

ASSESSMENT OF OCCUPATIONAL HAZARDS AND ITS IMPACT ON HEATH OF BRICK FACTORY WORKERS.

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Abstract:

Introduction: Brick laborers are one of the most helpless un-sorted out average workers of India. It is frequently discovered that the brick laborers experience the ill effects of morbidities as a result of revolting work and the unhygienic living condition. Brick making plants are one of the most dirtied working environments in India that cause respiratory, gastrointestinal, conceptive, psychosocial, dermatological and musculoskeletal scatters. **Objectives:** To search the evidence regarding the occupational hazards among brick factory workers. **Methods:** The data was explored on three online electronic databases- Pub Med, MEDLINE, google scholer in order to check the availability of reviews from the year 2014-2019. The search was confined to only English accent. **Results:** brick factory workers are prone to get health problems because of their working environment and due to work nature. During work brick workers faced many problems like poor working facility, lack of personal protective equipment, lack of knowledge regarding how to prevent them self from the health problems. On daily basis they faced many health hazards like chemical (especially silica dust), physical hazards, and environmental hazards and many others. **conclusion:** It has been estimated through various studies that workers usually have less knowledge regarding occupational hazards which affect health in many ways. Hence it is essential to providing education related to health in order to reduce the exposure of hazards and promote the health in an effective and efficient manner.

Key words: Occupational hazards, brick factory workers.

INTRODUCTION: According to International Labour Office (ILO) and the WHO occupational health define, as 'the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations. Construction site workers and brick kiln workers, are mostly 'periodic labour force'; and protecting their health at the work site may not be always on priority of the employer.

India is the second biggest maker of blocks over the globe. India alone delivers more than 10 percent of the bricks which is assessed that India has in excess of 1,00,000 brick kilns creating around 250 billion bricks yearly, utilizing around 15 million specialists. The brick business is developing as the interest for bricks is expanding in the towns and towns because of the quick monetary development, urbanization and success.

Brick laborers are one of the most helpless un-sorted out average workers of India. It is frequently discovered that the brick laborers experience the ill effects of morbidities as a result of revolting work and the unhygienic living condition. Brick making plants are one of the most dirtied working environments in India that cause respiratory, gastrointestinal, conceptive, psychosocial, dermatological and musculoskeletal scatters. Regardless of the different medical issues looked by brick furnace laborers, the presence of government disability administration and human services at work is nil or not truly open. Brick making is a relentless employment and speaks to a progression of word related dangers that can be preventable, this work is frequently done by all individuals from families, including ladies and kids, which fuels the issue and turns into a requirement for consideration regarding these populaces with a general wellbeing point of view.

1.1NEED FOR THE STUDY:

Brick-kiln workers suffer from high morbidity because of their work. This demands urgent attention to the health and safety. As per National Commission for Enterprises in the Un-organized Sector (NCEUS), Laborers in brick kilns are survivors of unfriendly workplace conditions and exposed to health dangers of occupational. These workers are poor and vulnerable.

Surveyed on kilns shows that, 65 to 85% worker are between the age of 5 to 14 years. 100 % of brick molders were from traditionally marginalized classes and cast. 87.72 % of the kilns surveyed have access only to untreated ground water as drinking water. 75.8% of all

toilet facility had no water provided them at all. Living condition also drastic for the workers.

Dr. Mittal Ashish (2018) has conducted a study on Health of Kiln Workers and Exposure to Emissions in Tripura India. The result of the study shows that Overall, 49 per cent workers are underweight: 64 % of the women (16 out of 25) and 44 % of the men (30 out of 68). 51% of the workers were anaemic—20 (80 %) of 25 women have a haemoglobin level below 12 g/ dl; 40 per cent of the men (25 out of 63) have a haemoglobin level less than 13 g/dl.

Pulmonary Function Test (PFTs) done for 91 participants, 71 per cent were normal; 11 women workers and 15 men performed less than the normal predicted values. Nine of 11 women workers and 9 of 15 men have either mild obstruction or mild restriction.

Sixty-six per cent of the workers, 47 (68 per cent) men and 15 (60 per cent) women complained of low back pain whereas 33 per cent workers have significant arm pain (23, that is, 33 per cent, men and 8, that is, 32 per cent, women).

1.2 AIM

The aim of the review is to identify knowledge on occupational hazards among brick factory workers.

1.3 OBJECTIVE

To search the evidence regarding the occupational hazards among brick factory workers.

2. METHODOLOGY

2.1 SEARCH STRATEGY METHODS:

The data was explored on three online electronic databases- Pub Med, MEDLINE, google scholar, in order to check the availability of reviews from the year 2014-2019. The search was confined to only English accent.

2.2 SEARCH STRATEGY: occupational hazards and its impact "occupational hazards"[MeSH Terms]+ "impact"[MeSH Terms] OR precaution [Text Word]+ "health hazards"[MeSH Terms] OR health prolems [Text Word]+ "health"[MeSH Terms] OR HEALTH[Text Word]+ brick kilns workers [All Fields].

2.3 TYPES OF STUDIES: Cross sectional design (simple survey and observation), Comparative cross-sectional design, Descriptive research design Cross sectional design.

2.4 TYPES OF PARTICIPANTS: Brick factory workers.

2.5 SETTINGS: Brick factories.

2.6 OUTCOME: The outcome of the narrative review is that occupational hazards are having ill effect on the brick factory workers health.

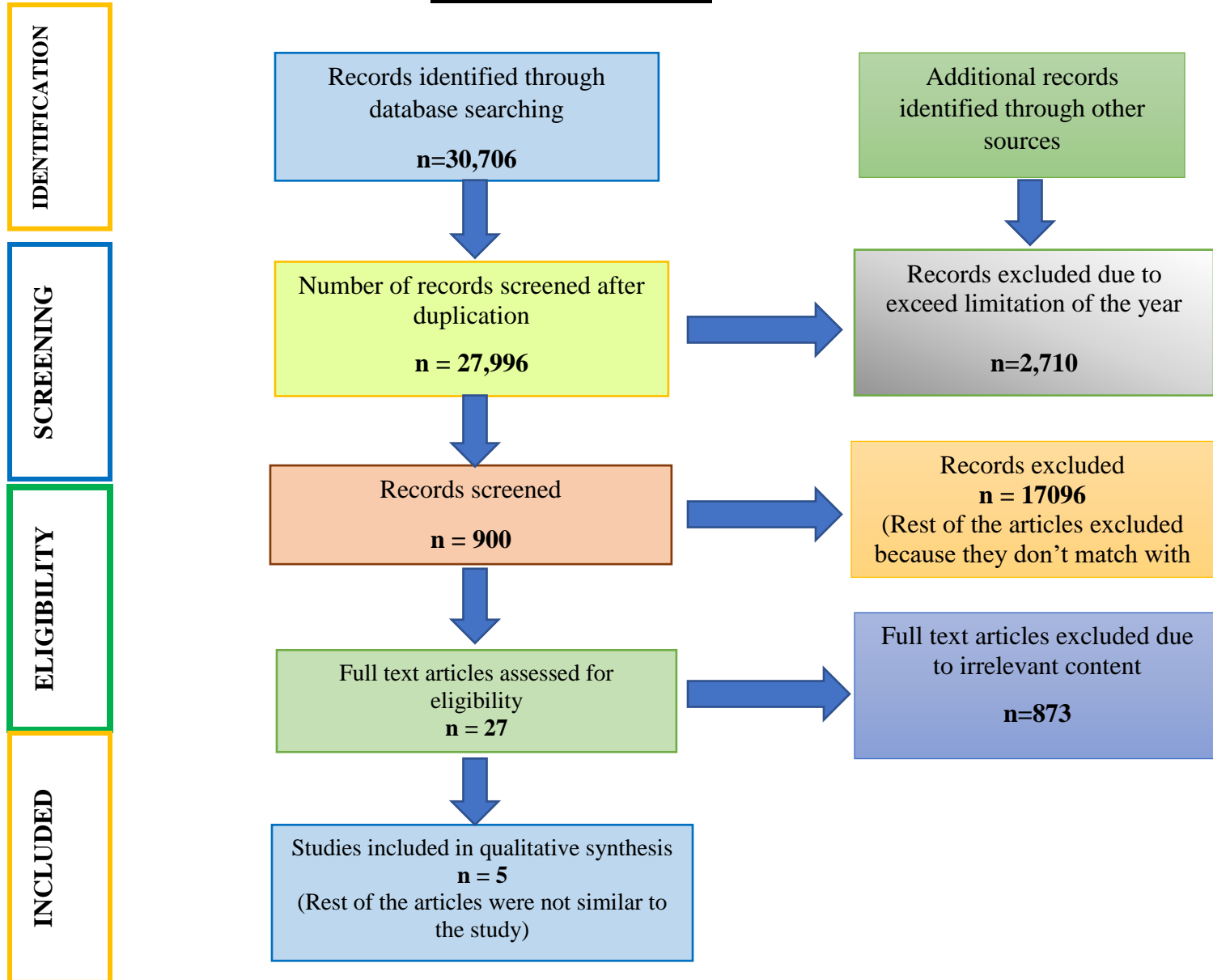
Result: All 5 articles shows that brick factory workers are prone to get health problems because of their working environment and due to work nature. During work brick workers faced many problems like poor working facility, lack of personal protective equipment, lack of knowledge regarding how to prevent them self from the health problems. On daily basis they faced many health hazards like chemical (especially silica dust), physical hazards, and environmental hazards and many others.

2.7 DELIVERY OF INTERVENTION: This narrative review was predetermined with the exploration of reviews related to the topic “assessment of occupational hazards and its impact on health”, the exploration begins with the keywords Assessment, occupational hazards, Brick factory workers Online databases which were used for the exploration of review was Pub Med, google scholer, MEDLINE. from the year 2014-2019. The search was confined to only English accent. At beginning, the search fetched 30706 articles. Duplicates were removed and reviewed 27,996. 2710 articles were excluded due to exceed limitation of year.17096 more articles were excluded because they don't match to the study criteria. 900 reviewed and screened 873 articles were excluded due irrelevant content and unavailability of full test.27 full text assessed for eligibility but 20 were not similar to study so 5 studies were included in qualitative synthesis.

3. RESULT

3.1 PRISMA FLOW CHART

PRISMA FLOWCHART



3.2 Data extraction table

A detailed description of studies

AUTHOR AND YEAR	RESEARCH DESIGN	FINDINGS OF THE STUDY
Rabin Das (2015)	Cross sectional design (simple survey and observation)	The results finding shows that 77.7% child worker experience fatigue or exhaustion. Most of the child workers, 85.7% experience cuts and bruises, broken bone 51.7% sprain and dislocation is 53.7% while carrying brick from the kiln to where the fired bricks were stacked outside. A higher percentage of child workers 86.7 % experienced burns while burning the green bricks.
Sheta S. and El Laithy N.(2015)	Comparative cross-sectional design	The results finding shows that brick kilns workers had significant higher frequency of chronic respiratory problems compared to their control group. Besides, 39.91% of brick kilns workers were complaining of more than one respiratory symptom compared to 11.70% among their control group. A notable increase of chronic respiratory problems seen in brick kilns workers with ≥ 10 years experienced as compare to the workers with 5-10 years experienced. Regarding the smoking habits, this study showed that there was a significant higher prevalence of chronic respiratory health problems among smoking workers (60.91).

Thirupathi T., Anthonisamy M.(2015)	Descriptive research design	The finding of the study is there is no significant difference between health problems and the Demographic variables. Age, gender, education, qualification, occupation and income are also affecting the brick kiln workers.
Dr. Pagar Vikrant, Dr. Bawa Mukeas et. Al(2016)	Cross sectional design	The study result shows that 70% of workers receiving daily income less than 150 rupees, 11% of workers were below 14 year of age in contradiction with child labor act, Majority (83%) of the workers were working above 8-9 hours against limits.
Das B. (2019)	cross-sectional design	Child brickfield workers suffer from pain, especially in the lower back (97%), shoulder (88%), hands (82%), wrist (76%), neck (73%) and ankle (71%). The post-activity heart rate of the child brickfield workers was 166.5 beats/min, whereas the systolic and diastolic blood pressures were 132.2 and 67.2 mm/Hg, respectively. The forced vital capacity value of child brickfield workers was 2.04, and in the case of the controls it was 2.18, which was significantly different. The forced expiratory volumes in 1 s of experimental and control subjects were 1.82 and 1.92 respectively. The peak expiratory flow rate was significantly different between the two groups.

4. SUMMARY OF FINDINGS:

The available literature was refined to get 5 quantitative studies:

All 5 articles show that brick kilns work was suffering from many health problems because of indecent working condition and they are not getting proper safety equipment and measures at working site. Occupational hazards effecting the workers health in negative terms.

5.DISCUSSION:

This chapter discuss the main finding of the research study. The quantitative studies on the occupational hazards and its impact on health directed in different countries such as India, Egypt. That study predict that occupational hazards are severely affecting the health of brick factory workers.

6.IMPORTANCE IN EDUCATION: Having baseline information regarding occupational hazards and its prevention will help the brick kilns workers to increases their knowledge related to health hazards and also help in prevention of those health hazards.

7.FUTURE SIGNIFICANCE: In order to reduce the exposure of hazards associated with occupation. It is very important to provide education related to occupational hazards and its prevention in brick factory workers, because it will help to build positive view among workers related to occupational health in the prevention of occupational hazards.

8. Limitations:

- Database search was limited
- Limited to only assessment of occupational hazards of brick kilns workers.

9. STRENGTH AND WEAKNESS:

STRENGTH:

- Article search was carried out on a significant problem

WEAKNESS:

- Only 5 articles were included for data synthesis due to limitations.
- Only meta-analysis was not done only qualitative synthesis done for this review.

CONCLUSION

It has been estimated through various studies that workers usually have less knowledge regarding occupational hazards which affect health in many ways. Hence it is essential to providing education related to health in order to reduce the exposure of hazards and promote the health in an effective and efficient manner.

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