

**A QUASI EXPERIMENTAL STUDY TO EVALUATE THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE AND ATTITUDE OF SANITARY WORKERS REGARDING PREVENTION OF OCCUPATIONAL HEALTH HAZARDS IN SELECTED AREAS AT MADURAI .**



**A DISSERTATION SUBMITTED TO  
THE TAMILNADU DR. M.G.R.MEDICAL UNIVERSITY, CHENNAI.  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF  
MASTER OF SCIENCE IN NURSING**

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**“I would maintain that thanks are the highest form of thought, and that gratitude is doubled by wonder” -Gilbert Keith Chesterton**

Gratitude is a memory of the heart, first of all I thank **Almighty god** for his abundant blessings and making me to complete the study successfully.

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I am extremely extend my thankful to the experts namely **Mrs. Helen Raja manickam M.Sc (N).**, Professor Matha college of Nursing, Mana Madurai. **Mrs. Diana M.Sc(N)** Vice Principal C.S.I. college of Nursing, Neyyoor, **Mrs.Vedha Selvi M.Sc(N)**, Lecturer, C.S.I. JACON Madurai, **Mr. Edwin Rajkumar**, Professor, Department of sociology, for their suggestions and for ensuring the validity of the tool.

I wish to thank the Librarians of **The Tamil Nadu Dr. M.G.R. Medical university**, Chennai, **CMC, Vellore, and Mrs. Angelin Manova** librarian of C.S.I. Jeyaraj Annapackiam College of Madurai,for allowing me to utilize the library facilities.

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## **ABSTRACT**

A study to evaluate the effectiveness of planned teaching program on knowledge and attitude on prevention of occupational health hazards among sanitary workers in selected areas at Madurai was done by Ms.P.Ranjani Devi as a Partial fulfillment of the requirement for the degree of Master of Science in Nursing to The Tamil Nadu Dr.M.G.R. Medical University, Chennai during the year 2010-2012.

The objectives of the study were;

1. To assess the prevalence of occupational diseases among sanitary workers in selected areas at Madurai.
2. To assess the existing knowledge and attitude of sanitation workers regarding occupational health hazards.
3. To evaluate the effectiveness of planned teaching program on knowledge and attitude of sanitation workers regarding prevention of occupational health hazards.
4. To find out the relationship between post test knowledge and attitude of sanitary workers on prevention of occupational health hazards.
5. To determine the association between post test level knowledge and attitude with selected demographic variables.

The research hypothesis of this study were formulated to test the association between knowledge and attitude of sanitary workers regarding the prevention of selected occupational health hazards and their demographic variables.

The review of literature was done and organized under following headings. Studies related to occupational diseases among sanitary workers, effectiveness of planned teaching programme in general and knowledge and attitude of sanitary workers. The conceptual frame work for this study was based on Lewin and Beckers health belief model.

Research approach used for this study was quasi experimental approach. One group pretest – post research design was used for this study. 50 sanitary workers at Madurai Corporation were samples of this study. Purposive sampling technique was used. A questionnaire and checklist was developed and used for data collection. The data collection procedure was held in three phases. In the first phase, knowledge and attitude on prevention of occupational health hazards was assessed. During the second phase, The Planned teaching program was administered to the same group with same structured interview was taken after 8 days of the planned teaching program.

The data was analyzed in terms of the objectives of the study using descriptive and inferential statistics. The study findings show that the knowledge and attitude of the sanitary workers after the planned teaching program.

The findings of the study reveals that there was a relationship between post test level of knowledge and attitude of the sanitary workers and there were no significant association between knowledge, attitude with selected demographic variables.

This study concludes that the planned teaching program play a vital role in creating awareness and to improve the knowledge and attitude of sanitary workers on prevention of occupational health hazards. The investigator assured that the sanitary worker who were participated in this study would maintain the personal hygiene and wear personal protective equipments. They would try to avoid the habits of abusing substances and they will not hesitate to go regular periodical medical checkups.

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## APPENDIX-II

### LETTER SEEKING FOR THE CONTENT VALIDITY

**From**

Ms.Ranjani Devi.P  
II year M.Sc (N) Student,  
C.S.I. Jeyaraj Annapakiyam College of Nursing,  
Madurai.

**To**

Forwarded through  
Prof. Dr. (Mrs). C. Jothi Sophia, M.Sc(N), Ph.D.,  
Principal,  
C.S.I Jeyaraj Annapackiam College of Nursing,  
Madurai.

Respected madam / sir,

**Sub: Requisition for opinions and suggestions of experts for establishing content validity of research tool.**

With due regards, I kindly bring to your knowledge that I am a post graduate student of the C.S.I. Jeyaraj Annapakiyam College of Nursing, Madurai. I have selected the below mentioned topic for dissertation to be submitted to the TamilNadu Dr.M.G.R.Medical University, Chennai as a part of partial fulfillment of Master of Nursing Degree.

My dissertation topic is as follows:

**“A study to evaluate effectiveness planned teaching programme on knowledge and attitude of sanitary workers regarding Prevention of Occupational health hazards in selected areas at Madurai.”**

With regards I humbly request you to validate my study instruments. I will be grateful if you do this favour to me as early as possible.

Thanking you

Date:

Place: Madurai

Yours Sincerely,

**(Ranjani Devi.P)**

### APPENDIX-III

#### LETTER SEEKING PERMISSION TO CONDUCT MAIN STUDY

From

MS.Ranjani Devi.P,  
M.sc.,(N) II year,(Community health nursing),  
C.S.I Jeyaraj Annapackiyam College of Nursing,  
Pasumalai,  
Madurai.

To

The Deputy Director of health services  
Madurai Corporation,  
Madurai.

Forwarded through

Prof. Dr. (Mrs). Jothi Sophia, M.Sc(N), Ph.D.,  
The principal,  
C.S.I. Jeyaraj Annapackiam college of nursing.  
Madurai.

**SUB:**

Seeking permission and to carry out the research on sanitary workers.

**Respected sir,**

I am a post graduate student of the C.S.I Jeyaraj Annapackiam college of nursing Madurai. I have selected the below mentioned topic for the research project to be submitted to the Tamilnadu Dr.M.G.R.Medical University, Chennai as a part of partial fulfillment of Masters in nursing degree.

**“A study to evaluate effectiveness planned teaching programme on knowledge and attitude of sanitary workers regarding Prevention of Occupational health hazards in selected areas at Madurai.”**

I would like to conduct this study in Madurai Corporation sanitary workers.Hence I request you to kindly grant me permission for the same.

Thanking you

Date:

Yours obediently,

Place:

Ranjani Devi.P

**APPENDIX –IV**  
**LIST OF EXPERTS**

- 1. Dr. Munawar khan M.B.B.S., B.S.SC., F.C.I.P.,F.I.S.C.D.,M.I.P.H.A.,**  
Former Professor of community medicine,  
Madras Medical college,  
Chennai.
- 2. Dr. Raj kumar M.D, P.hD,**  
Professor of community medicine,  
Meenakshi medical college,  
Chennai.
- 3. Mrs. Helan Rajamanickam M.sc ( N),**  
Professor of community health nursing department,  
Matha college of nursing ,  
Mana Madurai.
- 4. Dr. Siva kumar M.B.B.S.,**  
Block medical officer,  
T.P.K. primary health centre,  
Thirupparankundram.
- 5. Mr. John Sam Arun Prabu M.sc(N), Ph.D,**  
H.O.D. of community health nursing department,  
C.S.I. Jeyaraj Annapackiam college of nursing,  
Pasumalai.
- 6. Mrs. Diana M.sc(N),**  
Vice principal,  
C.S.I. college of nursing,  
Neyyoor.

- 7. Mrs. Celina M.sc(N),**  
Vice principal,  
Umayalachi college of nursing,  
Chennai.
- 8. Mrs. Jeya Thanga Selvi M.sc(N),<sup>—</sup>Ph.D,**  
H.O.D. of Medical surgical nursing department,  
C.S.I. Jeyaraj Annapackiam college of nursing,  
Pasumalai.
- 9. Mrs. Shanthi M.sc(N),**  
Professor,  
C.S.I. Jeyaraj Annapackiam college of nursing,  
Pasumalai
- 10. Mrs. Jancy Raichel M.sc(N),<sup>—</sup> Ph.D,**  
H.O.D of Mental health nursing,  
C.S.I. Jeyaraj Annapackiam college of nursing,  
Pasumalai.
- 11. Mrs. Rose Rajesh M.sc(N),<sup>—</sup> Ph.D,**  
H.O.D. of child health nursing,  
C.S.I. Jeyaraj Annapackiam college of nursing,  
Pasumalai.
- 12. Mr. Edwin Rajkumar MSW.,**  
Professor, Sociology department,  
C.S.I. Jeyaraj Annapackiam college of nursing,  
Pasumalai.

## APPENDIX -V

QUESTIONNAIRE TO ASSESS THE KNOWLEDGE ON SANITARY  
WORKER'S REGARDING OCCUPATIONAL HEALTH HAZARDS.

INSTRUCTION: PLACE A TICK MARK ON THE ANSWERS WHICH THE  
RESPONDENTS FIND AS MORE APPROPRIATE.

### SECTION –A

#### Demographic data

NAME

SAMPLE

NO:

1. Age in years

(a) 20-30

(b) 31-40

(c) 41-50

(d) Above 50

2. Sex

(a) Male

(b) Female

3. Educational status

(a) Literate

(b) Illiterate

4. Marital status

(a) Married

(b) Unmarried

(c) Widowed

(d) Divorced

5. Religion

- (a) Hindu
- (b) Muslim
- (c) Christian
- (d) Others \_\_\_\_\_

6. Occupational experience in years

- (a) 1-5
- (b) 5-10
- (c) Above 10

7. Duration of work per day

- (a) 1-5 Hours
- (b) 5-8 Hours
- (c) More than 8 Hours

8. Are you having any personal habits?

- (a) Yes
- (b) No

9. If yes specify

- (a) Smoking
- (b) Alcoholism
- (c) Drinking
- (d) Drug addiction
- (e) Smoking and smokeless tobacco
- (f) Smoking and drinking
- (g) Smoking and drug addiction
- (h) Smokeless tobacco and drinking
- (i) Drinking and drug addiction
- (j) Smokeless tobacco and drug addiction



10. Have you got any training on Bio medical waste management?

(a)Yes

(b) No

11. Have you immunized against any disease?

(a)Yes

(b)No

12. If yes, how many doses taken? In which age taken latest dose?

## **SECTION- B**

### **QUESTIONNAIRE TO ASSESS THE KNOWLEDGE OF SANITARY WORKERS RELATED TO OCCUPATIONAL HEALTH HAZARDS.**

#### **INSTRUCTION**

- **PLACE A TICK MARK ON THE ANSWERS WHICH THE RESPONDANTS FINDS A MORE APPROPRIATE.**
- **FOR CERTAIN QUESTIONS MORE THAN ONE RESPONSE MAY BE FOUND APPROPRIATE.**
- **EVERY CORRECT ANSWERS CARRY ONE SCORE.**

#### **PART- I: GENERAL**

1. How will you define health?

- (a) A state of complete absence disease
- (b) A state of physical and mental wellbeing
- (c) A state of physical, mental, and social well being
- (d) Don't know

2. What do you mean by micro organisms?

- (a) Bacteria
- (b) Virus
- (c) Disease producing agents
- (d) Don't know

3. What are the types of diseases?

- (a) Communicable
- (b) Non communicable diseases
- (c) Hereditary
- (d) Don't know

4. What type of health problems commonly occur in sanitary workers?

(a) Respiratory problems

(b) Skin problems

(c) Gastro intestinal problems

(d) Eye problems

(e) Musculo skeletal problems

(f) Don't know

## **PART- II: RESPIRATORY PROBLEMS**

5. What type of respiratory problems common in sanitary workers?

- (a) Upper respiratory tract infections
- (b) Occupational lung diseases
- (c) Don't know

6. What are the causes of respiratory infections?

- (a) Allergy
- (b) Infections
- (c) Don't know

7. What are the symptoms of respiratory problems?

- (a) Cough
- (b) Sputum production
- (c) Wheezing
- (d) Sore throat
- (e) Don't know

8. How do we prevent respiratory infections?

- (a) Frequent hand washing
- (b) Vitamin c rich diet
- (c) Using face mask
- (d) Wearing gloves
- (e) Personal hygiene
- (f) Don't know

9. What are the complications of respiratory problems?

- (a) Pulmonary damage
- (b) Cor pulmonale
- (c) Occupational Asthma
- (d) Lung cancer
- (e) Don't know

### **PART – III: SKIN DISEASES**

10. Which is the most common skin disease among sanitary worker?

- (a) Contact dermatitis
- (b) Don't know

11. What are the causes of skin problems among sanitary workers?

- (a) Prolonged exposure of skin contact with dust
- (b) Irritation to mineral oil and tar
- (c) Air borne contact
- (d) Don't know

12. What are the signs and symptoms?

- (a) Itching
- (b) Redness
- (c) Rashes
- (d) Don't know

13. What are all the ways to protect the skin from disease?

- (a) Taking bath after work
- (b) Wearing protective clothing
- (c) Using sun screen lotions
- (d) Go for regular periodical medical examination
- (e) Don't know

14. What are the complications of skin diseases?

- (a) Secondary dermatitis
- (b) Skin ulceration
- (c) Wound is not heal for a long time
- (d) Don't know

#### **PART-IV: GASTRO INTESTINAL PROBLEMS**

15. What are the common gastro intestinal problems among sanitary workers?

- (a)Diarrhea
- (b)Indigestion
- (c)Dyspepsia
- (d)Worm infestation
- (e)Don't know

16. What are all the common causes of diarrhea?

- (a) Infection
- (b)Consumption of alcoholic beverages
- (c)Poor personal hygiene
- (d)Inadequate hand washing
- (e)Don't know

17. What are the signs and symptoms of diarrhea?

- (a) Frequent passage of loose stools
- (b) Don't know

18. What are the preventive measures of diarrhoea?

- (a)Wash the hands with soap and water after work
- (b)Avoiding the consumption of alcoholic beverages
- (c)Maintain proper personal hygiene
- (d)Drink boiled cool water
- (e)Don't know

19. What do you mean by worm infestations?

- (a) Worms present in the stool
- (b) Worms present in the Gastro intestinal tract
- (c) Attack of Parasite in the body
- (d) Don't know

20. What are the worms which affects human beings?

- (a) Round worm
- (b) Hook worm
- (c) Tape worm
- (d) Don't know

21. What are the symptoms of worm infestation?

- (a) Pallor
- (b) Loss of appetite
- (c) Abdominal pain
- (d) Weight loss
- (e) Loss of sleep
- (f) Diarrhea
- (g) Itching over the anal region during night time
- (h) Don't know

22. What are all the methods to prevent worm infestation?

- (a) Kept Nails short and clean
- (b) Wash the hands with soap and water after defecation
- (c) Wearing proper foot wears while working
- (d) Wash all the vegetables thoroughly before cooking
- (e) Don't know

23. What are the complications of worm infestation?

- (a) Anaemia
- (b) Malnutrition
- (c) Loss of appetite
- (d) Recurrent infection
- (e) Don't know



## **PART-V: EYE PROBLEMS**

24. What are the common causes of eye problems among sanitary workers?

- (a) Occupation which constantly exposure to pollutants
- (b) Handling dust particles
- (c) Don't know

25. What are the symptoms of eye diseases?

- (a) Redness
- (b) Watering of the eye
- (c) Irritation
- (d) Don't know

26. How will you protect your eyes from diseases?

- (a) Wearing protective glasses during work
- (b) Avoid to touch the eyes after work
- (c) Avoids rubbing the eyes
- (d) Wash the eyes with clean water
- (e) Don't know

27. What are the complications of eye diseases?

- (a) Chronic conjunctivitis
- (b) Vision impairment
- (c) Blindness
- (d) Don't know

## **PART-VI: MUSCULOSKELETAL PROBLEMS**

28. Which is the common Musculo skeletal problem that will affect the sanitary and sewage worker?

- (a) Neck pain
- (b) Upper back pain
- (c) Low back pain
- (d) Don't know

29. What are the causes of Musculo skeletal problem?

- (a) Improper body mechanics
- (b) Don't know

30. What are the signs and symptoms of muscular skeletal problems?

- (a) Generalized body pain
- (b) Fatigue/Weakness
- (c) Don't know

31. What safety measures to be followed to prevent work related musculoskeletal problems?

- (a) Exercises
- (b) Proper body mechanics
- (c) Adequate rest
- (d) Don't know

32. What are the complications of musculoskeletal disorder?

- (a) Decreased muscle elasticity
- (b) Weakness
- (c) Don't know

**SECTION -C**

**QUESTIONNAIRE ON ATTITUDE AMONG SANITARY WORKERS IN  
RELATION TO PREVENTION OF OCCUPATIONAL HEALTH HAZARDS**

<b>S.NO</b>	<b>CRITERIA</b>	<b>Strongly agree</b>	<b>Agree</b>	<b>Uncertain</b>	<b>Disagree</b>	<b>Strongly disagree</b>
1	Do you think is there any relationship between occupation and health					
2	Do you think maintaining good personal hygiene is not essential for avoiding occupational diseases?					
3	Periodic medical examination is not necessary					
4	Proper body mechanics is essential in preventing occupational health hazards					
5	Do you think it is not necessary for vaccinate against hepatitis					
6	Proper hand washing technique is not reduce the incidence of diarrhea					
7	Wearing mask, and gloves is optional					
8	Consuming alcohol, cigarette due to work load triggers occupational hazards					
9	Early diagnosis and treatment can prevent complications of occupational health hazard					

10	It is not necessary for all family members to undergo prevention of worm infestation measures					
11	There is no need to showering after work					
12	Intake of coffee and tea more than three time during work time is essential					

**SECTION –D**  
**CHECK LIST ON SIGNS AND SYMPTOMS OF PREVALENCE OF**  
**OCCUPATIONAL HEALTH DISEASES BASED ON VARIOUS BODY**  
**SYSTEMS**

<b>S. No</b>	<b>Body system</b>	<b>Signs and Symptoms</b>	<b>Yes</b>	<b>No</b>
1.	Respiratory system	Recurrent upper respiratory tract infection		
		Chronic cough		
2.	Integumentary system	Itching		
		Skin rashes / allergy		
3.	Gastro Intestinal system	Recurrent episodes of diarrhea		
		Worm infestations		
4.	Sensory organ -eye	Burning sensation in the eye		
		Eye irritation		
5.	Musculo skeletal system	Back pain		
		Pain in extremities		

## APPENDIX-VI

உபகரணம்

பகுதி - I

நேர்காணலுக்கானப் படிவம்

குறிப்பு: ஒன்றின் பின் ஒன்றாக கேள்விகளை வாசித்து மக்கள் தரும் பதிலுக்கு

(V) குறியிடவும்.

அடிப்படைத் தகவல்கள்

பெயர்:

மாதிரி எண்:

1. வயது (வருடங்களில்)
  1. 20 - 30
  2. 31 - 40
  3. 41 - 50
  4. 50 வயதிற்கு மேல்
2. பாலினம்
  1. ஆண்
  2. பெண்
3. கல்வி நிலை
  1. படித்தவர்
  2. படிக்காதவர்
4. திருமண விபரம்
  1. திருமணமானவர்
  2. திருமணமாகாதவர்
  3. கைம்பெண்
  4. விவாகரத்தானவர்
5. மதம்
  1. இந்து

2. கிறிஸ்தவர்
3. முஸ்லீம்
4. மற்றவை (குறிப்பிடவும்)
6. தொழில் அனுபவம் வருடங்களில்
  1. 1 - 5 வருடங்கள்
  2. 5 - 10 வருடங்கள்
  3. 10 வருடங்களுக்கு மேல்
7. நாளொன்றுக்கு எத்தனை மணிநேரம் வேலை செய்கிறீர்கள்
  1. 5 முதல் 8 மணிநேரம்
  2. 8 மணி நேரத்திற்கு மேல்
8. தங்களுக்கு கீழ்க்கண்டவற்றில் ஏதேனும் பழக்கம் உள்ளதா?
  1. புகைப்பிடித்தல்
  2. புகையிலைப் போடும் பழக்கம்
  3. குடிப்பழக்கம்
  4. போதைப்பழக்கம்
  5. புகைப்பிடித்தல் மற்றும் புகையிலைப் போடும் பழக்கம்
  6. புகைப்பிடித்தல் மற்றும் குடிப்பழக்கம்
  7. புகைப்பிடித்தல் மற்றும் போதைப்பழக்கம்
  8. புகையிலைப் போடும் பழக்கம் மற்றும் குடிப்பழக்கம்
  9. குடிப்பழக்கம் மற்றும் போதைப்பழக்கம்
  10. புகையிலைப் போடும் பழக்கம் மற்றும் போதைப்பழக்கம்
9. தாங்கள் மருத்துவக் கழிவு மேலாண்மை குறித்து ஏதேனும் சிறப்புப் பயிற்சி பெற்றிருக்கிறீர்களா?
  1. ஆம்
  2. இல்லை
10. தாங்கள் நோய்த் தடுப்பூசி ஏதேனும் போட்டுக் கொண்டிருக்கிறீர்களா?

1. ஆம்

2. இல்லை

ஆம் எனில் தடுப்பூசி பற்றிய எதேனும் விபரங்கள் எப்போது எங்கு போட்டுக் கொண்டீர்கள் எனக் குறிப்பிடவும்.

பகுதி II

துப்புரவுத் தொழிலாளர்களுக்கு ஏற்படக்கூடிய பொதுவான உடல் நல பாதிப்புகள் பற்றிய நேர்முகத் தேர்வுக்கான வினாக்கள்.

பிரிவு- I

தொழில் மூலம் ஏற்படக் கூடிய நோய்கள் பற்றிய பொதுவான விபரங்கள்

1. நலம் என்பதை எவ்வாறு வரையறை செய்வீர்கள்?



1. முற்றிலும் நோயற்ற நிலை
  2. உடல் மற்றும் மனம் நன்றாக உள்ள நிலை
  3. உடல் மனம் மற்றும் சமூகத்தில் எந்தப் பிரச்சனையும் இல்லாதிருத்தல்
  4. தெரியாது
2. நுண்கிருமிகள் என்பதன் அர்த்தம் யாது?
    1. பாக்டீரியா
    2. வைரஸ்
    3. நோய்த் தொற்றுக்கான மூலம்
    4. தெரியாது
  3. நோய்களை எவ்வாறு வகைப்படுத்தலாம்
    1. தொடர்பினால் பரவும் நோய்கள்
    2. பரவும் தன்மையற்ற நோய்கள்
    3. பரம்பரை நோய்கள்
    4. தெரியாது
  4. துப்புரவுத் தொழிலாளர்களுக்கு ஏற்படக்கூடிய பொதுவான உடல் நல பாதிப்புகள் யாவை?
 

மூச்சுக்குழாய் சம்மந்தப்பட்ட நோய்கள்

    1. தோல் நோய்கள்
    2. உணவு மண்டல நோய்கள்
    3. கண் சார்ந்த பிரச்சனைகள்
    4. எலும்பு மற்றும் தசை வலி
    5. தெரியாது

## பிரிவு- II

### சுவாச மண்டலம் சம்மந்தமான நோய்கள்

5. துப்புரவுத் தொழிலாளர்களுக்கு ஏற்படும் பொதுவான மூச்சுக்குழாய் நோய்கள் யாவை?
  1. மேல் சுவாச மண்டல நோய்கள்
  2. தொழிலின் பாரணமாக நுரையீரலில் ஏற்படும் பாதிப்புகள்
  3. தெரியாது

6. சுவாசமண்டல நோய்களுக்கான காரணங்கள்
  1. அலர்ஜி (ஒவ்வாமை)
  2. நோய்த் தொற்று
  3. தெரியாது
7. சுவாச மண்டல நோய்களுக்கான அறிகுறிகள் யாவை?
  1. இருமல்
  2. சளி
  3. இளைப்பு
  4. தொண்டையில் கரகரப்பு
  5. தெரியாது
8. எவ்வாறு சுவாசமண்டல நோய்களைத் தவிர்க்கலாம்?
  1. கைகளை அடிக்கடி கழுவுதல்
  2. வைட்டமின் 'சி' அடங்கிய உணவுகள்
  3. முகத்திரை அணிதல்
  4. கையுறை அணிதல்
  5. சுயசுத்தத்தைக் கடைப்பிடித்தல்
  6. தெரியாது
9. மூச்சுக் குழாய் நோய்களினால் ஏற்படும் பின் விளைவுகள் யாவை?
  1. நுரையீரல் மற்றும் இதயத்தில் ஏற்படும் பாதிப்புகள்
  2. ஆஸ்துமா
  3. நுரையீரல் புற்றுநோய்
  4. தெரியாது

### பிரிவு-III

#### தோல் நோய்கள்

10. துப்புரவப் பணியாளர்களுக்கு ஏற்படக்கூடியப் பொதுவான தோல் நோய் எது?

1. தொடர்பினால் ஏற்படும் தோல் நோய்
2. தெரியாது

11. துப்புரவப் பணியாளர்களுக்கு ஏற்படும் தோல் நோய்களுக்கான காரணங்கள் யாவை?

1. நீண்டகாலமாக தூசியின் பாதிப்பிற்குள்ளாவது
2. தாது எண்ணெய் மற்றும் தார் ஆகியவற்றால் ஏற்படும் எரிச்சல்
3. காற்று வழி ஏற்படும் தொற்று

4. தெரியாது
12. தோலில் ஏற்படும் நோய்களுக்கான அறிகுறிகள் யாவை?
    1. அரிப்பு
    2. சிவந்த தோல்
    3. தோலில் ஏற்படும் தடிப்பு
    4. தெரியாது
  13. தோல் நோய்களிலிருந்து நம்மைப் பாதுகாத்துக் கொள்ள எந்தெந்த வழிவகைகளைக் கையாளலாம்?
    1. வேலை முடிந்தப் பின் குளித்தல்
    2. பாதுகாப்பான ஆடைகளை அணிதல்
    3. சூரிய ஒளியிலிருந்து பாதுகாக்க கிரீம்களைப் பூசுதல்
    4. குறிப்பிட்ட கால இடைவெளிகளில் மருத்துவப் பரிசோதனை மேற்கொள்ளுதல்
    5. தெரியாது
  14. தோல் நோய்களால் ஏற்படும் பின் விளைவுகள் யாவை?
    1. இரண்டாம் நிலை தோல் நோய்கள்
    2. தோலில் புண்கள் ஏற்படுதல்
    3. நீண்டகாலமாக புண்கள் ஆறாதிருத்தல்
    4. தெரியாது

#### பிரிவு- IV

##### உணவு மண்டலத்தில் ஏற்படும் பிரச்சனைகள்

15. துப்புரவு பணியாளர்களுக்கு ஏற்படக்கூடிய பொதுவான உணவு மண்டல நோய்கள்

யாவை?

1. வயிற்றுப்போக்கு
2. செரிமானமின்மை
3. வயிற்றுவலி
4. புழுத்தாக்கம்
5. தெரியாது

16. வயிற்றுப் போக்கு ஏற்படுவதற்கான காரணங்கள் யாவை?

1. நோய்த் தொற்று
2. ஆல்கஹால் கலந்த பானங்களை உட்கொள்ளுதல்
3. சுயசுத்தமின்மை
4. போதுமான கை சுத்தத்தைக் கடைபிடிக்காதிருத்தல்

5. தெரியாது
17. வயிற்றுப் போக்கின் அறிகுறிகள் யாவை?
  - 1.அடிக்கடி நூர்த்த நிலையில் மலம் வெளியேறுதல்
  - 2.தெரியாது
18. வயிற்றுப் போக்கினைத் தடுக்கும் முறைகள்?
  1. வேலை முடிந்தபின் கைகளை சுத்தமாக சோப்பு போட்டுத் கழுவுதல்
  2. மது பானங்கள் அருந்துவதைத் தவிர்த்தல்
  3. சுயசுத்ததைக் கடைபிடித்தல்
  4. காய்ச்சி வடிகட்டிய நீரை அருந்துதல்
  5. தெரியாது
19. புழுத்தாக்கம் என்றால் என்ன?
  1. மலத்தில் புழுக்கள் இருப்பது
  2. உணவு மண்டலத்தில் புழுக்களின் தாக்கம்
  3. மனித உடலில் ஒட்டுண்ணியின் தாக்கம்
  4. தெரியாது
20. எந்தெந்த புழுக்கள் மனித உடலை பாதிக்கிறது?
  1. உருளைப் புழு
  2. கொக்கிப் புழு
  3. தட்டைப் புழு
  4. தெரியாது
21. புழுத்தாக்கத்தின் அறிகுறிகள் யாவை?
  1. வெளுத்த முகம்
  2. பசியின்மை
  3. வயிற்றுவலி
  4. எடைக்குறைவு
  5. தூக்கமின்மை
  6. வயிற்றும் போக்கு

7. இரவு நேரங்களில் ஆசனவாயைச் சுற்றிலும் ஏற்படும் அரிப்பு
  8. தெரியாது
22. புழுத்தாக்கம் ஏற்படாமலிருக்க எந்த வகையான வழிமுறைகளை மேற்கொள்ளலாம்?
1. நகங்களை முறையாகப் பராமரித்தல்
  2. மலம் கழித்தபின் கைகளை நன்றாக சோப்பு போட்டுக் கழுவுதல்
  3. முறையான காலணிகளை அணிதல்
  4. சமைப்பதற்கு முன் காய்கறிகளை நன்றாகக் கழுவுதல்
  5. தெரியாது
23. புழுத்தாக்கத்தின் ஏற்படும் பின் விளைவுகள்
1. இரத்த சோகை
  2. பசியின்மை
  3. தொடர் புழுத்தாக்கம்
  4. தெரியாது

**பிரிவு- V**  
**கண் நோய்கள்**

24. துப்புரவு பணியாளர்களுக்கு ஏற்படக்கூடிய கண் நோய்களுக்கான காரணங்கள்

யாவை?

1. தூசி சம்பந்தப்பட்ட வேலை பார்ப்பது
2. மாசுக்கேட்டினை ஏற்படுத்தும் பொருட்களைக் கையாய்வதால்
3. தெரியாது

25. கண்சம்பந்தமான நோய்களுக்கான அறிகுறிகள் யாவை?

1. சிவந்த கண்கள்
2. கண்களில் நீர் வடிதல்
3. கண்களில் எரிச்சல்
4. தெரியாது

26. தங்கள் கண்களை எவ்வாறு பாதுகாப்பீர்கள்?

1. கண்களில் கண்ணாடி அணிதல்
2. வேலை செய்த பின் கண்களை தொடாதிருத்தல்
3. கண்களை தேய்க்காதிருத்தல்
4. தெரியாது

27. கண் பிரச்சனையால் ஏற்படும் பின் விளைவுகள்?

1. நாள்பட்ட விழிவெண்படலத்தொற்று



2. கண்பார்வைக் குறைவு
3. கண் பார்வை இழப்பு
4. தெரியாது

## பிரிவு- VI

### எலும்பு மற்றும் தசை மண்டல நோய்கள்

28. துப்புரவுப் பணியாளர்களுக்கு ஏற்படக்கூடிய பொதுவான தசை மண்டல நோய்கள்

1. கழுத்துவலி
2. மேல் முதுகுவலி
3. கீழ் முதுகுவலி
4. தெரியாது

29. எலும்பு மற்றும் தசை மண்டலம் பிரச்சனைகளுக்கானக் காரணங்கள்

1. முறையற்ற உடலசைவு
2. தெரியாது

30. எலும்பு மற்றும் தசை மண்டலத்தில் ஏற்படும் பிரச்சனைகளுக்கான அறிகுறிகள்

1. எலும்பு மற்றும் தசைவலி
2. மூட்டுவலி
3. வுக்கம்
4. தெரியாது

31. எலும்பு மற்றும் தசைப் பிரச்சனைகளை தவிர்க்கக் கையாள வேண்டிய வழிமுறைகள் யாவை?

#### உடற்பயிற்சி

1. முறையான உடலியக்கம்
2. போதுமான ஓய்வு

3. கால்சியம் அடங்கிய உணவுப் பொருட்கள்

4. தெரியாது

32. எலும்பு தசைப் பிரச்சனைகளினால் ஏற்படக்கூடிய பின் விளைவுகள் யாவை?

1. தசை தளர்ச்சி

2. சோர்வு

3. தெரியாது

பகுதி-III

தொழில் காரணமாக ஏற்படும் நோய்களைத் தவிர்ப்பது  
பற்றிய துப்புரவு பணியாளர்களின் மனப்பாங்கு.

குறிப்பு: ஒன்றின் பின் ஒன்றாக கேள்விகளை வாசித்து மக்கள் தரும் பதிலுக்கு (V) குறியிடவும்.

வ. எண்	திட்டப்பரிமாணம்	முழு மனதுடன் ஆமோதிக்	ஆமோதிக் கிறேன்	உறுதியாகத் தெரியாது	ஆமோதிக்க வில்லை	முழு மனதுடன் ஆமோதிக்க
1.	உடல் நலத்துக்கும் தொழிலுக்கும் தொடர்பு இல்லை என நான் நினைக்கிறேன்.					
2.	நன்றாக சுயசுத்தத்தைப் பேணாதிருத்தல் தொழில்சார்ந்த நோய்களை ஏற்படுத்தும் என நான் நினைக்கிறேன்					
3.	நோய்த்தாக்கத்தின் அறிகுறிகள் ஏதேனும் தென்பட்டால் உடனடியாக மருத்துவப் பரிசோதனை செய்து கொள்ள வேண்டும்					
4.	முறையான உடலசைவு தொழில் சம்பந்தப்பட்ட நோய்களைத் தவிர்ப்பதற்கு இன்றியமையாதது					
5.	பெரியவர்கள் நோய்த்தடுப்பூசி போட்டுக் கொள்வது தேவையற்றது என நான் நினைக்கிறேன்					
6.	கழிவு நீக்க வேலையின் போது கையுறை மற்றும் முகத்திரை அணிவது அவரவர் சுய விருப்பத்தைப் பொறுத்தது					
7.	கைகளை முறையாக அடிக்கடி கழுவுவது வயிற்றுப்போக்கு நோய் ஏற்படாமல் தடுக்கிறது.					
8.	வேலையின்போது புகைபிடிப்பது மற்றும் மது அருந்துவதால் வேலை செய்யுமிடத்தில் இருக்கும் தூர்நாற்றம்					

	குறைவதாகவும்,வேலைப்பளு தெரியாகவும்மலிருப்பத உணர்கிறேன்					
9.	கழிவு நீக்க வேலையில் ஈடுபடுபவர்கள் நோயின் ஆரம்ப நிலையிலேயே பரிசோதனை மற்றும் மருத்துவ சிகிச்சை செய்து கொள்வதன் மூலம் தொழில் ரீதியாக ஏற்படும் நோய்களின் பின் விளைவுகளைத் தடுக்கலாம்					
10.	நான் வேலையின்போது உபயோகிக்கும் காலணியினை எனது சொந்த பயன்பாட்டிற்கும் உபயோகிக்கிறேன்					
11.	கழிவு நீக்க வேலை முடிந்தபின் ஒவ்வொரு முறையும் குளிப்பது என்பது தேவையற்றது.					
12.	தினமும் வேலையின் ஊடாக காபி, டீ அதிகமாக குடிப்பதினால் மிகவும் உற்சாகமாக உணர்கிறேன்					

பகுதி - IV

துப்புரவு பணியாளர்களுக்குத் தொழிலின் காரணமாக ஏற்படக் கூடிய நோய் அறிகுறிகளுக்கான கேள்விப் பட்டியல்

வ.எண்	உறுப்பு மண்டலம்	நோயின் அறிகுறிகள்	ஆம்	இல்லை
1	சுவாச மண்டலம்	<ul style="list-style-type: none"> <li>• அடிக்கடி சளி ஏற்படுதல்</li> <li>• நீண்ட கால இருமல் தொல்லை</li> </ul>		
2	தோல்	<ul style="list-style-type: none"> <li>• உடலின் அரிப்பு</li> <li>• தோலில் தடிப்பு அல்லது ஒவ்வாமை</li> </ul>		
3	உணவு மண்டலம்	<ul style="list-style-type: none"> <li>• அடிக்கடி வயிற்றுப் போக்கு ஏற்படுதல்</li> <li>• காலத்தில் புழுக்கள் வெளி வருதல்</li> </ul>		
4	கண்	<ul style="list-style-type: none"> <li>• கண் எரிச்சல்</li> <li>• கண்களில் உறுத்தல்</li> </ul>		
5	எலும்பு மற்றும் தசை மண்டலம்	<ul style="list-style-type: none"> <li>• முதுகு வலி</li> <li>• கைகால் வலி</li> </ul>		

**APPENDIX –VII**

**KEY NOTE**

**PART – II**

<b>QUESTION NO</b>	<b>CORRECT RESPONSE</b>	<b>SCORE</b>
1	1,2,3	3
2	1,2,3	3
3	1,2,3	3
4	1,2,3,4	4
5	1,2	2
6	1,2	2
7	1,2,3,4,5	5
8	1,2,3,4,5	5
9	1,2,3	3
10	1	1
11	1,2,3	3
12	1,2,3	3
13	1,2,3,4	4
14	1,2,3	3
15	1,2,3,4	4
16	1,2,3,4	4
17	1	1
18	1,2,3,4	4
19	1,2,3	3
20	1,2,3	3

21	1,2,3,4,5,6,7	7
22	1,2,3,4	4
23	1,2,3	3
24	1,2	2
25	1,2,3	3
26	1,2,3	3
27	1,2,3	3
28	1,2,3	3
29	1	1
30	1,2,3	3
31	1,2,3	3
32	1,2,3	2
	TOTAL	100

## APPENDIX-VIII

### ATTITUDE

### KEY NOTE

### PART – III

S.NO	STRONGLY AGREE	AGREE	UNCERTAIN	DISAGREE	STRONGLY DIS AGREE
1	1	2	3	4	5
2	5	4	3	2	1
3	5	4	3	2	1
4	5	4	3	2	1
5	1	2	3	4	5
6	1	2	3	4	5
7	5	4	3	2	1
8	1	2	3	4	5
9	5	4	3	2	1
10	1	2	3	4	5
11	1	2	3	4	5
12	1	2	3	4	5



## **APPENDIX-IX**

### **STRUCTURED VIDEO PROGRAMME ON PREVENTION OF OCCUPATIONAL HEALTH HAZARDS**

Subject	: Community Health Nursing
Topic	: Prevention of occupational health hazards
Group	: Sanitary workers
Place	: Madurai Corporation office
Method of Teaching	: Short film with group discussion method
Time	: 45 minutes
Material	: video film,flex and Pamphlets

#### **General objectives**

At the end of the teaching program the sanitary workers will acquire knowledge on prevention of occupational health hazards

#### **Specific objectives**

At the end of the of the teaching programme sanitary workers can explain

- Definition of occupational health hazards
- Types of common occupational diseases among sanitary workers
- Causes of occupational diseases
- Signs and symptoms of occupational diseases
- Prevention of occupational diseases
- Complications of occupational diseases

## **PREVENTION OF OCCUPATIONAL HEALTH HAZARDS**

### **INTRODUCTION**

Occupational health represents a dynamic equilibrium between the worker and his occupational environment. Occupational health care is preventive health care, which is provided on the basis of the Occupational Health Care Act. Worldwide it is estimated that job-related accidents and illness claim more than 2 million annually, and this number appears to be rising because of industrialization in developing countries (WHO-2005). In that year, there were approximately 5,559 occupational fatalities fishing, mining, construction and agriculture have the highest rates of work related deaths(CDC,2005).These statistics do not reflect the unreported health problems. For example, a sanitary worker leaves the work site everyday with back strain and headache as a result, collective problems related to employment or occupation are often perceived as individualized injuries, and no one “connects dots”.

### **THE OBJECTIVES OF OCCUPATIONAL HEALTH CARE**

- To provide a healthy and safe working environment, a well-functioning working community,
- To prevent of work-related diseases
- To maintain the employees’ working ability and functional capacity, and promotion of their health.

### **DEFINITIONS**

**Health:** It is a state of complete physical, mental, social well being and not merely an absence of disease or infirmity.

#### **Occupational health**

The modern definition of Occupational Health (ILO and WHO) is:

“The promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations – total health of all at work”.

### **Occupational health hazard**

“Source or situation with a potential for harm in terms of injury or ill health, damage to property, damage to the workplace environment, or a combination of these”.

### **Types of occupational health hazards**

- Physical-Heat, cold, light, Noise, Radiation, Pressure
- Chemical-Coal, silica
- Biological-Leptospirosis, Anthrax, Tetanus
- Mechanical-Protruding or moving part of machinery
- Psychosocial-Frustrations at home, lack of job satisfaction

### **Occupational diseases**

Occupational health hazards are usually defined as diseases arising out of or in the course of employment.

### **Occupational diseases among sanitary workers**

Although essentially healthy, like active workers in general, there are some reports about negative health effects among sanitary workers.

### **Major occupational health hazards**

- Respiratory problems
- Skin problems
- Gastro intestinal problems
- Eye problems
- Muscle skeletal problems

## **Respiratory problems**

The common respiratory problems of sanitary workers are:

- Upper respiratory tract infections
- Occupational lung diseases

## **Upper respiratory tract infection**

The term “common cold” often used when referring to an upper respiratory tract infection that is self limited and caused by a virus.

## **Signs and symptoms**

- Nasal congestion
- Runny nose
- Sneezing
- Nasal itchiness
- Tearing watery eyes
- Sore throat
- General malaise
- Low grade fever
- Headache
- Muscle ache
- Cough

## **Occupational lung diseases**

Dust within the size range of 0.5 to 3 micron, is a health hazard producing after a variable period of exposure, a lung disease is known as occupational lung disease.

### **Factors increasing the hazardous effect of dusts on lungs**

- Chemical composition
- Fineness
- Concentration of dust in air
- Period of exposure
- Health status of person exposed

### **The complications of respiratory problems**

- Pulmonary damage
- Cor pulmonale
- Occupational Asthma
- Lung cancer

### **Prevention of respiratory infections**

- Smoking cessation
- Frequent hand washing
- Vitamin c rich diet
- Using face mask
- Wearing gloves
- Personal hygiene
- Take adequate rest
- Taking 3 meals a day is compulsory to improve immune system
- Deep breathing and coughing exercises
- Periodic medical examination
- Avoid consuming alcohol
- Take more vegetables and fruits

## **SKIN DISEASES**

The common skin disease among sanitary and sewage worker is Contact dermatitis. Occupational dermatitis is a big health problem.

### **Causes of skin problem are:**

**Physical:** Heat, cold, moisture, friction, pressure, and other rays

**Chemical:** Acids, alkalies, dyes, solvents, grease, tar, pitch, chlorinated phenols etc.

**Biological:** Living agents such as viruses, bacteria, fungi and other parasites

**Plant products:** leaves, vegetables, fruits, flowers, vegetable dust, etc.

### **Further Causes of dermatitis**

- Primary irritants: Prolonged exposure of skin contact with dust, Air borne contact
- Sensitisation to substances: Irritation to mineral oil and tar

### **Signs and symptoms of skin problems**

- Itching
- Redness
- Rashes

### **Prevention of skin diseases**

- Taking bath after work
- Wearing protective clothing
- Washing clothes frequently and kept well
- Use long leather gloves, apron and boots
- Using Barrier creams
- Go for regular periodical medical examination

## **Strategies for avoiding contact dermatitis**

The following precautions may help prevent repeated cases of contact dermatitis.

Follow these instructions for at least 4 months after your skin appears to be healed

- Study the pattern and location of your dermatitis and think about which things have your skin and which things have caused the problem
- Try to avoid contact with these materials
- Avoid heat, soap, and rubbing, all of which are external irritants
- Choose bath soaps, laundry detergents, and cosmetics that do not contain fragrance
- Avoid topical medications, lotions, or ointments, except those specifically prescribed for your condition
- Wash your skin thoroughly immediately after exposure to possible irritants
- When wearing gloves be sure they are cotton-lined.

## **The complications of skin diseases**

- Secondary dermatitis
- Skin ulceration
- Wound is not heal for a long time

## **GASTRO INTESTINAL PROBLEMS**

### **The common gastro intestinal problems among sewage worker**

1. Diarrhea
2. Indigestion
3. Dyspepsia
4. Worm infestation

#### **Diarrhoea**

A condition in which faeces are discharged from the bowels frequently and in a liquid form.

#### **Indigestion**

Pain or discomfort in the stomach associated with difficulty in digesting food.

#### **Dyspepsia**

Dyspepsia means indigestion

#### **Worm infestation**

Intestinal or other internal parasites which is having long slender soft body and no limbs.

#### **DIARRHOEA**

Diarrhoea is increased frequency of bowel movements (more than three per day), increased amount of stool (more than 200 g per day), and altered consistency (ie ,looseness) of stool.



### **The common causes of diarrhea**

- Infection
- Consumption of alcoholic beverages
- Poor personal hygiene
- Inadequate hand washing

### **Signs and symptoms**

- The increased frequency and fluid content of stools
- Abdominal cramps
- Distention
- Intestinal rumbling
- Anorexia
- Thirst
- Painful contractions of the anus
- Ineffectual straining
- Dehydration

### **The preventive measures of diarrhea**

- Avoid caffeine, and very hot and very cold foods
- Keep the nails short and clean
- Avoid to take the foods contaminated with flies
- Wash the hands with soap and water after work
- Avoiding the consumption of alcoholic beverages
- Maintain proper personal hygiene
- Drink boiled cool water
- Immunization for the epidemic diarrhoeal diseases

## **Complications**

- Potential for cardiac dysrhythmias
- Fluid and electrolyte loss
- Decreased urine output
- Muscle weakness
- Paresthesia
- Hypotension
- Anorexia
- Drowsiness

## **WORM INFESTATION**

An infection of the intestinal tract caused by adult worms.

### **Types of worms which affects human beings**

- (a) Round worm
- (b) Hook worm
- (c) Tape worm

### **The signs and symptoms of worm infestation**

- Pallor
- Loss of appetite
- Abdominal pain
- Weight loss
- Loss of sleep
- Diarrhea
- Itching over the anal region during night time

### **The methods to prevent worm infestation**

- Kept Nails short and clean
- Wash the hands with soap and water after defecation
- Wearing proper foot wears while working
- Wash all the vegetables thoroughly before cooking
- Take medications for every six month to avoid worm infestation
- Keep the environmental hygiene

### **The complications of worm infestation**

- Anaemia
- Malnutrition
- Recurrent infection

## **EYE PROBLEMS**

### **The common causes of eye problems among sanitary workers**

- Occupation which constantly exposure to pollutants
- Handling dust particles

### **The signs and symptoms of eye diseases**

- Redness
- Watering of the eye
- Irritation

### **Prevention of eyes diseases**

- Wearing protective glasses during work
- Avoid to touch the eyes after work
- Avoids rubbing the eyes
- Wash the eyes with clean water

### **The complications of eye diseases**

- Chronic conjunctivitis
- Vision impairment
- Blindness

## **MUSCULOSKELETAL PROBLEMS**

### **The common muscle skeletal problem in sanitary workers**

- Neck pain
- Upper back pain
- Low back pain

### **The causes of Musculo skeletal problem**

- Improper body mechanics

### **The signs and symptoms of muscular skeletal problems**

- Generalized body pain
- Fatigue
- Weakness

### **The management of musculo skeletal problems**

- Warm compress
- Exercises
- Calcium rich diet
- Analgesics

### **Prevention of work related musculoskeletal problems**

- Stand with lower back as flat as possible. Tuck hips in by tightening abdominal muscles.
- Take break in between work.
- Maintain erect posture, use back supports while sitting.
- When walking hold head erect, chin tucked in slightly and hold stomach in. The abdominal muscles help support the lower back.
- Avoid bending, lifting, twisting at waist level.
- Do not wear high heeled shoes.

- Squat with a straight lower back

### **Exercise**

- Daily exercise is important in the prevention of back problems
- Walking outdoors and gradually increasing the distance and pace of walking is recommended.

### **Preventing joint pain**

- Rest the joint in a position that minimizes stress on joint structures
- Support the affected arm on pillow while sleeping, to keep from rolling over on to the shoulder
- Avoid walking and lifting above shoulder level or pushing on object against “locked” shoulder.
- Perform range of motion strengthening exercises.

### **Exercises for back**

- Avoid work that have caused you back pain
- While standing straight, place your hands on your hips and bend over backward. Hold for 30 to 60 seconds. While sitting bend at the waist and place your head on your knees. Hold for 2 to 5 minutes.

### **Strategies for the person with low back pain:**

#### **Pain management:**

- Limit bed rest, keep knees flexed to decreased strain on back
- Non pharmacological approaches: distraction, relaxation, imagery, thermal interventions eg.ice or heat, stress reduction
- Pharmacological approaches: non steroidal anti inflammatory drugs, analgesics, muscle relaxants

**Body mechanics:**

- Practice good posture
- Avoid twisting of body
- Push objects rather than pull them
- Keep load close to body when lifting
- Bend knees and tighten abdominal muscles when lifting

**Work modifications**

- Adjust work area to avoid stress on back
- Avoid prolonged standing and repetitive tasks
- Avoid bending, twisting, and lifting heavy objects

**Stress reduction**

- Discuss with the interdependence of stress and anxiety on muscle tension.
- Go for stress reduction techniques.

**Complications**

- Disuse muscle atrophy
- Decreased muscle elasticity
- Weakness.

**CONCLUSION**

**“Prevention is better than cure.”**

From that above discussion the sanitary workers can understand the measures to prevent themselves from work related diseases.

## APPENDIX -IX

### திட்டமிட்ட போதனைப் படிவம்

தலைப்பு	:	தொழில் காரணமாக ஏற்படும் உடல் நலக்கேடுகள்
குழு	:	துப்புரவு பணியாளர்கள்
இடம்	:	மாநகராட்சி வளாகம்-மதுரை
நேரம்	:	60 நிமிடங்கள்
கற்பிக்கும் முறை	:	விரிவுரை மற்றும் கலந்து பேசுதல்
உதவிப்பொருள்	:	குறும்படம்.கைப்பிரதி

### முக்கியக்குறிக்கோள்

துப்புரவு பணியாளர்கள் தொழில்காரணமாக ஏற்படும் நோய்களைப் பற்றியும் அவற்றைத் தடுக்கும் முறைகள் பற்றியும் தெரிந்து கொண்டு அறிவு மற்றும் மனப்பாங்கை

மேம்படுத்துதல்

### துணைக்குறிக்கோள்கள்

திட்டமிட்ட போதனைக்குப் பின் துப்புரவு பணியாளர்கள் கீழ்க்கண்ட திறனைப் பெற வேண்டும்

- தொழில் சம்மந்தப்பட்ட நோய்களை வரையறுத்தல்
- தொழில் நலக் கேட்டினை ஏற்படுத்தும் காரணிகள் பற்றி கூறுதல்
- துப்புரவுப் பணியாளர்களுக்கு ஏற்படும் நோய்களுக்கான அறிகுறிகள்

தடுக்கும் முறைகள் மற்றும் விளைவுகள் பற்றி விரிவாக விளக்குதல்

**துப்புரவு பணியாளர்களுக்குத் தொழில்காரணமாக ஏற்படும்**

**நோய்களைத் தடுக்கும் முறைகள்**



### **முன்னுரை:**

தொழில் நலம் என்பது தொழிலாளர் மற்றும் அவர்தம் சுற்றுப்புரத்திற்குமிடையேயான சம நிலையைக் குறிக்கும். உலகம் முழுவதும் ஆண்டொன்றுக்கு 2 மில்லியன் விபத்துகள் தொழிலின் காரணமாக ஏற்படுகின்றன. பொதுவாக தொழில் காரணமாக ஏற்படும் பாதிப்புகள் விவசாயம் கட்டிடத்தொழில் மீன்பிடித்தொழிலில் உள்ளவர்களுக்குத் தான் அதிக அளவில் ஏற்படுவதாக ஆய்வறிக்கைகள் தெரிவிக்கின்றன. இருப்பினும் துப்புரவுப் பணியாளர்களுக்கும் அவர்தம் வேலையின் நிமித்தம் பல விதமான நோய்கள் ஏற்பட வாய்ப்புகள் உள்ளன. ஆனாலும் இது பற்றிய போதிய விழிப்புணர்வு இல்லாததால் துப்புரவுப் பணியாளர்கள் அவர்களுக்கு தொழில் காரணமாக ஏற்படும் பாதிப்புகளை தமக்கு ஏற்படும் பொதுவான பிரச்சனைகளாகக் கருதுகின்றனர்.

### **ஆரோக்கியம் :**

ஆரோக்கியம் என்பது ஒருவரது உடல்மனம் மற்றும் சமூகம் ஆகிய மூன்று நிலைகளிலும் பிரச்சனைகள் இல்லாதிருத்தலைக் குறிக்கும்.

### **தொழில் ஈதியான ஆரோக்கியம்**

தொழில் நலம் என்பது தொழிலாளரது உடல் மனம் மற்றும் சமூகம் ஆகிய நலத்தினைப் பாதுகாத்தல் மற்றும் முன்னேற்றுதல்.

### **தொழில் ஈதியான ஆரோக்கியம் பேணுவதின் நோக்கங்கள்:**

- தொழிலாளர்களுக்குப் பாதுகாப்பான சூழலை உருவாக்குதல்.
- நன்கு உழைக்கும் மக்களை உருவாக்குதல்
- தொழில் காரணமாக ஏற்படும் நோய்களைத் தடுத்தல்
- தொழிலாளர்களின் உழைக்கும்திறன் செயல்திறன் மற்றும் உடல் நலத்தைப் பேணல்

### **தொழில் சம்மந்தப்பட்ட நோய்**

தொழில் சம்மந்தப்பட்ட நோய் என்பது தொழில் செய்து கொண்டிருக்கும் போதோ தொடர்ச்சியாக செய்து கொண்டிருக்கும் நீண்ட நாளை ய வேலையின் காரணமாகவோ வரக்கூடிய நோய் ஆகும்.

### தொழில் நலக் கேட்டினை ஏற்படுத்தும் காரணிகள்

- பௌதூகக் காரணிகள்: வெப்பம் ,குளிர்ச்சி, சப்தம்,கதிர்வீச்சு மற்றும் அழுத்தம்.
- ரசாயனக் காரணிகள்: சிலிக்கா ,ஆஸ்பெஸ்டாஷ், புகையிலைத்தூசுகள்
- உயிரியல் காரணிகள்: பாக்டீரியா, வைரஸ்மற்றும் ஒட்டுண்ணிகள்
- இயந்திரக் காரணிகள்: இயந்திரகளினால் ஏற்படும் விபத்துகள்
- மன உளைச்சல்: வேலையில் திருப்தியின்மை

### துப்புரவுப் பணியாளர்களுக்கு ஏற்படும் தொழில் சார்ந்த நோய்கள்

- ❖ சுவாச மண்டல நோய்கள்
- ❖ தோல் நோய்கள்
- ❖ உணவு மண்டல நோய்கள்
- ❖ கண் சார்ந்த பிரச்சனைகள்
- ❖ எலும்பு மற்றும் தசை மண்டல நோய்கள்

### சுவாச மண்டல நோய்கள்

துப்புரவுப் பணியாளர்களுக்கு ஏற்படும் சுவாச மண்டல நோய்களாவன:

- மேல் சுவாச மண்டல நோய்த்தொற்று
- தொழிலின் காரணமாக நுரையீரலில் ஏற்படும் பாதிப்புகள்

### மேல் சுவாச மண்டல நோய்

மேல் சுவாச மண்டல நோய்த்தொற்று என்பது சாதாரண சளியைக் குறிக்கிறது.இது வைரஸ் நுண்கிருமியால் ஏற்படுகிறது

### மேல் சுவாசமண்டல நோய்களுக்கான காரணங்கள்

- அலர்ஜி (ஒவ்வாமை)
- நோய்த் தொற்று
- முறையாக சுயசுத்தத்தைக் கடைப்பிடிக்காதிருத்தல்
- சுய பாதுகாப்பு கருவிகளை பயன்படுத்தாதிருத்தல்

- நோய்த்தொற்று உடையவரிடம் பழகுதல்

#### மேல் சுவாச மண்டல நோய்களுக்கான அறிகுறிகள்

- இருமல்
- தொண்டையில் கரகரப்பு
- தும்மல்
- மூக்கு ஒழுகுதல்
- தலைவலி
- மூக்கடைப்பு

#### மேல் சுவாசமண்டல நோய்களால் ஏற்படும் பின் விளைவுகள்

- நோய் எதிர்ப்புத்திறன் குறைவு
- நுரையீரல் பாதிப்புகள்

#### தொழிலின் காரணமாக ஏற்படும் நுரையூரல் பாதிப்புகள்

##### காரணங்கள்

- நுண்ட காலமாக தூசியின் பாதிப்பிற்கு உள்ளாதல்
- நோய்த்தொற்றினை ஏற்படுத்தக்கூடியப் பொருட்களைக் கையாள்வதால்
- குறைவான நோய் எதிர்ப்புத்திறன்
- சுவாச மண்டல நோய்களுக்கு முறையான சிகிச்சை மேற்கொள்ளாததால்

#### நுரையூரல் பாதிப்பிற்கான அறிகுறிகள்

- நாள்பட்ட சளித்தொல்லை
- மூச்சு விடுவதில் சிரமம்
- நெஞ்சு வலி
- இளைப்பு

#### நுரையூரல் பாதிப்பினால் ஏற்படும் பின் விளைவுகள்

- நுரையீரல் மற்றும் இதயத்தில் ஏற்படும் பாதிப்புகள்
- ஆஸ்துமா

➤ நுரையீரல் புற்றுநோய்

**சுவாசமண்டல நோய்களைத் தவிர்க்கும் முறைகள்**

- ✓ கைகளை வேலை முடிந்தபின் ஒழுங்காக கழுவுதல்
- ✓ வைட்டமின் 'சி' சத்து அடங்கிய தக்காளி, எலுமிச்சை, நெல்லிக்காய் ஆகியவற்றை பச்சையாக உண்ணுதல்
- ✓ புரதச்சத்து நிறைந்த பால், முட்டை ,பருப்பு ஆகியவற்றை பச்சையாக உண்ணுதல்
- ✓ முகத்திரை அணிதல்
- ✓ கையுறை அணிதல்
- ✓ சுயசுத்தத்தைக் கடைப்பிடித்தல்
- ✓ கொதிக்க வைத்து ஆற வைத்த நிரைப் பருக வேண்டும்
- ✓ நோய்த்தொற்று உடையவர்கள் இருமும் போதும் தும்மும் போதும் வாயை துணியினால் மூட வேண்டும்.

## தோல் நோய்கள்

துப்புரவப் பணியாளர்களுக்கு ஏற்படக்கூடியப் பொதுவான தோல் நோய் தொடர்பினால் ஏற்படும் தோல் நோய் ஆகும்.

### துப்புரவப் பணியாளர்களுக்கு ஏற்படும் தோல் நோய்களுக்கான காரணங்கள்

- நீண்டகாலமாக தூசியின் பாதிப்பிற்குள்ளாவது
- தாது எண்ணெய் மற்றும் தார் ஆகியவற்றால் ஏற்படும் எரிச்சல்
- காற்று வழி ஏற்படும் தொற்று

### தோலில் ஏற்படும் நோய்களுக்கான அறிகுறிகள்

- ❖ அரிப்பு
- ❖ தோலில் சிவந்த புள்ளிகள் தோன்றுதல்
- ❖ தோலில் கொப்புளங்கள் தோன்றுதல்
- ❖ தோலில் ஏற்படும் தடிப்பு

### தோல் நோய்களைத் தவிர்க்கும் முறைகள்

- வேலை முடிந்தப் பின் குளித்தல்
- பாதுகாப்பான ஆடைகளை அணிதல்
- சூரிய ஒளியிலிருந்து பாதுகாக்க கிரீம்களைப் பூசுதல்
- தினமும் வேலைக்கு பயன்படுத்தும் ஆடைகளை சுத்தமாக அணிய வேண்டும்.
- நோய்களிலிருந்து தங்களைப் பாதுகாக்க சுய பாதுகாப்பு கருவிகளை உபயோகிக்க வேண்டும்.

### சுய பாதுகாப்பு கருவிகளாவன;

- கண்ணாடிகள்

- நீர் புகாத முகத்திரைகள்
- கையுறைகள்
- காலணிகள் முதலியன.
- திறந்த காயங்களை சுத்தமாகவும் உலர்ந்த கட்டுத்துணியால் கட்டியும் வைக்க வேண்டும்
- குறிப்பிட்ட கால இடைவெளிகளில் மருத்துவப் பரிசோதனை மேற்கொள்ளுதல்

#### **தோல் நோய்களால் ஏற்படும் பின் விளைவுகள்**

- இரண்டாம் நிலை தோல் நோய்கள்
- தோலில் புண்கள் ஏற்படுதல்
- நீண்டகாலமாக புண்கள் ஆறாதிருத்தல்

## உணவு மண்டலத்தில் ஏற்படும் பிரச்சனைகள்

துப்புரவு பணியாளர்களுக்கு ஏற்படக்கூடிய பொதுவான உணவு மண்டல நோய்கள்

- வயிற்றுப்போக்கு
- செரிமானமின்மை
- வயிற்றில் புண்
- புழுத்தாக்கம்

### வயிற்றுப்போக்கு

வயிற்றுப்போக்கு என்பது நூர்த்த நிலையில் மலம் அடிக்கடி வெளியேறுதலைக் குறிக்கும். இது மனிதனது உணவு மண்டலத்தில் நுண்கிருமிகளால் ஏற்படும் நோய்த்தொற்று ஆகும்.

### வயிற்றுப் போக்கு ஏற்படுவதற்கான காரணங்கள்

- நோய்த் தொற்று
- ஆல்கஹால் கலந்த பானங்களை உட்கொள்ளுதல்
- சுயசுத்தமின்மை
- போதுமான கை சுத்தத்தைக் கடைபிடிக்காதிருத்தல்
- அசுத்தமான இடங்களில் உணவு உட்கொள்வதால்

### வயிற்றுப் போக்கினைத் தடுக்கும் முறைகள்

- வேலை முடிந்தபின் கைகளை சுத்தமாக சோப்பு போட்டுத் கழுவுதல்
- மது பானங்கள் அருந்துவதைத் தவிர்த்தல்
- சுயசுத்தத்தைக் கடைபிடித்தல்
- காய்ச்சி வடிகட்டிய நீரை அருந்துதல்
- கழிவுகளை சுத்தம் செய்யும் வேலையில் ஈடுபட்டபின் கைகளை சோப்பினால் நன்றாக கழுவ வேண்டும்.
- வேலையின் போது முகம் வாய் மூக்கு பிறப்பு உறுப்புகள் மற்றும் திறந்த புண்களைத் தொடுவதைத் தவிர்க்க வேண்டும்.
- சாப்பிடுவது குடிப்பது மற்றும் புகைப்பிடிப்பதற்கு முன் கைகளை கழுவவேண்டும்.

### புழுத்தாக்கம்

புழுத்தாக்கம் என்பது மனிதனது குடலில் முதிர்ந்த புழுக்களினால் ஏற்படும் பாதிப்பு ஆகும்

#### புழுக்களின் வகைகள்

- உருளைப் புழு
- கொக்கிப் புழு
- தட்டைப் புழு

#### புழுத்தாக்கத்தின் அறிகுறிகள்

- வெளுத்த முகம்
- பசியின்மை
- வயிற்றுவலி
- எடைக்குறைவு
- தூக்கமின்மை
- வயிற்றும் போக்கு
- இரவு நேரங்களில் ஆசனவாயைச் சுற்றிலும் ஏற்படும் அரிப்பு

#### புழுத்தாக்கத்தை தடுக்கும் முறைகள்

- ❖ நகங்களை முறையாகப் பராமரித்தல்
- ❖ மலம் கழித்தபின் கைகளை நன்றாக சோப்பு போட்டுக் கழுவுதல்
- ❖ முறையான காலணிகளை அணிதல்
- ❖ சமைப்பதற்கு முன் காய்கறிகளை நன்றாகக் கழுவுதல் கழிவறையை பயன்படுத்துவதற்கு முன்னும் பின்னும் கைகளை நன்றாக கழுவ வேண்டும்
- ❖ உணவினை கழிவுகளை கையாளும் இடங்களில் அமர்ந்து உண்ண வேண்டாம்
- ❖ மேலும் அவ்விடங்களில் அமர்ந்து புகைப் பிடிப்பதையும் புகையிலை மெல்லுவதையும் தவிர்க்கவும்
- ❖ வீட்டுக்குள்ளும் வாகனங்களில் செல்லும் போதும் பணியின் போது பயன்படுத்திய காலணிகளை அணிய வேண்டாம்

#### புழுத்தாக்கத்தினால் ஏற்படும் பின் விளைவுகள்

- இரத்த சோகை



- ஊட்டச்சத்துக் குறைபாடு
- பசியின்மை
- தொடர் புழுத்தாக்கம்

### கண் நோய்கள்

#### துப்புரவு பணியாளர்களுக்கு ஏற்படக்கூடிய கண் நோய்களுக்கான காரணங்கள்

- தூசி சம்பந்தப்பட்ட வேலை பார்ப்பது
- மாசுக்கேட்டினை ஏற்படுத்தும் பொருட்களைக் கையாள்வதால்
- கழிவுகள் நேரிடையாக கண்களில் படுவதனால்
- மாசு படிந்த கைகளால் கண்களைத் தொடுவதால்
- காற்றின் மூலம் பரவும் நோய்க் கிருமிகளால்

#### கண்சம்பந்தமான நோய்களுக்கான அறிகுறிகள்

- கண்கள் சிவந்து போதல்
- கண்களில் நீர் வடிதல்
- கண்களில் எரிச்சல்
- கண்களில் வலி ஏற்படுதல்

#### கண் நோய்களை தவிர்ப்பதற்கான வழிமுறைகள்

- கண்களில் கண்ணாடி அணிதல்
- வேலை செய்த பின் கண்களை தொடாதிருத்தல்
- கண்களில் ஏதேனும் தூசு பட்டால் கண்களை தேய்க்காதிருத்தல்
- கண்களை தூய்மையான நீரினால் மென்மையாக கழுவ வேண்டும்
- வருடத்திற்கு ஒரு முறை கண்பரிசோதனை செய்ய வேண்டும்

#### கண் பிரச்சனையால் ஏற்படும் பின் விளைவுகள்

- நாள்பட்ட விழிவெண்படல நோய்த்தொற்று
- கண்பார்வைக் குறைவு
- கண் பார்வை இழத்தல்

#### துப்புரவுப் பணியாளர்களுக்கு ஏற்படக்கூடிய பொதுவான தசை மண்டல நோய்கள்

- கழுத்துவலி
- மேல் முதுகுவலி
- கீழ் முதுகுவலி

### எலும்பு மற்றும் தசை மண்டலப் பிரச்சனைகளுக்கானக் காரணங்கள்

- அதிக அழுத்தத்தை பயன்படுத்தி செய்யக்கூடிய வேலை
- குனியும்போதும் நிமிரும்போதும் முறையான உடல் அசைவு முறைகளைப் பின்பற்றாமை
- இடுப்பு பகுதியில் அதிக அழுத்தம்
- தண்டு வடத்தில் பிரச்சனை

### எலும்பு மற்றும் தசை மண்டலத்தில் ஏற்படும் பிரச்சனைகளுக்கான அறிகுறிகள்

- நுண்ட நாளாக அல்லது திடீரென ஏற்படும் முதுகுவலி
- மூட்டு வலி
- கை கால் வலி
- அசதி
- சோர்வு

### எலும்பு மற்றும் தசைப் பிரச்சனைகளை தவிர்க்கக் கையாள வேண்டிய வழிமுறைகள்

- ✓ முறையான உடலியக்கம்
- ✓ நிற்கும் போது முதுகை நேராக வைத்து கூன் விழுவதை தவிர்க்கலாம்.வயிற்றிலுள்ள தசைகளை இறுக்கி பிடிப்பதன் மூலம் முதுகை நேராக வைக்கலாம்
- ✓ உடற்பயிற்சி; முதுகில் ஏற்படும் பிரச்சனைகளைத் தவிர்க்க தினமும் உடற்பயிற்சி அவசியம்.
- ✓ போதுமான ஓய்வு இன்றியமையாதது
- ✓ மூட்டுகளுக்கு அழுத்தமில்லாதபடி மூட்டுகளுக்கு ஓய்வு கொடுக்க வேண்டும்

### எலும்பு தசைப் பிரச்சனைகளினால் ஏற்படக்கூடிய பின் விளைவுகள்

- ✚ தசைகள் பலவீனமாதல்
- ✚ மூட்டுகளின் தேய்மானம்
- ✚ தசை தளர்ச்சி

முடிவுரை

“கற்க கசடற கற்பவை கற்றபின்

நிற்க அதற்கு தக.”

என்னும் குறளுக்கிணங்க நாம் மேற்கண்ட வழிமுறைகளைக் கையாள்வதன் மூலம் துப்புரவு பணியாளர்கள் தொழிலின் காரணமாக தங்களுக்கு ஏற்படும் நோய்களிலிருந்துத் தங்களைப் பாதுகாத்துக் கொள்ளலாம்

‘

## APPENDIX X

### HEALTH AWARENESS PROGRAM FOR SANITARY WORKERS





# APPENDIX I

## AREA MAP



# CHAPTER-I

## INTRODUCTION

**“If I were to be born again, I would like to be born in the family of a scavenger so that I may relieve them of the inhuman unhealthy and hateful practice of carrying head loads of night soil.”**

**-Mahathma Gandhiji**

From the above sentences clearly exemplifies that Gandhiji had a strong intention in abolishes the unhealthy practices among sanitary workers. But after completing these many years, still the same unhealthy practices are being followed by them. Health is the right of all human beings. The message became clear that while disease remains an economic liability, health is an individual, national and even an international asset, and a key to socio economic development, higher standard of living and an improved quality of life. Health is not mainly an issue of doctors, social services and hospitals. It is an issue of social justice.

In recognition of this fact, the developing countries revised their developmental preferences and started paying priority attention to health and health related sectors in an attempt to reduce the developmental lag between them and the developed countries of the world.

Health has been described as “the condition of being sound in body, mind and spirit.” All the dimensions of health relate to these basic elements of human personality such as body, mind and soul or spirit. Health is multi faceted entity possessing physical, mental, social, moral and spiritual dimensions.

Health is determined by mainly three factors such as personal determinants, environmental determinants and government determinants'. Firstly the personal determinants include genetic endowment of the individual, awareness of the importance of health, a disciplined way of life that is following healthy life style and the philosophy of life based on simple living and high thinking. Secondly environmental determinants includes healthy family environment, healthy physical environment, healthy social environment and healthy occupational environment. Finally the governmental determinants includes socio-economic development, appropriate health care, and political commitment.

In that all determinants health, occupation play vital role in determining the health. The occupations placing the vital role to providing social dignity and respect to the individuals. Certain amount of physical and mental well being is determined by the individuals occupation. Some kind of diseases can be aroused due to the individuals work.

Occupational health represents a dynamic equilibrium between the worker and his occupational environment. The modern definition of Occupational Health (ILO and WHO) is "The promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations – total health of all".

In all occupations the working environment will always present the risk of workers over exposure to various chemicals, metals and solvents. Patterns or identifiable trends of occupational health problems have been associated with the type of work as well as where the work is performed (i.e., indoors or outdoors).



The primary hazards associated with indoor work are poor or inadequate physical and work organization ergonomics, inadequate indoor air quality or heating, ventilation and air conditioning systems, chemicals, asbestos, workplace violence and electromagnetic fields (low-level radiation).

Outdoor work environment occupational hazards include exposure to chemicals, lead, hazardous and solid waste, environmental conditions, inadequate ergonomics, motor vehicles, electrical and mechanical equipment and electromagnetic field emissions. Exposure to chemicals occurs in several identified occupational categories including waste disposal operations, water and sanitation services, sewage treatment, domestic waste collection, postal collection and technician jobs in telecommunications.

Hazardous work environments are common to waste disposal operations, water and sanitation services, sewage treatment and domestic waste collection. Occupational safety and health hazards include microbiological and medical waste, chemicals, inadequate ergonomics, motor vehicles, confined spaces and electrical and mechanical equipment. Identified health symptoms and illnesses include upper respiratory, dermatological, upper and lower extremity musculoskeletal, cardiovascular, central nervous system and visual problems. Additional concerns include lacerations, heat exhaustion and stroke.

The waste creates various work related diseases to the persons who were generate, handle, package, store, transport, treat and dispose the wastes. These wastes will leads to the environmental pollution and the transmit the communicable diseases, including cholera, TB ect.,

According to the Encyclopedia of Occupational Health and Safety, report in 1991 the sanitary workers are suffer from various kind of occupational diseases such as occupational lung diseases and upper respiratory tract infections, allergic problems especially of the skin like contact dermatitis, neurological problems like headache, dizziness and numbness, eye problems like burning, watering and redness, gastro intestinal problems like diarrhoea and parasitic infections and musculoskeletal problems like fatigue and weakness and backache.

### **SIGNIFICANCE AND NEED FOR THE STUDY**

**“Save and beautify your life and family with a little alertness and attentiveness”**

As a developing country India has faced with so many public health problems like communicable diseases, malnutrition, poor environmental sanitation and inadequate medical care. However, globalization and rapid industrial growth in the last few years has resulted in emergence of occupational health related issues. There are lot of agencies like central labour institute, national institute of occupational health, industrial toxicology research centre, are working on many kind of research activities regarding, Pesticide poisoning, Silica related diseases and Musculoskeletal disorders. Still much more is to be done for improving the occupational health research.

The working populations being largely illiterate are unaware of the hazards associated with their occupation. It leads to poor implementation of control measures and enforcement of laws. Thus, awareness and health education programme should be carried out for the workers. Health education programmes not only focus on the

occupational diseases but also includes advice on smoking, avoidance of drinking, eating and smoking at workplace etc.

According to the WHO report on 2011, Worldwide prevalence of job-related accidents and illness is more than 2 million annually, and this number appears to be raising because of industrialization in developing countries.

The statistics for the overall incidence or prevalence of occupational disease and injuries for the country is not available. According to the study findings of the Leigh et.al, total annual incidence of occupational disease between 924,700 and 1,902,300 and 121,000 deaths in India.

In India an estimated 1.2 million sanitary workers are involved in the sanitation of our surroundings. Apart from the social discrimination that these workers face, they are exposed to so many health hazards due to their occupation. These health problems include exposure to harmful gases like methane and hydrogen sulphide, cardiovascular diseases, musculoskeletal problems such as inter vertebral disc herniation, osteo arthritic changes and certain infections like hepatitis, leptospirosis and helicobacter, dermatological problems, respiratory problems and altered pulmonary function parameters. All over India 800 sewage work related accidents are reported annually.

There is no data about the occupational health and safety of sanitary workers; most of them are lower socio economic peoples. According to the official records of Chennai Metro water confirms that 17 sanitary worker deaths since 2003. The all over India number of deaths of sewage workers would run into the thousands. Workers who manage to survive plunging bare-bodied into clogged sanitary worker s suffered

by several diseases including TB. But if the statistics of earlier years are taken into account, as also the number of sanitary workers from private agencies who have died, the figure would be much higher. And it would run into several thousand if you consider the country as a whole.

Keeping the above facts in view, the researcher took up the task to assess the knowledge and attitude of sanitary workers. During her community posting the researcher noticed that many of the sanitary worker failed to wear the personal protective equipments. The researcher observed that most of the sanitary workers using tobacco, smoking cigarettes immediately after handling the waste materials without washing their hands ,and also they are consumed alcohol for tolerating the bad odor arises from the sewage particles. Even though there is numerous studies regarding occupational health effects of sanitation workers. There is very less studies regarding the prevention programme of occupational health hazards of sanitation workers. Hence, the researcher decides to provide a planned teaching programme on prevention of occupational health hazards. So the present study was planned to assess the knowledge and attitude of sanitary workers in response to planned teaching programme.

#### **STATEMENT OF THE PROBLEM**

A Quasi experimental study to evaluate the effectiveness of planned teaching programme on knowledge and attitude of sanitary workers regarding prevention of occupational health hazards in selected areas at Madurai – 2011.

## **OBJECTIVES**

1. To assess the prevalence of signs and occupational diseases among sanitary workers.
2. To assess the existing knowledge and attitude of sanitary workers on occupational health hazards.
3. To evaluate the effectiveness of planned teaching program on knowledge and attitude of sanitary workers on prevention of occupational health hazards.
4. To find out the relationship between post test knowledge and attitude of sanitary workers on prevention of occupational health hazards.
5. To determine the association between post test level knowledge and attitude with selected demographic variables.

## **HYPOTHESIS**

- H<sub>1</sub>** There will be a significant difference in the pre test and post test knowledge regarding prevention of occupational health hazards.
- H<sub>2</sub>** There will be a significant difference in the pre test and post test attitude regarding prevention of occupational health hazards.
- H<sub>3</sub>** There will be a significant relationship between knowledge and attitude regarding prevention of occupational health hazards.
- H<sub>4</sub>** There will be a significant association between the post test knowledge with selected demographic variables.
- H<sub>5</sub>** There will be significant association between the post test attitude with selected demographic variables.

**OPERATIONAL DEFINITION:****Effectiveness**

In this study it refers to the outcome of the teaching programme measured in terms of knowledge and attitude scores gained.

**Planned teaching program**

In this study it refers to a well planned instruction with a use of audio-visual aids helps to internalize the importance of prevention and care of occupational diseases.

**Knowledge**

Knowledge refers to the level of understanding on prevention of occupational health hazards as expressed through oral response from the sanitary workers.

**Attitude**

This refers to way of thinking, beliefs, and feelings regarding occupational health hazards as expressed in the form of statements as assessed by a rating scale.

**Sanitary worker**

A person, employed as by a municipality to collect and dispose of garbage or a person who is working in the management of waste water containing organic waste of human/animal or both.

**Occupational health hazards**

Occupational health hazards are refers to the diseases arising out of or in the course of occupation prevalent in that locality. In this study the common health problems existing among sanitary workers are respiratory diseases, skin diseases, gastro intestinal problems, eye diseases and musculo skeletal problems.

**ASSUMPTIONS**

1. The knowledge and attitude of the sanitary workers will influence their practices of prevention of occupational health hazards.
2. Demographic variables of sanitary workers may influence the knowledge attitude on prevention of occupational health hazards.
3. Health education at regular intervals will improve their knowledge and positive attitude on prevention of occupational health hazards among sanitary workers.
4. The verbal response of sanitary workers will exhibit their level knowledge and attitude on prevention of occupational health hazards.

**DELIMITATION**

The data will entirely be dependent on the verbalized responses of the respondents.

This study includes sanitary workers who are familiar with Tamil language.

This study is confined to selected geographical areas at Madurai.

**PROJECTED OUTCOME:**

The study findings would help to identify the knowledge and attitude of sanitary workers regarding prevention of occupational health hazards not only study group but also such population at large. The findings of the demographic variables would help to identify the factors which affect the level of knowledge and attitude of sanitary workers regarding prevention of occupational health hazards. The effective of planned teaching programme would enable the sanitary workers to accept and follow the precautions.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

Review of literature is a broad comprehensive in depth, systematic and critical review of scholarly publications, unpublished scholarly printed materials, audio-visual materials and personal communication. A literature review is a description and analysis of the literature relevant to a particular field or topic. It gives an overview of what has been said, who the key writers are, what are the prevailing theories and hypotheses, what questions are being asked, and what methods and methodologies are appropriate and useful. As such, it is not in itself primary research, rather it reports on findings of others.

Extensive review of research and non research literature being done to broaden the understanding and to gain insight in to the selected problems for the study. Along with the review of books and journals, and attempt was also made to review literature through internet research and non research literature.

This chapter deals with selected studies ,which are related to objectives of the proposed study, which helped the investigator to develop deeper insight in to the problem and gain information on what has been done in past. Review of literature consists of following headings

1. Studies on occupational health hazards among sanitary workers.
2. Studies on effectiveness of planned teaching programme - In general
3. Studies on knowledge and attitude of sanitary workers.



## **1. STUDIES ON OCCUPATIONAL HEALTH HAZARDS AMONG SANITARY WORKERS**

Occupational Health and Safety Centre, (1988) had ruled out a study in Mumbai to assess the occupational health hazards and working conditions of sewage workers from the Main Sewer Department of the Mumbai Corporation. 200 samples were taken for this study and the sample selection method for data collection is simple convenient sampling. The study was conducted to assess the morbidity profile and their prevalence among sewage workers in Mumbai city. It revealed that 60% of the workers had complaints of shortness of breath and persistent cough. 30% of the workers complained of itching all over the body, especially hands and feet. 53% of the workers had burning, redness of eyes and photophobia. 44% of the workers complained of diminished vision.

Schachter et. al, (1993) had done a study to assess the respiratory symptoms and ventilatory capacity of sewage workers in Croatia city. Totally 72 people were participated in this study. The workers were studied according to their work stations. 26 workers were worked in closed channels and 31 workers were in drainage and 17 sewage workers from other stations. The results show that the prevalence of chronic respiratory symptoms was higher in closed channel workers than controls, particularly for chronic cough such as 41.9% vs. 14.3%, Chronic phlegm was 38.7% vs. 14.3%, Chronic bronchitis was 32.3% vs. 8.6% and chest tightness was 29.0% vs. 0%. In the group of sewage workers, there was a high prevalence of acute symptoms which developed during the work shift, being particularly pronounced for eye irritation 16.1- 26.9%, dyspnea 16.1-23.1%, dizziness 6.5-23.1%, throat burning 9.7-19.2% and skin irritation 22.6-26.9%.

L. Friis, et. al, (1998) had done a cross-sectional study on abdominal symptoms among sewage workers. The objective of study was to investigate the prevalence of abdominal symptoms and the abdominal medical history among sewage workers. The aim of the study was to test an association of gastro intestinal symptom or gastro intestinal disease and sewage work. 156 male sewage workers from 11 Swedish municipalities were involved in this study. The results shows that There was no significant difference in the three months for prevalence of diarrhea, 95% persons having dyspepsia and 95% are affected by irritable bowel syndrome and 95% the sewage workers were affected more often by peptic ulcers during their present jobs than the referents, although the increased risk was not significant, adjusted odds ratio was 95% and the class interval was 6.1. The odds ratios were adjusted for age, use of tobacco products and alcohol consumption. The conclusion of this study was that sewage workers are less affected by nausea than comparable referents.

Smit et. al, (2005) conducted a study on endotoxin exposure and symptoms in wastewater treatment workers. The aim of the study was to investigate work related problems among these workers. 468 workers from 67 sewage treatment plants were participated in this study. Self-reported exposure data were investigated for the entire study population. Endotoxin exposure ranged from 0.6 to 2093 endotoxin units EU/m<sup>3</sup>, the geometric mean exposure was low 27 EU/m<sup>3</sup>. Factor analysis yielded three clusters of correlated symptoms, lower respiratory and skin symptoms, flu-like and systemic symptoms, and upper respiratory symptoms. Symptoms appeared to be more prevalent in workers exposed to endotoxin levels higher than 50 EU/m<sup>3</sup>. A significant dose-response relationship was found for lower respiratory and skin symptoms and flu-like and systemic symptoms ( $P < 0.05$ ). Wastewater treatment workers reported a wide range of symptoms that may be work-related. Microbial exposures such as endotoxin seem to play a causal role.

Wim van Hooste et. al, (2008) conducted study on Work-related Helicobacter pylorus infection among sewage workers in municipal wastewater treatment plants in Belgium. Objectives of the study was to assess the sero prevalence of Helico bactor pylorus infection in Belgian sewage workers at municipality, and to assess whether sewage exposure was an important risk factor for Helico bactor pylorus and is there any possible association with gastrointestinal symptoms. Study was conducted among 317 employees Information about demographic variables, possible Helico bactor pylorus risk factors, working history, and history of current gastrointestinal symptoms during last 3 months was obtained by a questionnaire. The presence of Helico bactor pylorus immune globulin was investigated with an Enzyme linked sorbent assay. The results were compared with those of 250 employees of a pharmaceutical company. Results shows that the prevalence of antibodies against among sewage workers was 16.7% compared to 13.6% among the control group. No significant associations were found between the Helico bactor pylorus status and gastrointestinal symptoms, occupational exposures in different tasks, nor with hygienic practices.

Purushottam, et. al, (2010) conducted a study on Morbidity Profile of Sewage Workers in Mumbai City. This was a cross sectional epidemiological. There were 150 sewage workers in Mumbai Municipal Corporation were involved in this study. The following results were obtained. On clinical examination, The eye problems 70.6% musculo skeletal problems 68.0% workers. 58.0% gastro intestinal problems, 52.6% respiratory problems. 52 % skin disorders, Injuries due to work 26.0% and minor injuries 70.6%. were detected. Thus, as the duration of service increases, ocular morbidity also increased  $p < 0.001$ . restrictive 20.2%. It was seen that as deterioration in lung function was found to be associated with increased duration of services  $p <$

0.05. This proportion increased steadily with each age group (23.3% in 35 to 39 yrs, to 39.1% in 40 to 45 yrs) increasing to 60.0% in 45 to 49 yrs to reach a maximum 65.2% in 50 to 54 yrs aged workers ( $p > 0.05$ ). In this study, almost all sewage workers 146 (97.3%) were addicted to one or the other addiction like tobacco, alcohol and smoking. None of the workers awareness regarding diseases caused due to sewage like lung diseases, worm infestation, leptospirosis and other major sewage related diseases.

## **2. STUDIES ON EFFECTIVENESS OF PLANNED TEACHING PROGRAMME**

Suneetha and Rao Anitha .C (2005) had assessed the Effectiveness of structured teaching programme on cancer cervix regarding the knowledge and attitude among married women residing in selected urban and rural areas of Karnataka. Research design used in this study was quasi-experimental design with one group pre test-post test. The multistage sampling technique was used. Structured Interview schedule using demographic, knowledge questionnaire and attitude scale was used for data collection. The findings of the study reveals that Most of married women 84% in urban area, 76% in rural had moderate knowledge. The pretest attitude score for all the married women 100% in urban, 92% in rural was favorable. The study showed that there was significant improvement between pretest and posttest knowledge, attitude score. There was significant association between knowledge on cancer cervix, attitude in urban, rural and selected demographic variables. The study concluded that structured teaching programme is more effective in urban than rural area in improving the knowledge.

R.Deepa, (2007) had done the study to evaluate the effectiveness of health education on prevention of swine flu among early adults in Sri Ramakrishna Arts and Science College at Coimbatore. It was the quasi experimental study and the research design used in this study was one group pre test –post test design. The tool or data collection were demographic questionnaire and knowledge questionnaire. The health education booklet was developed by the investigator. The descriptive statistics and inferential statistics were used for data analysis. The findings revealed that education was an effective to improve the knowledge level of the early adults about swine flu and its prevention.

Habibulla .N. syed, (2008) conducted a quasi-experimental study to assess the effectiveness of structured teaching program on prevention of occupational exposure to blood borne pathogens and also the knowledge, attitude as well as incidence of needle stick injury among student nurses. 106 student nurses were participated in this study. Self- administered knowledge questionnaire and an observation checklist to assess the attitude regarding hand washing, wearing gloves and handling needles was used for data collection. The results shows that use of gloves was rare while performing activities involving high risk of exposure to blood and body fluids. The experimental group reported a total of 18 injuries whereas the control group reported 24% injuries occurred while giving injections. Most common source of sharp injury were Intravenous needles 44% and syringes 32%. The study shows that structured training programme improved knowledge and attitude and reduced incidence of needle stick injuries in students of experimental group than control group.

### 3. STUDIES ON KNOWLEDGE AND ATTITUDE OF SANITARY WORKERS

Mohammed Iqbal, (2002) conducted a cross sectional, study to assess the knowledge, attitude and practice of hospital sanitary workers about waste disposal. 68 sanitary workers were participated in this study. Simple random technique was used to select the samples from the urban areas of Karachi. The study inferred that knowledge of all 100% sanitary workers about hospital waste management was inadequate. 38% of workers had positive attitude and the practice of was only 2 %. This study further revealed that 24.5% health-care facilities disposed infectious and non-infectious waste into public dustbins, 73.7% sanitary workers carry waste in to open bins for disposal. 67.9% were not using personal protective equipment.

Jyoti shrivastava et. al, (2005) conducted a study on effectiveness of planned teaching programme among fourth class workers in Choithram Hospital and Research Centre at Indore. The objectives of the study were to find out the level of knowledge of fourth class workers regarding ill-effects of tobacco consumption, practice of tobacco consumption and to evaluate the effectiveness of planned teaching program on creating awareness about the ill effects of tobacco consumption. 100 fourth class workers were involved in this study. Convenient sampling method was used select the samples. Research design used in this study was one group pre test post test design. The findings of the study shows that the mean post-test knowledge score was 23.42 and the mean pre-test knowledge score was 15.89, so the post test knowledge mean score higher than the pre test knowledge mean score. The results also shows that totally 60.86% participants were wished to stop tobacco consumption, among that 47.81% were males and 13.04% were females and Remaining 39.13% samples 34.78% male and 4.34% female, were not serious to stop tobacco consumption. Among that 34.78% were male and 4.34% were female.

Madiha Syed et. al, (2008) conducted a cross sectional survey on Knowledge, attitudes and practices regarding dengue fever among adults of high and low socioeconomic groups. 440 adults were participated in this study. Structured interview was used for data collection. The division of higher and lower socio economic group was divided on their income and locality. Findings of the study was about 35% of participants had adequate knowledge about dengue fever and its causative agent. Knowledge had significant associations with education ( $p= 0.004$ ) and socioeconomic status ( $p=0.02$ ). The high socio economic participants following better preventive practices. The low socio economic class following poor preventive practices. The high socio economic class had adequate knowledge than the low socio economic group. Hence, a greater focus should be needed for the low socioeconomic areas in future health campaigns.

Ramya. M, (2009) conducted a study to assess the knowledge, attitude and practice of sanitary workers about infection control measures. Descriptive research approach and one group pre test- post test design was used for this study. Sanitary workers of Bangalore municipality were participated in this study. Convenient sampling technique was used to select the samples. The study results shows that most of all sanitary workers 50 (100%) were having inadequate knowledge regarding infection control measures. 37(74%) had negative attitude and 13(26%) had neutral attitude regarding infection control measures. 44(88%) were not practicing infection control measures.

## CONCEPTUAL FRAME WORK

A theory is a framework initiated for some purpose. A theory is a set of interrelated constructs, definitions, propositions that present a systemic view of phenomena by specifying relations among variables with purpose of explaining and predicting the phenomena. Conceptual frame work for present study is Lewins Beck health belief model. Health belief model focuses the relationship between the person's belief and behavior. Use of this model is based on person's perception of the susceptibility to an illness. This model helps to understand the factors influencing client' perception, beliefs and behavior to plan the most effective care.

The first component of this model represents the individual's perception of susceptibility to an illness and the second component indicates individual's perception is influenced and modified by demographic and socio psychological variables, perceived threats of the illness and cues to action. The Third component is the likelihood that a person will take preventive action-is the persons perception of the benefits of taking action.

The conceptual frame work for the present investigation proposes that a sanitary worker may seek knowledge regarding occupational health hazards. When he or she perceives that (a) type of various diseases due to occupation. Mainly respiratory diseases, eye diseases, skin diseases, gastro intestinal and musculoskeletal disorders,( b) the causes involved in the occupational diseases,(c) the most common signs and symptoms of occupational diseases,(d) the primary, secondary and tertiary levels of prevention of occupational diseases, (e) the measures to relieve work pressure ,(f) Methods to avoid bad odour from the environment such as smoking alcoholism and other kind of substance abuse.

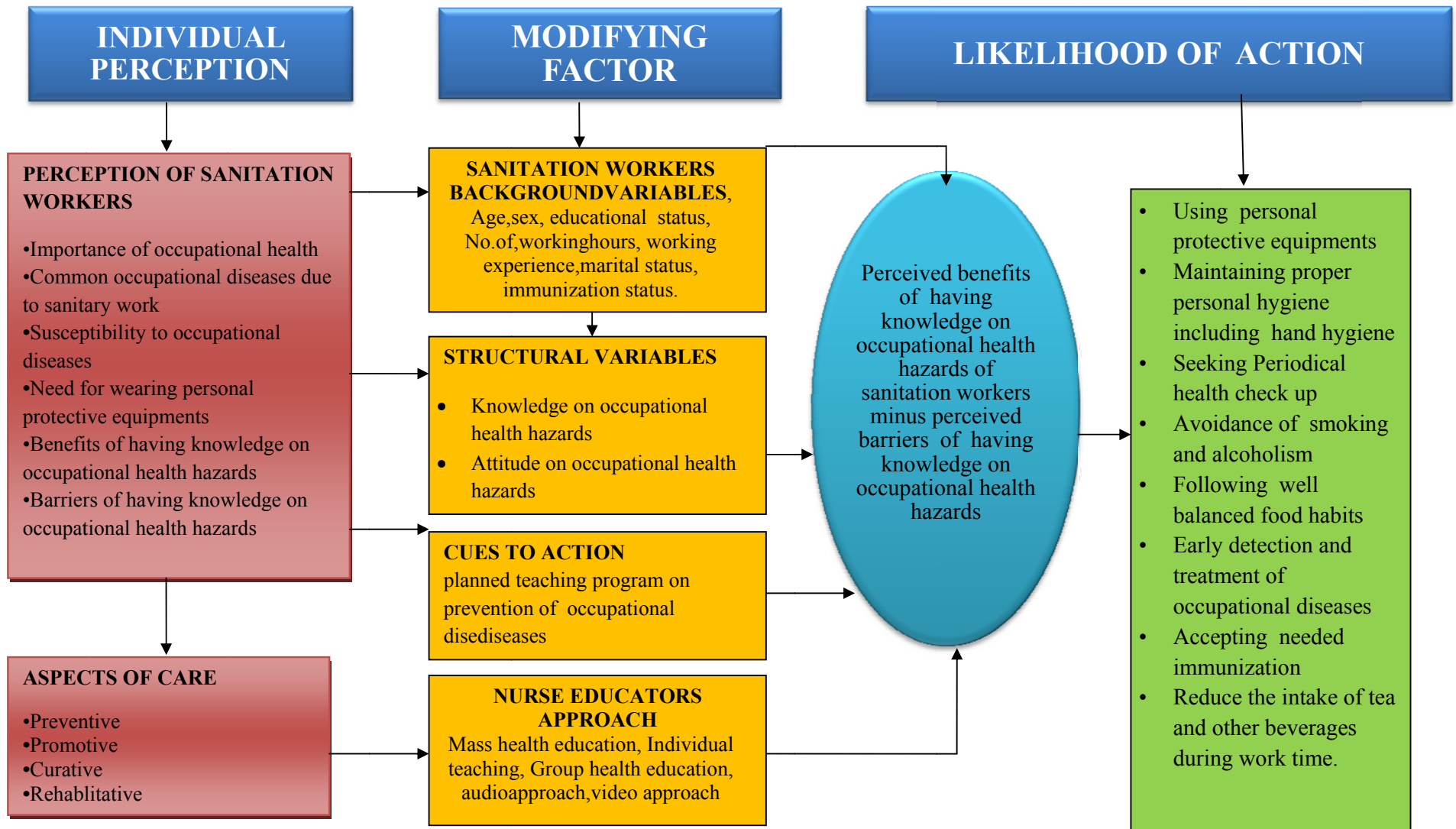


Social demographic variables and structural variables (modifying factors) may also condition a sanitary workers perception of developing occupational diseases to their selfs and benefits and barriers to structured teaching programme. The socio demographic variables (back ground variables) studied are Age, sex, educational status, Number of working hours, working experience, marital status, immunization status. The knowledge of sanitary worker regarding occupational health hazards on various aspects were considered to be the structural variable. The aspects of structured teaching programme include commonly affecting occupational diseases of the sanitary workers, causes, signs and symptoms, prevention and complications. The attitude of sanitary workers regarding occupational health diseases were considered to be the structural variable.

The stimulus called 'cue to action' is also necessary to motivate mother to have adequate knowledge and positive attitude on occupational health hazards. In this structured teaching programme was used as a stimulus to trigger the awareness sanitary workers regarding occupational health hazards.

The interaction of individual's perception with the modifying factors, structural factors and the cues, would result in likelihood of action after weighing the benefits and barriers. The likelihood of action in this study will be using personal protective equipments, maintain proper personal hygiene including hand hygiene, periodical health check up, avoidance of smoking and alcoholism ,following well balanced food habits, early detection and treatment of occupational diseases, accepting needed immunization, reduce the intake of tea and other beverages during work time.

**FIGURE 1 - CONCEPTUAL FRAME WORK**



**LEWIN AND BECKERS (1975) HEALTH AND BELIEF MODEL**

## **CHAPTER III**

### **METHODOLOGY**

This chapter deals with includes research approach, research design, setting of the study, population, sample, and sample size, sampling technique, Instrument and plan for data analysis.

#### **Research approach**

The research approach used for this present study was quasi experimental approach.

#### **Research Design**

Quasi experimental design was adopted with one group pre-test post-test design.

#### **Setting of the study**

The study was conducted in Madurai Corporation, north zone which is situated at a distance of 5 kilometer from C.S.I Jeyaraj Annapakiam college of Nursing. The Sanitary workers who were working in the Madurai Corporation north zone were involved in the study. The setting was selected based on acquaintance of the investigator with the area, feasibility of conducting study, availability of the sample, workers participation and proximity of the setting to the investigator.

#### **POPULATION:**

##### **Target**

The target population was all the sanitary workers those who were working in Madurai Corporation.

**Accessible**

The accessible population was the sanitary workers those who are working in North zone of Madurai Corporation.

**SAMPLING TECHNIQUE**

In this study, purposive sampling technique was used to select the samples. The list of sanitary workers were obtained from the health inspector of Madurai corporation. Based on the Inclusion and exclusion criteria 50 sanitary workers were selected through the purposive sampling technique.

**SAMPLE**

Sanitary workers of north zone of Madurai Corporation were selected as sample in this study

**SAMPLE SIZE**

The study samples were the sanitary workers in Madurai Corporation. The sample size for this quasi experimental study was 50.

**CRITERIA FOR SAMPLE SELECTION:**

The samples were selected based on the following inclusion and exclusion criteria.

**Inclusion criteria:**

The sanitary workers

- those who are in the age group of 20-60 years.
- those who are working in Madurai Corporation.
- those who are having more than one year experience .
- those who are willing to be participate in the study.

**Exclusion criteria:**

The Sanitary workers

- those who remain chronically absent (more than 6 months).
- those who are having temporary or part time job
- those who are not understand Tamil language.

**DEVELOPMENT OF AN INSTRUMENT**

After the intense library search and consultation with experts a structured interview schedule was developed to measure the knowledge and attitude of sanitary workers regarding prevention of occupational health hazards in selected areas at Madurai. The structured instrument has three parts.

**Part I: Demographic variables of the sanitary workers**

This section consists of 11 questions about demographic profile with age, sex, educational status, marital status, religion, occupational experience in years, duration of work per day, habits of any abusing substances, training on biomedical waste management and immunization status.

**Part II**

A well structured questionnaire which consists of 32 multiple choice questions regarding knowledge on prevention of selected occupational health hazards. The questions were further divided into 6 parts.

The first part has 4 questions regarding general aspects of occupational health hazards

The second part has 5 questions regarding respiratory problems

Third part has 5 questions regarding skin problems

Fourth part has 9 questions regarding gastro intestinal problems

Fifth part 4 questions regarding eye problems

Sixth part has 5 questions regarding Musculoskeletal problems

### **Part III**

It consists of Likert type attitude 5 Point scale to assess the attitude regarding occupational health hazards among sanitary workers. It consists of 12 statements, which includes 6 positive and 6 negative.

### **Scoring procedures:**

#### **Part II:**

The correct response to items in part II and part III are respectively knowledge and attitude related to health problems of sanitary and sewage workers was given a Numerical score. The knowledge was measured in terms of knowledge score. The maximum possible score was 100. A score of 1(one) was given to every correct response and a score zero was given to every wrong or do not know responses. For the purpose of the study, the knowledge score was classified as follows,

0-50 % - Inadequate

51-75% - Moderate

76 -100%- Adequate

#### **Part II**

It includes statements on attitude among sanitary and workers regarding prevention of occupational health hazards. There are totally 12 statements, the items will be measured on a 5 point scale from strongly agree to strongly disagree. The maximum score for measuring attitude of sanitary and sewage workers will be 60. Attitude score will be interpreted as follows

<b>Positive attitude</b>	<b>Strongly agree</b> <b>5</b>	<b>Agree</b> <b>4</b>	<b>Uncertain</b> <b>3</b>	<b>Disagree</b> <b>2</b>	<b>Strongly disagree</b> <b>1</b>
Negative attitude	1	2	3	4	5

81-100% - Positive attitude

61 - 80% - Neutral attitude

0 - 60% - Negative attitude

### **VALIDITY OF THE TOOL**

The tool used for the study was validated by 13 experts including 9 nursing experts, 3 physicians, and one sociologist. The tool was evaluated for appropriateness, adequacy, relevance, completeness and comprehensiveness. Comments and suggestions were invited and appropriate modifications were made accordingly and the tool was refined and finalized after establishing the validity. Based on their opinions and valuable suggestions a few items were modified and final tool was prepared as per suggestions given by experts, the questionnaire was translated in to Tamil language based on the need of study participants.

### **RELIABILITY OF THE TOOL**

The reliability of the tool was established by administration of the questionnaire to a sample of 5(10%) sanitary workers selected from Thirumangalam Municipality. Reliability was worked out by the test-retest method after a gap of 7 days. The Karl Pearson's co-efficient of correlation was computed. The 'r' value for knowledge and attitude was 0.89. The tool was found to be reliable.

## **PLANNED TEACHING PROGRAMME**

The investigator made planned teaching programme with a wide range of review of literature and with the experts valid suggestions. The content of planned teaching programme includes introduction, definition, types, causes, signs and symptoms and prevention of occupational health hazards. The average time taken for this teaching programme is around 45 minutes. The video used for this study was prepared with appropriate slides and the back voice was given by the investigator. The audio visual aids like video, flex, and pamphlets were used during teaching.

## **DATA COLLECTION PROCEDURE**

Data collection is the gathering information needed to address a research problem. The data were collected among sanitary workers who have been working in the Madurai Corporation. Written permission was sought and obtained from the authorities concerned. The period of data collection was 6 weeks. Technique used is purposive sampling. Data was collected through structured interview with the structured questionnaire to assess the knowledge and attitude. At the end of the session of interview, The video aided teaching programme was shown to the sanitary workers, 8 days later post test interview was obtained. The investigator spent a lot of time in listening to the problems of sanitary worker, most of the subjects were eager to express their feelings in the way they wanted to share rather than to conform to the questionnaire. This was time consuming. All the subjects were very much co operative.

## **PLAN FOR DATA ANALYSIS**

The data was analyzed in terms of the objectives of the study using descriptive and inferential statistics. The plan of data analysis is follows



1. Organize the data in the master data sheet.
2. Frequency and percentage distribution were used to analyze the demographic data for sanitary workers.
3. Frequency and percentage distribution were used to assess the level of knowledge and attitude of sanitary workers regarding prevention of occupational health hazards.
4. Mean, Mean percentage, standard deviation, and inferential measures 't' were used to assess and compare the pre test and post test knowledge and attitude.

### **PILOT STUDY**

The pilot study was conducted among five sanitary workers residing at Thirumangalam, to evaluate the effectiveness of planned teaching programme and find out the feasibility of conducting the main study. The structured questionnaire designed for the purpose was administered to five sanitary worker populations. These subjects had similar characteristics to the sample in the final study. The time taken to complete the tool was found to be satisfactory in terms of simplicity and clarity. Based on the time taken for collecting the data, arbitrary decision was taken to keep the sample size to 50. The tool used in the pilot study was found effective. The sample of pilot study was exempted from the main study.

### **PROTECTION OF HUMAN RIGHTS**

The proposed study was conducted after the approval of dissertation committee of the college prior to the main study. Permission was obtained from the head of the department of community health nursing, C.S.I Jeyaraj Annapackiam College of Nursing Madurai. Each individual was informed about the purpose of the study and confidentially was promised and ensured. Informed consent was obtained from the participants.

## CHAPTER IV

### DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data. The data were collected through structured interview questionnaire among 50 sanitary workers regarding occupational health hazards. This result was computed using descriptive and inferential statistics based on the objectives of the study. The findings of the study are presented in this chapter under the following headings.

1. Prevalence of signs and symptoms of occupational diseases among sanitary workers.
2. Distribution of sanitary workers based on the demographic variables.
3. Distribution of pre test and post test knowledge on prevention of occupational health hazards among sanitary workers.
4. Distribution of pre test and post test attitude on prevention of occupational health hazards among sanitary workers.
5. Difference between pre and post test level of knowledge among sanitary workers.
6. Difference between pre and post test level of attitude among sanitary workers.
7. Correlation between post test level of knowledge and level of attitude on prevention of occupational health hazards among sanitary workers.
8. Association of knowledge with the selected demographic variables on prevention of occupational health hazards among sanitary workers.
9. Association of attitude with the selected demographic variables on prevention of occupational health hazards among sanitary workers.

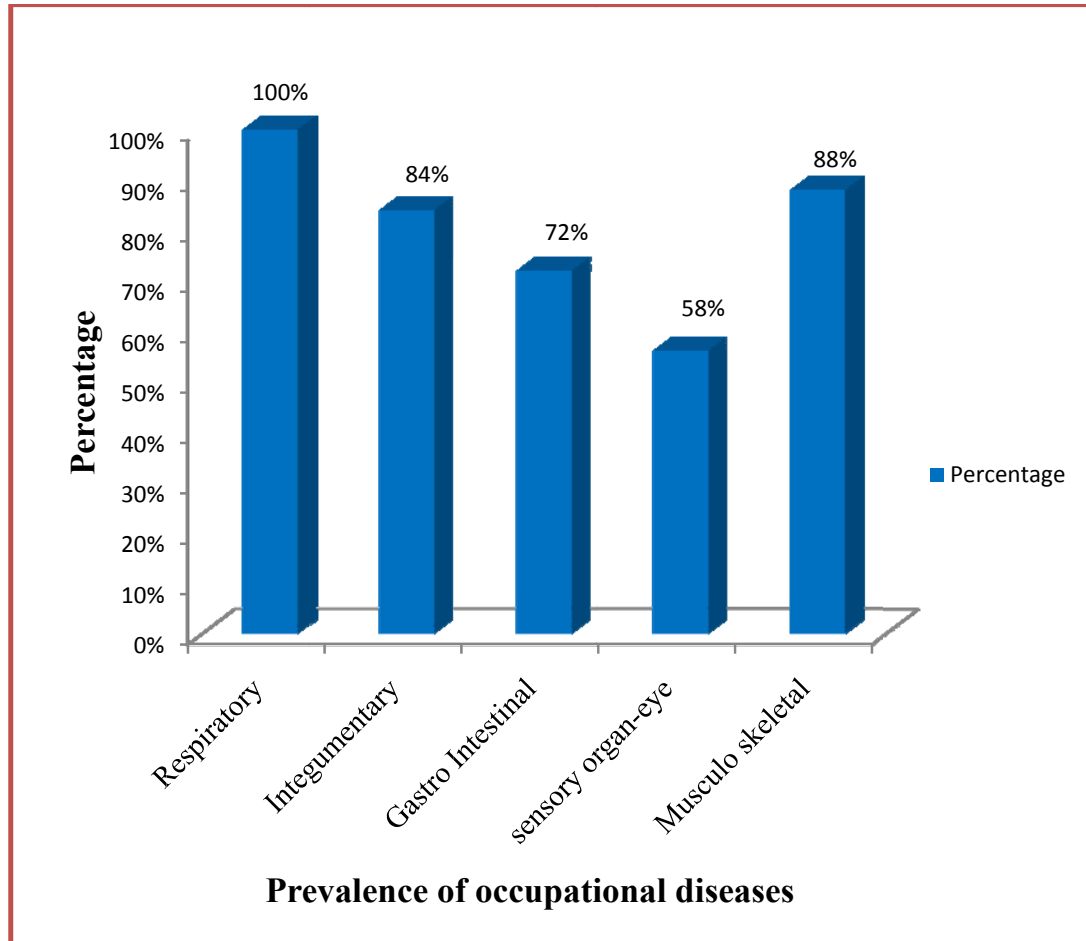
**Table 1**

**PREVALENCE OF SIGNS AND SYMPTOMS OF OCCUPATIONAL DISEASES BASED ON VARIOUS BODY SYSTEMS AMONG SANITARY WORKERS**

**n=50**

<b>S. No</b>	<b>Body system</b>	<b>Signs and Symptoms</b>	<b>Number</b>	<b>Percentage</b>
1.	Respiratory system	Recurrent upper respiratory tract infection	50	100
		Chronic cough	18	36
2.	Integumentary system	Itching	42	84
		Skin rashes / allergy	36	72
3.	Gastro Intestinal system	Recurrent episodes of diarrhea	12	24
		Worm infestations	29	58
4.	Sensory organ -eye	Burning sensation in the eye	12	24
		Eye irritation	16	32
5.	Musculo skeletal system	Back pain	44	88
		Pain in extremities	38	76

The table 1 Inferred that Majority of 50(100%) persons were suffered with recurrent episodes of upper respiratory tract infection. 42(84%) of workers having skin rashes and allergy. 44(88%) of workers having back pain

**FIGURE-2****PREVALENCE OF OCCUPATIONAL DISEASES BASED ON THEIR VARIOUS BODY SYSTEMS AMONG SANITARY WORKERS**

The figure 2 reveals that Majority of all 50(100%) workers had respiratory diseases. 44(88%) workers had skin diseases. 36 (72%) workers had gastro intestinal problems. 29(58%) workers had eye problems. 44(88%) workers had Musculo skeletal problems.

**Table 2.a**

**DISTRIBUTION OF SANITARY WORKERS BASED ON THEIR  
DEMOGRAPHIC VARIABLES SUCH AS AGE, SEX, EDUCATIONAL  
STATUS AND MARITAL STATUS**

n=50

Sl. No	Demographic Variables	Number	Percentage
<b>1.</b>	<b>Age</b>		
	1) 20 -30 years	8	16
	2) 30 - 40 years	16	32
	3) 40 - 50 years	14	28
	4) Above 50 years	12	24
<b>2.</b>	<b>Sex</b>		
	1) Male	37	74
	2) Female	13	26
<b>3.</b>	<b>Educational status</b>		
	1) Literate	24	48
	2) Illiterate	26	52
<b>4.</b>	<b>Marital status</b>		
	1) Married	46	92
	2) Unmarried	0	0
	3) Widowed	4	8
	4) Divorced	0	0

Table 2.a shows that among the sanitary workers majority 16 (32%) of the workers belonged to the age group of 31- 40 years. 37(74%) of the workers are male. 26(52%) of the workers are illiterate. 46 (92%) of the workers are married.

**Table 2.b**

**DISTRIBUTION OF SANITARY WORKERS BASED ON THEIR  
DEMOGRAPHIC VARIABLES SUCH AS RELIGION, EXPERIENCE,  
NUMBER OF WORKING HOURS, BAD HABITS**

n=50

<b>Sl. No</b>	<b>Demographic Variables</b>	<b>Number</b>	<b>Percentage</b>
<b>5.</b>	<b>Religion</b>		
	1) Hindu	48	92
	2) Christian	2	4
	3) Muslim	0	0
	4) Others	0	0
<b>6.</b>	<b>Experience</b>		
	1) 1 – 5 years	0	0
	2) 5 – 10 years	32	64
	3) Above 10 years	18	36
<b>7.</b>	<b>Number of working hours</b>		
	1) 5 – 8 hours	15	30
	2) Above 8 hours	35	70
<b>8.</b>	<b>Bad habits</b>		
	1) Yes	46	92
	2) No	4	8

Table 2.b shows that among the sanitary workers majority 48 (92%) of the workers belonged to Hindu religion, 32(64%) of the workers are having the experience of 5-10 years, 35(70%) of the workers are working above 8 hours, 46 (92%) are having bad habits like smoking, and alcoholism.

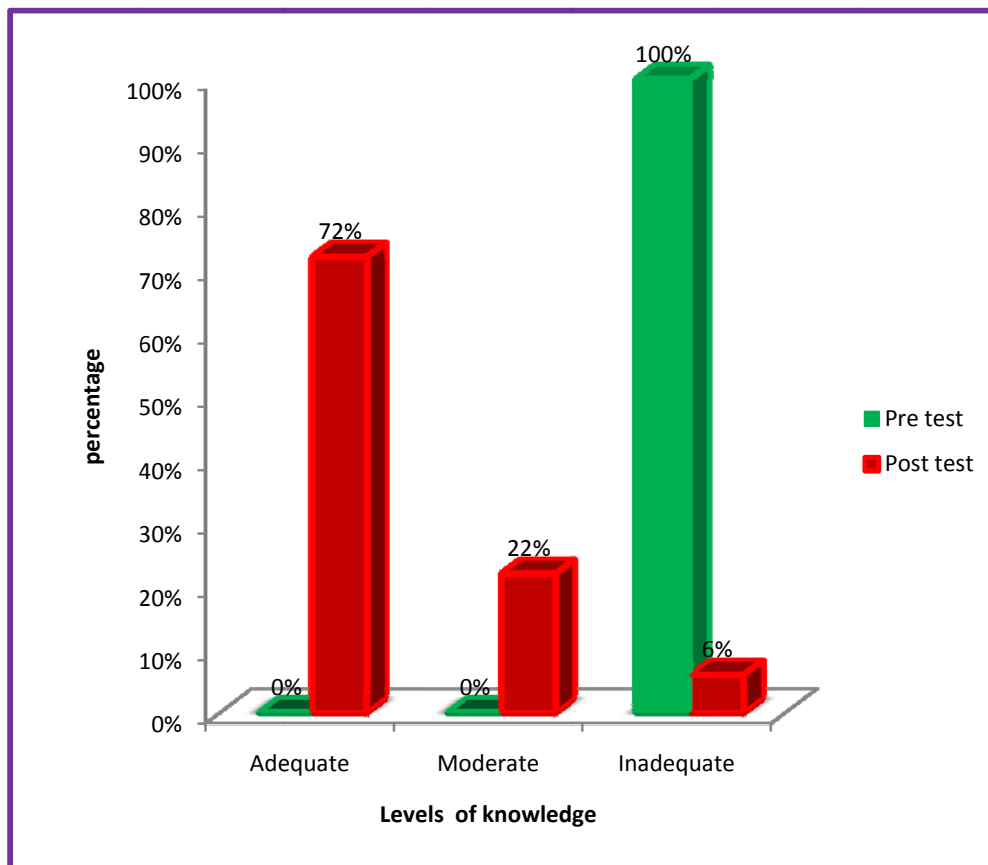
Table 2.c

**DISTRIBUTION OF SANITARY WORKERS BASED ON THEIR  
DEMOGRAPHIC VARIABLES SUCH AS BAD HABITS, PREVIOUS  
TRAINING ON BIO MEDICAL WASTE MANAGEMENT, IMMUNIZATION**

n=50

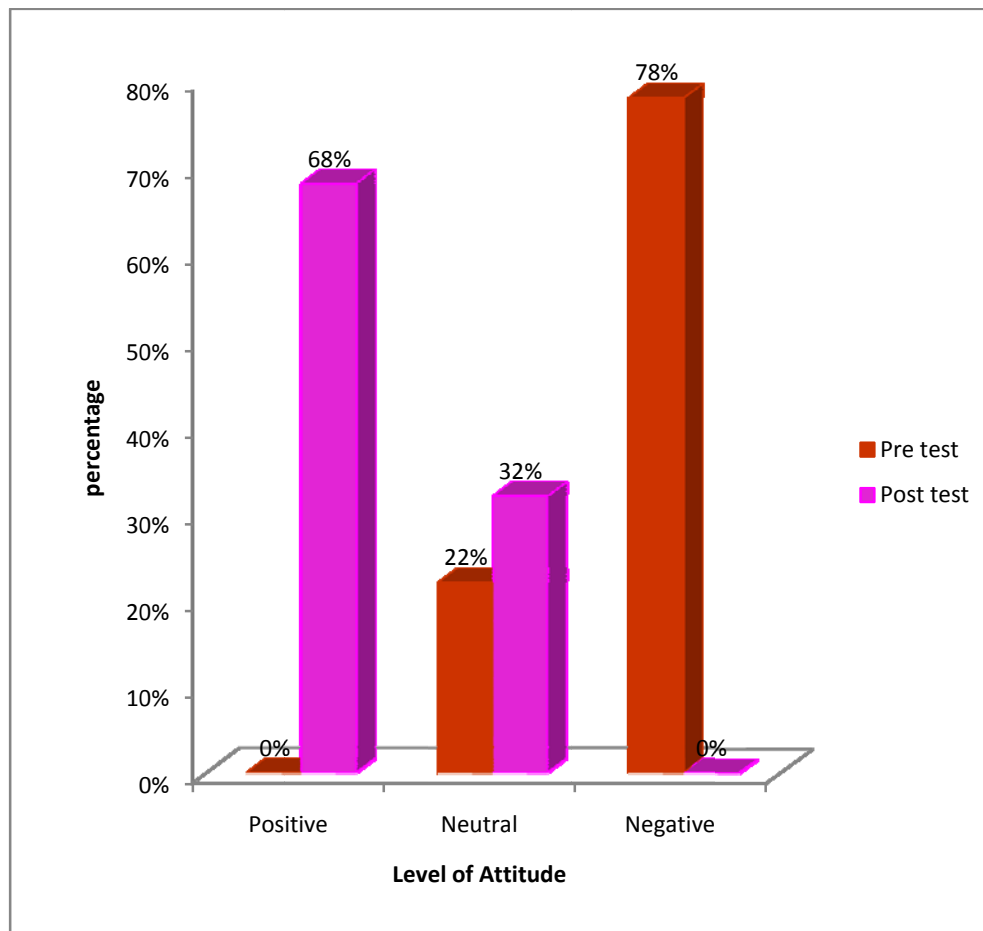
Sl. No	Demographic Variables	Number	Percentage
<b>9.</b>	<b>Bad habits</b>		
	1) Smoking	4	8
	2) Smokeless tobacco	8	16
	3) Drinking	10	20
	4) Drug addiction	0	0
	5) Smoking and smokeless tobacco	3	6
	6) Smoking and drinking	16	32
	7) Smoking and drug addiction	0	0
	8) Drinking and smokeless tobacco	5	10
	9) Drinking and drug addiction	0	0
	10) Smokeless tobacco and drug addiction	0	0
<b>10.</b>	<b>Previous knowledge regarding Bio – medical waste management</b>		
	1) Yes	0	0
	2) No	50	100
<b>11.</b>	<b>Immunization against vaccine preventable diseases</b>		
	1) Yes	10	20
	2) No	40	80

Table 2.c shows that among the sanitary workers majority 16 (32%) of the workers. had the habits of smoking and alcoholism. They are not having training regarding bio medical waste management. 40(80%) workers had immunized.

**FIGURE 3****DISTRIBUTION OF PRE TEST AND POST TEST LEVEL OF KNOWLEDGE  
ON PREVENTION OF OCCUPATIONAL HEALTH HAZARDS AMONG  
SANITARY WORKERS**

The figure 3 reveals that pre test knowledge for all 50 (100%) had inadequate knowledge. The post test knowledge revealed 36(72%) had adequate knowledge. 11(22%) had moderately adequate knowledge and 3(6%) had inadequate knowledge.



**FIGURE 4****DISTRIBUTION OF PRE TEST AND POST TEST LEVEL OF ATTITUDE ON PREVENTION OF OCCUPATIONAL HEALTH HAZARDS AMONG SANITARY WORKERS**

The above figure reveals that pre test attitude for all 39(78%) had negative attitude and 11(22%) had neutral attitude. The post test attitude revealed 33(66%) had positive attitude and 17(34%) had neutral attitude.

**Table 3.a**

**PRE AND POST TEST LEVEL OF KNOWLEDGE ON PREVENTION  
OF OCCUPATIONAL HEALTH HAZARDS AMONG SANITARY  
WORKERS**

**n = 50**

<b>Group</b>	<b>Mean</b>	<b>SD</b>	<b>Paired 't' test Value</b>
Pre test	18.36	6.42	*42.3
Post test	77.18	7.66	

**\*Significant at 0.05 level**

The above table reveals that the obtained 't' value was found to be highly significant at the level of ( $p < 0.05$ ). It is inferred that the sanitary workers exposed to the planned teaching program had significant increase in post test knowledge

**Table 3.b**

**PRE AND POST TEST LEVEL OF ATTITUDE ON PREVENTION  
OF OCCUPATIONAL HEALTH HAZARDS AMONG SANITARY  
WORKERS**

n = 50

<b>Group</b>	<b>Mean</b>	<b>SD</b>	<b>Paired 't' test Value</b>
Pre test	24.56	7.84	*20.4
Post test	49.46	4.86	

**\*Significant at 0.05 level**

The above table reveals that the obtained 't' value was found to be highly significant at the level of ( $p < 0.05$ ). It is inferred that the sanitary workers exposed to the planned teaching program had significant increase in post test attitude.

**Table 4**

**RELATIONSHIP BETWEEN POST TEST LEVEL OF KNOWLEDGE AND  
ATTITUDE ON PREVENTION OF OCCUPATIONAL HEALTH HAZARDS  
AMONG SANITARY WORKERS**

n = 50

<b>Group</b>	<b>Mean</b>	<b>SD</b>	<b>Paired 't' test Value</b>
Knowledge	45.78	7.66	*0.21
Attitude	49.46	4.86	

\*Significant at 0.05 level

The table 4 reveals that obtained knowledge mean score was 45.78 with a standard deviation of 7.66 and obtained attitude mean score was 49.46 with standard deviation of 4.86 .The relationship between post test knowledge and attitude 'r' value is 0.21(p<0.05).

**Table 5.a**

**ASSOCIATION OF KNOWLEDGE WITH THE SELECTED  
DEMOGRAPHIC VARIABLES SUCH AS AGE, SEX, EDUCATION AND  
MARITAL STATUS AMONG SANITARY WORKERS**

n=50

S. No	Variable	Adequate	Moderately adequate	Inadequate	$\chi^2$
1	<b>Age in years</b>				
	20-30	4	3	1	
	31-40	11	5	0	# 5.65
	41-50	12	1	1	
	Above 50	9	2	1	
2	<b>Sex</b>				
	Male	25	9	3	# 1.78
	Female	11	2	0	
3	<b>Education</b>				
	Literate	17	5	2	# 0.45
	Illiterate	19	6	1	
4	<b>Marital status</b>				
	married	33	10	3	
	Unmarried	0	0	0	# 0.28
	widowed	3	1	0	
	Divorced	0	0	0	

# Not significant

Table 5.a shows the association between demographic variables with post test knowledge among sanitary workers. Regarding age the  $\chi^2$  was 5.65(p<0.05) which was significant. Regarding sex the  $\chi^2$  was 1.78 (p<0.05) which was not significant. Regarding education the  $\chi^2$  was 0.45 (p<0.05) which was not significant. Regarding marital status the  $\chi^2$  was 0.45(p<0.05) which was not significant.

**Table 5.b**

**ASSOCIATION OF KNOWLEDGE WITH THE SELECTED  
DEMOGRAPHIC VARIABLES SUCH AS RELIGION, EXPERIENCE,  
WORKING HOURS AMONG SANITARY WORKERS**

n=50

S. No	Variable	Adequate	Moderately adequate	Inadequate	$\chi^2$
5	<b>Religion</b>				
	Hindu	34	11	3	
	Christian	2	0	0	# 0.80
	Muslim	0	0	0	
	Others	0	0	0	
6	<b>Experience</b>				
	1 to 5 years	0	0	0	
	5 to 10 years	24	6	2	#1.21
	Above 10 years	12	5	1	
7	<b>Working hours</b>				
	1 to 5 hours	11	3	1	#0.27
	5 to 10 hours	25	8	2	

# -Not significant

Table 5.b shows the association between demographic variables with post test knowledge among sanitary workers. Regarding the religion the  $\chi^2$  was 0.80 ( $p < 0.05$ ) which was not significant. Regarding the experience the  $\chi^2$  was 1.27 ( $p < 0.05$ ) which was not significant. Regarding the Number of working hours per day the  $\chi^2$  was 0.27 ( $p < 0.05$ ) which was not significant.

**Table 6.a**

**ASSOCIATION OF ATTITUDE WITH THE SELECTED DEMOGRAPHIC  
VARIABLES SUCH AS AGE, SEX, EDUCATION AND MARITAL STATUS  
AMONG SANITARY WORKERS**

n=50

S. No	Variable	Positive	Neutral	Negative	$\chi^2$
1	<b>Age in years</b>				
	20-30	5	3	0	
	31-40	13	3	0	# 3.27
	40-50	8	6	0	
	Above 50	8	4	0	
2	<b>Sex</b>				
	Male	24	13	0	# 0.84
	Female	10	3	0	
3	<b>Education</b>				
	Literate	16	8	0	# 0.01
	Illiterate	18	8	0	
4	<b>Marital status</b>				
	Married	32	14	0	
	Unmarried	0	0	0	# 0.64
	Widowed	2	2	0	
	Divorced	0	0	0	

# Not significant

Table 6.a shows the association between demographic variables with post test attitude among sanitary workers. Regarding age the  $\chi^2$  was 3.28 ( $p < 0.05$ ). Regarding sex the  $\chi^2$  was 0.84 ( $p < 0.05$ ). Regarding education the  $\chi^2$  was 0.01 ( $p < 0.05$ ). Regarding marital status the  $\chi^2$  was 0.64 ( $p < 0.05$ ). So all selected demographic variables were not significant.

**Table 6.b**

**ASSOCIATION OF ATTITUDE WITH THE SELECTED DEMOGRAPHIC VARIABLES SUCH AS RELIGION, EXPERIENCE AND WORKING HOURS AMONG SANITARY WORKERS**

n=50

S. No	Variable	Adequate	Moderately adequate	Inadequate	$\chi^2$
5	<b>Religion</b>				
	Hindu	34	11	3	
	Christian	2	0	0	#0.80
	Muslim	0	0	0	
	Others	0	0	0	
6	<b>Experience</b>				
	1 to 5 years	0	0	0	
	5 to 10 years	20	12	0	#1.21
	Above 10 years	14	4	0	
7	<b>Working hours</b>				
	1 to 5 hours	10	5	0	
	5 to 10 hours	24	11	0	#0.27

# -Not significant

Table 6.b shows the association between demographic variables with post test attitude among sanitary workers. Regarding the religion the  $\chi^2$  was 0.18(p<0.05) which was not significant. Regarding the experience the  $\chi^2$  was 1.27 (p<0.05) which was not significant. Regarding the Number of working hours per day the  $\chi^2$  was 0.27 (p<0.05) which was not significant.



## CHAPTER V

### DISCUSSION

This study was conducted to evaluate the effectiveness of planned teaching programme on knowledge and attitude of prevention of occupational health hazards among sanitary workers in selected areas at Madurai.

The discussion was based on the objectives specified in this study.

**The first objective of this study was to assess the prevalence of signs and symptoms of occupational diseases among sanitary workers in selected areas at Madurai.**

The study findings reveals that majority of 50 (100%) sanitary workers were suffered from respiratory diseases such as 50 (100%) workers had recurrent upper respiratory tract infections and 18(36) workers had chronic persistent cough. 42 (100%) sanitary workers were affected with skin diseases in that 42(84%) had itching all over the body and 36(72%) sanitary workers were affected with allergy and skin rashes. 36 (72%) of workers had gastro intestinal problems including 12(24%) had recurrent episodes of diarrhea and 30(60) sanitary workers had worm infestation. 28(56%) sanitary workers were suffered from eye problems in that 12(24%) of workers had burning sensation in the eye and 16(32%) sanitary workers were suffered with eye irritation. 44(80%) workers were affected with musculo skeletal problems such as 44(88%) had back pain and 38 (76%) workers had arm and leg pain.

This study was supported by the study conducted by Purushottam, et al (2010) on Morbidity Profile of Sewage Workers in Mumbai City. The following results were obtained. On clinical examination, The eye problems 70.6% musculo skeletal

problems 68.0% workers. 58.0% gastro intestinal problems, 52.6% respiratory problems. 52 % skin disorders, Injuries due to work 26.0% and minor injuries 70.6% were detected.

**The second objective of this study was to assess the existing knowledge and attitude of prevention of occupational health hazards among sanitary workers.**

The findings of the study shows that majority of sanitary workers had inadequate knowledge 50 (100%) and 34 (78%) had negative attitude and 16 (32%) had negative attitude on prevention of occupational health hazards in the pre test conducted before administering the planned teaching programme.

These findings were consistent with the study done by Ramya.M.(2009) conducted a study to assess the awareness of knowledge, attitude and practice of infection control measures among sanitary workers. regarding knowledge of infection control measures All 50 (100%) workers had inadequate knowledge regarding infection control measures. 37(74%) had negative attitude and 13(26%) had neutral attitude regarding infection control measures. 44(88%) were not practicing infection control measures.

**The third objective of the study is to evaluate the effectiveness of planned teaching program on knowledge and attitude of sanitary workers regarding prevention of occupational health hazards.**

The 't' value 42.3  $p(<0.05)$  indicates that there is a statistically significant difference between the pre test and post test knowledge level of the sanitary workers. For attitude 't' value of 20.4  $p(<0.05)$  shows that there is statistically significant difference between pretest and post test knowledge.

This study was supported by Jyoti shrivastava et.,al conducted a study on effectiveness of planned teaching programme among fourth class workers in Choithram Hospital. The findings of the study shows that the mean pre test knowledge score was 15.89 and the mean post-test knowledge score was 23.42 and the post test knowledge mean score higher than the pre test knowledge mean score. So the planned teaching programme was very effective.

**The fourth objective of this study was to find out the relationship between post test level of knowledge and attitude of sanitary workers on prevention of occupational health hazards.**

The post test knowledge mean value was 77.18 and SD was 7.66, the post test attitude mean value was 49.46 and SD was 4.86. The relationship between post test knowledge and attitude 'r' value was 0.21. This shows there was a positive correlation between the post test level of knowledge and attitude of sanitary workers on prevention of occupational health hazards. This inferred that the attitude of sanitary workers was positively influenced by their knowledge to some extent.

This study was supported by Priya Thomas (2009) conducted a study to evaluate the effectiveness of structured teaching programme on infection control among hospital sanitary workers. The results obtained that compare with pre test level of knowledge and attitude and post test level of knowledge and attitude, If the knowledge level increases attitude level also increased.

**The fifth objective of the study is to determine the association between post test level of knowledge and attitude with selected demographic variables.**

Regarding the association between the level of knowledge and attitude with selected demographic variables, the findings shows that there was no significant association between knowledge and attitude with all selected demographic variables. Such as age, sex, educational status, experience and number of working hours . So the hypothesis H<sub>4</sub> and H<sub>5</sub> were rejected. The investigator realize that inspite of all seen the variables the planned teaching programme will improve the knowledge and attitude of sanitary workers regarding prevention of occupational health hazards.

This study was supported by Rajnarayaj Tiwari(2008) conducted a study on knowledge, of sanitary and sewage workers regarding occupational health hazards, The results shows that there is no significant association between the knowledge and demographic variables.

The knowledge and attitude regarding health hazards of sanitary workers is not constrained with their demographic variables. They are not ready to accept the hygienic practices, and the change made by the government as well as NGO's.

## **CHAPTER VI**

### **SUMMARY AND RECOMMENDATION**

This chapter deals with the summary, findings, it focuses on the implications and gives recommendations for nursing practice, nursing research, nursing administration, and nursing education. The technical research effort of the investigator has helped in presenting the study findings that was revealed from the sanitary workers prevention of occupational health hazards after structured teaching programme.

#### **SUMMARY OF THE STUDY**

The focus of the study was to evaluate the effectiveness of planned teaching program on knowledge and attitude on prevention of occupational health hazards among sanitary workers in selected areas at Madurai. An intensive search of review of literature helped the investigator to develop the conceptual frame work, questionnaire, checklist and methodology. The review of literature was done with various kinds of books, journals and electronic resources. The conceptual frame work adopted for this study was Levin and Becker's health belief model (1975).

Research design adopted for this study was quasi experimental design. A questionnaire and a check list were developed by the investigator to assess knowledge and attitude of sanitary workers regarding prevention of occupational health hazards. The tool was found to be reliable and feasible. The reliability of the tool was established by administration of the questionnaire to a sample of 5 sanitary workers selected from Thirumangalam. Reliability was worked out by the test-retest method after a gap of 8 days. The Karl Pearson's co-efficient of correlation was computed.

The 'r' value for knowledge was 0.98 and attitude was 0.89. The tool was found to be reliable. The gathered data were computed and analyzed in terms of the study objectives.

The main study was conducted in Madurai for a period of six weeks. Convenient sampling technique was used to collect data from the participants. Descriptive and inferential statistics were used for organize, analyze, and interpret the data.

### **MAIN FINDINGS OF THE STUDY**

The study findings shows majority of 50(100%), workers had respiratory diseases, 44(88%) had skin diseases, 36(72%) workers had gastro intestinal problems, 29(58%) of workers had eye problems whereas 44(88%) had musculoskeletal problems.

Regarding the pre test level of knowledge among sanitary workers, all respondents 50 (100%) had inadequate knowledge regarding prevention of occupational health hazards particularly about the major work related diseases, causes, signs and symptoms and prophylactic measures of disease prevention. Regarding the level of attitude 39 (78%) had negative attitude and remaining 11(22%) of the total sanitary workers negative attitude towards prevention of occupational health hazards.

The investigator feels that poor literacy rate, work burden and unhealthy working environment leads to inadequate knowledge and attitude among sanitary workers. Also the finding shows that there is no health awareness programme conducted like occupational health hazards and bio medical waste management.

Regarding effectiveness of planned teaching programme, mean score of post test knowledge was higher than the pretest knowledge. Pre test score was 18.36 and post test was 77.18. The mean score of attitude in pre test was 24.56 and post test was 49.46, so Post test attitude mean score is higher than pre test attitude mean score. This finding indicates that there was significant difference pre test and post test knowledge and attitude regarding occupational health hazards among sanitary workers. This was observed that the planned teaching programme was effective. The results reveals that the planned teaching programmes play a vital role in creating awareness of the sanitary workers.

Regarding the relationship between post test level of knowledge and attitude there exist a positive correlation on Karl Pearson correlation coefficient  $r = 0.21$ .

Regarding association between level of knowledge and attitude with selected demographic variables, there was no significant association between level knowledge with demographic variables such as age, sex, educational status, income, years of experience and number of working hours per day.

Regarding association between the levels of attitude with selected demographic variables, there was no significant association between level with demographic variables such as age, sex, educational status, income, years of experience and number of working hours per day.

The investigator feels that this planned teaching programme was helps to create the positive attitude on sanitary workers. This education brings considerable changes in attitude of sanitary workers regarding the use of personal protective equipments.

## **CONCLUSION**

The main conclusion of this present study is that all the sanitary workers were affected with occupational health diseases. The planned teaching programme is very much effective in bringing the changes on knowledge and attitude regarding prophylactic measures for reducing work related diseases such as to wear mask, clean clothes, maintain personal hygiene, to avoid prolonged exposure of direct sun light, avoid smoking and alcoholism, reduce the intake of coffee, tea and other beverages often, use separate slippers for work place and personal use, deworming to the them and their family members. Instead of rubbing the eyes they are educated to gently wash the eyes with clean and cold water. Advice them to maintain proper body mechanics. Suggestions given for them regarding periodical health check ups and the appropriate immunization. The study results shows that the planned teaching programme increased the health seeking behavior among sanitary workers.

## **IMPLICATIONS OF THE STUDY**

The findings of the study have several implications in the areas namely nursing practice, nursing education, nursing administration, and nursing research.

### **IMPLICATIONS FOR NURSING PRACTICE**

1. The findings on sanitary workers show the need for preventive education occupational health hazards through public health personnel to increase knowledge and attitude regarding occupational health hazards.
2. The study findings will helps to identify the common health problems of sanitary workers and thereby prevent sanitary workers from prevention of occupational health hazards.



3. The study findings will encourage the community health nurses to create awareness among sanitary workers about occupational health hazards through the mass health education campaigns, Individual health education programme and Group health education programme.
4. It will help the community health nurse to organize annual master health checkups and periodical health visits to the sanitary workers.
5. Audio visual aids like short film, flex and pamphlets serve as the best teaching aid for individual learning or group learning of sanitary workers.

#### **IMPLICATIONS FOR NURSING EDUCATION**

1. This study will be an eye opener for future Nursing students to pay attention in collecting materials for health education of sanitary workers in hospital and community area.
2. It helps to educate the Nursing students with facts on prevention of occupational health hazards among sanitary workers.
3. This study will enable the student Nurses to teach the sanitary workers with the different aspects of knowledge regarding occupational health hazards.

#### **IMPLICATIONS FOR NURSING ADMINISTRATION**

1. This study will help the community health administrator to assign more number of community health nurses in order to assess and educate the community to have healthy citizens in our country.
2. This will encourage the Nurse administrator to arrange workshops, seminars regarding prevention of occupational health hazards among sanitary workers.
3. Audio visual aids regarding prevention of occupational health hazards among sanitary workers should be kept in sub centres, primary health centres and District hospitals for further use of sanitary workers of that locality.

4. It will help the Nurse administrator to arrange the various rehabilitation services especially smoking and alcoholism for sanitary workers.

### **IMPLICATIONS FOR NURSING RESEARCH**

1. This study can be a baseline for the future studies build upon.
2. This study motivates the other investigator expand the scientific body of professional knowledge upon which further study can be conducted.
3. This study will bring about the fact that more studies will be conducted in the sanitary workers community.
4. Large scale studies can be conducted.

### **RECOMMENDATIONS**

1. A similar study can be conducted for long duration
2. A similar study should be conducted by utilizing other domain like practice
3. A similar study can be conducted as a comparative between hospital and community sanitary workers.
4. A similar study can be conducted on a large population
5. Counseling centre for sanitary workers should be held in each union, Municipal and Corporation offices.
6. . ESI benefits should be given to the sanitary workers also.
7. 8. All sanitary workers must be immunized with TT and Hepatitis B vaccination

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