Introduction
CHAPTER 1
INTRODUCTION

Cashew is referred to as "poor man's crop and rich man's food." Cashew kernels are eaten either raw or fried, salted or sweetened with sugar. The cashew kernel compares favourably with other dry fruits like almond, walnut and pistachio in food value. It contains a high percentage of protein (21%), fat (47%), carbohydrates (22%) and vitamins A, B1, B2 and B6 (Menon et al., 1995). Unlike other kinds of tree nuts, the cashew kernel has low alkalinity and contains limited carbohydrates (22%) and 47 percent fat (Padmalochan, 1991).

India is the largest producer and exporter of cashew kernel in the world and is one among the countries such as Mozambique, Tanzania, Brazil, Kenya and China that export processed kernel to world markets. The quality of the kernel produced in India is acknowledged as the best and the credit goes mainly to the dexterity and skill of the cashew processing labour in the country. The country produces around four lakh metric tonnes of raw cashewnuts (Anthonysamy, 1998) and earns, on an average, five hundred and thirty five crore rupees per year as foreign exchange (Indian Cashew Statistics, 1991-96).
In India, cashew grows well in Kerala, Andhra Pradesh, Orissa, Maharashtra, Karnataka, Goa, Tamilnadu, Tripura, Meghalaya and Madhya Pradesh. Kerala records the highest production. Though the plant is found practically in all parts of the State, cashew processing is almost the monopoly of Kollam, the southern district of Kerala.

The cashew plant flowers during December to February, its peak season of flowering being January. The nut is procured and stocked in bulk during March to June for year round processing. Depending on the potential of the factory to stock the nuts, the work may extend year round or be confined to a few months. Because of this the work in the industry may become seasonal.

Over three lakh persons in India receive employment through 1000 factories involved in cashew nut processing (Abdul, 1997). According to the data provided to this investigator by the Cashew Special Office in Kollam, Kerala State has 413 cashew factories. In Kerala alone around 1.5 lakh people work in this industry (Remani, 1992). Around ninety four percent of these workers are women (Prabhu, 1990).

The work involved is mostly manual. Long hours of work in strained posture, inadequate workspace and the constraints of precision and speed
impose different types of stress on these workers. This in turn leads to localized aches and pains. Prolonged neglect of these problems leads to serious disabilities and health problems. Such problems arising out of one's work or work environment are referred to as occupational health problems. They have a direct bearing on the health and well being of the working population and hence their diagnosis and elimination is of significance in improving the quality of worklife of workers.

Significance of the Study

Efforts have been made by researchers (Pasricha and Srinivas, 1991) to project the dermatological problems of cashew workers. Aziz (1991) states that the hands of some of the workers suffered blisters and deformities similar to those of leprosy patients. To prevent abrasion of workers' hands by cashew shell oil, innovative, indigenous techniques like application of coconut oil on their hands before and after work has became an accepted practice, but whether the problem could be totally eliminated by this method is yet to be ascertained.

Roasting of nuts produces acrid fumes. In the opinion of Venketesan and Karunanidhi (1998), as the labourers work in the chemically polluted atmosphere, they become victims of respiratory diseases such as throat
infection, cough, asthma and tuberculosis and the oil exuded during roasting causes allergy and dermatitis.

Complaints of headache, pain at joints, fatigue, tanning of the palm, and, loss of vision are some of the common maladies reported for claiming medical aid from the Employees' State Insurance (E.S.I.) hospitals (Rajam, 1992). Those seeking medical help in private hospitals and clinics, however, were not counted under this category and hence it was felt that gathering primary data from individual workers would help to obtain a holistic picture of their health problems.

Grover (1988) points out that women in cashew factories face a variety of health hazards in day to day life. These get aggravated by other problems like poverty, poor wages, unsatisfactory working conditions and the failure of the employers to implement different welfare measures. Though it is difficult to trace the cause-effect relationship of such environmental factors on the health and well being of the workers, some realistic appraisal of their predicament can be expected of the present study.

Of all the categories of the work of women in the cashew industry, shelling, which is done in the squatting position with a head bent forward posture, seems to pose the highest degree of postural strain on their skeletal
system. The prolonged sitting posture is likely to affect their musculoskeletal harmony. In the opinion of Nag (1996), the reproductive health hazards faced by women due to such postural stress are alarming. The work constraints can adversely affect the women's genital organs, including instances of hypertrophic changes through a syndrome of pelvic congestion. Health effects caused by chronic discomforts include musculoskeletal pain and miscarriages or birth defects.

The report of the Department of Science and Technology (1984) emphasises that abnormal posture and sedentary work can lead to pelvic congestion with hemorrhage and degeneration in endometrium, dysmenorrhea, vulvar varicose veins, prolapse abortion and premature births (Nag, 1996). Such problems have been reported by women engaged in heavy muscular work, viz., iron and steel, non-ferrous metal refining and wood work industries. They are subjected to pelvic deformity, neuroendocrinal and ovulation disorders which may induce sterility, derange the course of pregnancy (abortion, prematurity) and cause complications in delivery or lactation. Though cashew processing work, especially the shelling, causes similar postural strain, no intensive study of this aspect could be traced from the literature.
Gothoskar (1995) maintains that different chemicals, fumes and dust affect women who do diverse types of work—housework, photocopying, electronics, mining, agriculture and building construction. The effects of these on women's health have been disastrous, with severe morbidity and fatalities. Low birth weight is possible in the case of pregnant women engaged in heavy labour in industry and high mortality rate has been observed, mainly due to infectious diseases caused by improper sanitation and hygiene (Lakshmi, 1990).

Most of the health problems that women face are related to their general life situation. These aggravate their problems at the workstation as workers. The maternal mortality rate of India in 1997 was 453 per 1,00,000 live births (All, 1999). In 1998, the mortality rate of women in India was 182 per 1000 live births, infant mortality rate was 72 per 1000 live births, total fertility rate was 3.1, and life expectancy at birth was 63 years (The WHO Report, 1998). India occupies only the 139th position in the Human Development Index (The WHO Report, 1999). To ascend the ladder on par with other developed nations, it is necessary for India to check early mortality, morbidity and disabilities. Towards achieving this goal, any study of the occupational health of the working population is a significant contribution.
To improve the health status of the working population in the cashew industry, it is necessary to undertake a detailed study of their work, activity pattern, duration of work, work postures and work environment, productivity, body discomforts and other health problems. The physical stress experienced by women in this industry and the allied problems have been the focus of this study. Because of the concern for the health of the hard working women in this socio-economically weak group, the investigator selected the present study of the "Occupational Health and Postural Stress of Women in Cashew Industry."

Scope of the Study

The study is designed to obtain a clear perspective of the work and working conditions and work related health problems of women workers in the cashew industry. The study will present ideas for action for minimising the physical stress and health risks of women in this industry so as to increase their quality of worklife and their productivity.