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## RESEARCH ARTICLE

### A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE REGARDING PELVIC INFLAMMATORY DISEASE AMONG ADOLESCENT GIRLS IN SAUDI ARABIA

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#### ABSTRACT

Adolescents are an important resource for any country. Adolescent girls are the future mothers of the society. Their health plays an important role in determining the health of the future population because adolescent girl's health has an intergenerational effect. The cumulative impact of the low health situation of girls is reflected in high maternal mortality rates and consequent high fertility rates. Pelvic inflammatory diseases are largely due to risk factors, which are preventable. adolescent girls are more prone for reproductive health problems amongst which Pelvic inflammatory diseases are common among sexually active girls and results in complications such as infertility ectopic pregnancy and chronic pelvic pain, which ultimately leads to social stigma in the society. Purpose of this study is to examine the knowledge of adolescents girls about pelvic inflammatory disease

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## INTRODUCTION

Adolescence is a key period in the lifecycle both in terms of the health of the person themselves also for their future life as an adult and even for the health of next generation. It is a crucial period of rapid development that encompasses significant changes in a person's life. The adolescent years are the link between childhood and adulthood the term adolescence comes from the Latin word "adolescere" which means to grow up. The World Health Organization (WHO) defines adolescence as a period in human growth and development that occurs after childhood and before adulthood. The period of adolescence divided into three stages; early (10-14 years), middle (15-16) and late adolescence (17-21 years) (Behman, 2004). Investing in Adolescent health and rights will yield large benefits for generations to come" Today's adolescents will be 2030 policy and decision-makers. Adolescent of today is the young married woman of tomorrow and the grandmother thereafter. The 2016 Lancet Commission concluded that Investments in adolescent health and wellbeing will yield a triple benefit –today, into adulthood and the next generation of children (Sabine Kleinert, 2017) Adolescents represent 1/6 of the world's population. In 2014, there were just over 1.2 billion adolescents in the world, the most that there's ever been. And that's estimated to increase very slowly to about 1.23 billion by 2040.

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The largest generation of adolescents and young people in human history (1.8 billion) demands more attention and action (World youth report 2005). Estimates of the young population of Saudi Arabia vary. In 2015, the estimated population was around twenty –seven million, and 19.11% of the population was between the ages of 15 and 24 (The world Fact book, 2015). Carley Murphy gives the figure of 51% of the population being younger than the age of 25 (as of February 2012) (Murphy, 2012). The Economist magazine estimates 60% of the Saudi population younger than the age of 21 (dated March 3, 2012) (Life expectancy at birth 2016) Adolescent girls represent about 1/5 th of the total female population in the world. Today we have both the knowledge and the opportunity to end preventable death among all women, children, and adolescents, to greatly improve their health and wellbeing and to bring about transformative change needed to shape a more prosperous and sustainable future. The fact is that many women, children, and adolescents worldwide still have little or no access to essential, good quality health services and education. As a result, as the MDG (Millennium Development Goal) 1.3 million adolescent died in 2012 from preventable or treatable causes. In adolescents girls, aged 15- 19 the two leading causes of death are suicide and complications during pregnancy and child birth. 70% of preventable adult deaths from non-communicable diseases are linked to risk factors that start in adolescence (WHO, 2004). WHO has focused significant planning and investment on developing a set of global strategies to reduce non communicable diseases.

One of the four main behavioral factors that contribute to increased risk of greater prevalence of for noncommunicable diseases is adolescent sexual and reproductive health. WHO has reported that reproductive and sexual health problems account for approximately 20% of the global burden disease for women. In most developed and developing countries, sexual and reproductive health education has always been challenging. In developing countries, compared with boys, the adolescent girl's health, nutrition, education, and development are more neglected, which has an adverse effect on reproductive health. In Saudi Arabia, early marriage among adolescent girls is an age-old tradition, nowadays this is changing, at the same time the mean age of marriage is rising resulting in an unprotected sexual activity by this group.

Pelvic inflammatory disease (PID) is one of the most serious infections of women today. It refers to the infection and inflammation of upper genital tract, involving the uterus, fallopian tubes, the ovaries and the surrounding structures. It can cause infertility, ectopic pregnancy, and chronic pelvic pain (<http://healthmad.com>). National Institute of Allergy and Infections Disease (NIAID) (fact sheet (2004) reports that in the U.S.A. the incidence of PID is 1,00,000 per year 83,333 per month, 19,230 per week, 2,739 per day, 114 per hour and one per minute. The death rate for Pelvic inflammatory diseases was 108 per year. Morbidity rate for Pelvic inflammatory diseases was 25 percent. NIAID fact sheet (2006) report on the Annual incidence of PID In Egypt was (2, 79,843), in Saudi Arabia (94,838), in Libya (20,704) and in Sweden (1, 43,927) respectively (<http://www.niaid.nih.gov>). Pelvic inflammatory diseases are largely due to risk factors, which are preventable. The most common preventable cause of PID is an untreated sexually transmitted infection (50%) mainly Chlamydia and gonorrhea and other causes include induced abortion and infection from other parts of body (e.g.) appendicitis. In the present scenario, PID is prevalent among developing countries than developed countries. This is because in developed countries sexually active adolescent girls are regularly undergoing screening for chlamydial and gonorrheal infection facilitating early deduction and treatment (Joshi, 2006). "Center for disease control and prevention" states in a report that every year more than 1,00,000 women become infertile and 70,000 ectopic pregnancies occur as a consequence of Pelvic inflammatory diseases in adolescents and also states that Pelvic inflammatory diseases are more common among teenagers than adult women (<http://www.cdc.gov/DES/>. Retrieved August 5, 2014.). It is obvious that PID is becoming prevalent among adolescent girls in the developing countries. As health team members nurses not only have the greater responsibility to give curative care but also should provide preventive care by imparting knowledge to the society. So the researcher felt the necessity to impart knowledge regarding PID among school-going teenage girls. The National Population Policy has recognized adolescents as an underserved vulnerable group that needs to be served especially by providing reproductive health information and services (Sogarwal, 2016). Above findings shows that adolescent girls are more prone for reproductive health problems amongst which Pelvic inflammatory diseases are common among sexually active girls and results in complications such as infertility ectopic pregnancy and chronic pelvic pain, which ultimately leads to social stigma in the society. Purpose of this study is to examine the knowledge of adolescents girls about pelvic inflammatory disease

## METHODOLOGY

The research design was conducted during April – May 2017 in College of Applied Medical Science, Hafar Al Batin, Saudi Arabia. Purposive sampling technique was used to collect the data Sample size was 91 adolescent female Nursing students. A closed-ended structured knowledge questionnaire was prepared to measure the knowledge of adolescent girls which had two sections: Sociodemographic characteristics and knowledge regarding Pelvic inflammatory disease. Four subareas were determined to access the knowledge regarding PID: female reproductive system, concept, detection and consequences, and prevention of PID. The total number of questions was 36. The knowledge scores of adolescent girls less than 50% is considered as poor, 50-70% as average and above 70% as good knowledge. Permission to conduct the study was obtained from the college and finally, individual consent was taken from the samples before collecting the data. Care was taken to maintain the privacy and confidentiality. Data were captured and analyzed using the SPSS statistical package version 16. Descriptive analysis (frequencies, mean, median, mode and cross-tabulations) were used to analyze all items on the questionnaire and the knowledge score of adolescents in relation to selected demographic variables were compared and tested statistically using "chi-square test

## RESULTS

Out of the 91 female adolescent female girls, majority of the respondent (57%) were in above 20 years of age and forty three (43%) were in the age group of less than 20 years. Almost half of them (55%) from were belonged to joint family. Maximum proportion of the subjects (42%) got information from health professionals. Education of the parents showed that 34% of fathers had secondary education and same percentage of mothers had primary education. Also (33%) of the girls reported that their mothers are illiterate. Majority of the subjects (74%) age of menarche was between 12- 14 years (Table 1)

**Table 1. Distribution of study sample according to their Sociodemographic Characteristics**

Variable	N	%
Age		
Less than 20	39	43
More than 20	52	57
Education of Father		
University	12	13
Secondary	31	34
Primary	28	31
Illiterate	20	22
Education of Mother		
University	10	11
Secondary	20	22
Primary	31	34
Illiterate	30	33
Type of Family		
Nuclear	19	21
Joint	50	55
Extended	22	24
Source of information		
Mass Media	26	29
Parents	23	25
Friends	4	4
Health Professionals	38	42
Age of Menarche		
Below 12 years	15	16
12-14 years	67	74
Above 14 years	9	10

## Assessment of Level of Knowledge on PID

Level of knowledge of adolescent girls shows that highest percentage (54%) of the adolescent girls had average knowledge regarding PID whereas 30% had good knowledge and only 16% had poor knowledge (Table 2)

**Table 2. Assessment of knowledge of adolescent girls regarding Pelvic inflammatory diseases**

N = 91			
Level of knowledge	Percentage range of scores	No of respondents	Percentage
Poor	<50	15	16
Average	50-70	49	54
Good	≥70	27	30
		91	100

## Area-wise Knowledge of PID

With regards to area wise knowledge on PID, the highest mean percentage (70%) was found in the area of consequences and prevention of pelvic, inflammatory diseases with a mean±SD of 9.09 ±1.98. Area wise mean percentage of knowledge score in the Manifestation and detection of pelvic, inflammatory diseases was (69%) with mean ± SD of 4.13 ± 1.36. The findings revealed that the adolescent girls (70%) had good knowledge regarding Pelvic inflammatory diseases.

## Item wise analysis of the knowledge

Findings revealed that highest percentage (94%) of adolescent girls had knowledge that there are two ovaries in the female reproductive system". (85%) were aware that "females will attain puberty between the ages of 10-14 years. Regarding the concept of PID, Findings revealed that highest (81%) percentage of adolescent girls knew that Pelvic inflammatory diseases affect the uterus, fallopian tube, ovary and pelvic peritoneum. Item wise analysis of correct responses regarding manifestation and detection of Pelvic inflammatory diseases reveals that highest percentage (78%) of girls knew that lower abdominal pain and pelvic pain is the most common symptom of PID. (74%) knew that PID can be detected by ultrasonography. Correct response regarding consequences and prevention of PID revealed that (85%) were know that PID is preventable and good menstrual hygiene prevents most of the reproductive tract infection.

## Association between level of knowledge with selected socio-demographic variables

The study reveals that there was a significant association between level of knowledge and selected demographic variables such as the age of the students and the age of menarche ( $p < 0.05$ ). In the other demographic variables like parents' education, type of family, source of information regarding pelvic inflammatory disease, there is no significant association between them and the level of knowledge. ( $p > 0.05$ )

## DISCUSSION

In the present study, level of knowledge of adolescent girls about pelvic inflammatory disease showed that highest percentage (54%) of the adolescent girls had average knowledge regarding PID whereas 30% had good knowledge and only 16% had poor knowledge.

Similar to this study another study conducted to find out the effectiveness of self-instructional module on pelvic inflammatory disease among adolescent girls showed that 80% had the average knowledge and only 18% had poor knowledge and only 2% had good knowledge (Priya, 2010). The findings of this study were a contradiction with another study which was conducted to find out the effectiveness of structured teaching program on knowledge regarding pelvic inflammatory disease among urban women in India. In pre-test level of knowledge showed 61.7% subjects had poor level of knowledge, 38.3 % subjects had an average level of knowledge and none of them had the good level of knowledge (Nirmala Neupane, 2015). The present study reveals that there was a significant association between level of knowledge and selected demographic variables such as the age of the students and the age of menarche ( $p < 0.05$ ). A similar study was conducted on risk factors for PID in the inner city of Mumbai. Study result revealed that one of the independent risk factors for PID was later age at Menarche. ( $\text{or} = 14$  years.) These findings suggest the feasibility of considering the age at menarche of adolescent girls as a significant factor in defining risk group for PID (Khasna et al., 2005).

## Conclusion

The study concluded that adolescent girls have average knowledge about pelvic inflammatory disease Nurses should have thorough knowledge regarding various aspects of health in order to provide comprehensive care to the society. One of the important aspects of health is reproductive health. Nurses need to have in-depth knowledge regarding reproductive health and issues so that they can motivate the adolescents about the preventive measures. This can be done by integrating sex education including various reproductive problems into all levels of the curriculum in nursing education; the findings of the study would help the nurses to develop an insight into the importance of health education regarding PID. Promotion of health and prevention of diseases is the present day trend in the healthcare industry, which is also greatly emphasized by WHO. Nurses have a major role in improving the health of the people by conducting awareness education programme. National population policy identified adolescent girls as the underserved population of the country.

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