

Toxic Hazards of Paints on Painters in Bangalore City

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Abstract

In a city like Bangalore, many buildings are being constructed every day, each building will be painted on a daily basis, and many painters will be working on it. Many face significant health risks from toxic hazards associated with paints and chemicals used in paints. These health hazards include exposure to heavy chemicals and inhalation of paint fumes. Prolonged exposure to paint fumes and other harmful chemicals, especially those containing volatile organic compounds (VOCs), can cause respiratory issues, including asthma and bronchitis, etc... Few paints contain toxic components such as lead, cadmium, and chromium, which can lead to severe health issues, which including lungs infection, kidney damage and cancer.

Objective:

1. To understand the health hazards faced by painters.
2. To identify the risks caused paints.
3. To know better paint used in current scenario.

The major aim of the study was to investigate the types of problems, faced by painter while doing paint in Bangalore City. The respondents opined that their major problems face during paint chemicals. The objectives were to find out the difficulties faced by the painters while painting and mixing the paint chemicals in Bangalore City and to know the risk caused which affect health of the painters, to know the better paint used in current scenario.

There are 100 painters was taken as a Sample Size in Bangalore City, purposive random technique adopted to select different samples and data was collected to use the structured interview schedule.

From the present research it was discovered that the difficulties faced during mixing of the paints, inhalation of strong fumes causing several health issued. most of the respondents have done 10th who are not aware that the strong paint fumes can give different health problems. Majority of the experience respondents are willing to go for organic paints which gives less impact on health.

INTRODUCTION

In a city like Bangalore, many buildings are being constructed every day, each building will be painted on a daily basis, and many painters will be working on it. Many face significant health risks from toxic hazards associated with paints and chemicals used in paints. These health hazards include exposure to heavy chemicals and inhalation of paint fumes. Prolonged exposure to paint fumes and other harmful chemicals, especially those containing volatile organic compounds (VOCs), can cause respiratory issues, including asthma and bronchitis, etc...

Few paints contain toxic components such as lead, cadmium, and chromium, which can lead to severe health issues, which including lungs infection, kidney damage and cancer. The toxic fumes of paints effect on painters are a serious concern, it long term chronic exposure lead to health consequences.

A painter need to exposed to heavy metal chemicals and fume because they have chosen it as their occupation, a conditions that results from exposure in a workplace to a physical, biological agent, to the extent that the normal physiological activities are affected and the health of the worker is impaired. It similarly leads to skin illnesses and contact sensitivity most predominant in those house were painters use water based paints, glue and putties. Chemical burns are most comely caused skin damages.

MAJOR FINDINGS

TABLE-1 Socio Demographic Characteristics of the Respondents

N =100

Characteristics	Category		
		N	%
Age group (years)	20-30	68	68
	30-40	25	25
	40-50	7	7
Marital status	Married	56	56
	Unmarried	44	44
Educational level	SSLC	62	62
	PUC	30	30
	Degree	07	7
	Post graduate	01	1
	Professional	00	0
Work experience	More than 5 yrs	60	60
	Less than 5 yrs	34	34
	Nil	06	6
Total		100	

Table 1 revealed the age range, educational level and work experiences the respondents. It was found that 68 percent of painters are belongs to the age range of 20-30 years followed by 25 percent of painters falls in the age range of 30-40 respectively. With regard to marital status 56 percent of painters were married. A 44 percent of the painters were unmarried. With regard to the educational qualification it was found higher percent (62%) of painters completed their SSLC. A 30 percent of painters were completed or dropped out from PUC. With regard to work experience, 60 percent painters having more than 5 yrs. of experience, around 34 percent is having less than 5 years of experience, a very few respondents have no experience.

Table-2: Problems faced during painting

N =100

Characteristics	Respondents	%
Eye irritation	48	48%
headache	10	10%
Skin irritation	27	27%

Breathing problem	15	15%
Total	100	

Table 2 interprets the type of respondents who faced problems during painting. From the above table it can be seen that majority (48%) of painters face eye irritation during painting. With regard to the majority (27%) of painters face skin irritation as problem during painting. A very few painters have face headache and breathing problems (10%, 15%).

The data was analyzed statistically by using Chi Square test and found that there was a significant association between employed and unemployed homemaker with respect to income of the family and non significant association with respect to family type, family size among employed and unemployed homemakers.

Table 3: Painting brand's used very often
N=100

No.	Paints	Response	%
1	Nippon	67	67
2	Asian paints	20	20
3	Berger	1	1
4	Birla	12	12
Total		100	

Table 3 depicts the factors considered while purchasing painting products. Majority of painters (67%) ranked first for Nippon painting products, followed by 20 % chosen Asian paints. A very few respondents have chosen Berger and Birla paints as their brands of paints used very often during their work.

Table-4: Types of painting methods used very often
N=100

Methods	Response	%
Spray method	7	7
Brush method	36	36
Tapping method	20	20
Rolling method	37	37
Total	100	

Table 4 reveals the types of painting methods used very often among the painters. It can be observed that the majority of respondents agreed that rolling and brushing (37%, 36%) method of painting is used very

often. Followed by 20 percent of the respondents have chosen tapping method and very few respondents considered spray method of painting.

Table-5 Impact of color chemicals to health while mixing paint.

N=100

Statement	Response	%
Respiratory route	72	72
Parental route	05	5
Digestive route	20	20
Dermal route	03	3
Total	100	

Table-5 indicates the color chemicals inhale while mixing the paints. Higher percentage (72%) of respondents considered respiratory route health will get affect while mixing the panting chemicals because of strong smell. Majority respondents have digestive route problems. Most of the resondents are not aware of parental route and dermal route health issues. extremely important because packaging materials prevents the product from loss, followed by high quality materials that attractsconsumers' more than low quality and facilitates carrying/easy holding. A very few respondents gave importance to packages as it helps to hold easily.

Table-6 Precautions to be taken before painting

N=100

Statement	Response	%
Ventilation	61	61
Wear protective cloth	25	25
Ladder safety	1	1
Avoid hazards paint	13	13
Total	100	

Table-6 shows the precautions to be taken before painting by painters during painting work. It can be inferred that the majority ofthe respondentshave chosen ventilation plays major role of precautions before painting. A very few painters gave importance towear protective cloth, least number have chosen to avoid hazards paint and ladder safety during painting.

Table 7 Paint fumes cause flu- kind symptoms

N=100

Statement	Response	%
Yes	81	81
No	19	19
Total	100	

Table 7 reveals the health hazards caused by paint fumes symptoms like flu and other issues, here majority (81%) of the respondents have said yes they are getting affected with the paint fumes. A very few respondents (19 %) have said that they don't have any problems.

Table-8: Reduce exposure to a paint hazards

N=100

Statement	Response	%
Washing expose paint body	32	32
Wear mask	13	13
Eye glass	42	42
Improving ventilation	13	13
Total	100	

Table-8 shows the information how can painter reduce exposure to a paint hazards during work. Majority of respondents (42%) gave first preference to the eye glasses which protect from any damages to the eyes. A few (32%) preferred body to reduce exposure to a paint hazards, a least number (13%) have chosen wearing mask and improving ventilation will help them to get reduce from paint exposure.

Table-9: Major effect of high concentrations of paint fumes can cause damage on body organs.

N=100

Table 7
the

Statement	Response	%
Nervous system	52	52
Kidneys	15	15
Liver	11	11
Lungs	22	22
Total	100	

depicts

information considered on paint high fumes which can cause damage on body organs of the painters during work. Majority (52%) of painters said paint fumes will cause damage to the nervous system, a few numbers (22%) said they will get affected to the lungs followed by ingredients used in paints. A least painters agreed that they will get effect to kidneys and liver.

Table-10: Better paint to be used in current scenario
N=100

Statement	Response	%
Organic	62	62
Oil	15	15
Chemical	11	11
Emulsion	12	12
Total	100	

Table 10 interprets the information considered on types of paints used in current scenario. Most of the painters are willing to take organic paint to use in current scenario, few numbers have selected oil based paint are comfortable during painting. A least number have selected chemical and emulsion.

Table-11: Recommended paint for homes with kids/ pets
N=100

Statement	Response	%
Organic paint	72	72
Epoxy- based paints	17	17
High VOC chemical paints	11	11
None	0	0
Total	100	

Table 11 interprets the paints which is recommended for kids and pets friendly according to the painters, majority (72%) of painters have chosen organic paint is kids/ pets friendly because of less usage of

chemicals in it. A very few (17%, 11%) painters have chosen Epoxy- based paints and High VOC chemical paints.

Table-12: Advantages of organic paints
N=100

Statement	Response	%
Less health issues	31	31
Less chemical impacts	12	12
Good for kids and pets	52	52
Customer demand	5	5
Total	100	

Table 12 depicts painter's perception on organic paint advantages. Majority (52%) of painter's respondents strongly agreed that organic paint have major advantage being kids/pets friendly. A few respondents only agreed that organic paint can give less health issues. A least numbers responded about less chemical issues. Painters said customer and customer demand on the package, language used on package while purchasing packaged product.

Table-13: Paints used for industry
N=100

Statement	Response	%
Cheaper	31	31
Natural materials	12	12
Fast drying durable	52	52
Safe for humans	5	5
Total	100	

Table-13 represents to know the paints use for industry majority of painter respondents strongly agreed that fast drying and durable paints are used in industry, few have responded they will choose according to the price, a least number of respondents have taken consideration for natural materials and safe for humans.

Summary

Above research spotlight on the toxic hazards of paints on painters in Bangalore city, importance the work-related physical condition risk faced due to nonstop exposure to damaging chemicals and paint vapors. Everywhere the people who work with paint in factory and construction sites are exposed to VOCs (volatile organic compounds) and toxic metals like cadmium, lead, chromium, which can lead to a major health related issues like as skin irritation, and respiratory problems, long-term organ damage. The demographic in sequence prove that most who does painting are youngsters (20–30 years), with education (SSLC level) and important work knowledge (more than 5 years). Ordinary health harms reported include headaches (10%) breathing issues (15%), skin irritation (27%), eye irritation (48%).

Conclusion

The research here by concludes that people who work with paints in Bangalore are drastically exposed to work-related physical condition hazards due to toxic paint chemicals and inadequate protection practice. in spite of consciousness of risks, the use of shielding procedures leftovers inadequate, growing susceptibility to both temporary and long-standing physical condition issue.

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