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Role Of Child Rag Pickers In Muncipal Solid Waste Management:A Case Study In Bhubaneswar City, Odisha.

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ABSTRACT:

The objectives of the present study were to assess the socio economic condition and work status of the child rag pickers in Bhubaneswar city,Odisha .Sixty five child rag pickers belong to the age group 10-19 years were selected by purposive sampling method for the present study. The results of the study revealed that majority of the respondents were adolescents belonged to the age group of 16-19 years. Most (61%) of the rag pickers were migrated from West Bengal with expectation of better life and were working under unhygienic and polluted environmental conditions for about 9-10 hours. Most of them were residing near dump site in a worst living condition. 85% of them were drop out from school and were engaged in this profession due to parental poverty and to support their family. A strong association between reasons for rag picking and socioeconomic condition was also found in this study.

KEYWORDS:-Rag pickers, Migration, Education. Parental poverty

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INTRODUCTION:-

Industrialization, urbanization and modernization contribute substantial quantities of solid waste in the cities and its management has become a major environmental issue in India. In Indian cities rag pickers play an important role in the municipal solid waste management, management of recyclable materials from the waste and also earning money from the waste (wealth from waste) and financially supporting their families. They are recognized as the real hero of Swaccha Bharat Abhiyan.¹ Municipal solid waste contain different types of waste such as recyclable waste, biomedical waste, toxic substance, industrial waste and compostable waste². The rag pickers have a special role to play in the segregation of waste. In India the number of rag pickers estimates between 1.5 million to 4 million³. Man has to pass several stages of life out of these childhood is an important one. During the childhood period they are unknown about their role, responsibilities and rights. Because of family problem and environmental factors they have to choose some type of unskilled works from their childhood which is termed as child labors, rag pickers and many more. Child labor is a practice where children engage in economic activity. Such situation negatively impact on their life.

LITERATURE REVIEW-Majority of the rag pickers were illiterate and dropout from school due to financial problem and lack of interest in studies^{4,5}. Most of the rag pickers are working under unhygienic and polluted environmental conditions from 8 -12 hours. Rag pickers are roaming around the garbage heaps with bare hands and feet, broken glasses, needles, sharp metals, discard pieces come into contact while they are working at dump sites⁶. During the trash picking they feel stress due to unpleasant atmosphere but they are compelled to work in this environment which almost is very dangerous and against the dignity of humans⁷.

The objectives of the present study were

1. To find out the socio economic condition of the child rag pickers
2. To study the working condition and reasons for choosing the profession

MATERIALS AND METHODOLOGY:-

The study was conducted in Bhuasini site of Bhubaneswar city of Odisha where about 600 metric tons of waste generated per day for disposal. 65 rag pickers belong to the age group 10-19 years were selected by simple random sampling method for the present study. The information on their socio-economic condition and working status and reasons for choosing this profession was collected with the help of pretested and predesigned questionnaire with personal interview and observation method.

RESULTS & DISCUSSION:-***1.General information and family environment of the respondents.*****TABLE:-1 General information and family environment of the respondents.**

Sl no	Socio economic indicators	Characteristics	Number(N)	Percentage (%)
1	Age of the children	10-15	7	11
		16-19	58	89
2	Gender	Boys	56	86
		Girls	9	13
3	Caste	SC	38	58
		ST	17	26
		OBC	10	15
4	Types of family	Nuclear	58	89
		Joint	7	10
5	Total family members	1-5	3	4
		5-6	5	7
		6-7	32	49
		7-10	25	38
6	Migration	Yes	59	90
		No	6	10
7	Reason for migration	Expected better life, unemployment and poverty	42	71
		Ill treatment	17	29
8	Migration from	West Bengal	36	61
		Andhra Pradesh	12	20
		Near Bhubaneswar	11	18
9	Types of house And living condition of the rag pickers	Slum area(rented)	21	32
		Tent near Dumpsite with Woods and other poor material	39	60
		Own house	5	7

Table 1 shows that maximum numbers (89%) of respondents were in the age group of 16-19 years. Most (86%) of the respondents were boys engaged in this profession belonged to schedule caste (56%). Nuclear family system having 6-7 family members was found to be prevalent among the respondents. Most of the respondents (90%) were migrated, out of them 61% were migrated from West Bengal with expectation of better life, unemployment and good living condition (71%). About 60% respondents were living in tent house near the dump site which was made up of woods, mud and other material. Similar findings were also observed by Mallick⁵.

2. Basic amenities of the respondents

TABLE-2 :Basic amenities of the respondents

Sl no	Particulars	Variables	characteristics	Yes (N)	Percentage (%)
1	Basic amenities of rag pickers	Toilet facility	Own	21	32
			Community open	30	46
		Drinking water facility	Tap(BMC supply)	14	21
			Bore well	56	90
2	Durable goods use by the respondents		Mobile	09	10
			Television	59	90
			Fan	13	20
			Cooler	20	30
			Freeze	-	-
			Motor cycle	11	16
			Cycle	-	-
			Tricycle	26	40
Own Cart	45	70			

Table -2 shows that the rag pickers were deprived from their basic amenities such as 21% did not have own toilet facility and still they are going for open defecation. 90% respondents have BMC water supply. Majority (90%) of the respondents were using mobile phone. 80%, 69%, 83%, 60% had no television, fan, motor cycle and tricycle respectively. It was interestingly noted that majority (70%) had their own cart (trolley) to carry the waste.

3. Educational status of the respondents.

TABLE-3: Educational status of the respondents.

Sl no	Variables	characteristics	Number(N)	Percentage(%)		
1	Educational status of the parents	Literate	8	12		
		Illiterate	57	87		
2	Educational status of the respondents	1-5 th class	49	75		
		5-8 th class	13	20		
		Above 8th	03	4.61		
3	Dropout of school of children	Yes	55	85		
		no	10	15		
4	Reason for dropout	Parental poverty	23	55	41.81	
		Parent unwillingness	16			
		Parents death/illness	5			9
		Not interested	11			20

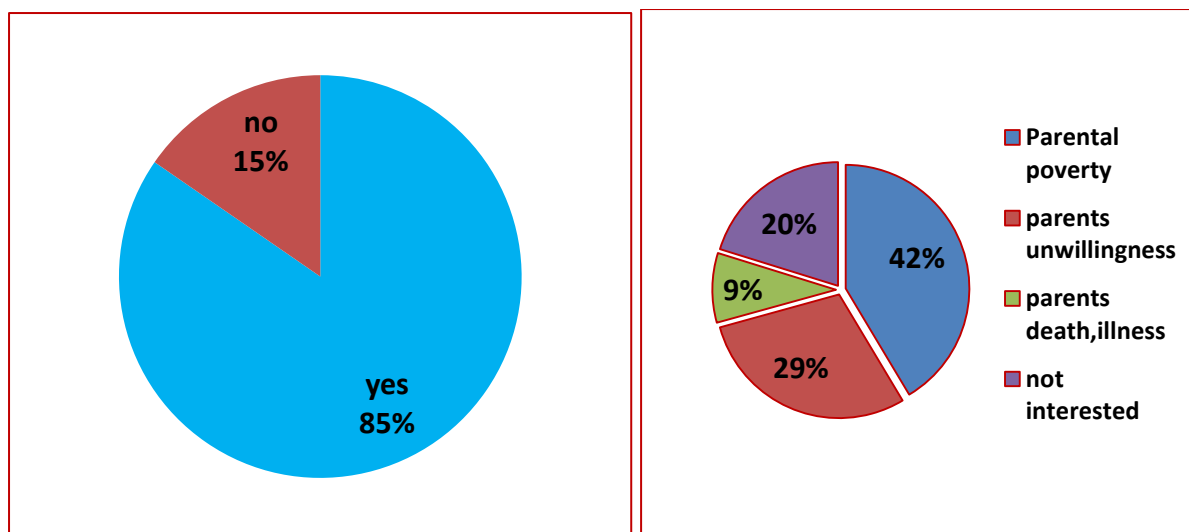


Figure No-1:School Drop out of Rag PickersFigure No-2:Reason for Drop out of Rag Pickers

Table -3 shows that majorities (87%) of the parents were illiterate but 75% of the respondents were studied up to 5th standard and 89% of the respondents were not going to school. Education is the most important right of every child for their personal and mental development. The study reveals that majority (84%) of the respondents were dropped out from the school due to parental poverty. Sharma⁶ also found similar reasons of rag picking in their studies.

4. Factors for choosing rag picking profession

TABLE -4 :Factors for choosing rag picking profession

Sl.no	Particulars	Characteristics	Number(N)	Percentage (%)
1	Factors for choosing rag picking profession	Poverty and support family	61	93
		To increase family income	35	53
		Death and illness of the parents	19	29
		Daily and easy way of income	59	90
		No need of education and skill	31	47

(Multiple answers)

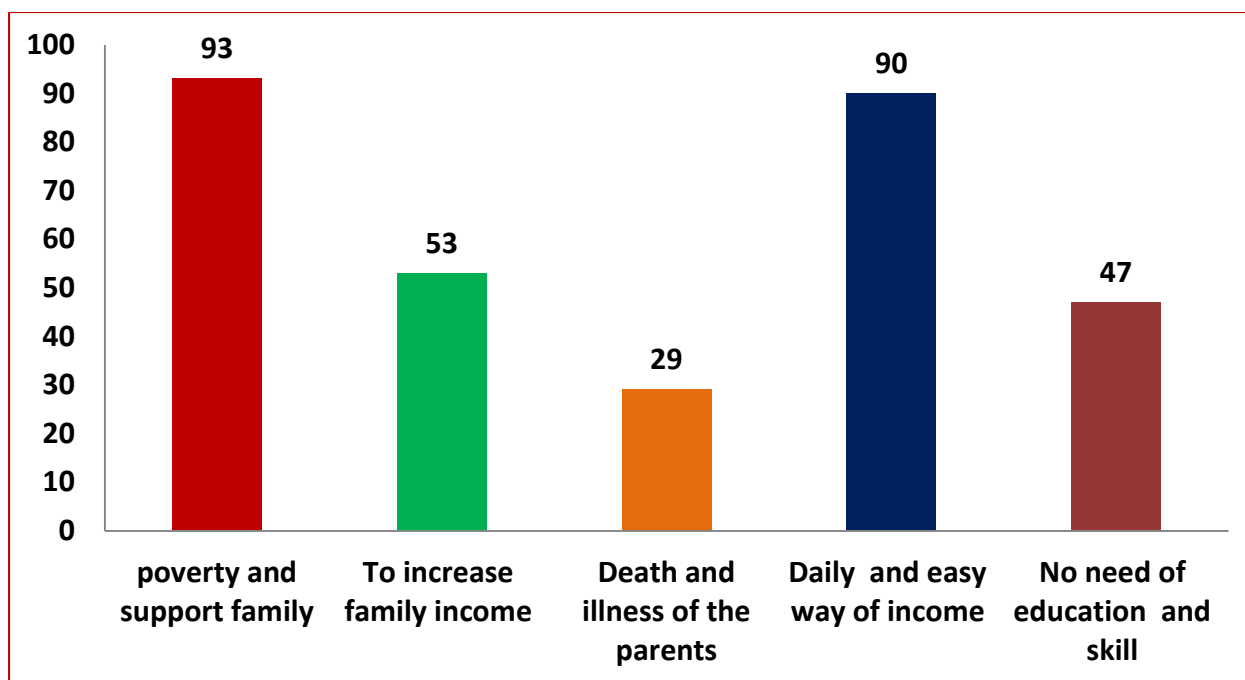


Figure No-3: Factors for choosing Rag picking profession

The results of the Table-4 revealed that 93% number of respondents choose rag picking works due to the poverty and support family and 90% of them choose this work to get daily and easy income. 47% choose this profession as they felt that they did not need any other skill to do this work.

5. Working condition of the rag pickers.

TABLE:-5 Working condition of the rag pickers.

Sl no	Particulars	Characteristics	Number (N)	Percentage (%)
1	Nature of work	Full time	56	86
		Part time	09	13
2	Working hour per day	7-8 hours	18	27
		9-10 hours	39	60
		10 hours above	08	12
3	Place of waste collection	Dump site	59	90
		Door to door	06	9
4	Types of waste collection	Paper	53	81
		Plastics	61	93
		Rubber	21	32
		Metal	27	41
		Biomedical	37	56
		Glass	23	35
5	Amount of waste collection	2-5 kg	07	11
		5-10 kg	17	27
		15-20 kg	36	55
		>15 kg	05	07

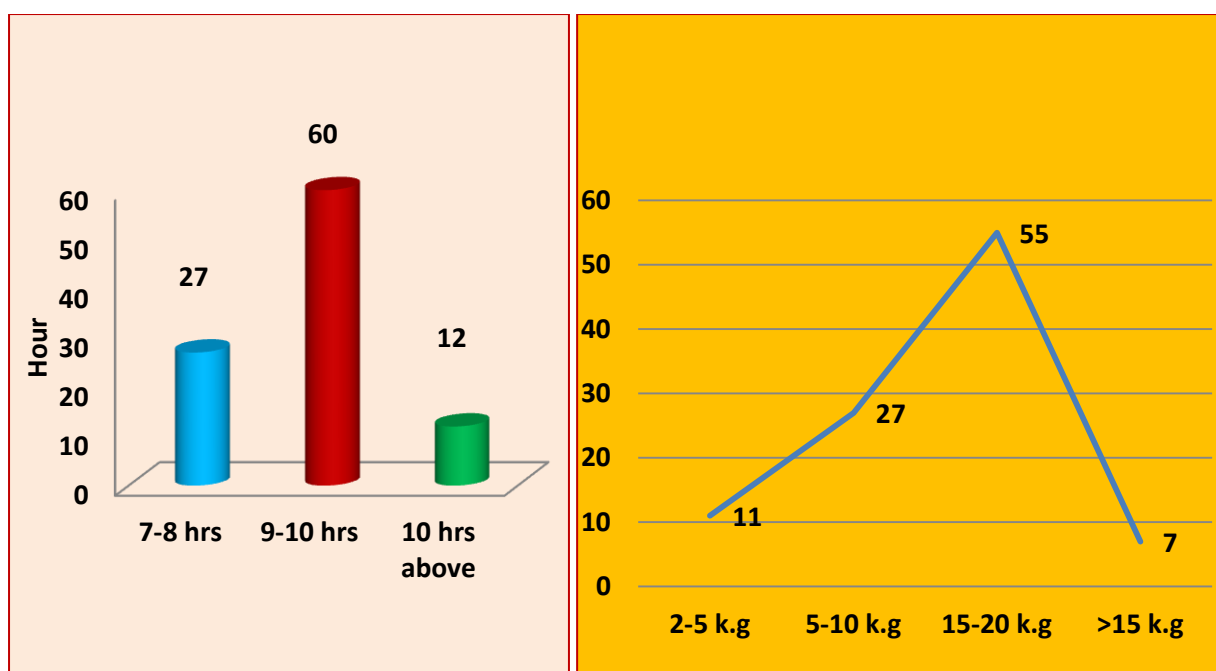


Figure No-4: Working hours per day Figure No-5: Amount of waste collection per day

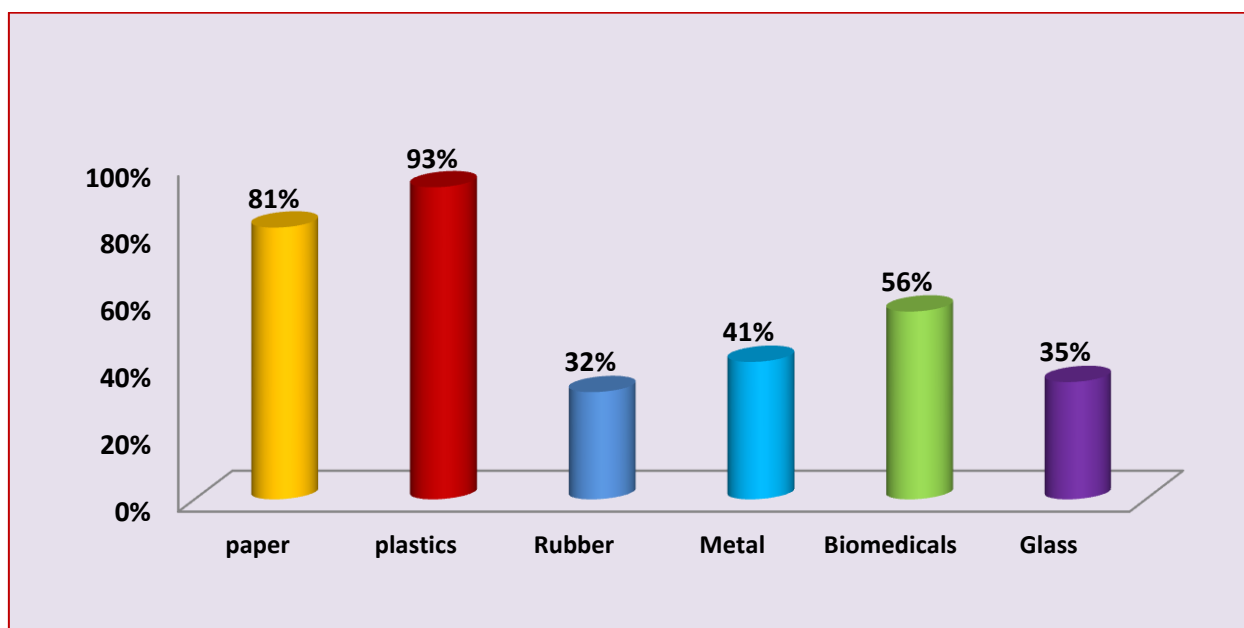


Figure No-6: Types of waste collection

Table -5 shows the working condition of the rag pickers. It was interesting to note that 86% of the respondents were working as fulltime rag pickers and 90% of them were collecting the waste in the dump site. Majority (81%) of rag pickers gather paper, 93% collect plastic, 56% collect biomedical waste such as injection, syringe, saline bottle, cotton blood etc, 35% collects glass and rest 41% collect metal. It was found that 55% of rag pickers were collecting a huge amount of waste in a single day to meet their needs i.e. about 15-20 k.g waste per day. It was found that a large (60%) no. of child rag pickers undergoes long working hour's i.e. 8-10 hours per day. Sharma⁶ also found in their studies that most of the rag pickers are working under unhygienic and polluted environmental

conditions from 8 -12 hours. Rag pickers are roaming around the garbage heaps with bare hands and feet, broken glasses, needles, sharp metals, discard pieces come into contact while they are working at dump sites.

6. Income and expenditure pattern of the rag pickers

TABLE:-6 Income and expenditure pattern of the rag pickers

Sl.no	Socio-economic variable	Characteristics	Number(N)	Percentage (%)
1	Monthly income of the family	Rs 1000-2000	16	24
		Rs.3000-4000	36	55
		Rs.5000	13	20
2	Daily income of the respondents	Rs.50-100	47	72
		Rs.100-200	07	10
		Rs.200-300	11	16
3	Daily expenses of the respondents	Rs30-40	23	35
		Rs.40-50	27	41
		>50	15	23

Table:-6Shows that majority (72%) of the respondents were earning about Rs 50-100 /-per day where as their daily expense was Rs.40-50.Total income of the majority family was found to be Rs.3000- Rs.4000/- per month.It was observed in majoritycases (53%) the expenditure of the respondents was more than their income.

7. Association of reasons of rag picking with socio-economic condition

TABLE:-7 Association of reasons of rag picking with socio-economic condition

variable	Degree of freedom (df)	chi-square value(X^2)	Tabular value or p value 0.01(1%) level of signifance	Statistical value	result
Age and Gender	1	5.708	6.635	$X^2=5.708(p<0.05)$	significant
Migration and reason for migration	1	3.47	6.635	$X^2=635.338(p<0.001)$	significant
Religion and migration	2	2.48	9.210	$X^2 =2.48(p<0.001)$	significant
Education and monthly income	2	4.434	9.210	$X^2 =4.434(p<0.001)$	significant
Monthly income and living condition	4	5.31	13.277	$X^2=5.31(p<0.001)$	significant
School dropout and educational status	1	2.59	6.635	$X^2 =2.59(p<0.001)$	significant

Daily income and daily expenses	4	2.37	13.277	$X^2=2.37(p<0.001)$	significant
Daily income and amount of waste collection	6	1.76	16.812	$X^2 =1.76(p<0.001)$	significant

a) H₁: There is no significant relationship between age and gender in rag picking.

The chi square value($X^2 =5.708$) shows that there is a significant relationship between the age and gender of the respondents at 0.01 level of significant. In this present study it was found that both boys and girls were engaged in rag picking profession but the percentage of boy was more (86%) than the girls. Another study done by Mallick⁵ showed that both male and female were engaged in rag picking profession but the percentage of male was more than female percentage because of female rag pickers stay in home for taking care of younger children and household work. Also another reason was that there were sex risks during the collection of rags from different places.

b) H₂-. Migration does not depend on any reason.

The chi square value($X^2 =3.47$) shows that there is a significant relationship between migration and reason for migration of the respondents at 0.01 level of significance. In this present study it was found that most(61%) waste pickers were migrated from west Bengal and the main reason (71%) of migration is due to expectation a better life, unemployment and poverty. Another case study has been done by Sarkar Papiya⁸ found that unemployment and poverty were two reasons for the rag pickers migration into urban setups. He also found that 97.5% of the migrants they came to Delhi looking for employment and ended up waste picking as a means to survive.

c) H₃-. Religion does not effect in migration

The chi square value($X^2=2.48$) showed that there was a significant relationship between religion and reason for migration of the respondents at 0.01 level of significance. In this present study it was found that respondents were belongs to Hindu; Muslim and Christian are engaged in this profession. But majority (78%) of them was belonged to Muslim community. Another study done by Sarkar Papiya⁽⁸⁾ also showed that both Hindu and Muslim refugees took up waste picking as a means to survive.

d) H₄-. There is no significant difference between monthly income and education.

The chi square value($X^2 =4.434$) shows that there is a significant relationship between monthly income and education of the respondents at 0.01 level of significance. In this present study it was found that most (87%) of the respondents were illiterate and majority (55%) has

monthly income Rs.3000- 4000 per month which may be impact on their education. This is supported by Mallik⁵. In his study he was also found that most of the children were illiterate due to financial problems and lack of interest in studies. Research also indicates that children from low-SES households and communities develop academic skills slower than children from higher SES groups⁹.

e) H5: There is no significant difference between monthly income and living condition

The chi square value ($X^2=5.31$) shows that there is a significant relationship between monthly income and living condition of the respondents at 0.01 level of significance. In this present study it was found that the living condition of the respondent was not good. Majority (60%) of the respondents were living in a tent made up of wood and other poor materials near the dumpsite. Another case study has been done by Krishna Vijai¹⁰ also found that those children who are involved in this field are not getting proper education, proper nutrition and proper shelter. Researcher also found that low socio economic status (SES) and exposure to adversity are linked to decreased educational success¹¹. Such toxic stress in early childhood leads to lasting impacts on learning, behavior, and health¹².

f) H6: Drop out from school does not impact on educational status.

The chi square value ($X^2=2.59$) shows that there is a significant relationship between drop out and education of the respondents at 0.01 level of significance. It is interpreted in this study that majorities (87%) of child rag pickers are illiterate and majority (84%) of child rag pickers were school drop outs. Mallik Dillip⁵ also found in his study that vast majority of child rag pickers were illiterate & very high percentage of child rag pickers were school drop outs. Children dropped out of school due to financial problems and lack of interest in studies. Some of the children have also reported other reasons such as migration, no accessibility of schools, supplementing family income, large family size, sibling care, unfavorable climatic conditions etc. Researcher also found that in 2014, the high school dropout rate among persons 16–24 years old was highest in low-income families (11.6 percent) as compared to high-income families 2.8 percent¹³.

g) H7: There is no difference between Daily income and daily expenses.

The chi square value ($X^2 =2.37$) shows that there is a significant relationship between daily income and daily expenses of the respondents at 0.01 level of significance. In this present study it was found that majority (72%) of the respondents had daily income Rs.50-100 and majority (41%) of the respondents had daily expense Rs.40-50. This may affect on their daily life requirements and their life style practices. Another case study has been done by Krishna Vijai¹⁰ also found that daily expenses of the rag pickers was more than the daily income hence the rag pickers socio-economic status was not satisfactory. Similar findings was also observed by Shedakar and Jha^{14, 2}.

h) H8:- There is no difference between Daily income and amount of waste collection.

The chi square value ($X^2 = 1.76$) showed that there was a significant relationship between daily income and amount of waste collection of the respondents at 0.01 level of significance. In this present study it was found that majority (87%) of the respondents daily waste collection was 15-20 Kg. Among them maximum (93%) waste were plastics. Another case study has been done by Devi Shymala¹⁵ also found that due to collect and selling the waste, rag pickers are earning money and the quantity of waste collected in a day depends on the number of hours spent per day. They did not prefer any items but collected all type of wastes. The rag pickers were reported to collect all kinds of recyclable goods such as aluminum can, glass, cardboard and plastic. As compared to other materials, in the present study it was found that majority of the rag pickers opted plastics and metals because of the easy to sell them at better price but generally they collected everything they could access.

CONCLUSION: -

Rag pickers play a major role in solid waste management especially in cities. In the present study, it was observed that the ragpickers had some survival strategy for livelihood after migrated from West Bengal. The most common reason for migration was expectation for a better life, unemployment and poverty. The study also found that majority of the respondents still deprived from the basic amenities and directly or indirectly neglected by the Govt. as well as the society. Dropout rates were found to be high because children were forced to work due to parental poverty. The major factors for choosing this profession were parental poverty, to support family and daily & easy way of income. Rag picking is an inhuman economic activity that is harmful for their health because of work in an unhygienic and unpleasant environment; but there is no other opportunity for livelihoods.⁷ Most of the rag pickers were working around 9-10 hours per day in an unhygienic condition and 15-20 kg all types of waste such as paper glass, plastics, biomedical, rubber and metal etc. were collected by them daily. The study also observed very important issue i.e. most of their monthly expenditure was more than the monthly income which affect standards of living of rag pickers. Due to population growth, urbanization, rising standards of living due to technological innovation quantity and quality of solid waste is increasing day by day. The solid waste is managed by the rag pickers who scavenge the city's garbage bins, riversides, streets and landfill site. They play a major role in keeping our society clean, if they leave their work even for a single day the city would look like a garbage centre. Thus it can be concluded that as children are wealth of our nation steps should be taken to fulfill the basic needs and basic rights of each and every children to foresee a better future.

SUGGESTIONS AND RECOMMENDATIONS:

1. Government and non government agencies should take efforts to implement different programme and policies specially for rag pickers.
2. Effort should be taken to include rag pickers in SarvaSikhyaAbhiyan&Mid Day Meal programme.
3. Technical training should be provided to these children, so that they can get different jobs which are more stable .
4. Providing BPL card, Adhar card to the rag pickers for their identity and easy sailing of life.

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