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A descriptive study to assess the knowledge level on effects of inhaling vapours of petrol on health among petrol pump workers in selected area of Pune city

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Abstract

There are now many upcoming problems and issues regarding petrol inhalation among many petrol pump workers and the civilians who used petrol as day-to-day essentials.

Petrol is one of the most important stuff/ needs in our everyday life. The major effect of using petrol is that it is one of the greatest non-renewable resources. Petrol is a fossil fuel which is decomposed by the organic matter which was over million of years and ages. It is one of the highly inflammable liquid and it generally can affect the health of human beings. It is made up of crude oil and it is a mixture of members of hydrocarbons. The indicated colour of petrol was orange and it is a known non- renewable source of energy.

There were approximately between 50 workers including all the employees in each of the pumps. Many workers were employed there to earn their daily life / wages. The workers there were a source of income for many family. The need to study about the knowledge of the workers would help them to gain more knowledge about the effects of petrol vapour inhalation in their future and day-to-day life.

Quantitative approach was chooser for the research study. The research design used for the study was exploratory survey design. The study consists of 100 samples which are selected by nonprobability convenience sampling. The study was conducted in various petrol pump station in Pune. The data was collected by administering structured questionnaires to 100 participants under study. The questionnaire consists of two parts.

Section-A which deals with demographic data of participants and Section-B which consists of questions related to knowledge regarding the effects of inhaling vapours of petrol on health.

Major findings of the study were, Majority 49% of the workers where from the age group 22 to 25 years. Majority 54% of the samples where educated up to secondary level. Majority 88% where male employed workers. 67% of the workers where having knowledge regarding the effects of inhaling vapours of petrol on health and majority 57% where having a work experience of 1 to 5 years. 32% of the workers have poor knowledge regarding the effects of inhaling vapours of petrol on health. And 1% among the workers where having good knowledge regarding the effects of inhaling vapours of petrol on health.

Keywords: Inhaling vapours, petrol pump workers, health among, Pune

Introduction

There are now many upcoming problems and issues regarding petrol inhalation among many petrol pump workers and the civilians who used petrol as day-to-day essentials. Petrol is one of the most important stuff/needs in our everyday life. The major effect of using petrol is that it is one of the greatest non-renewable resources. Petrol is a fossil fuel which is decomposed by the organic matter which was over millions of years and ages. It is one of the highly inflammable liquid and it generally can affect the health of human beings. It is made up of crude oil and it is a mixture of members of hydrocarbons. The indicated colour of petrol was orange and it is a known non- renewable source of energy ^[1].

The occupational exposure to petrol fumes have had a toxic effects on various organs and respiratory tract while it includes organs like the heart, lungs, kidney and even one of the sensory organs i.e. our skin. The toxicity produces a result in various diseases and effects.

There were approximately between 50 workers including all the employees in each of the pumps. Many workers were employed there to earn their daily life/wages.

The workers there were a source of income for many family. The need to study about the knowledge of the workers would help them to gain more knowledge about the affects of petrol vapour inhalation in their future and day-to-day life.

Need of the study

The inhalation of petrol is one of the most affected respiratory problems in the society. The need to study about the petrol pump workers is because, they were spending most of their times in that risky area. The chemical of which present in the petrol is ethylene.

In the year 2018 of August 01, Samar Alsaggaf of Anatomy Department, Faculty of Medicine, King Abdulaziz University, Jeddha, Saudi Arabia, according to his review on petrol induced histopathological effect in laboratory animals, "it constricted more than 500 saturated/ unsaturated hydrocarbons having 3-12 carbons such as pentane, toluene, n- hexane and benzene."

There are few studies which effect the health by petrol vapours because petrol is one of toxic products. According to various studies direct inhalation of petrol fumes can affect

the lungs. When the petrol gets enter into the bloodstream, it can reduce the function of CNS (Central Nervous System). And ingestion of petrol can also lead to abdominal pain, lungs problem, when it enters the lungs it may lead to Pneumonia.

Some symptoms for skin and eyes when it gets exposed by petrol are given below:-

- Skin irritation
- Hyperkeratosis
- Dryness of skin
- Peeling of skin
- Vision loss

Objective of study

1. To assess the knowledge level on effects of inhaling vapours of petrol on health.
2. To assess the associated finding with selected petrol pump workers on demographic variables.

Research Methodology

Research approach

Quantitative approach was used in this study



Research design

Non- Experimental descriptive research design



Settings

study was conducted on selected petrol pump of Pune city,
(Deshmukh Petroleum Station – Pune - Satara Road, Pune Maharashtra, Indian Oil Pump – Katraj Kondhwa Road, Pune,
Beldare Patil Petroleum - Ambegaon Bk Katraj, Pune)



Target population

the population of the present study comprises co-workers of petrol station who fill the petrol in the vehicles.



Sample

selected co-workers of petrol station who fill the petrol in the vehicles.



Sampling technique – non- probability convenient sampling technique



Sample size is 100



Tool for data collection

Informed Consent form

Section: -A It includes demographic data that consist Age, Gender, Education and working experience

Section: -B It includes self-structured questionnaires to assess the knowledge level on effects of inhaling vapours of petrol on health.



Analysis of the data

Descriptive and inferential statistics.

Fig 1: Schematic representation of the Research methodology

Data collecting process

- The permission was granted by the Principal of the college.
- The sample was selected according to the criteria.
- The consent was taken from the selected samples.
- Tool was distributed among the selected samples.
- The sample size was 100.
- The instructions were given to the selected samples.
- After completion of form, the questionnaires were

collected back.

- Documentation and analysis.

Data analysis

Analysis is the process of categories, ordering, manipulation, and summarizing of data to be obtain answer to research question. The purpose of the analysis is to reduce data to an intelligible and interpretable form so that the relation of research problem be studied and tested.

Table 1: Above table shows that, thirty two percent of petrol pump workers have poor knowledge about effects of inhaling vapours of petrol on health, about sixty seven percent of petrol pump workers have average knowledge and only one percent of petrol pump worker were came under good knowledge. It concludes that 32% of the petrol pump workers have poor knowledge level on effects of inhaling vapours of petrol on health and 67% of the petrol pump workers have average knowledge about the effects of inhaling vapours of petrol on health. n= 100

| Level of Knowledge | Frequency | Percentage % |
|--------------------|-----------|--------------|
| Poor (1-7) | 32 | 32% |
| Average 8-14) | 67 | 67% |
| Good (15-20) | 1 | 1% |

Conclusion

The researcher conducted “a descriptive study to assess the knowledge level on effects of inhaling vapours of petrol on health among petrol pump workers in selected area of Pune city”.

In this study it found that, thirty two percent of petrol pump workers have poor knowledge about effects of inhaling vapours of petrol on health, about sixty seven percent of petrol pump workers have average knowledge and only one percent of petrol pump worker were came under good knowledge. It concludes that 32% of the petrol pump workers have poor knowledge level on effects of inhaling vapours of petrol on health and 67% of the petrol pump workers have average knowledge about the effects of inhaling vapours of petrol on health.

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