

‘A DESCRIPTIVE STUDY TO ASSESS THE PHYSICAL AND PSYCHOLOGICAL HEALTH PROBLEMS AMONG WORKERS OF A SELECTED FACTORY IN LUDHIANA CITY, PUNJAB’

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ABSTRACT

Background of the study- *The factors which influence health lie both within the individual and externally in society where he or she lives.*

Objective- *To assess physical and psychological health problems among workers in selected factory of Ludhiana city, Punjab*

Methodology- *A descriptive design was used to assess physical and psychological health problems with Purposive sampling technique among 200 factory workers. Structured check list was used to assess the physical health problems and Standardized scales to assess psychological health problems. Analysis was done by using descriptive and inferential statistics.*

Results- *The study results revealed that factory workers had multiple physical health problems. Maximum factory workers had suffered from problems of musculoskeletal system, followed by central nervous system, gastrointestinal system and respiratory system. As per psychological health problems a very few subjects were having mild levels of anxiety and depression.*

Keywords - *Physical health problems, psychological health problems, factory workers.*

“A man too busy to take care of his health is like a mechanic too busy to take care of his tools”

Spanish proverb

INTRODUCTION

Good health is a fundamental right of every human being. Internal and external growth of a person is not possible without good health. It is essential to lead both a quality and successful life. According to WHO (1948), “Health is a state of complete physical, mental, social wellbeing and not merely the absence of disease or infirmity”.¹

Health is essential for every individual in both aspects i.e. physical and psychological. Physical health is the overall condition of a living organism at a given time, the soundness of the body, freedom from diseases or abnormality and the condition of optimal wellbeing.³

Psychological health is about doing things that gives a sense of enjoyment and achievement, holding helpful and balanced attitudes toward life, and building satisfying relationships.⁴

Emerging health problems among workers are to be tackled along with the existing traditional public health problems. Globalization and rapid industrial growth in the last few years have further complicated the occupational health related issues. Along with the increase in population, there is an increase of about 28% male workers and 45% female workers in all occupations. These workers are either local or migrants, working in different parts of the different factories and other occupations.⁵

Migration is the residential or physical movement across administrative borders or within countries from one area to another. The migration occurs due to many reasons either because of any natural calamity or due to unemployment. Many people are migrating from their residential states to other states where they can get employment.⁶

By the year 2001 it was estimated that out of 1.02 billion people, 307 million (30%) were reported as migrants by place of birth in our country.⁶ The migrant population in Punjab is close to 30 lakh. Nearly 10 lakh migrants are living in industrial city, Ludhiana. Many of these migrants are mainly working in different factories of Ludhiana city.⁷

Ludhiana is among the big industrial cities in India and the industrial capital of Punjab. The main industries here are hosiery, bicycle, tyre, auto-parts, engineering etc. Most of the workers of Ludhiana are migrant workers coming from different states like Uttar Pradesh and Bihar.⁸

Migrants are often considered as 2nd class citizen, and the jobs assigned to them are mostly dirty, dangerous and difficult one. The World Migration Report (2005) of the International Organization for Migration (IOM) shows that the concerns about migration are mainly loss of jobs, lower wages, increased welfare costs and the belief that migration is spiraling out of control etc. The WHO and UNESCO both advocate human rights-based approach for migration management.⁹

Towns and villages of Punjab are the destination of large-scale spatial mobility of unskilled populations from rural areas of backward states especially Uttar Pradesh and Bihar. These migrants reach Punjab from all over the country individually as well as in groups with or without the help of contractors/agents. According to newspaper (Tribune), the population of migrant workers in Punjab has reached 2.5 million with Ludhiana being its focal point.⁹

Punjab's entire agriculture, paddy, plantation and allied fields such as poultry and dairy are almost fully dependent on migrant workers. The same is reflected in the case of small and medium scale industries. The steel, iron, sugar, wool, knitwear etc. are also heavily dependent on migrant workers.⁹

Kristiansen et al. (2007) stated that the effect would fade out over time because migrants are exposed to many health risk factors at destination.¹³ In 2010 World Health Organization (WHO) has identified that migrants are more susceptible and vulnerable to ill-health effects and have more limited access to health care.¹⁴

A factory or a manufacturing plant is an industrial site, usually consisting of buildings and machinery or more commonly a complex having several buildings where workers manufacture goods or operate machines processing one product into another. The Indian factories have an awesome existence in Indian economy. It is the second largest employment after agriculture in India.¹⁶

Factory workers constitute only a segment of the general population, and the factors that influence the health of population, also apply equally to industrial workers i.e. housing, water, sewage and waste disposal, nutrition and education. Lots of workers are earning from these factories and are also at greater risk of developing health problems such as silicosis, musculoskeletal problems, pneumoconiosis, chronic obstructive lung disease, asbestosis, byssinosis, pesticide poisoning and noise induced hearing loss.¹⁷

As per the amended factories act provision of health centre is mandatory in factories carrying out different working process. Many progressive factories have established preventive and promotive health services to look after the health needs of factory workers.

Manufacturers of different factories compete on basis of their price and quality of the products for which they need workers. This leads to situation of 'race to bottom' as employers try to reduce their cost of production and at same time get maximum out of workers. This competition leads to intensification of work, which has impact on physical and psychological health of both local and migrant workers of the factories.

NEED FOR STUDY

The International Labour Organisation (ILO) estimates that more than 2 million workers die each year from work related accidents and diseases. The ILO (2008) has estimated that the workers suffer 270 million accidents every year. Various health problems affect 160 million people every year. The important morbidities noted are musculoskeletal disorders 22.1%, refractive errors 14.4%, skin disorders 9.9% and respiratory illness 6.1%.¹⁸

The current burden of occupational diseases in India is estimated to be at around 18 million cases. In India, the major occupational morbidities are silicosis, musculoskeletal injuries, pneumoconiosis, chronic obstructive lung diseases, asbestosis, byssinosis, and noise-induced hearing loss.¹⁹

Census of 2007-08 shows that there were 672.6 thousand workers in urban areas in Ludhiana district of which 338.4 thousand were local workers. Interstate and intrastate migrants were 28.9 and 304.0 thousand respectively.²⁰

A survey conducted among migrant worker's occupation and healthcare-seeking preferences for TB-suspicious symptoms and other health problems in Songkhla province, southern Thailand, finds that the migrant workers have suffered more with tuberculosis, gynaecological problems, and G.I problems for which they seek the medical treatment.²¹

National Institute of Occupational Health reports that the prevalence of some respiratory diseases were as follows: Byssinosis- Textile Mills (Blow Room) 30 %, Textile Mills (Card Room) 38%, Jute Mills 48.8%; Asbestosis- Asbestos mine & mill 11%, Asbestos Textile workers 9%, Asbestos cement 3–5%.²³ Occupational asthma is more common among young adults in age group of 40±8.2 years, with a predominance of women (67.7%). The textile sector dominated with a share of 74.9% of occupational asthma prevalence.²⁴

Migrants are looked as a problems and a threat for locals. At the same time, various research reports point to the fact that today Punjab need outside workers for various reasons. Therefore more reasonable thing is to understand the migrants also – their compulsions, expectations and to work out strategy for “Symbiotic Relation” between the locals and migrants.⁸

During community posting, the investigator observed that a large section of people are employed in various factories and their health is greatly affected. With this background, the present study was undertaken to assess the physical and psychological health problems among workers in a selected factory.

Research problem

A descriptive study to assess the physical and psychological health problems among workers in selected factory of Ludhiana City, Punjab

Objectives

1. To assess physical health problems among workers in selected factory of Ludhiana city, Punjab.
2. To assess psychological health problems among workers in selected factory of Ludhiana city, Punjab.
3. To provide health education and IEC pamphlets to workers regarding promotion of health.

Operational definition

- **Factory workers:** refers to personals working in the factory
- **Physical health problems:** refers to any physiological disturbance in the body which has an impact on activities of daily living e.g. headache, backache, irritation in eyes, sneezing, coughing, skin problems.
- **Psychological health problems:** It is defined in terms of depression and anxiety among workers.
 - i. **Anxiety:** it is defined as fearful concern about situation or person as assessed by Zung self-rating anxiety scale.
 - ii. **Depression:** it is defined as sadness of mood decreased motor activity and poverty of ideas as assessed by Beck's depression Inventory scale.

Assumptions

The study assumes that:

- Factory workers may suffer from more health problems related to musculoskeletal system, central nervous system, respiratory system and gastrointestinal system. e.g. back pain, headache, coughing, sneezing difficulty in breathing, indigestion, constipation,

Delimitation

The study will be delimited to:

- Factory workers in a selected factory of Ludhiana City, Punjab.

Conceptual Framework

The conceptual framework provides a certain frame of reference for clinical practice, research and education. The utility of a conceptual model comes from the organization. It provides for thinking, for observation and for interpreting what is seen. As the name implies, it deals with abstractions (concepts) that are assembled by virtue of their relevance to a common theme. It also gives direction for relevant questions on the phenomenon and point out solutions to practical problems. A conceptual model of the framework is defined as a set of concepts and proposition that integrate them into meaningful configuration. (Pilot and Hungler 2004). Conceptual framework of the present study is based on the concepts of “Levels of Prevention” given by Leavell and Clark (1975).

The terms primary, secondary and tertiary prevention were first documented in the late 1940's by Hugh Leavell and E. Guernsey from the Harvard and Columbia university schools of Public Health, respectively. Leavell and Clark described the principles of prevention within the context of the public Health triad of host, agent and environment commonly referred to as the epidemiologic triangle model of Causation of disease.

Primary Prevention

Primary prevention seeks to prevent a disease or condition at a pre-pathologic state to stop something from ever happening. Primary prevention strategies emphasize on general health promotion, risk factor reduction, and other health protective measures. These strategies include:

- Health education and health promotion programmes designed to foster healthier lifestyles
- Environmental health programs designed to improve environmental quality.

Secondary Prevention

Secondary prevention focuses on individuals who have experienced health problems or illness and who are at risk of developing complication or worsening conditions. Activities are directed at diagnosis and prompt intervention, thereby reducing severity and enabling the client to return to normal. Its purpose is to

- Cure disease
- Slow its progression
- Reduce the impact on individuals or communities.

Tertiary Prevention

Tertiary prevention occurs when a defect or disability is permanent and irreversible. It involves minimizing the effects of long-term disease or disability by interventions direct at preventing complications and deteriorations. Tertiary prevention strategies are both therapeutic and rehabilitative measures.

In the present study, the levels of prevention describe as:

The research was carried out among local and migrant factory workers of a selected factory in Ludhiana city, Punjab.

After the assessment of physical and psychological health problems, some of the local and migrant factory workers were found to be suffering with some of the physical and psychological health problems while some of the local and migrant factory workers were not suffering from that problem, some preventive measures were taken for the local and migrant factory workers in the form of health educational pamphlets.

Primary prevention

Primary prevention was provided to local and migrant factory workers who were not suffering from physical and psychological health problems by giving health education regarding promotion of health.

Secondary prevention

In secondary prevention screening of the physical and psychological health problems among local and migrant factory workers was done.

Tertiary prevention

Tertiary prevention was implemented by giving health education with the help of pamphlets, charts and scrap book regarding promotion of health to prevent future occurrence of physical and psychological health problems.

The outcome of health education will be maintenance of physical and psychological health among local and migrant factory workers but it was not studied.

REVIEW OF LITERATURE

Review of literature is an important step in development of research project. It helps the investigator to develop greater insight into the problem and gain information on what has been done before. It provides basis for future investigations, light on feasibility of study, constraints of data collection and relates the findings from one day to another with the hope to establish a comprehensive body of scientific in professional discipline, from valid and pertinent may be developed.

In present study literature review is divided into 2 categories' as follows:

- ❖ Studies related to physical health problems among factory workers.
- ❖ Studies related to psychological health problems among factory workers.

STUDIES RELATED TO PHYSICAL HEALTH PROBLEMS

Paudyal .P Macfarlane J.G, Sample S, Ayres J.G (2013), conducted a cross sectional study regarding low back pain among 938 textile workers showed that the prevalence of low back pain was reported to be 44%, 42%, 27% and 23% from four different sectors of factory i.e. garment, weaving, carpet and recycling respectively. It also showed that the prevalence of low back pain was more common in female (45%) than male workers (28%).²⁶

Sigh. B. Madhu. Fodtedar Ranjana (2012), conducted a comparative study to assess occupational morbidities and their association with nutrition and environmental factors among 1240 workers textile and non-textile workers of desert areas of Rajasthan selected by random sampling from caustsizing and bleaching, dying; printing and finishing sections. The results revealed that sickness at the time of survey was higher among the textile workers than non-textile workers i.e. 52.9% and 46.3% respectively. The main morbidities reported at the time of survey among textile workers were body ache, back ache and headache among 19.4% workers; respiratory (12%) and fever (7.7%).²⁷

Wenahou Yu, Zhi Min Li, X Saorong Wang, Hui Lin, Trevor Sun (2012), conducted a study on work related injuries and musculoskeletal disorders among factory workers in China reported that 8.3% workers had acute traumatic injuries in previous 12 months and about 50% frontline workers reported musculoskeletal disorders. It was also found that injury risk was reduced for female workers but risk of injury was more among workers who worked for 55 hours per week.²⁸

Ismaila Adamu Saidu(2011) conducted a study to assess the prevalence of musculoskeletal injuries and other related occupational hazards among factory workers in Kano Metropolis, Nigeria showed that the low back complaints had the highest prevalence (360, 85.71%), followed by upper limb injuries (40.71%), shoulder complaints (37.14%) and hip injuries (8.10%). About 41% of the respondents body ache/discomfort in the low back region was the most common injury sustained among the subjects surveyed.²⁹

Silva De Vijitha, Lipscomb Hester, Ostbye Truls (2011) conducted a study regarding occupational health problems among randomly selected 1058 female workers of garment factory in Sri Lanka, working as sewing machine operators; quality controllers, ironers and workers in packing and cutting departments. The results founds that 15.6%, 2.3%, 5.3%, 0.5% workers were suffering from musculoskeletal problems, migraine, tension headache were emotional abuse respectively.³⁰

Thomas Sherly (2011), conducted a study to assess health problems among 60 women workers of a textile units working in different sections such as weaving, spinning, tailoring and packing revealed that 31.65% women workers suffered with headache, 9.49% had complaints of fever, 12.03% suffered from backache, 5.90% had stomach pain and 1.9% had problems blood pressure.³¹

A cross sectional study conducted by **Yerpude N. Pravin, Jogdand S. Keerti, (2010)**, regarding morbidity profile of 474 workers randomly selected cotton mill workers showed that 18.35%, 28.90%, 7.80%, 6.54%, 7.80%, 4.85%, 8.64% workers were suffering from the eosinophilia, iron deficiency anaemia, byssinosis grade1, dental stains, refractive errors, chronic bronchitis and upper respiratory tract infections respectively.³²

Saha T.K, Dasgupta A, Butt A (2010), revealed in a cross sectional study conducted among workers of a small scale garment industry, that 69.64% had musculoskeletal problems, 5.36% had menstrual problems, and 37.5% had malnutrition.³³

STUDIES RELATED TO PSYCHOLOGICAL HEALTH PROBLEMS

Tennant Christopher (2001) conducted a study on work related stress and depressive disorders among 900 blue and white collar industrial workers over 5-10 years. It predicts that, the mental stress symptoms, poor perceived health and absenteeism were more in white collar workers and level of irritability, somatic complaints, anxiety and depression was high among 2368 blue collar female.⁴¹

Anthony Ping Kam So(2009) conducted a comparative study to identify the relationship between stress, work hours and depressive symptoms among 911 randomly selected migrant factory workers in china. The results showed that the 48.7%, 31.7,16.2%, 3.3% subjects reported mild depressive mood, moderate symptoms of depression, signs of severe depressive symptomatology and an extreme form of depressive symptoms respectively in the past two weeks.⁴²

MATERIALS AND METHODS:

Research design

A descriptive design was used to assess the physical and psychological health problems among workers in a selected factory of Ludhiana city, Punjab.

Demographic variables: Age, gender, education, marital status, religion, dietary habits, place of origin, living status, type of family, number of children, care taker of children any history of medical illness ,any history of surgery, tobacco consumption, alcohol intake, socioeconomic status, section of factory, job experience, working hours per day, working hours per week, break time, working posture, repetition of movements

Research variable:

Physical and psychological health problems among workers in a selected factory

Research setting:

The study was conducted in Oswal woolen mill of Ludhiana city, Punjab.

Target population:

The target population was the workers of a selected factory.

Sample size and Sampling technique

Purposive sampling technique was used to select the workers. The sample size was 200 workers.

Inclusion and Exclusion criteria

- *Inclusion criteria:* Both male and female local and migrant factory workers were included in the study.
- *Exclusion criteria:*

- Workers on leave on the day of data collection
- The workers who will not be interested to participate.

Selection and development of tools

The most important and indispensable part of conducting research study is to collect the relevant data to answer the queries in research problem statement. Tool was developed on the basis of:

- An extensive review of literature related to physical and psychological health problems among workers in a selected factory of Ludhiana City, Punjab
- Consultation with the experts from the all fields of Nursing and Community Medicine of DMCH.

Description of research tool

Tool consists of three parts:-

Part-A: - Socio-demographic profile.

Part-B: - Checklist to assess physical health problems.

Part-C:-Standardized scales were used to assess psychological health problems

- ZUNG self-rating scale to assess Anxiety.
- Beck's depression inventory to assess Depression.

Part A:

Section (a) Socio-demographic profile: Age, gender, education, marital status, religion, dietary habits, place of origin, living status, type of family, number of children, care taker of children any history of medical illness ,any history of surgery, tobacco consumption, alcohol intake, socioeconomic status,

Section (b) Job profile for workers: Section of factory, job experience, working hours per day, and working hours per week, break time, working posture, and repetition of movements.

Part B:

Checklist to assess physical health problems: Central nervous system, Respiratory system, Ophthalmic system ENT Cardiovascular system Musculoskeletal system Gastrointestinal system Urinary system Reproductive system. Integumentary system, Endocrine system and Oncology.

Part C: Tool to assess psychological health problems:

This part consists of:

- **Zung self-rating anxiety scale:** This scale assesses the level of anxiety of subjects experiencing anxiety related symptoms. Scale contains 20 questions and each question was scored on a scale of 1-4.
- **Beck's depression inventory:** This scale assesses the level of depression among the subjects experiencing depressive symptoms.

Validity of research tool

- Validity of tool for physical health problems was determined by opinions and suggestions of experts of different specialties in field of nursing.
- Validity of tool for psychological health problems i.e. ZUNG self-rating scale to assess Anxiety and Beck's depression inventory to assess depression is predetermined as these are the standardized tools.

Reliability of research tool

Standardized tool was used, the reliability of the tool was pre-determined.

Pilot study

Pilot study was conducted on 3rd week of December 2014 to ensure the feasibility of the tool and to incorporate changes if required. The pilot study was done by taking 200 workers from Oswal woolen mill, Ludhiana city, Punjab. The average time taken for each subject was about 25-30 minutes. Pilot study revealed that it was feasible to conduct the main study. The investigator did not face any difficulty for carrying out the pilot study.

Data collection procedure

The data collection for the study was carried out from 1st January to 30th January 2015. Permission from the head of H.R. department of the Oswal woolen mills of Ludhiana city Punjab was taken. There were about 2500 workers in the factory. Self-introduction was given to respondents and the purpose of gathering information was also explained to them. They were assured that their responses would be kept confidential and used for research purpose only.

Ethical considerations

The permission to conduct the present study was obtained from the ethical committee of DMCH Ludhiana city Punjab. A written consent from the head of human resource department of the factory was taken and an informed written consent from the subjects was also taken. Anonymity and confidentiality of subjects was maintained while interviewing.

Data analysis and interpretations

Analysis of data collection was done in accordance with the objectives of the study. Data thus obtained has been analysed in terms of descriptive and inferential statistics. In descriptive analysis mean, percentage and standard deviation of variables were computed. In inferential statistics ANOVA test and t-test (unpaired) was applied.

Plan for writing references

References were given in the format recommended by research committee of DMC& Hospital, Ludhiana and Baba Farid University of Health Sciences, Faridkot.

ANALYSIS AND INTERPRETATION OF DATA

Analysis and interpretation is presented into two sections:

Section A: Sample characteristics

Section B: Analysis as per objectives

Section A: Sample Characteristics

Table1: Frequency and percentage distribution of factory workers as per their socio-demographic profile

N=200

Socio-demographic variables	Total F(%)
Age (in years)	
15-30	130 (65.0)
31-45	060 (30.0)
45-60	010 (05.0)
Gender	
Male	083(41.5)
Female	117(58.0)
Education[#]	
Illiterate	012 (6.0)
Elementary	072 (36.2)
Secondary	108 (54.3)
Graduate or above	008 (4.0)
Religion[#]	
Hindu	154 (77.0)
Muslim	004 (2.0)
Sikh	029 (14.5)
Christian	013 (6.5)
Dietary pattern[#]	
Vegetarian	074 (37.0)
Non vegetarian	113 (56.5)
Ova-vegetarian	013 (6.5)
Living status	
Alone	070 (35.0)
With family	130 (65.0)
Marital status[#]	
Unmarried	105 (52.5)
Married	093 (46.5)
Widow/ widower	002 (1.0)

Table 2: Frequency and percentage distribution of physical health problems as per their socio-demographic profile

N=200

Socio-demographic variables	Total f (%)
Number of children (n= 95 workers)	
0	05 (5.2)
1	26 (27.3)
2	44 (46.3)
3 or above	20 (21.0)
Care taker of children in their absence[#] (n=90)	
No care taker	25 (27.7)
Husband	01 (01.1)
Wife	46 (51.1)
In- laws	15 (16.6)
Hostel	03 (3.33)
Any past medical history	
No	185 (92.0)
Yes	015 (07.5)
Arthritis	003 (20.0)
Tuberculosis	002 (13.3)
Typhoid	009 (60.0)
Cholecystitis	001 (06.7)
Any past surgical history	
No	178 (89)
Yes	022 (10.5)
Stiches on hand and head	02 (9.1)
Hysterectomy	02 (9.1)
Laparotomy	02 (9.1)
Tubectomy	09 (40.9)
Hernia	03 (13.63)
Caesarean section	04 (18.1)

Table 3: Frequency distribution of local and migrant factory workers as per their socio-demographic profile

N=200

Socio-demographic variables	Total f (%)
Tobacco consumption	
No	168 (84.0)
Yes	032 (16.0)
Alcohol intake	
No	185 (92.5)
Yes	015(7.5)
Socioeconomic status(SES)#	
Lower middle	028(14.0)
Upper lower	129(64.5)
Lower	043(21.5)

#SES as per Kuppuswamy's scale of socioeconomic status 2014

Table 4: Frequency distribution of factory workers as per their job profiles

N=200

Job profile	Total F(%)
Section of factory	
Weaving	076(38)
Dyeing	007(3.5)
Spinning	117(58.5)
Job experience (In years)	
<5	150(75)
5-10	29(14.5)
>10	21(10.5)
Working hours per day	
8-12	200(100)
Working hours per week	
48-72	200(100)
Break time provided	
Yes	200(100)
Working Posture	
Sitting	001(0.50)
Standing	194(97.0)
Both	005(2.50)

Table 5: Frequency distribution of physical health problems among local and migrant factory workers

N=200

Physical Health Problems	f (%)
Central nervous system	n=185
a) Headache	134
b) Dizziness	43
c) Decreased sensation	08
Musculoskeletal system	n=283
a) Joint pain	29
b) Neck pain	12
c) Backache	57
d) Decreased hand grip strength	05
e) Pain in shoulder	13
f) Pain in wrist	24
f) Fatigue	140
g) Numbness	03
Respiratory system	n=153
a) DryCough	101
b) Cough with thick sputum(expectoration)	40
c) Difficulty in breathing	05
d) Chest pain on the sides of chest	02
e) Chest tightness	02
f) Wheezing	03
Gastrointestinal system	n=160
a) Ulcers in mouth	12
b) Discoloration of teeth	38
c) Dental caries	38
f) Nausea	13
g) Vomiting	05
h) Acidity/Burning sensation in the GI tract or heart burn	22
i) Constipation	24
j) Loose stools	02
k) Piles	06

*frequencies increased due to multiple responses

Table 6: Frequency distribution of physical health problems among local and migrant factory workers

N=200

Physical Health Problems	f (%)
Integumentary system	n=58
a) Pimples	14
b) Redness	13
c) Wheals	06
d) Skin allergies	19
e) Itching	06
Ophthalmic system	n=41
a) Irritation in eyes	07
b) Watery discharge/Pus discharge	08
c) Eye strain	04
d) Near sightedness	07
e) Far sightedness	15
ENT	n=31
a) Persistent throat infections	03
b) Tingling sensation	01
c) Sensory deafness	50
d) Watery/ running nose	09
e) Sneezing	13
Reproductive system	n=28
a) Watery and foul smelling discharge/	22
b) Pain in lower abdomen	05
c) Excessive bleeding	01
Urinary system	n=29
a) Burning micturition	16
b) Difficulty in urination	03
c) Pain in lower abdomen	05
d) Itching	02
g) Frequent urination	03
Cardiovascular system	n=13
d) Palpitations	01
e) Hypertension	06
f) Hypotension	06

*frequencies increased due to multiple responses

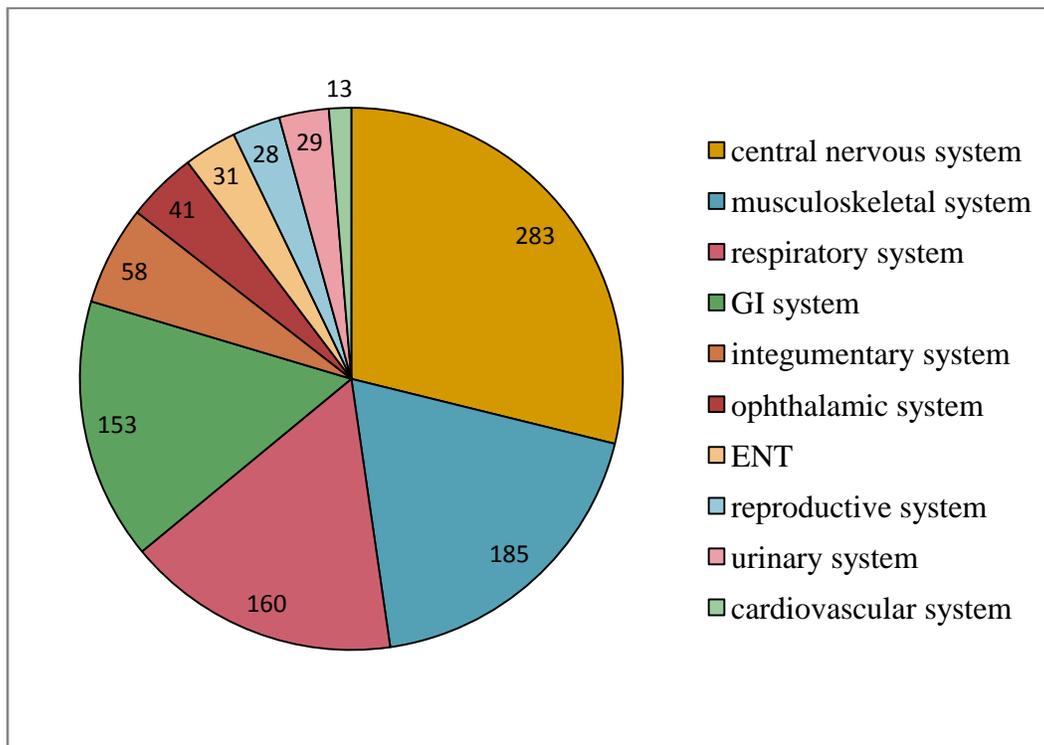


Figure 1: frequency distribution of physical health problems among factory workers.

Table 7: Frequency distribution of factory workers as per level of anxiety

N=200

ANXIETY SCORE	TOTAL f(%)
No Anxiety (20 – 49)	195(97.5)
Mild Anxiety (50 – 59)	005(2.5)

Minimum Anxiety Score=20

Maximum Anxiety Score=80

Table 8: Frequency distribution of factory workers as per level of depression

N=200

DEPRESSION	TOTAL f (%)
No Depression (1-10)	188 (94.0)
Mild Depression (11-16)	009 (4.5)
Moderate Depression (17-20)	003 (1.5)

Minimum depression Score = 00

Maximum depression Score= 63

DISCUSSION

A descriptive study was conducted to assess the physical and psychological health problems among 200 factory workers in selected factory of Ludhiana City, Punjab. Structured checklist was used to assess physical health problems and standardized tool i.e. ZUNG self-rating scale to assess Anxiety and Beck's depression inventory to assess Depression were used. Scoring of the tool was done as per the standardized format. Data analysis was done using SPSS, SSP and manual calculations.

The objective of the study was to assess physical and psychological health problems among workers in selected factory of Ludhiana city, Punjab. The findings of present study revealed that majority of factory workers were suffering from central nervous system problems, more than half were having problems of respiratory problems and three fourth were suffering from musculoskeletal problems.

The findings of the present study related to physical health problems were in concordance with was a comparative study research study conducted by **Sigh. B. Madhu. Fodtedar Ranjana), (2012)**, to assess occupational morbidities and their association with nutrition and environmental factors among textile workers of desert areas of Rajasthan among 1240 workers selected by random sampling from caustsizing and bleaching, dying; printing and finishing sections(comparative group). The results revealed that sickness at the time of survey was higher among the textile workers than comparative group i.e. 52.9% and 46.3% respectively. The main morbidities reported at time of survey among textile workers were body ache, back ache and headache among 19.4% workers; respiratory(12%) and fever(7.7%).²⁷

As per the psychological health problems are concerned, the present study revealed that very few subjects had mild levels of anxiety and depression.

The findings of present study were almost similar to a comparative **research study conducted by Anthony Ping Kam So (2009)**, to identify the relationship between stress, work hours and depressive symptoms among 911 randomly selected migrant factory workers in china. The results showed that the subjects reported scores reflecting a mild depressive mood, moderate symptoms of depression, signs of severe depressive symptomatology and an extreme form of depressive symptoms were found to be (48.7%), 289(31.7),(16.2%),(3.3%) respectively. ⁴²

SUMMERIZATION, CONCLUSION & RECOMMENDATIONS

SUMMARY

The study was conducted to assess physical and psychological health problems among workers in selected factory of Ludhiana city Punjab.

The objectives of the study were

1. To assess physical and psychological health problems among workers in selected factory of Ludhiana city, Punjab.
2. To assess psychological health problems among workers in selected factory of Ludhiana city, Punjab.
3. To provide health education and IEC pamphlets to workers regarding promotion of health.

A descriptive design was used to assess the physical and psychological health problems among workers in selected factory of Ludhiana city, Punjab. 200 workers were selected by purposive sampling. Structured checklist to assess the physical health problems and standardised scale to assess psychological health problems were used.

CONCLUSION

The present study was conducted among 200 factory workers. The findings of the present study concluded that:

- Majority of factory workers suffered with musculoskeletal system problems followed by central nervous system, gastrointestinal system, respiratory system, integumentary system, ophthalmic system, ENT, reproductive system, urinary system and cardiovascular system related problems.
- As per the psychological health problems, a very few of factory workers had mild anxiety and depression.

IMPLICATIONS

The findings of the study have implications in four major areas, which are discussed here

- Nursing practice
- Nursing education
- Nursing administration
- Nursing research

Nursing practice

- The findings of the study revealed that the physical and psychological health problems of factory workers need to be assessed regularly by the nurses for improving quality of life among factory workers.
- Nursing staff and nursing students should give suggestions to authority members regarding facilities to be provided in factory according to type of health problems.
- Nursing staff and nursing students should give health education to factory workers regarding physical and mental health.
- Nursing staff and nursing students learn accurate assessment of anxiety and depression by using ZUNG self-rating scale to assess Anxiety and Beck's Depression inventory to assess depression.

Nursing education

- The community health nursing, medical surgical nursing curriculum for all levels of nursing students should go for more emphasis on promotion of health of factory workers.
- To understand the importance of magnitude of problem, make available literature in library for the student's reference related to physical and psychological health problems.
- Nursing students should be posted in factory to know about occupational hazards and to assess problems among factory workers.

Nursing administration

- Nursing administration at hospital and community level should evaluate the effectiveness of health programme related to factory workers.
- Administration support should be provided to conduct in-service educational programme for the nursing personnel related to health problems among factory workers.

- Nursing administration should organize camps for assessment of physical and psychological health.

Nursing research

- There is need to encourage and conduct further research studies in our country on physical and psychological health problems among factory workers.
- As evidence from the review of literature more researches needs to be conducted among factory workers.

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