7.1. Discussion on the Results

The results concerning symptoms of fatigue showed that the permanent night shift workers made a significantly greater number of complaints of fatigue than the permanent day shift workers (see Table 6i). This subjective feeling could create an objective disturbance, as reported by Weber et al., (1975). The greater number of complaints of fatigue of the permanent day shift workers might be due to sleep problems which might have affect their physical and mental health. The night shift workers work in the unusual time of the day which affects their biological rhythm. Kleitman (1963) opined that the sleep and wakefulness cycle is a 24-hour cycle which has been socially established to conform with the social functions and community activities. According to him, shift workers' sleep problems are due to deviations from his established rhythmic cycle.

The night shift workers are to sleep during the day time. In the context of our countries, sleep difficulties during the day time arises due to intense heat and poor housing conditions i.e., uncomfortable and over-crowded, located in noisy areas (Dumont, 1982). Bjerner et al., (1944) and Ulich (1957) reported that shift workers complain much more about inadequate housing conditions than do normal day workers. Sleep loss due to interruption was greater for the fixed shift workers than the rotating shift workers (Khaleque and Rahman, 1982).
Due to continuous sleep loss, the permanent night shift workers find themselves in a strainful situation. Feeling of fatigue results from this continuous strain. Thiss-Svensen (1958) found that 60% of shift workers as compared with 11% of day workers, suffered from sleep disturbance. Sleep disturbance occur due to environmental noise, disturbance in biological rhythm and inadequate housing conditions (Smith et al., 1982). Tepas (1982) demonstrated that shift workers have problems in sleeping because they attempt to sleep at chronobiologically odd times of day; this reflects in difficulty in going to sleep and in staying asleep.

The results of RPé-Scale showed that the degree of perceived effort of the permanent night shift workers is significantly greater than that of the permanent day shift workers (see Table- 6ii). Hence the results of the present study provided more or less consistent evidence that the night shift workers spend more effort as compared to the day shift workers. Ulmer et al., (1977) reported that perceived effort is correlated with stress and strain. The present results showed that perceived effort increases at night shift. Thus it seemed that since the night shift workers expend more effort, they also suffer from a deal of strain. A work situation like this, where permanent night shift workers experience a greater degree of effort and strain, cannot be considered favourable for the quality of working life.

Highest number of physical health complaints had been reported to have perceived by the night shift workers (see Table- 6.6) and, as a result, their reports were found with a statistically significant difference (Table- 6iii) — another contradictory conditions to their quality of working life could be
envisioned here. As reported by Wilde (1963) here also these night shift workers were found with comparatively high rate of absenteeism and medical leave applications to overcome symptoms of functional health problems. The highest number of health complaints made by the permanent night shift workers might be a reflection of an adverse effect of sleep deprivation on their health.

The results of mental health questionnaire showed that the permanent night shift workers possessed a poor mental health than that of day shift workers (Table- 6iv). It might be mentioned here that not only the sleep deprivation but the combined effect of a number of factors arising from reduced well-being due to psycho-social problems might be the determining factor for the impairment of health of the night shift workers.

The findings incorporated in Table 6.9 revealed that the greater number of subjects of permanent day shift workers were satisfied with their job in comparison to the permanent night shift workers. But the said job-satisfaction whether spoke of their high job involvement had not been investigated here—remained beyond the perview of the present investigation. According to Kundi et al., (1979), "Job satisfaction and attitude towards shift system seem to play a central role within the mechanism of the formation of health problems in shift work." The above findings provided evidence that the night shift workers as the respondents of present investigation were valid with more feelings of fatigue, work-stress, perceived health problems and interrupted social and cultural aspects of community life they could never report a picture of job-satisfaction in their permanent placement in a night shift schedule.
The results of the Table-6.11 showed that the most of the permanent night shift workers thought that their work schedule disturb family life, curtail leisure activities, create difficulties for meeting friends, disturb sleep, affect health, and disturb regularity of meal time. But permanent day shift workers did not think so. Thus the results seemed to confirm the view expressed by several authors (Banning et al., 1961; Carpentier & Cazamian, 1977). A number of investigators (Uehata et al., 1982; Kogi et al., 1976) reported that the work schedule (night-work and day-rest) of the permanent night shift workers creates various psycho-social problems. Several authors (Bunnage, 1979; Wedderburn, 1981; Rutenfranz, 1981) stressed that family and social life effects of shift work may cause health problems.

The above results (Table 6.11) also showed that most of the permanent night shift workers do not consider that their work schedule affects their social life. Since a lot of social activities take place in the evening, permanent night shift workers did not find any difficulty to participate in the social activities. It might be due to the fact that night shift starts from 22.00 hours. This late start time allowed the worker to get a free evening, with regard to this finding, we could refer to the study by Sergean (1971), which provided evidence that a late start of the night shift (e.g., 23.00 or 24.00 hours) allows it to be preceded by a "relatively clear evening."

The results in the Table- 6.12 showed that shift workers consider elimination of night shift as the best remedial measures. They thought that night shift creates most of the problems. Thus our results supported the findings of
several other studies which showed that night work has the most adverse consequences on health and well-being (Haider et al., 1979; Koller et al., 1978).

The results of the present study also confirmed the findings given by Dumont (1982). He investigated that the workers in developing countries evaluate on the whole negatively the effects of shift work on their health, family life and social activity. He added that it appears that certain aspects of the context of developing countries tend to make shift work more arduous than in industrialized countries. One example is the greater difficulty of sleeping during the day for workers coming off the night shift, given the intense heat during the day time and the poor housing conditions. There had not been any reason to deny that night shift workers of the locality concerned and the sample studied in this investigation remained as the victims of those adverse effects because seldom they got opportunity to enjoy a special comfort and provision in order to overcome certain necessary strain of work, even.

7.2. Concluding Comments

In the light of the answers available against six research questions it could be said that permanent night shift workers studied here reported comparatively more symptoms of felt-fatigue, work-stress in terms of perceived effort, health complaints, interruptions in performing normal social and cultural obligations of life, and achieved dissatisfaction regarding the nature of duty hours of their placement in the job. But their responses did not reveal anywhere the presence of any other risk-factor in the night shift. On the contrary,
most of them reported the possibility of their free-evening movement as because of late evening hour reporting.

2. Admitting those adverse effects of nightshift work conditions and no-adverse comments on uncomfortable work-conditions, it can be said the workers concerned highlighted the need for elimination of night shift due to its incompatibility in the local conditions of community life.

3. In accordance with the findings and observations made here it can be thought of suggesting the authorities of the Chittaranjan Cotton Mills to think of a policy to close "nightshift" and implement two rotating shift schedules for the placement of workers who are now working permanently in the two daytime shifts, simultaneously. By closing the nightshift the permanent nightshift workers should be equally distributed amongst the two rotating shift. And for such additional absorption of manpower may involve some additional capital expenditure for plant extension - which the authorities may be urged to do keeping in view of the modern concept of labour welfare and its ideology. This capital investment would be worthy as this will absorb the prevalent vapour of unhappiness in permanent nightshift workers, otherwise assumed to be job involved. Except the gradual degeneration of total health of an individual permanent nightshift worker there lies no other risk factor involved in it (Rutenfranz, 1967).

4. In fine, it may be said that by eliminating permanent night shift schedule for work, absorbing the permanent night shift workers in the existing two dayshifts, and by introducing rotating shift system in between the said two
dayshifts there will be slight increase of overhead cost, no reduction of employment opportunity, minor changes in the capital investment policy, while there will be grand changes in the labour welfare policy of the Mills concerned in consonance with the modern concept labour welfare ideology in a democratic country.

7.3. Observations

Considering the sample size and population characteristics the conclusive remarks should not be made generalised. It is better to keep the remarks confined for the population of workers in the Mills concerned.

Considering the limitations of the investigator to carry on any such investigation, single-handed, the merit of the findings should not be ignored rather encouragement be made to invite other interested researchers to form a team and probe in the matter in the form of a research project involving larger size of population constituted highly stratified sample from different types of industry - where shiftwork system is in vogue.

The tests included in the present investigation have been proved to bear sufficient merits. Attempts may be made by the future investigators to constitute a test-battery by utilising Factor analysis technique to probe in this area of investigation.

Finally, the investigator foundly hope to expect all valuable comments from the evaluators of this dissertation which can be utilised by her and other investigators in future by overcoming the demerits or limitations lying here.