

EFFECTIVENESS OF VOCATIONAL TRAINING PROGRAM ON EMPLOYABILITY OF RAG PICKERS.

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ABSTRACT

Background: Rag picking is still widespread in Third World countries today, such as in Mumbai, India, where it offers the poorest in society around the rubbish and recycling areas a chance to earn a hand-to-mouth supply of money. Worse still, their job is considered menial and they themselves are treated as untouchables by a large section of our society. Consider a simple aspect of their livelihood to understand the exploitation that these women undergo every day.

Objectives: 1. To assess the level of intelligence of rag pickers. 2. To assess the level of mental pain of rag pickers. 3. To identify the relationship between intelligence and mental pain of rag pickers. 4. To develop the vocational and skill training program based on the relationship between IQ and mental pain among rag pickers. 5. To assess the effectiveness of vocational and skill training program based on IQ and Mental pain in increasing job placement potential of the rag pickers. 6. To reduce mental pain by increasing job placement potential of rag pickers.

Study design: Randomized control trial **Setting:** Rural and urban slums of Wardha and Nagpur districts.

Methodology: The participants will be 340 Rag pickers (Both genders in 14-25 age group) with Simple random sampling technique; participants will be allocated to control and experimental groups through Computerized random number table. 1) Experimental group and control group will be going through assessment of their mental pain and IQ with the help of OMMP and CFIT respectively. 2) Experimental group will receive vocational and skill training program based upon their IQ. 3) Control group will not receive vocational and skill training program. The experimental group will receive vocational and skill training for 30 days. The progress of rag pickers will be obtained during the intervention from 15th day. The intervention will be given for 30 days. After intervention, based on this data, estimation of effectiveness of vocational and skills training on the job placements and reduction in the mental pain of the rag pickers will be established. The secondary outcome i.e. quality of life and job satisfaction will be improved after the vocational and skill training program. **Expected results:** after providing vocational and skill training program there will be significant improvement in the quality-of-life, job satisfaction and job placement opportunities of the Rag pickers. **Limitations:** Only rag pickers from the age group of 14-25 years will be included in this study **Conclusion:** This study result will contribute in increasing job placement potential and reducing mental pain of the Rag pickers.

Keywords: Vocational and skill training program, Mental Pain, IQ, Quality of life and Job Satisfaction.

INTRODUCTION

Rag picker, is a term for someone who makes a living by rummaging through refuse in the streets to collect material for salvage. Scraps of cloth and paper could be turned into cardboard, broken glass could be melted down and reused, and even dead cats and dogs could be skinned to make clothes. Rag picking is still widespread in Third World countries today, such as in Mumbai, India, where it offers the poorest in society around the rubbish and recycling areas a chance to earn a hand-to-mouth supply of money.¹

In India alone, there are approximately 4 million women in this profession. However, this huge number in no way implies that it is a comfortable profession in any way. A typical day in the life of a rag-picker consists of her heading out to work between 2 and 3 am, walking for nearly 8-10 km in harmoniously mutually agreed upon territories, scavenging in dumpsites and alleyways, and bending a minimum of 1,000 times to collect nearly 20 kg of recyclable waste with their bare hands from our city's streets. She then carries it in large bags on her head and shoulders, sorts it at her place, and sells this sorted waste to community pithas (waste collection centres), earning nearly Rs 100-140, enough for the hand-to-mouth survival of her and her family. The saddest and possibly the most ironic part of their story is that even after rendering this phenomenal service, these women are denied both their dignity and fair remuneration by our society. Worse still, their job is considered menial and they themselves are treated as untouchables by a large section of our society. Consider a simple aspect of their livelihood to understand the exploitation that these women undergo every day. Taking advantage of their illiteracy and poverty, a majority of middlemen dealers purchasing the recyclables exploit these women through rigged scales and lower-than-fair prices. A woman collecting 20 kg of waste at a market rate of Rs 8/kg should have been paid Rs 160 ideally. But her collection is weighed at 18 kg and she is offered Rs 6/kg which reduces her returns to Rs 108 only. Imagine – the poor woman loses almost 60 percent of her deserved remuneration, every single day.²

Rag pickers come across difficult situations of discrimination, stigmatization, lack of sleep, lack of nutrition and a feeling of shame, embarrassment and guilty as they are exposed to the harsh realities of life. A common job that they can be easily cheated is exposed to street and many fall prey to child labour, domestic labour, prostitution and other illegal activities. These rag pickers are denied of their rights of education, survival and vocational training that could enable them to escape any kind of discrimination. Besides these they prone to various illness that can hamper their growth and developmet.³

Problems of the rag pickers

1. Poor and marginalized

A marginalized community is a group that's confined to the lower or peripheral edge of the society. Such a group is denied involvement in mainstream economic, political, cultural and social activities. Marginalization or social exclusion deprives a group of its rightful share of reach to productive resources and ways to utilize its maximum potential for prosperity. It's the

rag pickers who are seen very poor and marginalized in the society. When you push people to the edge of society by not allowing them a place within it, you marginalize them.

2. Unhealthy environment

Something that is unhealthy is likely to cause illness or poor health. Illnesses and conditions caused by factors in the environment are collectively called environmental diseases. Pesticides, chemicals, radiation, air pollution, and water pollution, are some of the manmade hazards that are believed to contribute to human illnesses.

3. Poor living condition

Poverty is a multi-faceted phenomenon which affects not only the ability to purchase goods, but also vulnerability towards various pressures that may prohibit an individual from enjoying life. This vulnerability may be gauged from living conditions such as employment, health, education, and housing. It is important to monitor gender differences in poverty, vulnerability and living conditions. The living condition of the rag pickers limits their opportunities and means for survival.

4. Victims of abuse

Although both men and women can be abused, most victims are women. Children in homes where there is domestic violence are more likely to be abused and/or neglected. Most children in these homes know about the violence. Even if a child is not physically harmed, they may have emotional and behaviour problems. Since the rag pickers are weak in the society they fall prey into different illegal activities.³

Shocking facts on rag pickers of India

- Many rag pickers start at 4-5 years. In a recent study, in Patna and Raipur 20% of total rag pickers were between of 5-14 years, and 40% of the total dump site waste pickers were children. New Delhi and Mumbai have about 300,000 rag pickers and around 120,000 are under the age of 14.
- Children as young as 5, work from morning to evening to collect enough trash for sustaining themselves
- Many rag pickers come from rural areas into huge cities for better living and are unable to find opportunities and end up collecting trash.
- Many rag pickers live on the street, are homeless and have no access to education or healthcare.
- Rag pickers mostly work barefoot in the Indian heat, get exposed to chemicals and hazardous substances and often suffer from life threatening diseases as a result.²⁰

Dr. Manoti Barki (2013) This study aims to find out perception of rag pickers towards their education. During the course of the investigation literacy level among the child rag pickers found to be very low. Finding of the study also revealed that 52% of children

held positive perception towards education as necessity. These children felt that like all basic need, education is also must. Out of the total samples 58% believed that education is necessary for everyone for everyone as it helps in acquiring reading and writing skills while 50% were of the opinion that it helped in securing a good/respectable job. Regarding rag picker's enrolment in school, overall, 20% of them were trying to gain some education and were currently attending school. These children adjust their working hours with the school timings.¹⁹

Balu Natha Mote et al (2016) This paper examined the health status, occupational and environmental health hazards among rag-pickers working in dumping ground of Shivaji-Nagar and Govandi Slums of Mumbai, India. The cross-sectional study gathered data by interviewing 120 rag pickers during the Masters in Public Health course curriculum at Tata Institute of Social Sciences (TISS) in the year 2012-13.¹⁵

Marcelo Cozzensa da Silva et al This study aims to understand minor psychiatric illness found among the Rag pickers. Rag pickers are informal workers who collect recyclable materials to earn a small wage. Their life and working conditions are extremely difficult. We examined minor psychiatric disorders (MPD) among a cohort of rag pickers in Pelotas, a city in southern Brazil. Rag pickers were matched by sex, age, and years of schooling with a sample of non-rag pickers from the same poor neighbourhoods.¹⁶

Vaishali Tendolkar et al (2019) For the present study, a target group was new students entrants of M.B.B.S., B.D.S., B.A.M.S. and B.Sc Nursing courses. CFIT minimizes irrelevant influence of cultural learning and social climate. It can give cleaner separation of natural ability from specific learning. It also gives better analysis of individual's potentialities. This test helps to discover the achievement of each individual is what would be expected from his or her intelligence. Administration and scoring of CFIT is easy and less time consuming.¹¹

To sum up there are many research studies have been conducted to assess the living condition as well as health status of the rag pickers. But there is no research conducted to assess the mental pain and intelligence of the rag pickers and the correlation of these two factors in order to plan interventions to improve the quality of life of this population.

EXPLANATION FOR THE CHOICE OF INTERVENTION

Looking at this scenario and the living condition of rag pickers. Through the assessment of their intellectual capacity and mental pain and with its correlation it will be very easy to understand what best skill training and vocational trainings can be provided to help them opt for the better source of income and helping this community to live a respectful and better life.

SPECIFIC OBJECTIVES

1. To identify the relationship between intelligence and mental pain of rag pickers.

2. To develop the vocational and skill training program based on the relationship between IQ and mental pain among rag pickers.
3. To assess the effectiveness of vocational and skill training program based on IQ and Mental pain in increasing job placement potential of the rag pickers.
4. To reduce mental pain by increasing job placement potential of rag pickers.

HYPOTHESIS

H₁- Vocational and skill training program may be effective in increasing job placement potential of the Rag pickers.

H₂- There may be significant reduction in mental pain of the rag pickers after providing Vocational and skill training program.

MATERIALS AND METHODS:

Study design: -Randomised control trial

Study setting: The study will be conducted in Rural and urban slums of Wardha and Nagpur districts

Sample: Rag pickers

Sample size calculation: Sample size formula with calculation

Sample size formula for difference between two proportions

$$N1 = \frac{Z_{1-\alpha/2}^2 * p * q * (1+1/K) + Z_{1-\beta}^2 * \sqrt{p_1 * q_1 + (p_2 * q_2)}}{\Delta^2} * k$$

P1=Prevalence of MPD among rag pickers =44.7%=0.447

P2=Prevalence of MPD among controls=33.6%=0.336

Δ = Absolute difference between two proportion

=P1 -P2 = 0.447-0.337=0.111

n1 = Sample size from group 1

n2 = Sample size from group 2

α = Probability of type I error 1.96

β = Probability of type II error 0.84

K = Ratio of sample size for group #2 to group #1

z = critical Z value for a given α or β

$$P = P1 + KP2/1+K = 0.3915$$

$$q = 1-p = 1-0.3915 = 0.6085$$

$$N1 = \frac{1.96 \sqrt{0.3915 * 0.6085 * (1+1/1)} + 0.84 * \sqrt{0.447 * 0.553} \cdot \frac{(0.336 * 0.664)}{2}}{(0.447 - 0.336)^2}$$

$$= 165.74 = 170$$

$$n2 = K * N1 = 170$$

$$n1 = 170 \text{ and } n2 = 170$$

Study reference: Marcelo Cozzensa da Silva et al

Statistical formula: Chisanare test, Student's t-test, Z test, Pearson's correlation coefficient

Software used: SPSS27.0 version

Study design: RCT case-control study

Sample Allocation: Random selection of subjects

Level of study: Level I

Sample size: 340 (170 in experimental & 170 in control group)

Sampling procedure: Simple random sampling technique.

Eligibility Criteria

Inclusion Criteria: -

1. Rag pickers of urban and rural slums of Wardha and Nagpur Districts.
2. Those who are available at the time of study.
3. Both genders included in the study.
4. Age between 14-25 years.
5. Those who are willing and cooperating to participate in the study.

Exclusion Criteria

1. Those who are not willing to participate in the study.
2. Those who are below 14 and more than 25 years of age.

Data collection tools:

1. Demographic Performa of the rag pickers.
2. Tool to assess their satisfaction level with the help of mental pain scale.

3. Tool to assess their intellectual capacity with the use of culture fair intelligence test.

INTERVENTION

Rag pickers who fall under the category of 14-25 years will be included as study participants. The socio demographic information will be gathered along with assessment of mental pain and IQ will be done for the study participants. Based upon the relationship between the mental pain and IQ, various vocational and skill training programs will be planned and participants will be trained accordingly for the period of 3 months. After the successful completion of the Vocational and skill training program their job placement opportunities will be evaluated and see how they are placed in the market. After their placement once again, their mental pain will be rated.

Criteria for discontinuing or modifying allocate intervention for a given trial

The adherence to the intervention will be monitored via duly signed consent forms and also with the help of group meetings before the completion of last post intervention assessment. If it is observed that participants are not able to complete the training program or they face any difficulty, then modifications will be made.

Relevant concomitant care and intervention that are permitted or prohibited during the trial

Participants will be permitted to continue their basic education (if any) or any occupation (if any) they are already involved in during the course of the study. Additional contacts will be made with the control group participants over the period of study time to ensure participation adherence.

Out come

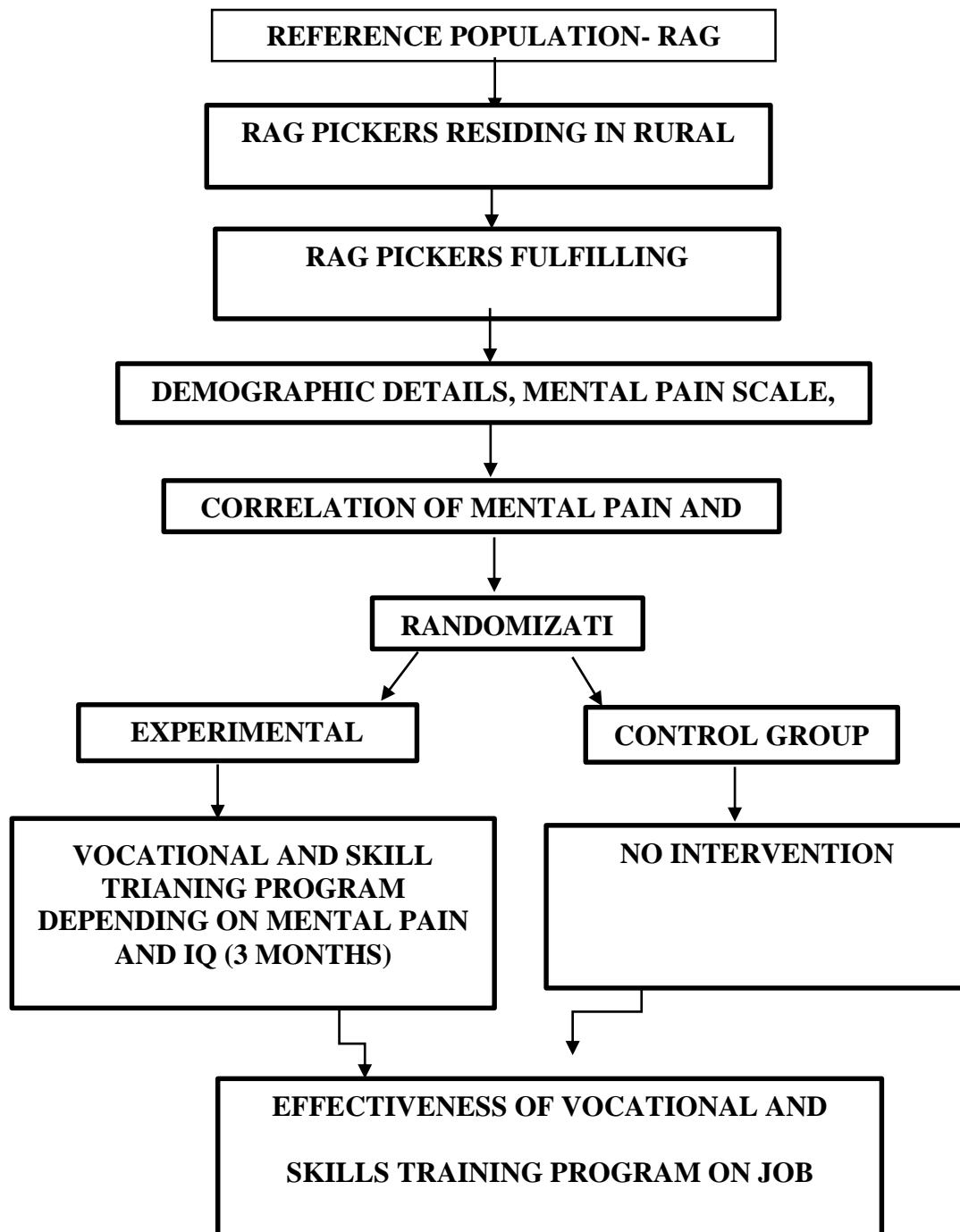
Primary outcome: Increased job placement potential of the rag pickers after providing them with vocational and skill training program.

Secondary outcome: Reduced mental pain of rag pickers after providing them with vocational and skill training programs.

Participation time line

The duration of the involvement for the study participants will be in 2 groups, first control group and second treatment group, is approximately 5 months. Participation in this project finishes after the assessment of job placement of treatment group and of mental pain of both the study groups post intervention.

Intervention protocol



Statistical analysis: Plan to use descriptive such as mean, standard deviation and inferential statistics such as paired and t-test, Pearson's Correlation Coefficient (or Pearson's r) test will be used.

RESULTS

1. Increased job placement potential and quality of life and satisfaction of the rag pickers.
2. Positive or negative correlation between quality of life and satisfaction.

DISCUSSION

A study will support the present study that Solid waste picking is a job which majority of people use to sustain themselves. The solid waste pickers, according to the study lack skills which are needed for the execution of the job. The facilities which are also required for their job are not in adequate. However, solid waste pickers are required to enroll in schools such as vocational centers where the adequate knowledge, skills and attitude regarding their career choice can be improved. Thus, solid waste pickers need to be motivated for this enrolment. This is because education is an instrument for career, personal and economic development in all nations of the world. ⁽¹⁾

The conclusion of the study will be reinforced by another study in which the researcher determine that the findings of the paper clearly show that VET (inclusive of VET of any form) significantly enhances participation in the manufacturing sector of India. Findings are same for formal VET as well. However, the impacts on the probability of participation as wage labourers vary across industries in case of VET as well as formal VET to some extent and this may be happening due to the differences in the level of requirement of skilled workers in manufacturing industries. As far as the impact of VET on wage/salary earning is concerned, both VET and formal VET appear to be capable of significantly increasing wages of workers in the manufacturing sector at aggregate level. ⁽²⁾

CONCLUSION

After the completion of data collection, the conclusion will be drawn from the statistical analysis. The researcher expects participants who intervened with vocational and skill training program to be benefitted more than those who do not receive any intervention. The findings of this study will help to improve the quality of life and satisfaction along with reduction in mental pain among Rag pickers.

CONSENT AND ETHICAL APPROVAL

The institutional ethics committee approved the present study of DMIMS, Wardha (DMIMS (DU)/IEC/2022/1138). Written consent will be taken from the participant for participation in the study. Participants will be instructed that their participation in this study is entirely voluntary and they can't opt out once they are enrolled in vocational and skill training program. Throughout the study project confidentiality will be maintained. Findings of the study will be disseminated to participants and published in a SCOPUS or PUBMED indexed Journal.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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