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CASE STUDY

Changes in socio-economic and health condition of rehabilitated slum dwellers in Kolkata, West Bengal

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ABSTRACT: The cancerous spread of slum has been a rampant problem in urban areas worldwide. The acute shortage of housing facilities compels the poor to live in slums. Proper rehabilitation is considered as a very essential remedial measure to provide better living environment to slum peoples. This study is an essential attempt to gauge the effectiveness of a rehabilitation program, which studies the changes in socio-economic and health condition of rehabilitated slum dwellers since they got rehabilitated. In order to do so, a household survey was carried comprising 240 households in two rehabilitated sites in the city of Kolkata (ward no. 107 and 114) during the month of July, 2014. The results conforms a strand of a belief that in-situ rehabilitation or rehabilitation within short distance is more effective. A rehabilitation too far away area disrupts the existing social, economic and political ties of neighborhoods. Measures have also been proposed to overcome such problems and to make the slum dwellers an integral part of urban society.

KEYWORDS: *In-situ rehabilitation; Occupational shifting; Rehabilitation; Sanitation; Self-Help Group (SHG)*

INTRODUCTION

Faustina in the world report on disability stated: " If you do not have a proper wheelchair that is when you really feel that you are disabled. But if you have proper wheelchair which meets your needs and suits you, you can forget about your disability"(World Health Organization, 2011, p.94).

Habitation is one of the important basic needs of human being. Proper habitation with healthy environment is favorable for growth and development of human being. But according to the HABITAT report on slums in 2001 about 31.6 percent of the world's total urban population was living in slums. UN-HABITAT defines slum as "a contiguous settlement where the inhabitants are characterized as having inadequate housing and basic services. A slum is often not recognized and addressed by the public authorities as an integral or equal part of the city" (Chandramouli *et al.*, 2010).

The census of India defined slums as areas, where buildings are unfit for human habitation characterizing dilapidation, overcrowding, faulty arrangement of streets and lack of ventilation, electricity or sanitary facilities etc. So the living conditions of slum dwellers are still far away from physical and mental satisfaction.

Paradoxically, it has been recognized that slum dwellers are one of the leading contributors to a city's overall productivity (Patel, 1996). To improve the living condition, proper rehabilitation process plays an overarching role. Also, relocating the squatters to decent housing can resist poverty and other social problems (Andavarapu and Edelman, 2013). The task of improving and integrating Indian slums to the mainstream is a long-standing humanitarian challenge (Patel *et al.*, 2011). Slum rehabilitation may be done by

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in-situ up-gradation and relocation of slum peoples. In-situ up-gradation is a process of redevelopment of slum areas by providing dwelling space and other basic civic and infrastructural services to the slum dwellers on the existing land on which the slum is situated. On the other hand, relocation or ex-situ rehabilitation is a process to resettle slum dwellers from the existing area to an alternative site with dwelling space, basic civic and social infrastructural services (Kapse *et al*., 2012).

Hypothesis: Rehabilitation process may shade both positive and negative consequences on slum peoples.

Rehabilitation of slum dwellers in Kolkata

Kolkata, the capital city of the state of West Bengal, is demographically one of the 10 largest urban agglomerations in the world with one third of the current population living in slums (Sengupta, 2006). According to the census report it accounts to 31.35 percent (Chandramouli, 2011).

In Kolkata rehabilitation of canal bank slum dwellers is done by Kolkata Environmental Improvement Project (KEIP) funded by Asian Development Bank (ADB), Government of West Bengal (GoWB) and Kolkata Municipality Corporation (KMC). As of June 2012, total 3365 flats were built and 2880 families were successfully resettled. Each flat has one bedroom, toilet and a balcony-cum- kitchen (KEIP, 2013).

Objectives

Rehabilitation of slum dwellers does not shed positive impact all time; it may have some negative impacts as well. The main objective of this study is to examine the consequences of rehabilitation on slum people in Kolkata in two wards (Kasba and Purba Putiary).

Data Source and Methodology

This study is mainly based on primary data administered with the help of a questionnaire (prepared by author) by conducting a household survey during the month of July, 2014.

Some secondary informationwas collected from the Kolkata Environment Improvement Project office. Among all rehabilitated housing complexes, Kasba has 10 blocks with 320 families (located in ward no. 107) and Purba Putiary having six blocks with 134 families (located in ward no.114) were selected as the study area. Out of total households, 240 sample households were selected including 15 households per block through simple random sampling.

Findings

In Kolkata, rehabilitation process started 2007 onwards with the resettlement of canal bank slum dwellers as canals like Tollygunge-Panchannogram (TP) basin were choked by silt and garbage. To restore the drainage condition canals needed to be cleaned and for that reason canal bank slum dwellers were to be resettled (KEIP, 2013). The main findings about the impact of rehabilitation are as follows:

First of all it provided 99 years lease deed to the female head of the household (2790 out of 2880) addressing female empowerment in Kolkata. This strategy has been successfully implemented by many countries (Andavarapu and Edelman, 2013). Thus, tenure security must be the first step of slum rehabilitation (Patel, 1996).

Habitation condition and possession of assets have been positively changed in both the study areas. But maximum respondents claimed that they have not been provided sufficient drinking water and even if available it comes once or twice in a week, being supplied by Municipality tank. Many of them were compelled to use water for even drinking purposes from unclean reservoir and only one pumping machine is there to supply water to that reservoir. As per Patel's statement, there is also a chance of increase in demand for water supply after providing them separate bathrooms (Patel, 1996).

After rehabilitation slum people got a flat with one bedroom, but the empirical evidence showed that 33 percent of respondents in Purba Putiary and 24 percent of respondents in Kasba were sharing one room for more than one couple.

Space crisis may disrupt free and healthy air circulation, a study in Swedish schools found poor air quality (IAQ) as one of the responsible factors for the occurrence of many health problems like irritation of eyes, nose and neck; dry mucous membranes; skin rashes; tiredness; headache; nausea and others (Alsmo and Holmberg, 2007).

In their study, Zhang *et al.* (2006) established that the occurrence of ever eczema and itchy rash in children are associated with domestic environment. Many of slum people used their living space or open space as

kitchen but kitchen room may be described as 'front line in the battle against food-borne disease' (Redmond and Griffith, 2009).

Due to the poor quality of construction, there were (mainly in Purba Putiary) apparent leaks and cracks on the walls and the maintenance cost that followed were too high.

In case of Purba Putiary 36 percent of the respondents and in Kasba 72 percent of the respondents were unable to continue their education. According to them, besides poverty, child marriage, long distance to school and unavailability of government school are the most important reasons for the dropout situation. In addition to all the factors, distant rehabilitation from their original place was also one of the important reasons for the dropout rate in Kasba.

There is a strong relationship between spatial mobility and occupational shifting. Many times this shifting plays a negative role if it happens unwillingly. In case of Purba Putiary maximum respondents told that they had shop in market area but after rehabilitation they got flat in a relatively backward area. Moreover in both the study areas people who were resettled at more than three kilometer from their original habitance were compelled to change their occupation to avoid transport cost and thence had to loose substantial amount of their prior income. In Rio de Janeiro the same result were also found in of the studies (Perlman, 1979).

According to many of the respondents there were improvements in income but on contrary expenditure also increased (due to electric, high price of commodity, other service payments and others). Many rehabilitated dwellers in both the study areas were forced to sell their flat and move to the urban fringe area or back to slum to avoid additional financial liabilities and to avoid occupational mobility or at times because of room crisis too.

Restrepo (2010) also found the same mobility in Mumbai due to additional financial liabilities or mismatching preferences with new living conditions (economic activities or household size). About health condition, rehabilitation process shaded positive impact in both the study areas, because expenditure for medical purpose and disease distribution showed decreasing nature after getting better living conditions. Vickery (1953) showed that good living environment plays vital role to achieve the 'positive health and the natural resistance to disease'.

Lastly, John Turner's idea of 'Self-help' showed how the formation of Self Help Groups (SHG) may make rehabilitation process more effective (Turner, 1977).

KEIP formulated 35 SHG among all rehabilitated slum dwellers in Kolkata to provide alternative livelihood option; 417 people (out of which 326 were women) were trained in association with reputed polytechnic institutions within short time duration in various trades like sanitary plumping, advance tailoring, mobile handset repairing, AC and refrigerator repairing, beauty care, two or three wheeler repairing, electrical wiring etc. (KEIP, 2013). Major feedbacks given by the dwellers have been given in Table 1, which may highlight the impacts of rehabilitation of slum dwellers.

Table 1: Major feedbacks at a glance (House-hold survey, 2014)

Indicators	Positive feedback	Negative feedback	Requirement
Habitation condition:	Relatively better environment.	Space crisis.	At least two room per family.
Possession of household assets/ amenities.	Satisfactory change.	-	-
Basic facilities	Personal toilet, dustbin, electricity etc.	Paucity of drinking water.	Regular drinking water supply.
Education	Improvement in Purba Putiary.	Drop out student, due to long distance from the school in Kasba.	Government school within short distance.
Occupation	Improvement for those who were resettled in short distance.	Occupational shift for most of the dwellers who were resettled from distant areas.	Flat near source area or in-situ rehabilitation.
Income and Expenditure	Improvement.	Expenditure also increased.	Certainty in daily work.
Health condition	Improvement.	Long distance from government hospital in Kasba.	Health centre for first-aid treatment and for emergency case.
About SHG	Benefited.	_	Formation of more SHG.

CONCLUSION

From the above post-rehabilitation study it is clear that in-situ rehabilitation or nearer ex-situ rehabilitation may shed positive impact to the living situation of the rehabilitated. One study of in-situ up-gradation project in Mumbai also showed positive impacts (Kapse *et al*., 2012).

But if it is done to a greater distance then rehabilitated people were compelled to change their occupation and also lost a good amount of their income. Moreover for maximum cases, a rehabilitation to far away area disrupts the existing social, economic and political ties of neighborhoods. Weinstein has also shown that social and economic ties are in critical position among the urban poor at Dharabi (Weinstein, 2009).

Above discussion also highlights paucity of drinking water still a major problem in both the study areas. So it may be suggested that availability of basic facilities should be made accessible before rehabilitation process is undertaken. The study suggests urban parks and green spaces should be available at rehabilitated place, which may help to improve the physical and mental health of people. But improper and unplanned playground, parks and others may create some disastrous situations. Hence, proper 'Health, safety and environment (HSE)' management system is very essential for successful rehabilitation process (Akbari *et al*., 2016).

Some other recommendations could be provision of at least two rooms to a family and physical handicapped must be prioritized while allotting the ground floor. In case of Ex-situ rehabilitation there must be some essential similarities between the pre-rehabilitation and post-rehabilitation places. For example, if they are in urban fringe area then they must not be resettled in the core area of a city. A model of successful rehabilitation has been given (Fig. 1) which may enrich the slum rehabilitation process.

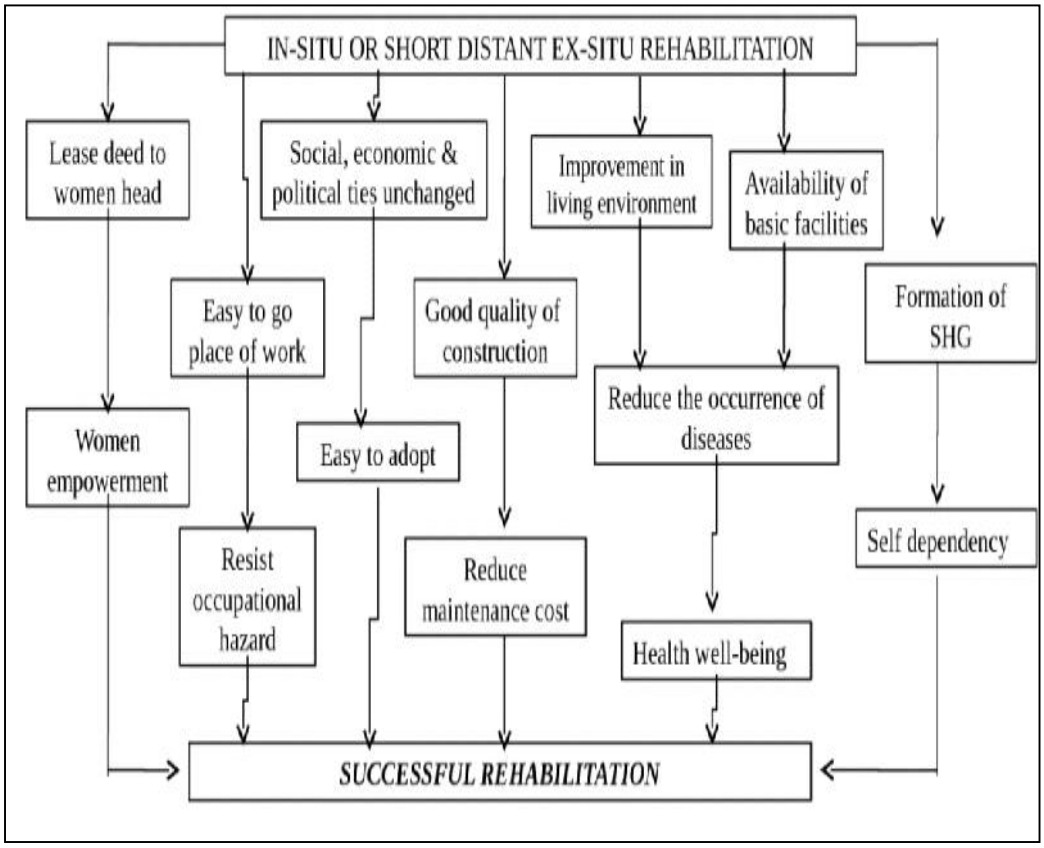

Fig. 1: Successful rehabilitation

Improving the living conditions of the slum dwellers is not only one solution. Besides rehabilitation, rural-urban migration must be lowered by providing rural livelihoods or improving agricultural productivity in the rural areas. Roy also supported this statement in his research because migrant peoples are unskilled labor and have to start from the lower end of the income chain. For which they create slum area on public or private property (Roy, 2004). Lastly, Government and Non-governmental Organizations (NGOs) should work jointly to sensitize the dwellers and mobilize their thought process towards achieving their development through themselves.

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CONFLICT OF INTEREST

The authors declare that there are no conflicts of interests regarding the publication of this manuscript.

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