CHAPTER 1

1.1 INTRODUCTION

Health is a major determinant of human development. It is a well known fact that no nation can make progress and achieve economic development until the health of its citizens is taken care of. Indeed, it is increasingly being recognized that good health is an important contributor to productivity and economic growth, but it is, first and foremost, an end in itself.

In the poor countries where the only asset most people have is their bodies', health assumes even greater significance. Good health and its natural corollary - defense against illness - is fundamental to every man, woman and child, not only for their well - being but for their very survival. If the state exists to safe guard the right of its citizens to the fundamental prerequisites to protect them from illness and premature mortality.¹

One of the important components of health is reproductive health. World Health Organization (WHO) defines reproductive health as a “state of complete physical, mental and social well-being in all matters related to the reproductive system and to its functions and process”. In January 2005, the Millennium projects investing in development: a practical plan to achieve the Millennium Development Goals (MDGs) formally recognized that sexual and reproductive health is essential for reaching all eight of the goals derived from the 2000 Millennium declaration.²

In support of the importance of reproductive health, one of WHO reproductive health program is “Avoid illnesses, disease and disability related to sexuality and reproduction and receive appropriate care when needed”.³ Absence of Reproductive Tract Infection (RTI) is essential for the reproductive health of both women and men.⁴ RTIs have been classified as a group of illnesses commonly experienced by women and men especially in resource poor setting. RTIs are
considered as potentially hazardous to health and well-being, particularly among women. RTIs encompass three main groups of infection:  

1. Endogenous infection occurs primarily among women as a result of a disturbance of the normal genital tract flora.

2. Iatrogenic infection acquired for example, through unsterile procedure across the cervix such as insertion of an intrauterine device, or termination of a pregnancy.

3. Sexually Transmitted Infection (STI) occurs in both men and women.

The increased life expectancy recorded in recent decades, together with changes in lifestyle and diet, has led to rise in the incidence of non-communicable diseases, and also seen in the developing countries. Non-communicable diseases now cause nearly 40% of all deaths in developing countries, affecting people of a younger age than they do in industrialized countries. The epidemiological transition, with its double burden of infectious and non-communicable diseases, means that many developing countries now struggle with a range and volume of disease for which they are not prepared. Although the diseases that kill attract much of the public’s attention, musculoskeletal or rheumatic diseases are the major cause of morbidity throughout the world, having a substantial influence on health and quality of life, and inflecting an enormous burden of cost on health systems. Rheumatic diseases include more than 150 different conditions and syndromes with the common denominators of pain and inflammation. The most common chronic inflammatory arthritis is Rheumatoid Arthritis (RA). Its clinical course is highly variable and spontaneous disease fluctuations are common. Most of the patients have a progressive course that eventually leads to considerable functional disability.

1.2 IMPORTANCE OF THE STUDY

Women’s health is a basic human right, without which women can fully play their roles as careers neither for their families nor as participants in the process of economic and social development. The current focus on women’s reproductive health marks a global recognition that women’s reproductive health needs have been
largely neglected. As well as, with the launch of the International Conference on Population and Development (ICPD) in 1994, Cairo, Egypt, there has been a change in the approach of looking at women’s health problems and the understanding of women’s health needs and has been broadened from its focus on maternal health to the broad category of reproductive health. One of the important aspects of reproductive health is to avoid illness, diseases and reproductive tract infections. Information about epidemiological data for all categories of RTIs is not available globally. Also there is almost no information available on reproductive health situation and RTIs among women who suffer from chronic diseases.

Globally, approximately 52% of the female population (26% of the total population) is of reproductive age and RTI/STI is a major public health concern; particularly in low-income countries with the largest proportion among them (women aged 15-49 years). Women tend to suffer more because of the synergistic effect of chronic diseases, malnutrition and reproduction. These infections are among the most important causes of morbidity and mortality most particularly in women, resulting in serious economic, social and psychological consequences. RTI/STI is important not only because of their acute presentation, but also because of their associated sequel including chronic pain, ectopic pregnancy, infertility, poor pregnancy outcomes, neonatal and infant morbidity and mortality.

It is estimated that about one third of the 500,000 maternal deaths occurring each year have been due to RTI/STI complications of pregnancy. After maternal causes, STI result in the greatest number of healthy years lost to women of reproductive age in low-income countries, and the consequences of RTI/STI including stigmatization, reproductive impairment, domestic abuse and abandonment, can be severe in women. Also, the presence of an untreated or incorrectly treated STI (ulcerative or non-ulcerative) can increase the risk of both acquisition and transmission of HIV.

Self-medications with antimicrobials for treatment of RTI/STI is commonly found in low-income countries, and may result in antimicrobial resistance, treatment failure, treatment costs, disease spread, drug side-effects, allergic reactions and toxic
poisoning.\textsuperscript{15} In addition RTI/STI constitutes a huge health and economic burden, especially for low-income countries where they account for 17\% of economic losses caused by ill-health.\textsuperscript{16} Care for RTI/STI sequel accounts for a large proportion of care costs in terms of cervical cancer screening and treatment, liver disease management, infertility investigation, care for prenatal morbidity, childhood blindness, and chronic pain in women. The RTI/STI social costs include conflict between sexual partners and domestic violence, and the costs rise further when the cofactor effect of other STI on HIV transmission is taken into consideration, especially for women.

On one hand, women as a group tend to have longer life expectancy than men in the same socio-economic circumstances, this women’s greater longevity is itself a cause of higher rates of non-communicable/chronic disease. Also women bear a heavier burden than men of reproductive tract infections and this vulnerability is exacerbated during their child bearing years.\textsuperscript{17} On the other hand, women are biologically more susceptible than men to certain chronic and disabling disease like rheumatoid arthritis.

RA is the commonest form of chronic inflammatory arthritis which is a common cause of disability.\textsuperscript{18} It is a chronic, systemic inflammatory disorder of unknown etiology. It is frequently referred to as an autoimmune disease and is characterized by symmetric polyarticular pain and swelling, morning stiffness, malaise and fatigue. RA has a variable course, often with periods of exacerbations and less frequently true remissions. Outcomes are variable as well, ranging from a remitting disease (rare) to a severe disease bringing disability and even premature death. The progression of joint damage without treatment in the majority of patients results in significant disability within 10 - 20 years.\textsuperscript{19}

RA can result in difficulties with employment, problem with daily activities and can severely strain family relationships. In its most severe forms, and without any proper treatments, it can result in deformities of the joints. RA has potential to present during the child bearing years of women’s life, it is a chronic and debilitating and inflammatory disease which is also systemic, painful, leads to premature mortality and potentially disabling. Disabled patients have increased risk
of an adverse health outcomes, acute and chronic illness and different kind of infections. They have also special needs in relation to their health; sexual and reproductive health. The needs of persons with disabilities – like RA women with disability and immobility - are often overlooked or neglected. Worse, many persons with disabilities are marginalized, they are deprived of freedom, and their human rights are violated. Persons with disabilities have been denied information about Sexual and reproductive Health (SRH). In fact, persons with disabilities may actually have greater needs for sexual and reproductive health education and care than persons without disabilities due to their increased vulnerability to abuse. The challenges to SRH faced by persons with disabilities are not necessarily part of having a disability, but instead often reflect lack of social attention, legal protection, understanding and support. Persons with disabilities often cannot obtain even the most basic information about SRH. Thus they remain ignorant of basic facts about themselves, their bodies, and their rights to define what they do and do not want. Furthermore, SRH services are often inaccessible to persons with disabilities for many reasons, including physical barriers, the lack of disability-related clinical services, and stigma and discrimination.

From the viewpoint of economic impact, RA as a chronic disease is very costly to patients, families and society. Economic costs of illness are usually divided into two broad components. Direct costs spent to treat the illness include physician visits, emergency room visits, physical therapy, occupational therapy, nursing home care, mental health counseling, x-rays, laboratory tests, prescription and over the counter medication, hospitalization assistive devices like canes, crutches and walkers and “alternative” therapies. Indirect costs are those due to loss of productivity as a result of mortality and morbidity (e.g. lost wages). Also intangible costs include pain; psychological suffering and the stress placed on families. All can affect women’s ability and their decision to seek care. Moreover pain, immobility, immunosuppressive drugs, disability, fatigue, social consequences of chronic disease like RA are other inhibiting factors for seeking care and treatment of RTI.

Rheumatoid arthritis is a chronic polyarthritis with symptoms of synovitis, fatigue, anorexia, weakness, weight loss, depression, and vague musculoskeletal
symptoms. The hands, wrists, knees, and feet are commonly involved. Pain, aggravated by movement, is accompanied by swelling and tenderness. Extra-articular manifestations include rheumatoid nodules, vasculitis, cardiac and pleural-pulmonary symptoms. There are some studies which show improvement of RA during pregnancy and conversely, postpartum and miscarriage are associated with accelerated joint destruction. Living with chronic disabling disease like RA can impact on all aspects of quality of life. Most patients with the disease require continuous treatment to retard or stop progression and to control disease flares. Many also require surgery, such as total hip or knee replacement. In addition to these direct costs, work disability leads to reduced productivity and early retirement, and as a result, substantial indirect costs. The individual and his or her family must cope with the feeling of loss of contribution to society combined with redefined social roles, and the effects of pain, fatigue, low self-esteem, mental distress and depression.\textsuperscript{24} Also RA can affect relationships and sexual function.\textsuperscript{25} Little research has been undertaken on sexuality in the rheumatic diseases. Result of previous studies \textsuperscript{24,25} indicate that loss of function, fatigue and pain interfere with sexual pleasure and higher levels of pain, physical disability and depression also have an impact on sexual function. Some studies have been demonstrated that some patients with RA experience problems with their sexual relationships, but few are provided with the opportunity to discuss the subject.\textsuperscript{26} While there is little research about effects of RA on sexuality, but there is not data reported about whether RA has any affect as risk factors of RTI.

Finding the prevalence rates of RTI among women suffering chronic disease like RA is a vital indicator of reproductive health among them. RA can be one of the most debilitating, painful, and distressing conditions to live with. What is worse, it is incurable. It has an immunosuppressive nature with a lot of complications as well as pain, disability, immobility, extra-articular manifestations, fatigue, social and economical consequences of chronic disease and immunosuppressive drugs which all can be as inhibiting factors for seeking care and treatment. While RA is predominantly a female disease but there remain many unanswered (or unasked) scientific questions that often preclude the practitioner’s ability to provide the most concrete and informed advice about reproductive health among the RA women. An understanding of the relationship between RTI and its determinants with RA can
provide valuable information for policy makers and health professionals who are concerned with improving the quality of life for women—especially women with chronic disease in the third world. So it is necessary to design appropriate and relevant interventions for improving the women’s ability for preventing of RTI or discussing about reproductive infections and seeking care among chronic disease women like RA women.

For gaining access to this aim, awareness about prevalence and risk factor of RTI among patients with a chronic disease like RA is necessary. In spite of the fact that, they have double problem as compare to non chronic disease female there is lack of attention on these women.

1.3 OBJECTIVES

The aim of this thesis is to “study of the prevalence, common symptoms and risk factors of reproductive tract infections among women in reproductive ages suffering from rheumatoid arthritis that referred to Center for Rheumatic Disease (CRD) in Pune, India”. Specific objectives of this thesis are the following:

- To determine prevalence of RTIs, among RA women in reproductive ages who referred to Center for Rheumatic Disease (CRD) in Pune, India.
- To identity common symptoms of RTIs among them.
- To determine the common cause of RTIs with the help of simple laboratory tests among sample population in this research (the focus of this study being mainly on *Candida albicans*, bacterial vaginosis, trichomoniasis and syphilis).
- To assess risk factors of RTIs, among selected population of this research.

1.4 UTILITY OF THIS STUDY

The findings of this study can be utilized in a number of ways:

1- To educate RA women about ways of preventing RTI as an important health threaten.
2- To consider especial RTI preventive program into reproductive health care programs for RA women with a view to providing a broad based reproductive health for policy makers and health professionals who are concerned with improving the quality of life for women-especially women with chronic disease.