

A study of health awareness and health risk of rag collectors related to hygienic practices and rag collection in selected areas of Haldwani, Uttarakhand.

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Abstract

Background: Millions of rag collectors are engaged in rag collection and rendering the great service to the urban communities through this unrecognized occupation. It is necessary to explore their hygienic practices and health awareness in order to protect them from the continuous exposure to hazardous waste. Hence, this study was undertaken. **Materials and Methods:** Mixed approach and descriptive exploratory research design was used, convenient sampling technique was adopted to study 40 rag collectors residing in selected areas of Haldwani.. The tools used for data collection were unstructured interview schedule and health risk identification checklist to assess the hygienic practices and to identify health risk of rag collectors. The data was analyzed by descriptive statistics and content analysis. **Results:** The maximum number of years involved in rag collection were between 29 to 40 years and the rag collectors had been in this work from childhood 6(15%). Majority of rag collectors 26(65%) started at the age of 16. All the rag collectors 40(100%) had taken up this work due to poverty (monthly income below Rs 5000 per month) and illiteracy [(25-63%)]. Of all the waste materials, the most common material collected by 35(87.5%) of respondents was polythene. Regarding their hygienic practices, none of the respondents 40(100%) were in the habit of taking bath, the reason mentioned by them was lack of water, lack of time and no place for taking bath, 36(90%) did not have any knowledge regarding cutting nails. Large number of respondents 36(90%) were not using any safety measures.

Key Words: Rag collectors, Health risk, Health awareness, Rag collect

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I. Introduction

Rag collectors are informal workers who collect recyclable materials to earn a small wage on daily basis, their life and working conditions are very much difficult. No attention has been paid on the crucial linkage between the waste disposal system and degradation of environmental and human health.ⁱ

Rag collectors families lives in unhygienic environment, faced malnutrition, extreme poverty, and adverse health infections. They collect waste without using any physical protection such as gloves, shoes and masks.ⁱⁱ

Ignorance about health disease is due to illiteracy, lower socioeconomic status, unavailability of good health care facility near to their locality and lack of time to utilize nearest health care facility as during day time they are busy in rag collection.ⁱⁱⁱ

Objectives of the study:

1. To assess the hygienic practices of rag collectors and the level of awareness regarding health.
2. To identify health risk related to hygiene and rag collection.

II. Material and Methods

The research approach adopted was mixed approach and descriptive exploratory research design was used, convenient sampling technique was adopted to study 40 rag collectors residing in selected area of Haldwani.. The tools used for data collection were unstructured interview schedule and health risk identification

checklist to assess the hygienic practices and to identify health risk of rag collectors. The data was analyzed by descriptive statistics and content analysis.

III. Result

Section I- Socio-demographic characteristics of rag collectors

Table No. 1: Frequency and percentage distribution of the Socio-demographic characteristics of the respondents n=40

Sl. No	Characteristics	Frequency (f)	Percentage (%)
1.	Age in years		
	16-26	26	65
	27-37	09	22
	38-48	05	13
2.	Gender		
	Female	25	63
	Male	15	37
3.	Religion		
	Hindu	21	53
	Muslim	19	47
4.	Education of rag collectors		
	Non-literate	25	63
	Primary	15	37
5.	Time spent in rag collection.		
	<4 hours	12	30
	5- 6 hours	23	58
	> 7 hours	5	12
6.	Years involved in rag collection		
	7-17yrs	23	58
	18-28yrs	11	27
	29-40 yrs	6	15
7.	Family income per month		
	Rs 2000-5000	34	85
	Rs 5001-8000	6	15
8.	Preference for health facility.		
	Government hospital	32	80
	Clinic	8	20

The data presented in the above table shows that majority 26(65%) of rag collectors were in the age group of 16-26 years. Maximum 25(63%) of them were female. The number of Hindus was 21(53) % and the remaining were Muslims. Majority 25(63%) of rag collectors were non illiterate and only 15(37%) had primary education. 23(58%) of the respondents spends 5-6 hours every day in rag collection as they were engage in rag collection from last 7-17 year. Majority 34(85) participants had family monthly income between 2000-5000 rupees. Maximum of 32(80%) respondents preferred government hospital for health facility.

Section II

Section II A : Practice regarding hygienic habits

Table No. 2: Frequency and percentage distribution of hygienic practice of respondents' n=40

Sl. No.	Items	Yes		No	
		(f)	(%)	(f)	(%)
1.	Cleaning teeth	34	85	06	15
2.	Bathing	00	00	40	100
3.	Washing hair	03	7.5	37	92.5
4.	Applying oil	00	00	40	100
5.	Nail care	00	00	40	100
6.	Wearing same clothes after rag collection	17	42.5	23	57.5
7.	Washing clothes	00	00	40	100
8.	Washing hands after rag collection	40	100	00	00
9.	Washing hands before and after eating	40	100	00	00
10.	Using soap after toileting	40	100	00	00
11.	Wearing foot ware	40	100	00	00

As shown in Table above, only related to the habits of washing hands respondents have the practice. Whereas, the most important practice like bathing, nail care, washing clothes and applying oil to hair, none of the respondents have this practice. Awareness regarding basic hygiene and practice are very inadequate and not practicing these basic hygienic habits undoubtedly leads to many types of health risks.

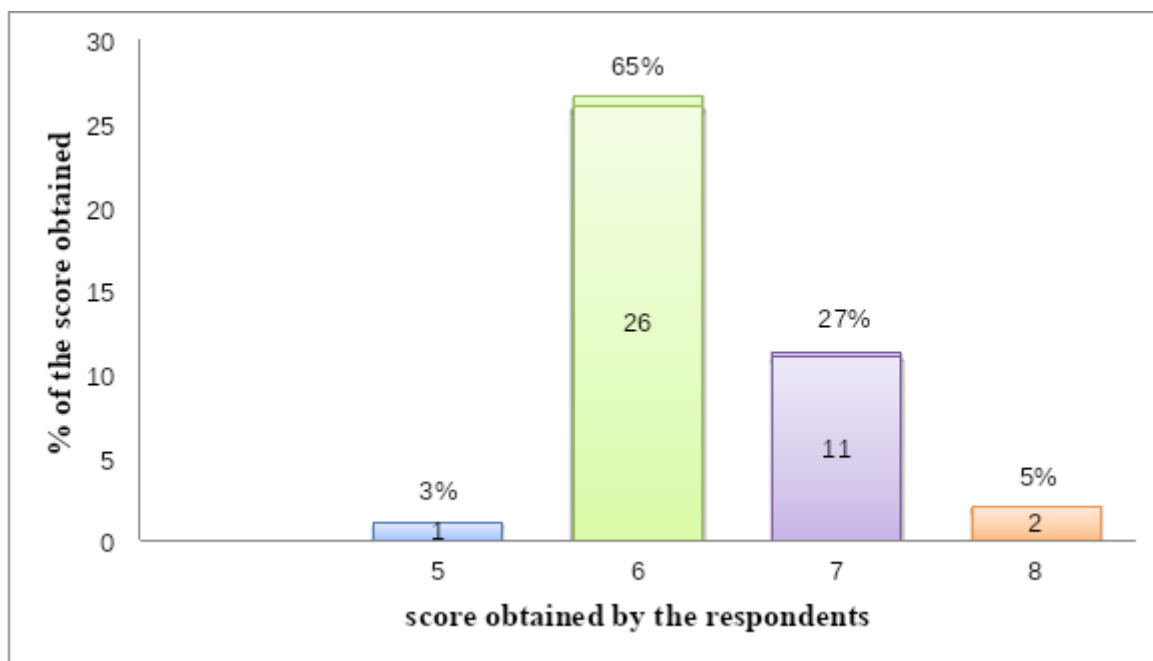


Fig.1: Bar diagram showing frequency and percentage distribution of practice score of participants on personal health.

The above Bar diagram shows that very few respondents 2(5%) scored maximum (8). The actual maximum score of hygienic practice is 12, but out of 12, the maximum practice score secured by the respondents was only 8.

Section II-B

This section describes the knowledge of hygienic practice of the respondents n=40

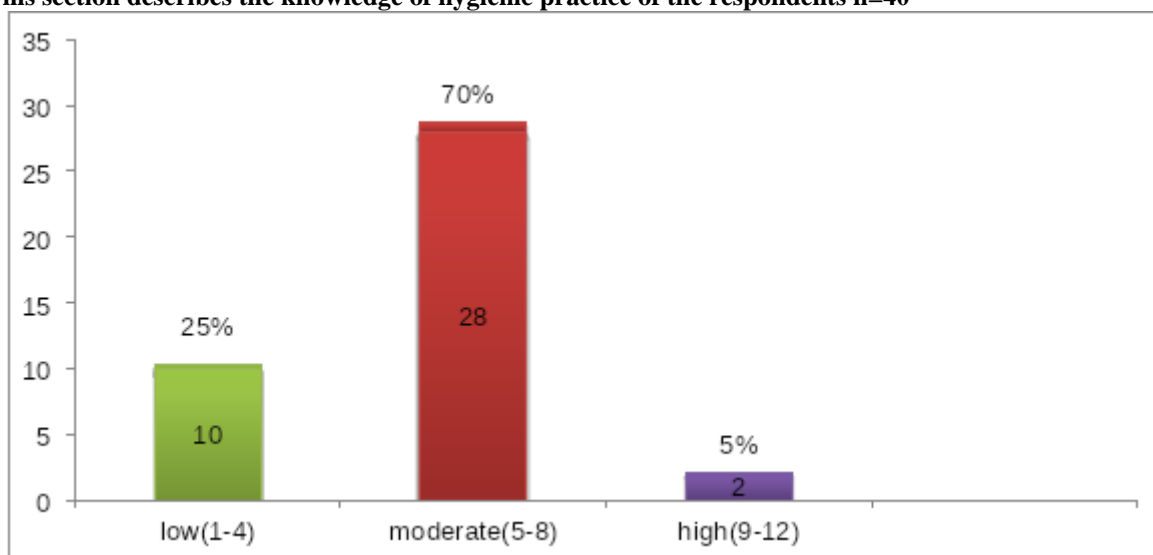


Fig 2. Frequency and percentage distribution of respondents' overall knowledge of practice score relating to hygiene.

As shown in Figure 2 in the overall knowledge of practice score only 2(5%) of the respondents had high score and maximum number of respondents 28(70%) had moderate score.

Section III

This section consists of Health risk of rag collectors

Section III A.

Table No 3: Frequency and percentage distribution of the respondents based on hygiene. n=40

S.No	Items	Yes		No	
		(f)	(%)	(f)	(%)
1.	General Appearance				
	a) Appearance of being unclean	4	10	36	90
	b) Dental caries.	12	30	28	70
	c) Discoloration of teeth.	23	57	17	43
	d) Dirty nails.	14	35	26	65
	e) Rough and dry hair.	25	63	15	37
	f) Dirty clothes.	33	83	7	17
g) Cracked heels.	19	47	21	53	

As shown in Table No.3 maximum numbers of respondents were wearing dirty clothes 33 (83%). Similarly, 25(63%) of them had rough and dry hair. 23(57%) had discoloration of teeth. 19(47%) had cracked heels. The investigator contacted the respondents at their residence and the above observations were made by the investigator when they were at their residence.

Section III B.

Table 4: Frequency and percentage distribution of total risk score of not using safety measures. n=40

S.No	Items	Yes		No	
		(f)	(%)	(f)	(%)
1.	Wearing mask	2	5	38	95
2.	Wearing gloves	2	5	38	95

3.	Wearing foot ware	40	100	00	00
4.	Wearing head cover	0	0	40	100

As shown in Table no. 4, all the respondents 40(100%) were wearing foot ware. Relating to remaining safety measures, it could be seen from the table that, only 2 respondents were wearing mask and another 2 respondents were wearing gloves. Nobody was using head cover.

The startling picture one can understand from the lack of safety measures is that, all the respondents are permanently exposed to any type of noxious effect.

Section III C.

Internal and external environment risk to which respondents are exposed

The investigator visited the locations where the respondents were residing and also went into their homes in order to assess the surrounding outside the residence and also inside the homes. The investigator identified the following risks from the observation as mentioned below:

- Dumping yard within 100 m of residence.
- Open drainage near house.
- Single room house without ventilation.
- Roof material made of disposed waste.
- Lying down on dumped waste material using it as a bed.
- Open defecation
- Cooking outside
- Bathroom
- Water outlet
- Clean floor
- Burning oven

Table No. 5: Frequency distribution of the respondents according to internal and external environmental risk score n=40

Sl. No.	Score	Frequency (f)	Percentage (%)	Mean score
1.	8	1	2.5	11
2.	9	4	10	
3.	10	4	10	
4.	11	15	37.5	
5.	12	9	22.5	
6.	13	3	7.5	
7.	14	4	10	

As presented in the Table no. 5 above, the maximum risk score is 14 and the minimum risk score itself is 8. 31(77.5%) respondents were above mean score level which shows that they are while exposed to highest risk. The extent of risk exposure depends on the prolonged continuous exposure.

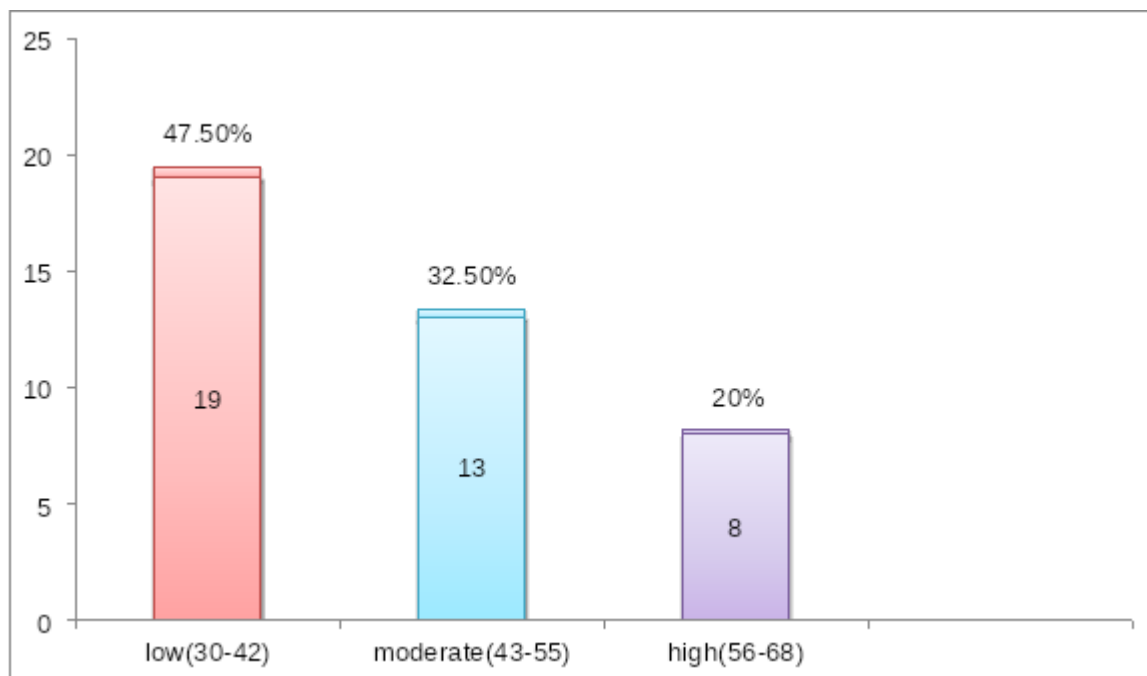


Fig No.3 Overall risk score of the respondents

As shown in fig.3 above, maximum number of respondents 19(47.5%) were in low score category of risk. A total of 21(52.5%) were above low risk score category.

IV. Conclusion:

The study was in the specialty area of occupational health and nursing. The purpose of this study was to assess the level of knowledge, and health risk in rag collectors in urban area Haldwani, with a view to develop a need based awareness program. The researcher had interviewed 40 rag collectors in selected area of Haldwani. The whole study was cost effective, simple and carried out in an accepted way to assess the knowledge and risk of rag collectors regarding their health. The results revealed that majority of the rag collectors did not have awareness regarding personal health and they were at health risk. Children of the rag collectors should be given sustained training in healthy hygienic practices, and safety measures to be adopted during rag collection.

V. Recommendation

- Nationwide study should be conducted including all the clusters of slums and the dumping areas. The findings of which should be made first priority in the national development program.
- Broader study should be conducted on finding remedies through research on the rag collectors, their family life and health.
- Focused research is needed to identify the agencies, the hotels and markets engaged in indiscriminate dumping into enforce, segregation of waste materials while dumping.
- Research is necessary to utilize the series of rag collectors in identifying, segregating and recycling materials.

ⁱ Uplap P, Bhate K. Health profile of women rag picker members of a non- governmental organization in Mumbai, India.[Internet].2014 [cited 2019 Jan 12]; 18(3): 140–4. Available from <http://www.ijoem.com>.

ⁱⁱ Mathangi S.How Can India's Waste Problem See a Systemic Change?[Internet] 2018 .[cited 2019 Jan]. 53(16). Available from <https://www.epw.in>.

ⁱⁱⁱ Ghansham Wasnik Sumit, Bhate Kamaxi, Mehta Arjun, Sadawarte Mandar. Evaluate the factors affecting health seeking behaviours of women rag collectors in Mumbai.[Internet].2018[cited 2019 May 12]; 5(1):[156-160pp].Available from <https://www.ijcmph.com>.