1- Review of Related Literature

Yadav Sangeetha. (2004) reported higher incidence of LBW babies in teenage pregnant mothers 32.5 per cent. Young mothers less than 19 years had 156 times the risk of delivering low birth weight babies.

Singh, M.M; Devi, R; Gupta, S.S. (1999) have suggested that because of differences of male and female socialization there may be different sexual scripts or role prescriptions for sexual behavior.

Peek (1977) conducted research on children ranging between 10-17 years of age to develop a theory of moral development. As the children were studied each individual tended to show a predictable stable pattern of moral behavior. Many of their avert acting changed of course as they grow older, learned new social and intellectual levels and developed through puberty. However, each child appeared to maintain very persistency his deep held feeling and attitude towards life and the modes of reacting.

Sen S. (2004). a study was carried out on body weight, body image and perception of fad diets in adolescent girls. A sample of 203 adolescent girls tested interrelationship among body weight, body image and perceived desirability of fad diets. Subjects were students in home economic classes of four schools in rural and suburban areas near Philadelphia. They treated the desired among of weight loss as an independent variable and divided the 169 students who wanted to lose weight into two groups; one wanting a weight loss of more than 10 per cent of the actual body weight and other wanting less.

Usmiani, S. and Daniluk, J. (1997), girls who matured early tended to be at a social disadvantage in late elementary school but in junior high school and high school they had more prestige than late matures. According to another study early bloomers tended to be better adjusted, more self-assured, relaxed and secure and displayed more adequate.

Virginia (1980) historical records indicate that menarche occurred at 13 years in China and in 12th in Hindus and at 14 years in Greek girls. Roman and Jews set the age at 12 years. The admixture of religions and cultural Practices and beliefs may have influenced these records.
There are no scientific data to confirm or deny whether these are actual age of menarche in early times as they are not very different from the present.

**Imtiyaz Ali (2006)** the adolescent dietary intake showed calorie deficit up to 20 per cent of RDA at 10 to 12 years which reaches up to 25 per cent by 15 years. The deficit is more common among girls. This calorie deficit coupled with other specific nutrient deficiencies like iron, iodine and vitamin A.

**Hulton (1991)** observes that the amount of iron needed to be absorbed to meet the iron requirement in 95 per cent of menstruating teenage girls is 3.21 mg/d. Prevalence of iron deficiency was quite high 40 per cent in a representative sample of 222 girls aged 15-16 years. The finding from different surveys in general boys appear to prefer meat and dairy products while girls prefer artificially sweetened drinks (Health 21).

**Woodhead, M. (2004)** high blood pressure among young children constitutes about 10 per cent of the total number of HTN cases seen in India. According to rough estimates about 2-3 per cent of young children have elevated blood pressure. The reason is because of decreased physical activity leading to obesity and high calorie intake and Sodium foods.

A study was conducted by **Sidhu (2005)** in which 255 adolescent girls 10 to 15 years schedule cast community of Amritsar were the subjects of the study. The study showed 29.43 per cent girls were normal, 70.57 per cent were affected with various grades of anemic condition, 30.57 per cent girls being mildly anemic, 27.17 moderately anemic while 12.83 per cent suffered from severe anemia.

**Chatter (July 2002)**, the longitudinal study provides information about physical activities for 15-17 years adolescents were observed. The mean over all activity time at the age of 17 years with the 5-2 hrs/week activity was found to be lower than 15 years age with 9.1 hrs/ week activity. At both ages boys were scientifically spending more time than females 87 percent girls and 87 boys decreased the number of different activities in which they were involved.

**Dandapani, S.A.(2014)** Health maintenance depends properly on proper eating habits. Attainment of maximum height, strength and physical well being depends on proper nutrition.
Nutritional deficiencies are related to emotional instability, premenstrual tension in females, and lower resistance to infection, reduced stamina and physical retardation.

**Nair, M.K.C. (2013)** In the Health Examination Survey in the United States of youth between 12 and 17 years of age only 4 per cent of whites and 10 per cent of black rated their own health as fair to poor. The large majority of rating ranged from good to excellent. Youth in the lowest income group were more under weight and those in upper income group were overweight.

**Hacker’s (1998)** study shows that sexually active adolescent women are at high risk of accruing the most severe sequelae of PID. Pelvic inflammatory diseases on adolescence year’s risk of PID have been calculated to be in 1 in 8 for 15 years girls, 1 in 10 for the 16 years and 1 in 80 for 24 year old. Because of increased risk it is rational and cost effective to focus primary preventive majors on sexually active adolescence.

Violence due to physical and sexual assault is a major public health and social problem during adolescence. Poverty, inadequate parental discipline and lack of monitoring in early childhood result in behavior problems. Such children may be rejected by their normal peers and often leave the school due to academic failures. Adolescent murders often belong to families prone to commit violent crimes. They become member of criminal gangs and are habitual to drug abuse. Violence shown on TV and movies may lead to small to moderate in aggressive behavior (Hawkins 1987; Health United States 2015).

Periodically a cluster of suicide occurs among teenagers. The suicide is the third leading cause of death among adolescent. Accidents and suicide among adolescents are common. The suicide rate in US teenagers has more than doubled in the last 20 years. Suicidal deaths in Kashmir are also on rise **Dandapani, S.A.(2003)**

Drug and alcohol use is common in adolescent. Because they want to feel accepted by the crowd, desire to act more like adults or feel a need to escape the multiple pressures of schoolwork and social activities. Teenagers are especially vulnerable to alcohol and drug use **Joshi, Kavita, (2004)**.

Law and order’ orientation norms and values of the society become more internalized and sense of personal integrity begins to appear. Individuals are oriented towards duties, defined
responsibility, fixed rules and maintenance of social order; they also attempt to integrate this sense of duty with an internal sense of honour. Right behavior consists of showing respect to authorities and doing ones (Pipher, M.(1994)

Dietary recommendations during adolescence must take into account the social and attitudinal characteristics of the individual as well as the timing and the rate of growth. Greater independence from family supervision and guidance is associated with increased peer conformity and influences of mass media. Rapid changes in body create alterations in body image and individual reactions to those changes. Emotional instability may cause intermittent stress. Physical activity may be higher among individuals who participate in competitive sports but very low in those with sedentary pursuit’s time schedule may lead to the omissions of some meals or to greater frequency of eating may be consumed more often away from home and may commonly be bought in franchised food outlets. Interest of nontraditional eating pattern may increase. Nutrient needs during adolescence are dictated by the rate of growth. Requirement increases at the outset of growth. Spirit reaches their maximum at the time of peak growth and gradually approach adult levels as growth subsides (Desai Murali 2002)

Choudhary et al (2009), opines that socio-economic status is significantly associated with nutritional status of the individual. Assessment of total family income as per 11th Five year plan (2007-2011) classification revealed that the families of the chosen subjects belonged to economically weaker section. Majority (55.0 %) of the girls belonged to the families having an income of less than Rs.3300 followed by 37 per cent of families with an income range of Rs.3301 to 7300 (37%). Nearly 7.7 per cent of the girls belonged to the family having a monthly income of Rs.7301-14500 and only 0.3 per cent of the subjects belonged to the families having an income of more than Rs.14500 per month.

Nutrition inadequacy during crucial period of adolescence may have serious health related consequences during adolescence as well as throughout life (Nayar, 2007).Risk of developing anemia and malnutrition is highest among adolescent girls. It is also recognized as the vulnerable period in the human life cycle for development of anemia. Anemia in adolescent girls contributes to maternal and fetal mortality and morbidity in future. Adolescent girls are considered as the backbone of not only healthy but also progressive family and thus future builders of healthy community. Nutritional status of adolescent girls plays a vital role in attaining healthy

Adolescence a period of transition between childhood and adulthood, occupies a crucial position in the life of human beings. This period is an important physiological phase of life characterized by an exceptionally rapid rate of growth and development both physical and psychological (Cargan Leonard, (2008)). Adolescent’s growth and development is closely linked to the diet they receive during childhood and adolescence. Adequate nutrition of any individual is determined by two factors (Chen 1979). The first is the adequate availability of food in terms of quantity as well as quality which depends on socio-economic status, food practices, cultural traditions and allocation of the food. The second factor is the ability to digest, absorb and utilize the food in the body. According to some researcher cultural factor play a stronger role than socio-economic conditions in determining allocations of food and nutritional adequacy (Sendrowitz 1995). Even where food resources are adequate, the mean caloric intake of individual family members can fall bellow requirements.

Adolescence is the most important period in human development about which poets, writers and historians have made occasional references and have held in high esteem the sacrifices made by the adolescences. It is the transaction period and turning point in the life of the individual (Seifert Kelvin, (2015)

Adolescence (adolescence from adolescere to grow up) is the period from the beginning of puberty until the maturity. The onset of puberty and maturity is a gradual process and variable among individuals. Thus it is not practical to set exact age or chronological limits in defining the adolescent period (Garg 2002).

Chandrakekhar, C.R. (2006) A famous psychoanalyst, who developed very comprehensive theory of human development, defined ‘adolescence as a period of rapid changes physical, physiological, psychological and social. According to Adams (1973) “Adolescence can be defined as a holding period in which education maturing and waiting are the major tasks to be faced.” For this reason it seems scarcely profitable to define adolescence as being tied with age. It is the time when child begins to feel a lesser need for the security of familial supervision and protection at the time when physiological and hormonal development begins to approximate
adult maturity and lastly when psychological maturing moves in the child in the direction of becoming responsible in society adolescence has begun.

In some cultures by initiation rites involve a display of courage and skill qualities required by an adult man. He may be beaten thrown into icy waters, circumcised or scarified. In other societies the initiation rites for boys involve the teaching of ideas considered importance by their culture. Among the Indian of New Mexico for instance it is during rites that boys learn that the sacred Kachinawho appear at seasonal festival, are really marked adult members of the community (Joshi, Kavita, (2004)

3-Research methodology

The proposed research work will be based on adolescent nutrition status in Nasik city. The study will be undertaken on 1500 adolescents aged 10-19 years of age, both boys and girls.

A total of 1500 adolescent will be government school students comprising the Nasik city adolescent population will be chosen by Simple Random Sampling. The specific population selected for sampling in the survey will be students attending schools from middle to higher secondary.

Data collection

The information was collected from primary as well as secondary sources. In primary sources questionnaire cum interview technique was used. In secondary source journals, books and related literature were studied. In designing questionnaire, simple language was used but still in some schools questions had to be explained in local Marathi language to obtain appropriate information from the respondents. Pre-testing was done on 2 per cent of the sample and questionnaire was modified accordingly. The questionnaire consisted of the following sections:

General Information

In this section name, address, age, class, parental education, parental occupation, income of the family was asked. Parental literacy is perhaps the most important factor that determines the prevailing state of ill health and under nutrition /malnutrition. It has been observed that educated mothers with inadequate health care and limited economic facilities could largely succeed in
escaping ill health and malnutrition because they could utilize available meager resources optimally.

**Health status:**

In this section anthropometry, personal, hygiene, clinical checkup, present status of health, past status of health, signs of malnutrition and menstrual history in case of girl respondents were ascertained.

Nutritional Deficiencies:

Regarding nutritional deficiencies diet counseling was provided to the respondents by the researcher where it was needed.

**Socio-Psycho Issues**

In this section questions regarding school behavior, home behavior and other behavior, smoking, use of drugs, physical activities and liking towards TV programs were asked.

**Research design**

The design of the proposed study is Quasi - Experimental research design, with pre-test post-test, non-equivalent comparison group. When it is not possible to divide the respondents into experimental and comparison groups by random assignments in the same sample, selects an existing control group (comparison group) that appears to be similar to experimental group. This research design is commonly called as pre-test posttest non-equivalent comparison group design.