents are already mothers by the time they are 19 years (Zimbabwe Population Census 1992). According to Magodi (2004) the incidence of adolescents' pregnancies is particularly critical in sub-Saharan Africa due to lack of effective contraceptive and reproductive health information. Globally adolescents commonly under estimate their risk of pregnancy related complications (Nugent 2006). They often lack knowledge about consequences of their actions thereby exposing themselves to serious reproductive health problems. The adolescents lack empowerment in sexual reproductive health, leading to pregnancy and pregnancy related complications increasing the disease burden and increased bed occupancy in hospitals with their babies. Maternal morbidity and mortality is increased impairing the Ministry of Health and Child Welfare's millennium

development plan.

The purpose of the study was to examine the relationship between pregnancy and knowledge of pregnancy related complications among adolescents. The adolescents studied were from Marondera urban in Mashonaland East Province. The theory of the study was that if the knowledge of pregnancy related complications changed the sexual behaviour of adolescents improved thereby reducing the pregnancy prevalence rate.

The study utilized Pender's Health promotion model to try and enhance understanding. The selected components were individual characteristics and experiences which affect subsequent actions prior related behaviour and personal factors. These are equated to the adolescents aged 13 years to 19 years who have knowledge on pregnancy related complications and are well empowered to change their sexual reproductive behaviour and prevent pregnancy early in life. Interpersonal influences are equated, to information sources that lead to health promotion sexual behaviour that prevent risks. Commitment to action of plan is equated to the adolescents determined to seek correct information and act appropriately to prevent pregnancy and pregnancy related complications. The health promotion factors according to Penders' framework related to the adolescents making informed decisions in order to improve self care, self identity and protection thereby reducing pregnancy incidence and related complications.

A descriptive correlation design was used to study a random sample of 66 pregnant and adolescent mothers. The power used was .80, the medium effect size was. 50 and the significance level was .05. The data collected was analysed using the SPSS. When the knowledge of pregnancy related complications was correlated with pregnancy among adolescents the results were significant. The study results supported that there is a relationship between knowledge of pregnancy related complications and pregnancy among adolescents

aged 13 to 19 years in Marondera urban.

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Appendix A

Ethical considerations

Informed consent

I Rowesai Gandanga (70-202176M-70), a UZ postgraduate student doing Masters in Nursing Science (MCH) is carrying out a research on the relationship between pregnancy and knowledge of pregnancy related complications among adolescents aged 13 to 19 years in Marondera urban.

The study is carried out in fulfilments of Masters in Nursing Science (MCH) degree. Permission to carry out the research was sought from the Medical Superintendent and Sister-in Charge FCH and maternity (Marondera Provincial Hospital). An informal verbal and written consent will be obtained from the participants before the questionnaires are distributed.

You are therefore selected randomly to participate. The investigation will enable the researcher to make recommendations based on findings to improve the reproductive health of adolescents. You are advised that you are free to participate in the research willingly and withdraw whenever you feel like. Privacy and confidentiality will be ensured and only relevant stakeholders are going to be informed about the outcomes of the research. No harm during the research. You are also requested to answer all questions honestly and truthfully. If you have any questions concerning this study please conduct me on phone 079 – 25611 or 091 2 700 249.

Are you willing to participate in this research (YES/NO) please indicate your consent by signing below before answering the questions;

Signature of participant …… Date ……..

Signature of witness …… Date …….

Thank you.

Appendix B
Questionnaire

Section A:- Demographic Data Code No……

The following questions concern you. May you please respond to the best of your ability. Answer all questions.

| | | |
|---|---|---|
| 1) How old are you? | 13 | ☐ |
| | 14 | ☐ |
| | 15 | ☐ |
| | 16 | ☐ |
| | 17 | ☐ |
| | 18 | ☐ |
| | 19 | ☐ |
| 2) What was your age of menarche? | 10 | ☐ |
| | 11 | ☐ |
| | 12 | ☐ |
| | 13 | ☐ |
| | 14 | ☐ |
| | 15 | ☐ |
| | 16 | ☐ |
| | 17 | ☐ |
| 3) What is your marital status? | Single | ☐ |
| | Married | ☐ |
| | Divorced | ☐ |
| | Separated | ☐ |
| | Co-habiting | ☐ |
| 4) What is your level of education? | | |
| | Grade 7 and below | ☐ |
| | Form 2 | ☐ |
| | Form 4 | ☐ |
| | Form 6 | ☐ |
| | Tertiary education | ☐ |
| | Others (specify) | ☐ |
| 5) What is your occupation? | Unemployed | ☐ |
| | Self employed | ☐ |
| | Professional | ☐ |
| | General worker | ☐ |
| | Farmer | ☐ |
| | Any other (specify) | ☐ |
| 6) What is your religion | African traditional | ☐ |
| | Christianity | ☐ |

Moslem ☐
Non-denominational ☐
Any other (specify) ☐

7) Have you ever received any education on pregnancy related complications.

Yes ☐
No ☐

8) If yes , where did you get it from?

School Teachers ☐
Peers ☐
Mass Media ☐
Church ☐
Nurses ☐

9) Was this information adequate to the prevention of pregnancy related Complications

Yes ☐
No ☐

10) At what age did you have first pregnancy?

13 ☐
14 ☐
15 ☐
16 ☐
17 ☐
18 ☐
19 ☐

11) Which of the following methods of contraceptives do you use?

Secure ☐
Control ☐
Depo provera ☐
Condom ☐
Loop ☐
Diaphram ☐
Spermicides ☐
None ☐

12) Do you have access to the above listed methods of family planning?

Yes ☐
No ☐

13) How many births have you given so far?

0 0 ☐
1 1 ☐

2 2 ☐

14) If more than 1 (0ne) state the interval between each birth

1 year 1 ☐
2 years 2 ☐
3 years 3 ☐

KNOWLEDGE OF PREGNANCY, RELATED COMPLICATIONS

15) Which of the following pregnancy related complications do you know?

Preterm labour ☐
Preterm delivery ☐
Obstructed labour ☐
Abortions ☐
Still birth ☐
Anaemia ☐
Other (specify) ☐
None ☐

16) What are the dangers of falling pregnant early?

School drop out ☐
Career disturbance ☐
Social neglect /rejection ☐
Financial problems ☐
Early marriage ☐
Infections (HIV) ☐
Others (specify) ☐

17) To what extent do you agree that early childbirth can lead to the following pregnancy related complications:-

| | | |
|---|---|---|
| Preterm labour | Strongly agree | ☐ |
| | Agree | ☐ |
| | Uncertain | ☐ |
| | Disagree | ☐ |
| | Strongly disagree | ☐ |
| Obstructed Labour | Strongly agree | ☐ |
| | Agree | ☐ |
| | Uncertain | ☐ |
| | Disagree | ☐ |
| | Strongly disagree | ☐ |
| Abortions | Strongly agree | ☐ |
| | Agree | ☐ |
| | Uncertain | ☐ |

| | | |
|---|---|---|
| | Disagree | ☐ |
| | Strongly disagree | ☐ |
| Still Birth | Strongly agree | ☐ |
| | Agree | ☐ |
| | Uncertain | ☐ |
| | Disagree | ☐ |
| | Strongly disagree | ☐ |
| Anaemia | Strongly agree | ☐ |
| | Agree | ☐ |
| | Uncertain | ☐ |
| | Disagree | ☐ |
| | Strongly disagree | ☐ |

18) How much do you agree with the following statements?

The 13 to 16 years age group is associated within highest frequency of pregnancy related complications

| | |
|---|---|
| Strongly agree | ☐ |
| Agree | ☐ |
| Uncertain | ☐ |
| Disagree | ☐ |
| Strongly disagree | |

Pregnancy related complications diminish with age.

| | |
|---|---|
| Strongly agree | ☐ |
| Agree | ☐ |
| Uncertain | ☐ |
| Disagree | ☐ |

Pregnancy related complications are least frequent if pregnant woman is above 20 years

| | |
|---|---|
| Strongly agree | ☐ |
| Agree | ☐ |
| Uncertain | ☐ |
| Disagree | ☐ |
| Strongly disagree | ☐ |

## Appendix C

### Fomu Rekubvuma Mutsananguro

Ini Rowesai Gandanga (70-202176M – 70) ndiri mudzidzi paUniversity ye Zimbabwe aro kuita dhigiri raama mukoti rinonzi “Masters of Nursing Science degree”.

Ndinofanirwa kuita tsakurudzo iyi kuti ndipiwe dhigiri racho. Saka ndichafunda nezve Hukama uripo pakati pepamuviri nematambudziko anosangana nevechidiki vanenge vaita pamuviri vane makore gumi nematatu kusvikira gumi nemapfumbamwe muguta remaMarondera. Bvumo yokuita tsakiridzo ndakapiwa nevakuru veMashonaland East, Marondeera Hospital nevana mukoti vakuru vekuFCH nemateniti ndinokukumbiraiwa bvumo kwamuri musati mapindura mibvunzo yandichakupai.

Masarudzwa kuti mupindure mibvunzo. Zvichawanikwa mutsananguro dzenyu zvichabatsira vechidiki pane zvepamuviri nematambudziko anosanganikwa nawo akana vakasika kubara. Hamumanikidzwe kupindura mibvunzo uye munogona kubuda mutsvangurudzo pamadira. Kupinda kusapinda kana kubuda mutsvakurudzo hakuzokanganisa mabatirwo amuchaitwa muchipatara. Hamunyore zita renyu pamapepa etsvanangudzo. Zvamunonyora hazvipiwi kune mumwe munhu kunze kweavo vanogona kukupai rubatsiro chete.

Ndinokukumbirai kuti mupindure mibvunzo yose pachokwadi. Kana mune mimwe mibvunzo ndifoneri pa079 – 25611 kana 091 2 700 249.

Kusaina: …… Murwere Date:…….

Kusaina: …… Mutsvakiridzi Date: ……

Appendix D

Chikamu chekutanga: Demographic Data"  "Code No ……"

Ndinokumbira kuti mupiondure mibvunzo yose pachokwadi, neruzivo rwenyu.

1) Une makore mangani?

- 13 ☐
- 14 ☐
- 15 ☐
- 16 ☐
- 17 ☐
- 18 ☐
- 19 ☐

2) wakatanga kuenda kumwedzi wavenemakore mangani?

- 10 ☐
- 11 ☐
- 12 ☐
- 13 ☐
- 14 ☐
- 15 ☐
- 16 ☐
- 17 ☐

3) Makaroorwa kana kuroora?

- Handisati ☐
- Ndakaroorwa ☐
- Takarambana ☐
- Takasiyana ☐
- Tinogarisana ☐

4) Wakadzidza kusvika mugwaro ripi?

- Grade 7 and below ☐
- Fomu 2 ☐
- Fomu 4 ☐
- Form 6 ☐
- Tertiary education ☐
- Others (specify) ☐

5) Unoita basa rei?

- Handishandi ☐
- Ndonoita mabasa amaoko ☐
- Ndinoenda kubasa ☐
- Ndinotengesa ☐
- Murimi ☐
- Zvimwewo ☐

6) Unopinda muchitendero chipi?

- Midzimu ☐

Chikirisitu ☐
Islam ☐
Hamuna zvamunotendera ☐
Zvimwewo ☐

7) wakambowana ruzivo nezvematambudziko anowanikwa kana munhu ane pamuviri here?

Hongu ☐
Kwete ☐

8) Kana mati hongu makawana ruzivo urwu kupi?

Mudzidzisi ☐
Shamwari ☐
Wairesi/Terevhizheni ☐
Kuchechi ☐
Vakoti ☐

9) Unofunga kuti wakawana ruzivo rwakakwana here?

Hongu ☐
Kwete ☐

10) Wakaita pamuviri pokutanga une makore mangani?

13 ☐
14 ☐
15 ☐
16 ☐
17 ☐
18 ☐
19 ☐

11) Wakamboshandisa nzira dzinotevera dzokudzivirira kusaita pamuviri here?

Mapiritsi ☐
Jekiseni ☐
Depo provera ☐
Kondomu ☐
Rupu ☐
Hwidibiro ☐
Spermicides ☐
Dzimwewo ☐

12) Waigona kuwana nzira dzokuzvidzivirira kusaita pamuviri nyorenyore here?

Hongu ☐
Kwete ☐

13) Une vana vangani parizvino? ___

Ndinepamuviri ☐
Mumwe chete ☐
Vaviri ☐

14) vana venyu vanotevedzana vakasiyana nemakore mangani?

Gore rimwe chete ☐
Makore maviri ☐
Makore matatu ☐

Ruzivo nezvematambudziko anowanikwa kana munhu ane pamuviri

15) Ndeapi matambudziko anowanikwa nemunhu ane pamuviri amunoziva?

Kurwadziwa nguva isati yakwana ☐
Kubara mwana asina kusvika ☐
Kutadza kuburitsa mwana ☐
Kubva pamuviri ☐
Kubara mwana akafa ☐
Kuva neropa shoma ☐
Hapana ☐
Zvimwewo ☐

16) Ndedzipi njodzi dzinowanikwa kana wechidiki akakasika kuita pamuviri?

Kuregedza chikoro panzira ☐
Kuregedza basa ☐
Kudzingwa pamusha ☐
Kushaya mari/nhamo yemari ☐
Kukasika kuroorwa ☐
Kurwara ☐
Zvimwewo ☐

17) Munotenderana here kuti matambudziko anotevera anokonzerwa nekukasika kubara:-

Kurwadziwa nguva isati yakwana

Ndinobvuma chose ☐
Ndinobvuma ☐
Handizive ☐
Handibvume ☐
Handibvume chose ☐

Kutadza kuburitsa mwana

Ndinobvuma chose ☐
Ndinobvuma ☐
Handizive ☐
Handibvume ☐
Handibvume chose ☐

| | | |
|---|---|---|
| Kubva pamuviri | Ndinobvuma chose | ☐ |
| | Ndinobvuma | ☐ |
| | Handizive | ☐ |
| | Handibvume | ☐ |
| | Handibvume chose | ☐ |
| Kubara mwana akafa | Ndinobvuma chose | ☐ |
| | Ndinobvuma | ☐ |
| | Handizive | ☐ |
| | Handibvume | ☐ |
| | Handibvume chose | ☐ |
| Kuvaneropa shoma | Ndinobvuma chose | ☐ |
| | Ndinobvuma | ☐ |
| | Handizive | ☐ |
| | Handibvume | ☐ |
| | Handibvume chose | ☐ |

18) Munobvumirana here nezvakanyorwa pazasi?

Matambudziko anowanikwa nemunhu anepamuviri akanyanya kumunhu anemakore 13 kusvika makore 16?

| | |
|---|---|
| Ndinobvuma chose | ☐ |
| Ndinobvuma | ☐ |
| Handizive | ☐ |
| Handibvume | ☐ |
| Handibvume chose | |

Matambudziko epamuviri anoenda achiita mashoma nekukura kwemunhu

| | |
|---|---|
| Ndinobvuma chose | ☐ |
| Ndinobvuma | ☐ |
| Handizive | ☐ |
| Handibvume | ☐ |

Matambudziko epamuviri anoita mashoma aripamunhu akazvitakura ane makore anopfuura magumi maviri (20)

| | |
|---|---|
| Ndinobvuma chose | ☐ |
| Ndinobvuma | ☐ |
| Handizive | ☐ |
| Handibvume | ☐ |
| Handibvume chose | ☐ |

## Appendix E

Abbreviations

HIV - human immuno-deficiency virus

AIDS- acquired immuno-deficiency syndrome

DHS - demographic health survey

UNAIDS- United Nations Joint United National Programme on HIV/AIDS

UNICEF- United Nations International Children Education Fund

NACP- National Aids Control Programme

MoHCW- Ministry of Health and Child Welfare

WHO- World Health Organisation