Mapping Occupational Hazards and Exposures amongst Home-based Workers in Ahmedabad, India

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List of abbreviations

SEWA	Self-Employed Women's Association
LSST	Lok Swasthya SEWA Trust
HBWs	Home-based Workers
CHWs	Community Health Workers
FGDs	Focus Group Discussions
GST	Goods and Service Tax

SEWA and LSST

While 75% of working women in India are employed with informal or unorganized sectors, they have historically enjoyed fewer legal protections or rights. With little education and awareness they are subject to exploitation and harassment by employers or middle men and moneylenders. In 1972, Ela Bhatt, a lawyer and head of the women's section of the Textile Labour Association in Ahmedabad, observed the horrendous conditions faced by women working as head-loaders, needlecraft workers, street vendors, cigarette rollers, and waste pickers. As a result, she became committed to helping women organize themselves and the Self-Employed Women's Association (SEWA) was established in Ahmedabad city of Gujarat. SEWA is a trade union of approximately 1.5 million members representing 100 plus informal trades, within the state of Gujarat, and in fifteen other states of India.

SEWA provides comprehensive support to poor, self-employed women. Its efforts over four decades to increase the bargaining power, economic opportunities, health, nutrition and social security, legal representation, and organizational abilities of Indian women have brought significant improvements to thousands and influenced similar initiative around the globe. It is the largest women's union in India, offering its members an array of financial, health, child care, legal, vocational, and education services. Its members have created 106 co-operatives, over more than 3,000 producers' groups, forged market links and enhanced bargaining positions. SEWA's approach is firmly grounded in its philosophy of addressing the several needs of informal women workers in a holistic manner.

The Lok Swasthya SEWA Trust (LSST) was established by senior SEWA leaders in 2005. LSST focuses on promotion, prevention and curative services for better health of poor women and their families. SEWA has promoted LSST to provide social security services (i.e. health care, child care, insurance, pension, housing and sanitation) to its members, informal women workers and their families, since last 12 years. These services have sought to address social security issues for informal women workers at the policy level through advocacy efforts. The occupational health of informal women workers is one such program, supported by the LSST since past 12 years and by SEWA since its inception in 1972. Constant monitoring of services and capacity- building of the LSST team help strengthen the above services.

Introduction

In India, around 90% of the economy constitutes informal workers, out of which approximately 75% are women (India and the IMF, February, 2017).They work long hours, earn low incomes and are thus vulnerable to a variety of occupational health hazards which are important determinants of work, income security and social security. The awareness of occupational health hazards and exposure amongst these women workers is minimal unlike the women workers in the formal employment, who enjoy some form of employer-employee relationships, and access to all forms of social security, including health security and some measures to prevention from occupational hazards and exposures are taken by the employers in the case of formal workers. Unlike workers in the formal sector, they do not access public health care or reasonably priced health care due to lack of awareness, time constraints, lack of proximity to public health facilities, loss of wages due to the time taken to go to a public health facility and generally have to pay a large percentage of their incomes to access private health care facilities closer to their work places or homes. Lack of awareness and low education remains an important factor that keeps them out of the health systems and for the most part deprived of entitlements and rights meant for them.

The informal sector is characterized by a lack of monitoring occupational hazards, absence of hazard controls, or any other forms of health interventions. Addressing occupational hazards and risk exposure are extremely important, as health is an important determinant of work, income security and social security; yet occupational health remains a neglected aspect in both public and private health care systems of this country, and perhaps most glaringly so in the informal sector. Health and work are inextricably linked for the poor and the interlinkages are innumerable.

Occupational health problems due to hazards and exposures are a major issue for informal women workers. A woman's work often affects her health. Women in the informal employment do strenuous work that is physically demanding, often with harmful substances. These workers work in same position for long hours that can cause harm to various parts of their body. Pregnant and lactating mothers often work in circumstances that affect their health and health of their child. Manual work, long sitting hours in same position, repetitive movements, living in unsanitary conditions, lack of basic facilities at work-place like drinking water, hand-washing facility, unavailability of toilet, lack of access to health care, pressure and abuse (verbal) from sub-contractors, leads to poor physical (and, often mental) health. In urban areas, sharing a room space between 10 or more co-workers, congested space, unavailability of

proper electricity/open channels and ventilation, are also a cause of poor health of women workers, fall in productivity and income, leading into a vicious cycle of deteriorating health and increasing poverty.

Home-based workers (HBWs) - A vast, invisible work-force

Home-based workers produce goods or services for the market from within or around their own homes. Some of them are self-employed and some are sub-contracted. They stitch garments, roll incense sticks, bidis; make kites; and many more. In urban areas, due to social restrictions around their mobility, many women informal workers subcontract to small factories, rolling incense sticks or stitching garments in their own home at a piece rate. These women are called home-based workers (HBW), and they are defined as self-employed in the labour statistics (Alfers *et al*, 2017).

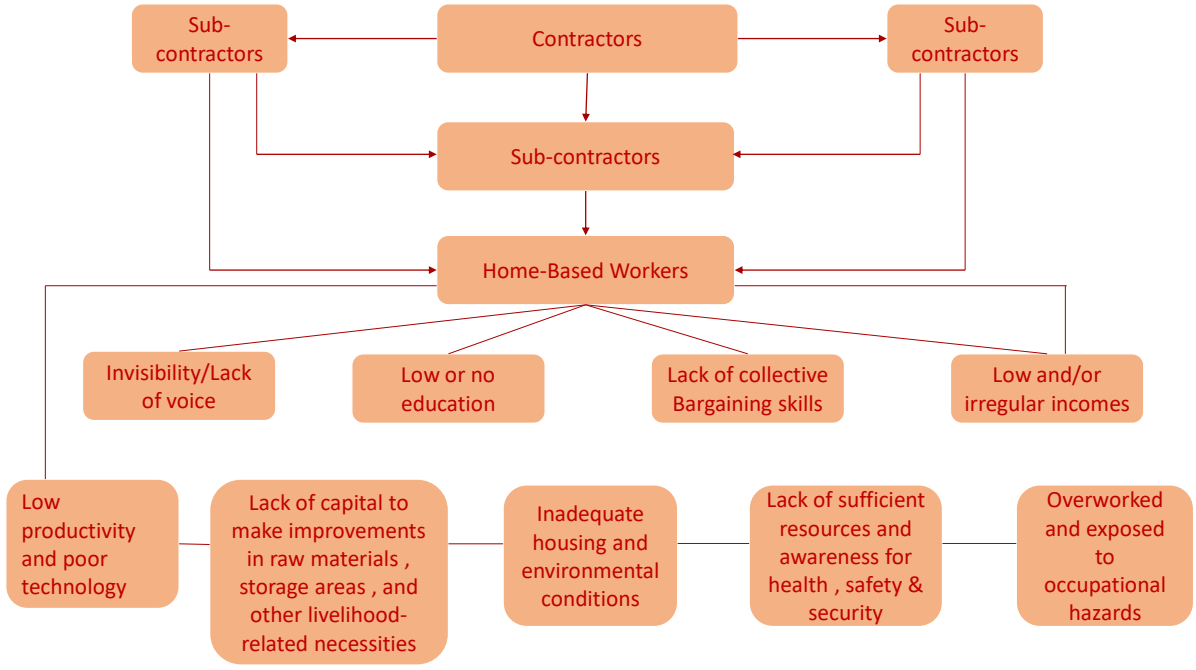
In India, home-based work, which cuts across different branches of industry, is an important category, representing a significant share of urban employment; in 2009-10 it was 18 per cent of the total urban employment and 23 per cent of the urban informal employment (Chen and Raveendran 2012: 14), with the data showing an increasing trend from 2005 onwards. A survey of Ahmedabad city from April 2012 to April 2013 conducted by WIEGO reported that 71% of home-based workers were subcontracted workers.

Home-based workers are amongst the lowest- paid members of the workforce, often earning less than even factory workers. And most, not by coincidence, are women. That's because women are usually responsible for childcare and care of family, and in a country like India where home-based workers are most prevalent, there are often cultural limitations on women working outside the home. Most of them are invisible due to the informality of their work, it's this invisibility, coupled with the fact that most are poor and disadvantaged to begin with, that make home- based workers one of the global economy's most vulnerable labor groups. They have little or no bargaining power in relation to the contractors who employ them. And while the money they earn is often critical in feeding their families, it's rarely enough to help them actually escape poverty.

The work-related health problems of home-based workers are not well recognised, largely because these women fall between the cracks in the health system. Occupational health services in India cover only the workers in the formal employment, a small minority, whilst the public health system is by and large focus on women's reproductive roles and do not acknowledge their roles as workers. Moreover, very little health education and information, especially that is work-sensitive and gender-sensitive, is available to urban home-based workers.

This project highlights the homes as workplaces, especially for women workers, and the multiple hazards and exposures within their work-places which are often their own homes, the impact of work on their living conditions and vice versa. Therefore it becomes prudent for the city governments and urban health practitioners need to be aware of these twin facts in all their interventions.

Figure 1: Home-based workers and Home-based work economy



Project Brief:

Target Group: 200 home-based workers in four different sectors [i.e. Garment workers (50), Kite-makers (50), Incense stick rollers (50), bidi makers/rollers (50)]. Selection of target group was completed using stratified random sampling technique, the home-based workers were selected as a sub-group and form each of the four trade groups desired sample was selected randomly.

Garment worker

Kite maker

Incense stick roller

Bidi roller

Geographic Locations and Home-based work sectors:

Main Sector (Home-based work)	Geographic Location	Socio-economic background
Garment workers	Qutub Nagar, Saiyadwadi, Vatva-1	Muslim community members with little or no education, most women members are involved in sewing/stitching of clothes, stone fixing on stole/saree, stitching cushion covers, etc.
Kite-makers	Side & Service area, Danilimda ward	Muslim community members, less-literate, most women members are involved in Kite-making with no fixed- income (mostly, seasonal workers- between March and January- about 10 months)
Incense stick rollers	Panna Estate, Bapunagar	Most community members are migrants from Andhra Pradesh, Maharashtra and Uttar Pradesh states of India; most members shifted in search of work opportunities
Bidi makers/rollers	Pathan Ni Chali, Saraspur	Community members here are less literate; most members are bidi rollers, incense stick rollers, and street vendors. Some of the community members are migrants from Rajasthan, Andhra Pradesh and, other intra-state migrants.

Goal:

To explore the occupational health issues within the different groups of home-based workers, map occupational hazards and exposures and improve the knowledge amongst Home-based Workers on these hazards and exposures to take preventive steps which will mitigate the adverse affects on work and health conditions.

Objectives:

1. Capacity-building of Community Health Workers (CHWs)
2. To develop occupational hazard database for home-based workers
3. To disseminate the learning and experiences achieved through this (project) work, with the researchers and institutions working in this field

Activities conducted:

1. **Developing appropriate methods and tools for hazard mapping and basic exposure assessment**

   Tools and methods were developed, to map hazards within the workplaces of home-based workers and assess exposures to harmful substances at a basic level, by the LSST team. Details of methods and tools developed for hazard mapping and basic exposure assessment are mentioned below:

- **A Survey Questionnaire with Health Check-list (*Annexe I*):** A survey questionnaire developed to map hazards and exposure risk faced by home-based workers in different trades implicated five sections covering, ***personal details***, ***socio-economic details*** (i.e. income, work-hours, etc.), ***work environment*** (i.e. single room work-space, adequate light, source of light, ventilation, sitting arrangement, number of breaks while working, etc.), ***work process*** (i.e. repetition of movements, use of personal protective equipments), ***hazard exposure*** (i.e. ergonomic, physical, biological, chemical, and psycho-social), and ***past medical history*** of respondents. A health check-list was also prepared along with the questionnaire and was prepared in such a way that it gives an idea about the specific illness/injuries/aches & pains faced by the different groups of home-based workers. The survey questionnaire along with health check-list, looked into occupational hygiene aspect (i.e. work-space, work environment, work processes, etc.), and its impact on their health.
  Total 200 questionnaire forms (50 questionnaire forms filled with each home-based worker group) were filled by the CHWs in all four areas within a period of 10 days. In-person survey method ensured low non-response and low rates of incomplete data.

- **Objective Hazard Assessment tool (*Annexe II*):** The method of observation was employed to collect and record data, which enabled us to construct and then endorse the findings obtained through the subjective assessment exercise.
  This involved the community health worker (CHW) observing the work process of a worker for few hours and noting the hazards, the worker is exposed to. This tool was used with the selected 04 workers from each trade-group who are respondents of the survey questionnaire. This tool also served as an educational tool for both the CHW and later, the HBWs. Duration of observation differed from 40 minutes to 2 and a half hours, depending on the work processes involved in each task finished by the HBWs.

The tool developed also looked at mapping the value for likelihood and severity of the risk associated (low, medium and high, depending on the score given between 1 and 4). The tool developed for objective assessment, comes from OHS in the formal sector and is an experimental method, here. Total 16 of members (4 each) from each sector were observed with their prior permission to add learning to our study. Apart from hazards and risk, the CHWs also observed whether there is any protective equipment being used by the members whilst at work and anything else that could have an impact on the health of the worker.

- **Participatory Risk Mapping for Home-based workers- Focus Group Discussions (FGDs) (*Annexe III*):**
  A guideline for FGDs was developed for participatory risk mapping exercise amongst home-based workers. One focus group discussion per sector, using the participatory tool, to lead upto a discussion of possible solutions was conducted. FGDs were used to gain an understanding of the occupational health and safety risks to which 4 sectors of home-based workers in Ahmedabad are exposed to; to validate the findings from two above mentioned methods (i.e. subjective and objective assessment), to raise awareness amongst workers of the link between work and ill-health and injury, and through this, think through with workers, possible interventions to improve health and safety at work.

  A sectorally specific Focus Group Discussions were conducted with 8 to 10 workers in each location. A facilitation guideline was also developed to prepare facilitator and note-taker in advance, to get different information and ideas from the workers. Each FGD conducted lasted for about 45 to 60 minutes.

  The workers were explained the purpose of the FGD, to report back to them on the findings of the subjective and objective assessments, and also to hear from them about possible solutions. Detailed discussions took place around each FGD about the workers' understanding of "hazard". All the FGDs were conducted through four activities on "hazards and solutions". Activities were distributed into 4 components, starting from Listing Hazards (Activity 1), Report back on Subjective & Objective Assessment (Activity 2 & 3) and lastly, Thinking through solutions (Activity 4).

  In the first activity, the participants were asked to list the health and safety hazards they experience as part of their working lives [written down by the note-taker]. For each hazard that was elicited, workers were asked to talk more about how and why those constitute a hazard. Here, they were also asked if they know of any specific examples of accidents/ill-health that have occurred as a result of the hazard identified.

Facilitator used the hazards noted-down, grouping them into broad categories of ergonomic, physical, chemical, biological, and psycho-social, as a way to explain to workers about how each of these can impact on both their health and their incomes.

In the second & third activity, facilitator reported back to participants on the findings of the subjective and objective assessment. After, reporting the participants with the findings, the participants were asked, what do they think of the results reported to them. If there are any findings that were new and different, why these hazards and exposures existed?

The last activity drew on the previous activities. By this time, the facilitator had a good knowledge about the hazards faced by workers, and used it to start a discussion on possible solutions. The questions asked focused on, possible solutions to hazards elicited, who should have responsibility for implementing solutions, and what support would be needed and from whom?

FGD with Incense stick makers in Panna Estate, Bapunagar

FGD with Garment workers in Saiyadwadi, Vatva-1

2. Developing an occupational hazard database for home-based workers

Home-based work and workers are invisible in economic statistics and in city level data, and as a result, these workers are often denied basic urban services while cities decide what to do about informal settlements or impose regulations. Invisibility and lack of recognition (with no formal contracts and no identity cards) give rise to other insecurities such as a no social security, lack of access to credit or to government schemes that provide basic services like housing, health insurance for the poor, no day care facilities for their children while they work, etc. Shelter and infrastructure deficiencies, lack of basic amenities like water and sanitation and related inadequacies often exert huge pressures on urban home-based workers.

In order to make the work-related health needs of home-based workers more visible to policy-makers and to themselves, there is a need to have better and more systematic information about the occupational hazards and exposures that these workers face, and the impact on their work and well-being. A **database** using ***Excel format*** was developed to record and maintain the data obtained through survey questionnaire and the health check-list (i.e. subjective assessment) and formats for objective assessment impressions (observation of respondents for hazards exposure assessment).

The data collected, were entered into the database, compiled and analysed to understand the hazards and exposure risk faced by the different trade groups. In turn, the analysed data will be

used for dissemination and wider visibility to researchers, policy-makers and other stake-holders to reduce the risk-hazards and improve the overall work & well-being of home-based workers.

3. Capacity-building of Community Health workers (CHWs)

SEWA's approach to health interventions is participatory. All activities were implemented by and through the community health workers (CHWs) who make up SEWA's health cooperative and who are also themselves informal workers and members of the SEWA union. ***Participatory approach*** was used as a tool to enhance the capacities of the CHWs in all the implementation areas mentioned above. The knowledge and experience gained is expected to enable sustained interventions to address the OHS of home-based workers at the community level. The CHWs were involved in Occupational Hazard mapping exercise and assessment among home-based workers like Garment workers, Kite-makers, Incense stick rollers, bidi makers/rollers. Use of this participatory approach ensures sustainability and the ability to "scale up" the exercise into different locations.

Capacity-building sessions were organized for CHWs with the LSST team on various occasions, with the purpose of providing them with project orientation and details, how to fill survey questionnaire and health checklist, and also basic training in hazard identification before actually implementing the assessment tools. Suggestions of CHWs, who are themselves from the informal sector and aware of the work hazards and living conditions of the target group, were also incorporated into the questionnaire format. For objective assessment tool, sector-wise work-processes were documented with the help of CHWs to facilitate hazard identification, risk-associated with each work process, identify the likelihood and severities of risk associated with each process, and indicate if each risk is low, medium or high. Most importantly, CHWs were also trained to use the observation method at the community level, to not to miss out on any information regarding particular home-based work. This training session worked as a "*participatory activity*" to map hazards within their workplaces and assess exposure to harmful substances at a basic level, in the identified sectors.

Capacity-building session for CHWs

4. Feedback session with Community Health Workers

The Assessment tools developed had to be tested and the project team decided to conduct a feedback session with the community health workers after using the tools. The objective of conducting feedback session with all CHWs was to identify major problems in implementing the tool at the community level and effectiveness of using the method of observation as a tool to identify potential hazards and risk faced by the home-based workers.

Although, method of observing members and noticing each and every potential hazard to which the home-based worker is exposed in their home which is also their workplace was enjoyed by our CHWs, it took little more time for them to understand and value the likelihood and severity of risk associated to workers whilst at work. There were no major problems identified during the implementation of the tool. The CHWs also gave their opinion on how such tools can be adapted. In their words, "*Adapting such tools at community level takes a little more time, but proper training and support from the team members can make it easier.*" They also shared their experiences of their usual work implementation and experience of conducting subjective as well as objective assessment of home-based workers.

"We have got new learning and exposure with this survey. We were working on Occupational Health earlier, but this survey has given us new insights on hazards and exposures faced by home-based workers and their health problems. It is a good experience."

CHW of LSST, Vatva-1

"*Even though, we were given training on Objective Hazard Assessment, it took really long for me to understand, how to value likelihood and severity of risk associated with hazards among the selected home-based workers. But, as soon I started understanding the method, I quite enjoyed it and while observing kite-makers, I had a feeling that I am designated to be a supervisor. It was really a good learning experience to be a part of objective assessment*."

CHW of LSST, Side & Service, Danilimda

5. Awareness through education among HBWs

All three tools developed for mapping occupational hazards and exposure amongst HBWs, also served as an educational tool to create awareness among workers about their home environment, work situation, other related factors, and its impact on their health. Approaching women home-based workers as respondents in our survey, observational study, and FGDs, allowed deep interactions with them, and know their work- related problems, and how it could have an impact on their health and income. This small study has helped in some understanding of occupational hazards and exposure faced by HBWs, but there is a long way to go to implement such experiences and integrate them into public health policies.

6. Dissemination of Findings

A strong regulatory framework can reduce the burden of occupational diseases; however, regulatory agencies have limited resources to evaluate existing and emerging hazards in the workplace. A brief discussion on the data analysed was done with researchers from the city-based Occupational Health Institution. During the discussion, the problems faced by Incense-stick rollers were stressed upon by the researchers and some of the points for further exploration are mentioned below:

- Identifying the problem areas
- Magnitude/Quantum of the problem

- Chemical analysis of chemical substance used in the incense-stick making process (to identify the hazardous impact on the health and well-being of the workers)
- Measuring indoor-air quality (to prevent respiratory ill-nesses)
- Involving other stake-holders and developing low-cost technology
- Conducting screening camps for Pulmonary Function Test (PFT)

The points mentioned above were discussed with an objective to identify risk factors and reduce suffering among workers. Also, developing scientific and meaningful educational tools for education and awareness purpose was also discussed among LSST representatives and the team of local researchers.

Key findings:

In the following pages the qualitative and quantitative results obtained from the mapping tools will be presented. Data obtained through survey questionnaire (subjective assessment), objective assessment and FGDs are shown as means of descriptive statistics, tables and narratives. There is a brief explanation and summary beneath for comprehension.

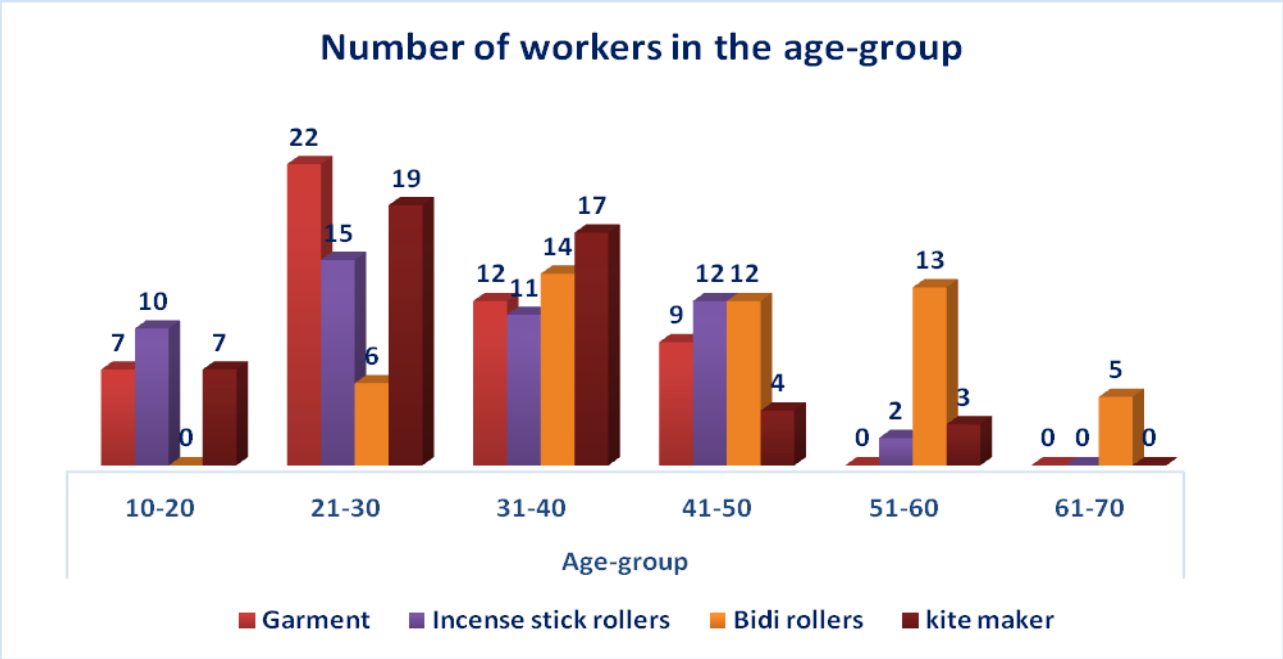
The structural data listed below illustrates the scope of study and select characteristic of the HBWs observed and interviewed.

Structural data

Sector	Subjective assessment data	Objective assessment data	FGD data (number of participants)
Garment	50	04	10
Kite-making	50	04	09
Incense-stick rolling	50	04	07
Bidi rolling	50	04	07

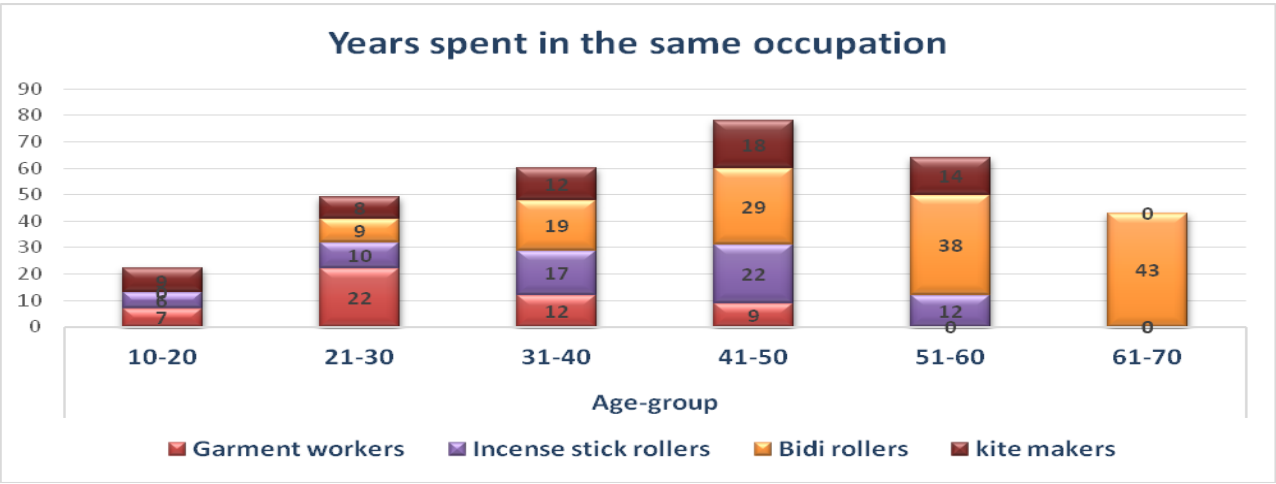
Descriptive analysis of data (Survey-questionnaire)

Data obtained through Personal Information of Survey respondents

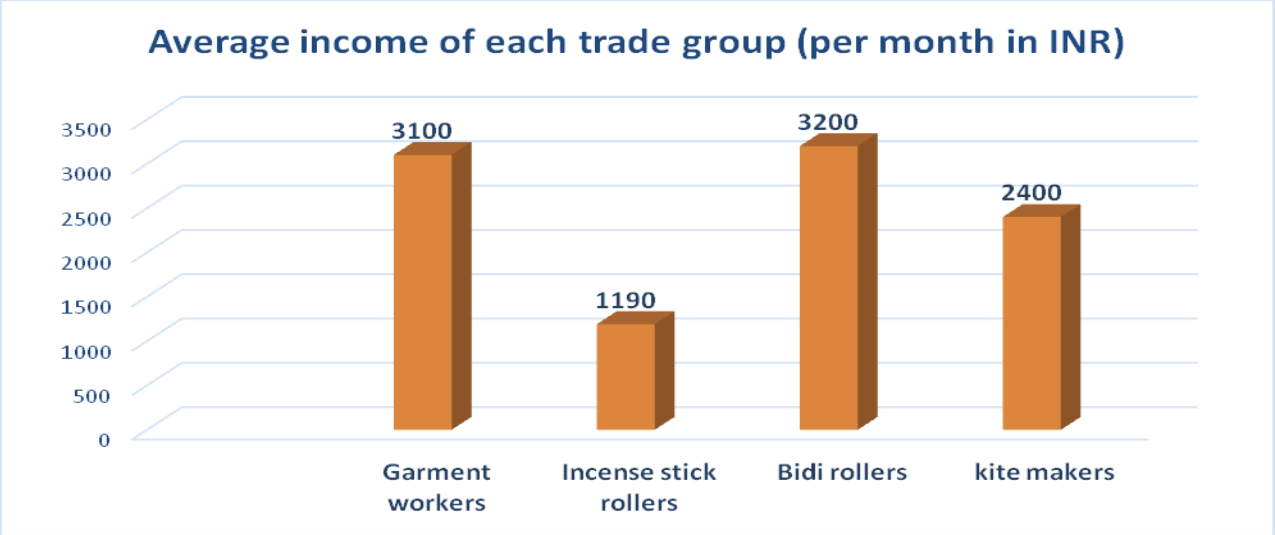


In all four sectors, number of women workers in the age-group of 21 to 40 years is high, whereas number of young workers in the age-group of 10 to 20 is high among Incense-stick rolling, and the older age-group in high numbers is seen among bidi-rollers.

Data obtained through Socio-economic details of Survey respondents

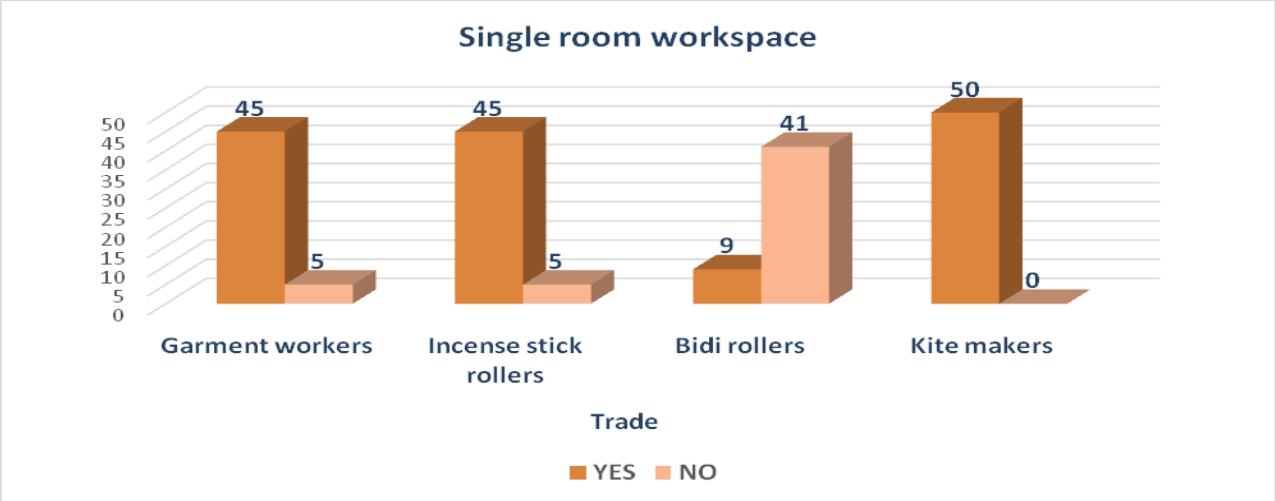


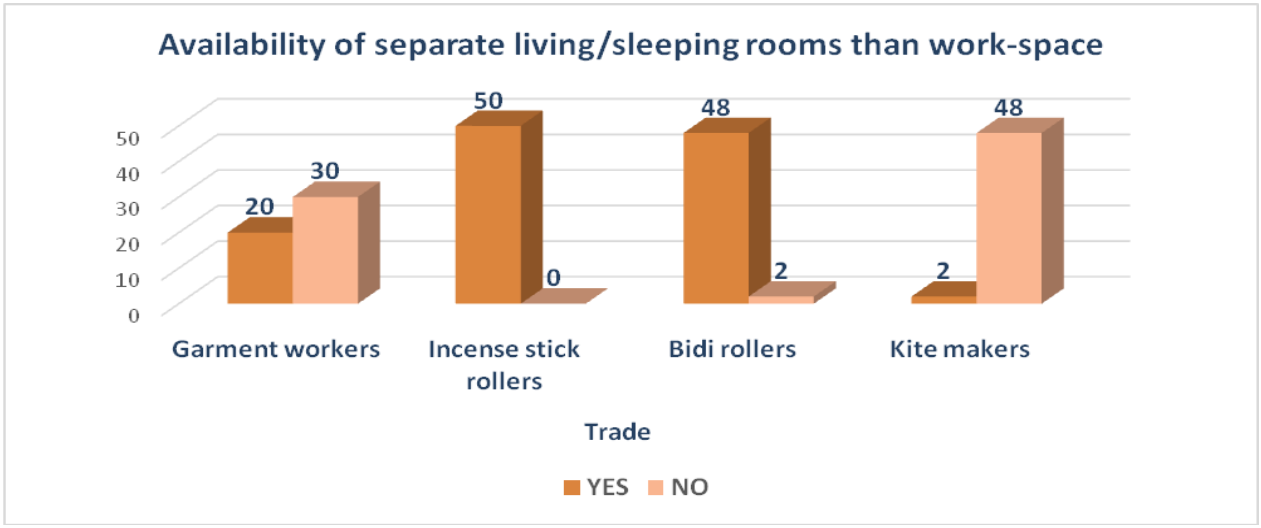
Bidi-rollers in the older age-group spent most of their lives rolling bidis indicating new generation opting for other work preferences, where as workers in all age-groups in other three sectors spent almost equal years in the same occupation. The similarity between all four sectors is that all the workers started working at an early age.

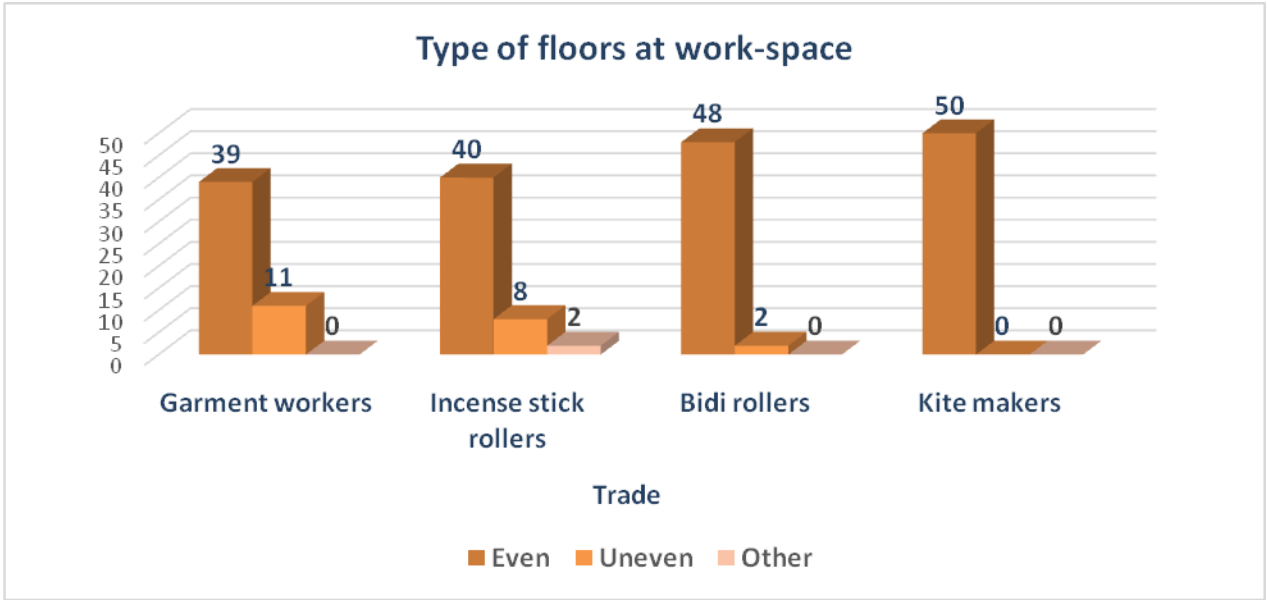


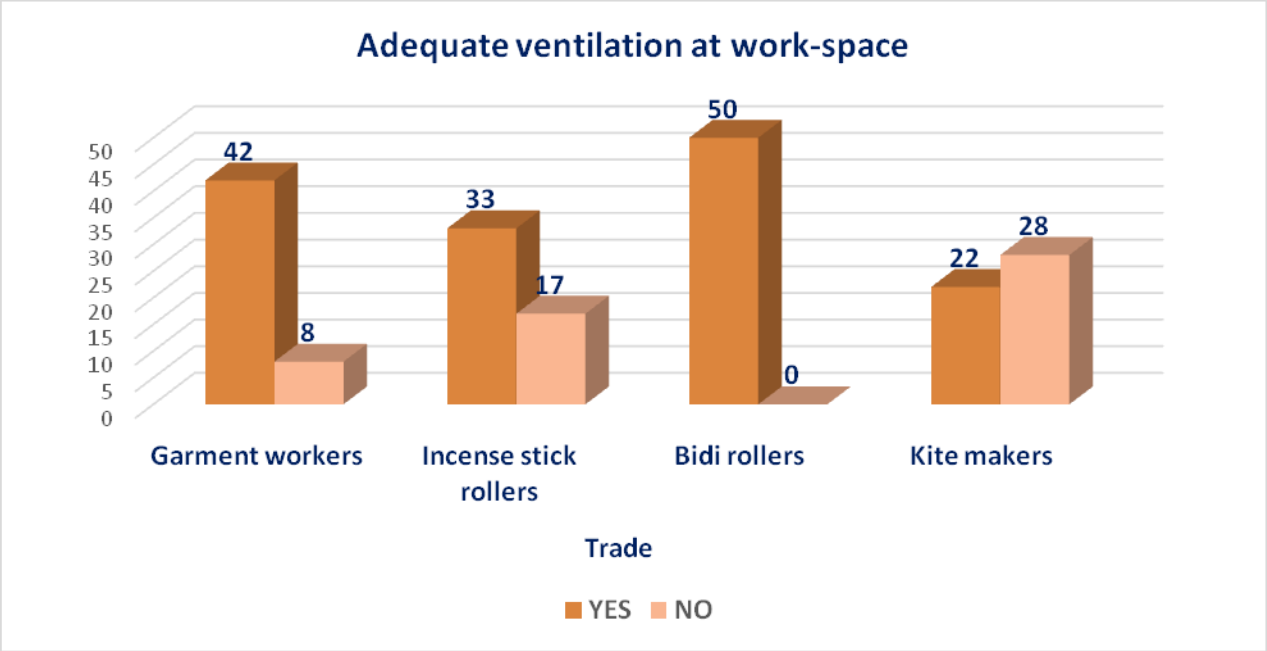
An average income earned by workers in each sector ranges between INR 1000 and 3000 per month.

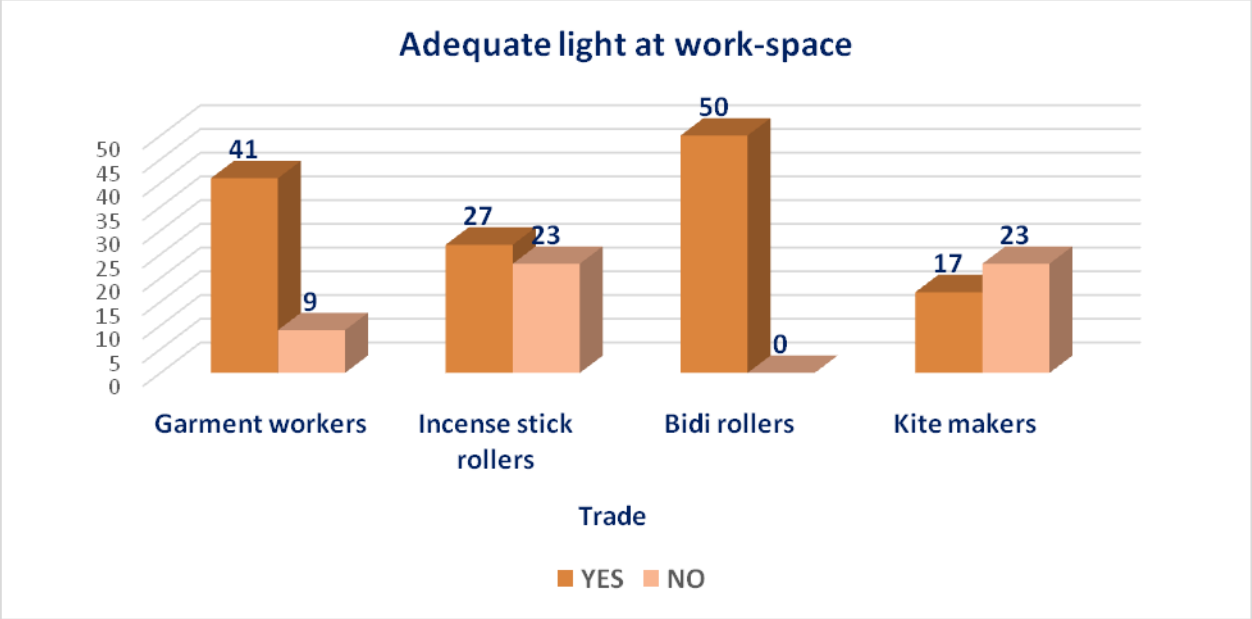
Data obtained through Work Environment details of Survey respondents

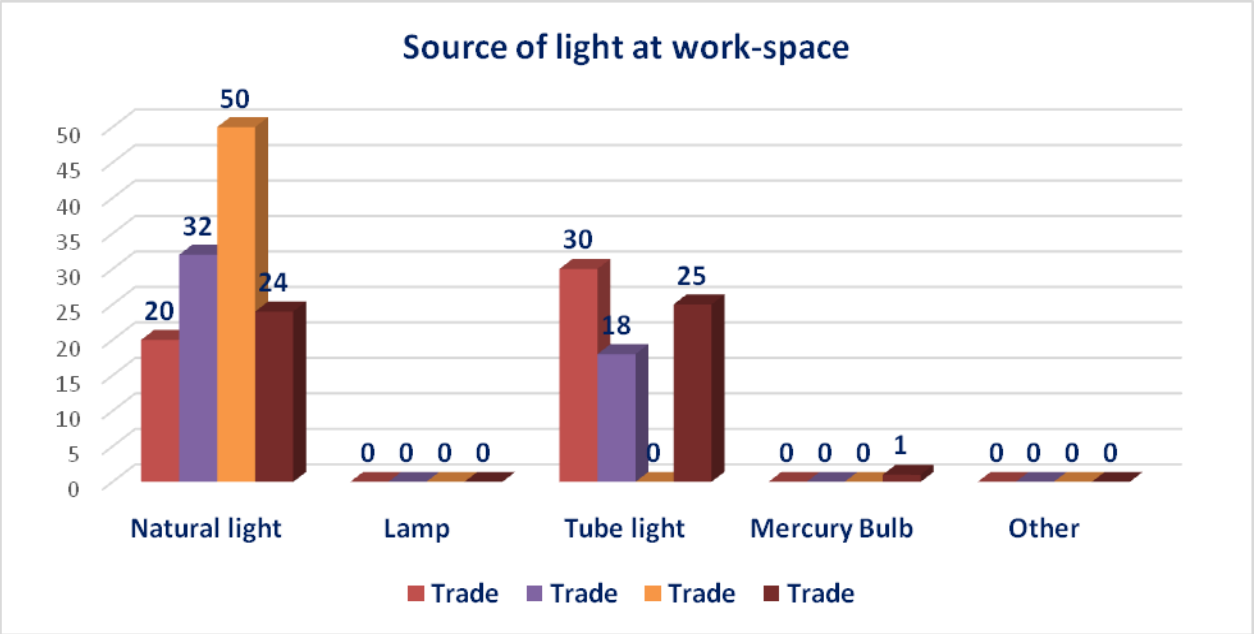


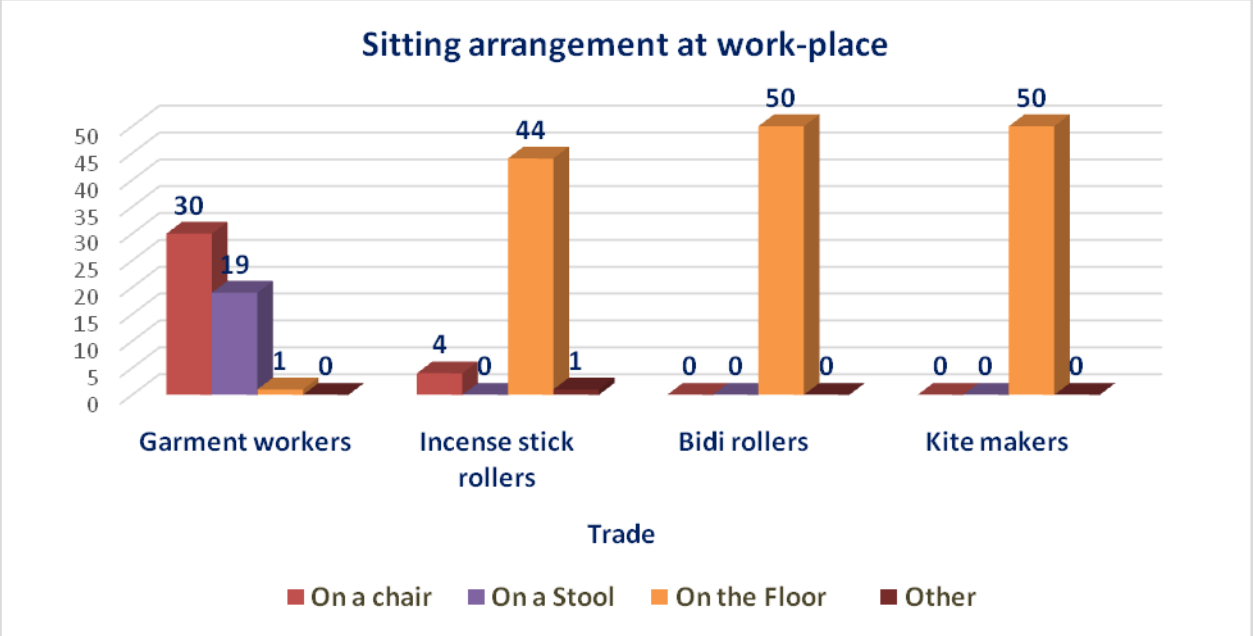

Availability of separate living/sleeping rooms than work-space
50
40
30
20
10
0
20
30
50
0
48
2
2
48
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

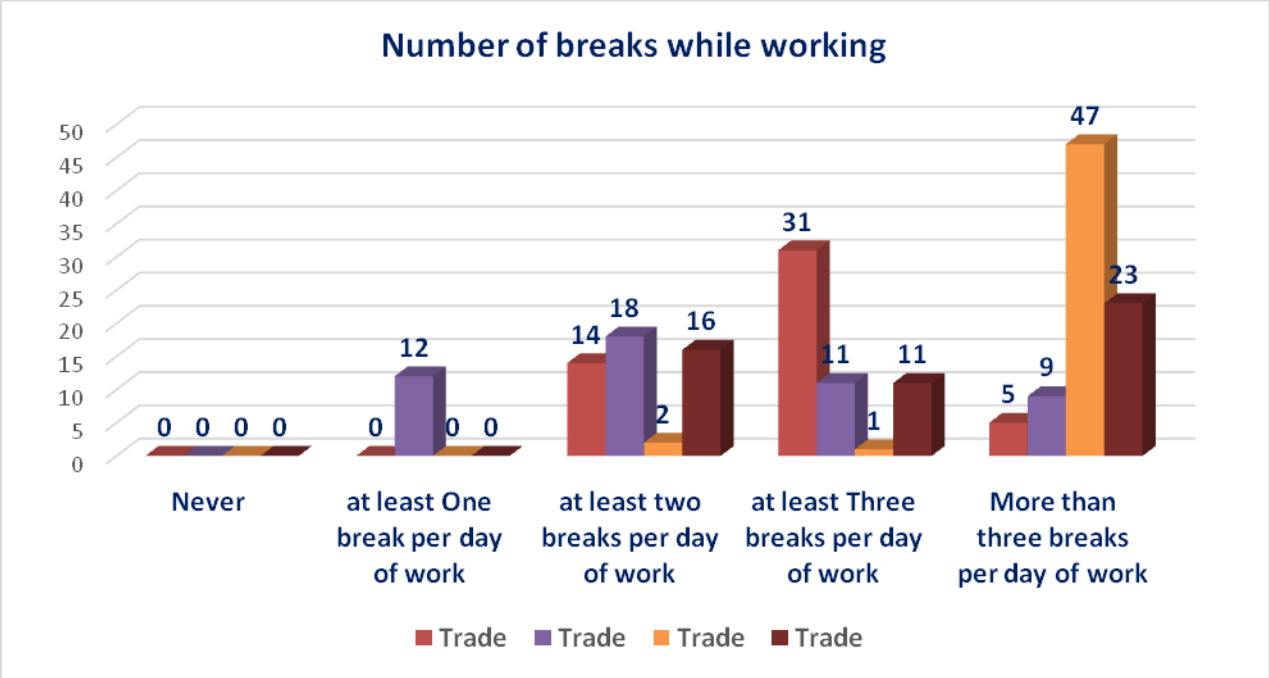

Type of floors at work-space
50
45
40
35
30
25
20
15
10
5
0
39
11
0
40
8
2
48
2
0
50
0
0
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
Even
Uneven
Other


Adequate ventilation at work-space
50
45
40
35
30
25
20
15
10
5
0
42
8
33
17
50
0
22
28
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO


Adequate light at work-space
50
45
40
35
30
25
20
15
10
5
0
41
9
27
23
50
0
17
23
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

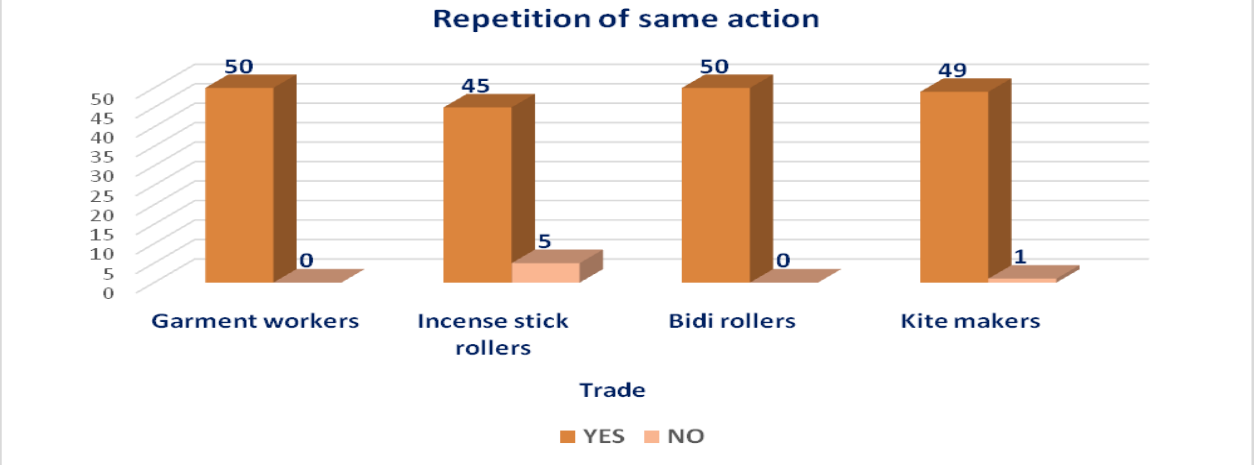

Source of light at work-space
50
45
40
35
30
25
20
15
10
5
0
20
32
50
24
0 0 0 0
30
18
0
25
0 0 0 1
0 0 0 0
Natural light
Lamp
Tube light
Mercury Bulb
Other
Trade
Trade
Trade
Trade

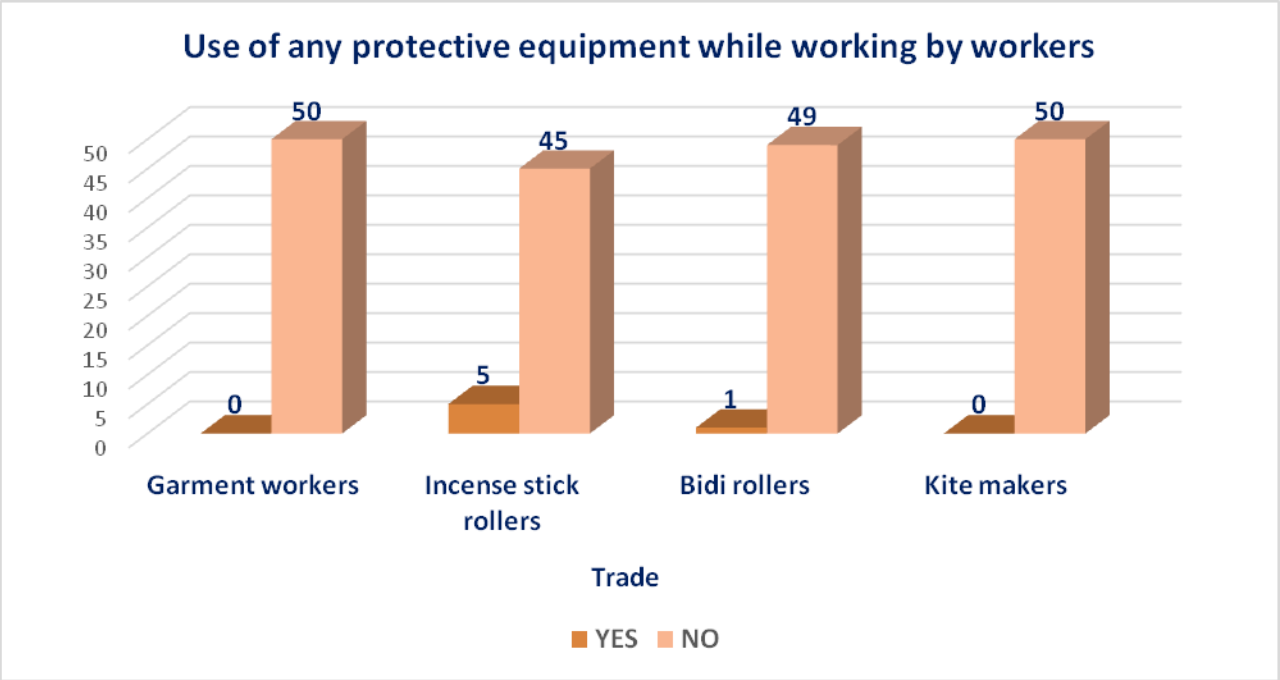

Sitting arrangement at work-place
50
45
40
35
30
25
20
15
10
5
0
30
19
1
0
4
0
44
1
0
0
50
0
0
50
0
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
On a chair
On a Stool
On the Floor
Other



Compounding all the challenges faced by home-based workers are urban settings including, housing issues. Many home-based workers toil seven days a week in homes-cum-workplaces located in the large slums. These dwellings are small and crowded, with little natural light or fresh air. Almost 50% of the Incense-stick makers and Kite-makers do not have adequate light and ventilation. Most kite-makers and garment workers do not have separate living and sleeping rooms than work-space, making them prone to the hazardous exposure. Bidi rollers sit outside their houses for rolling bidis for better light and ventilation. Almost all HBWs in all three sectors except Garment work, sit on the floor to produce their work whereas, garment workers use chairs and stools to stitch the (cloth) material. Most respondents take minimum one or two breaks per day of work, except bidi rollers who take more than three breaks per day of work.

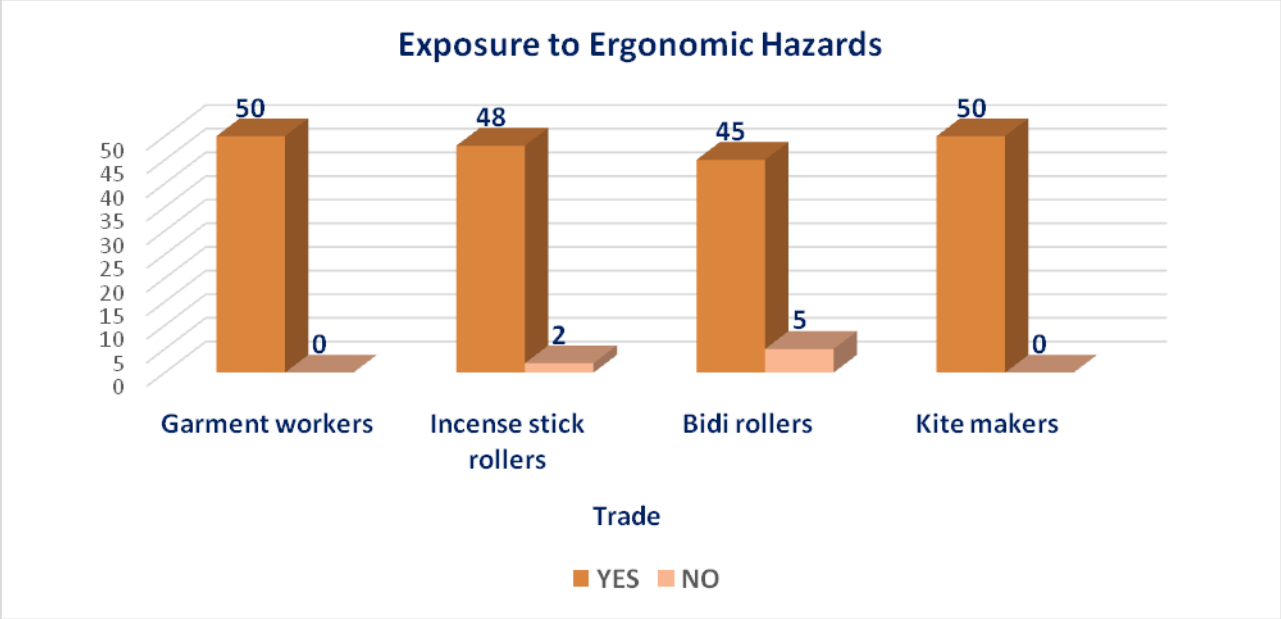
Data obtained through Work Process details of Survey respondents

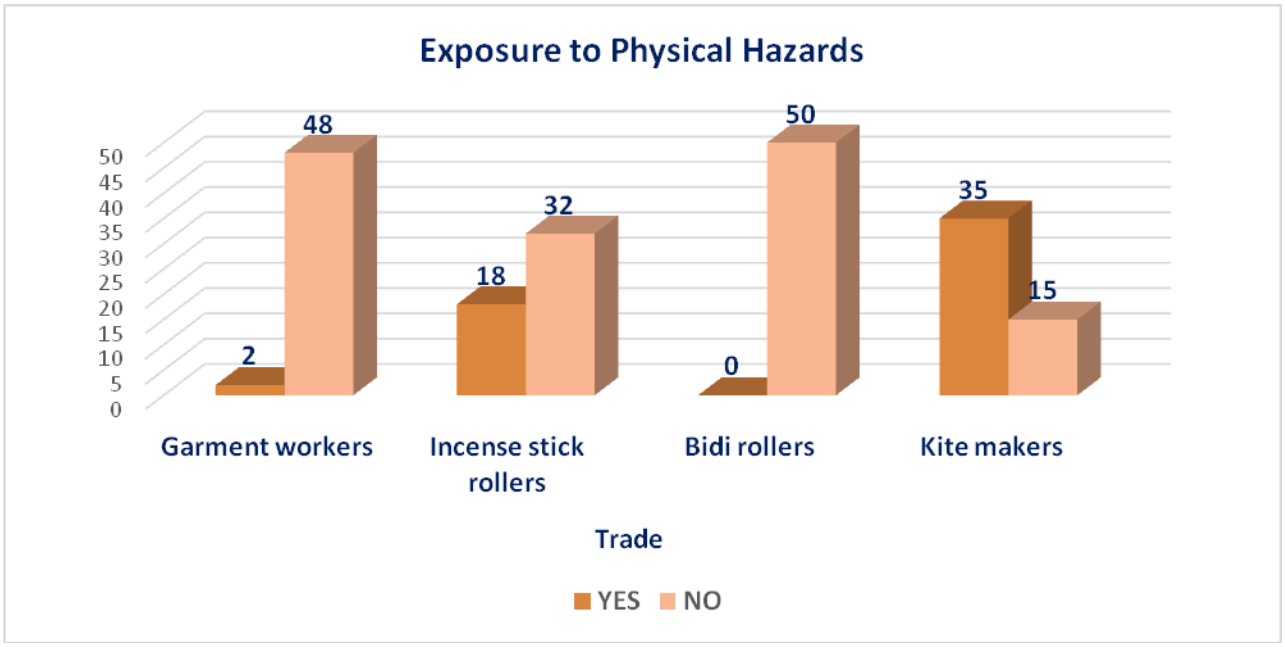


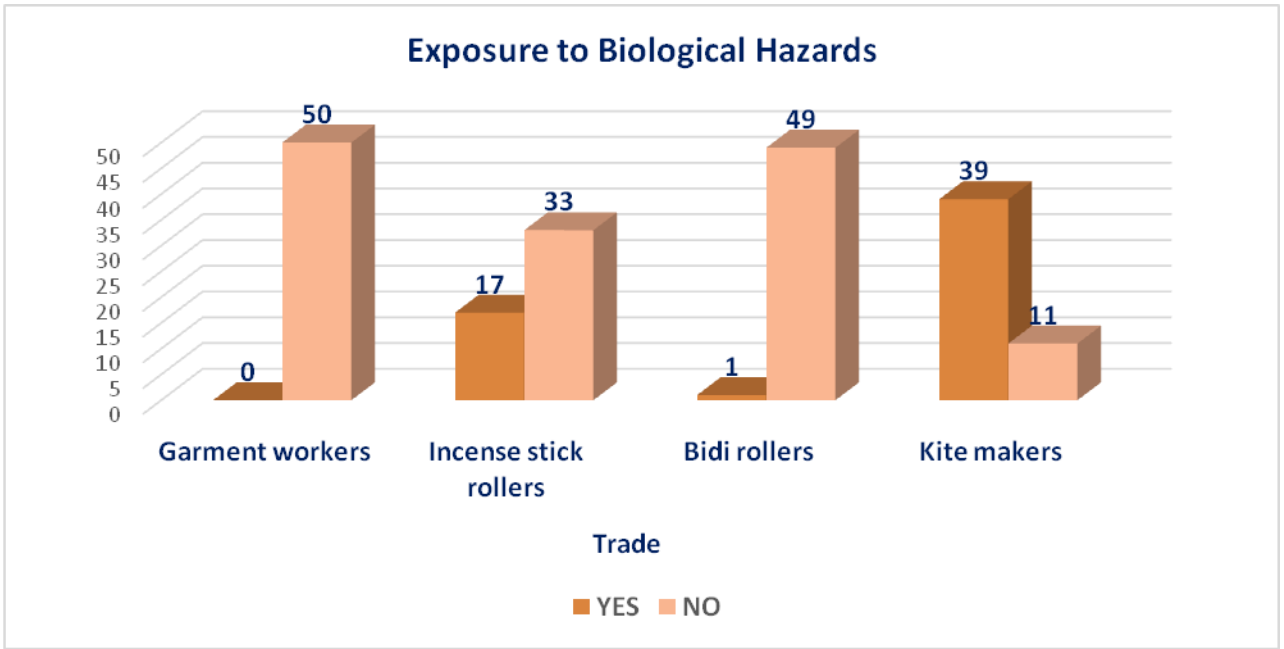


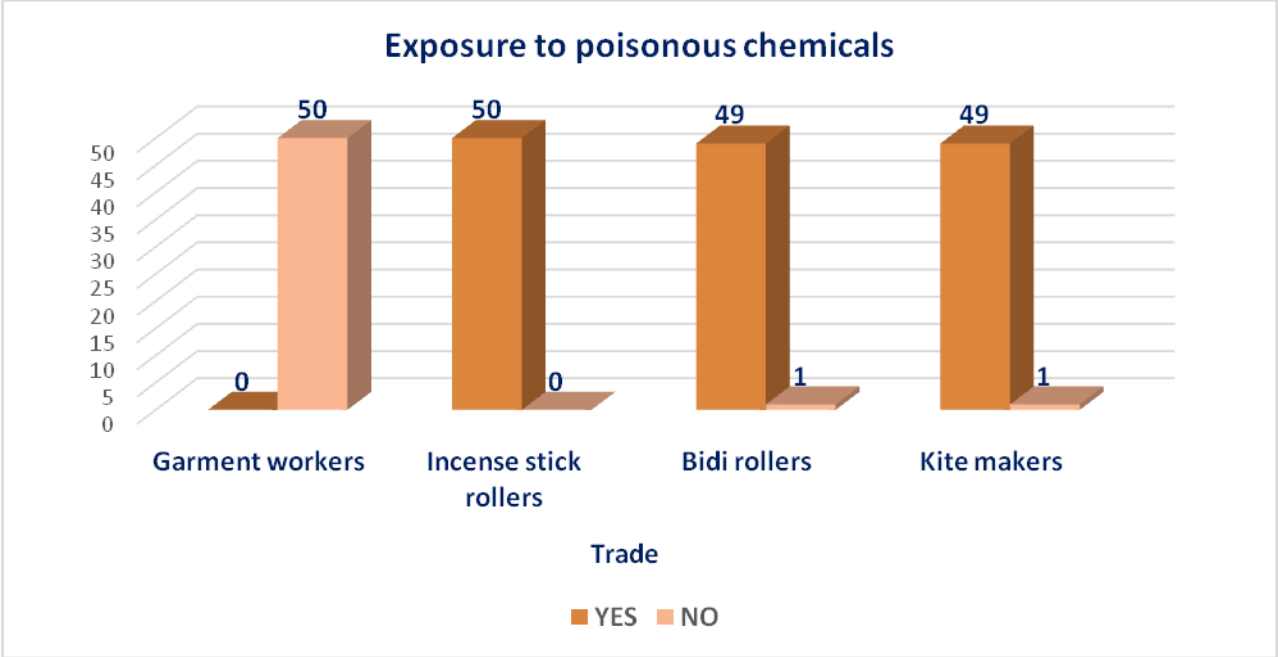
Nearly 100% respondents repeat the same action/movements through the day of work and none of them use any protective equipment as a measure to reduce exposure to any harmful substances. Very few Incense stick rollers found to be using their own cloth material, tying around mouth to prevent inhalation of chemical used in the incense stick making process.

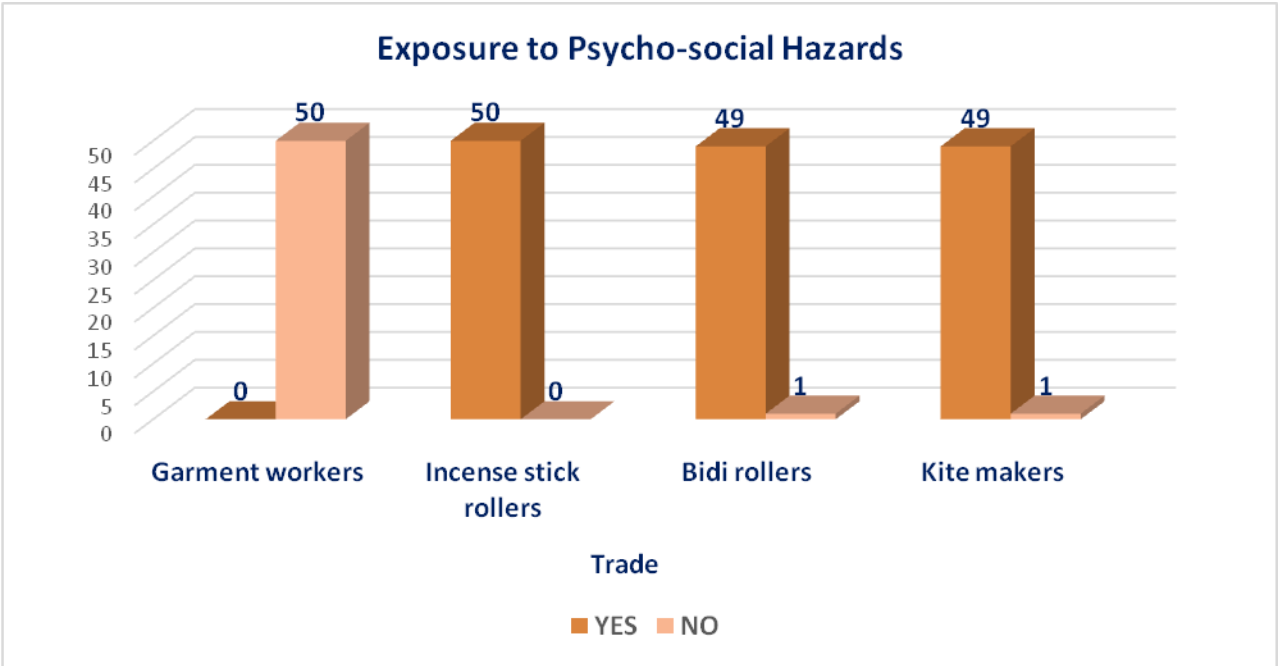
Data obtained through Exposure to Hazards details of Survey respondents




Exposure to Physical Hazards
50
45
40
35
30
25
20
15
10
5
0
2
48
18
32
0
50
35
15
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

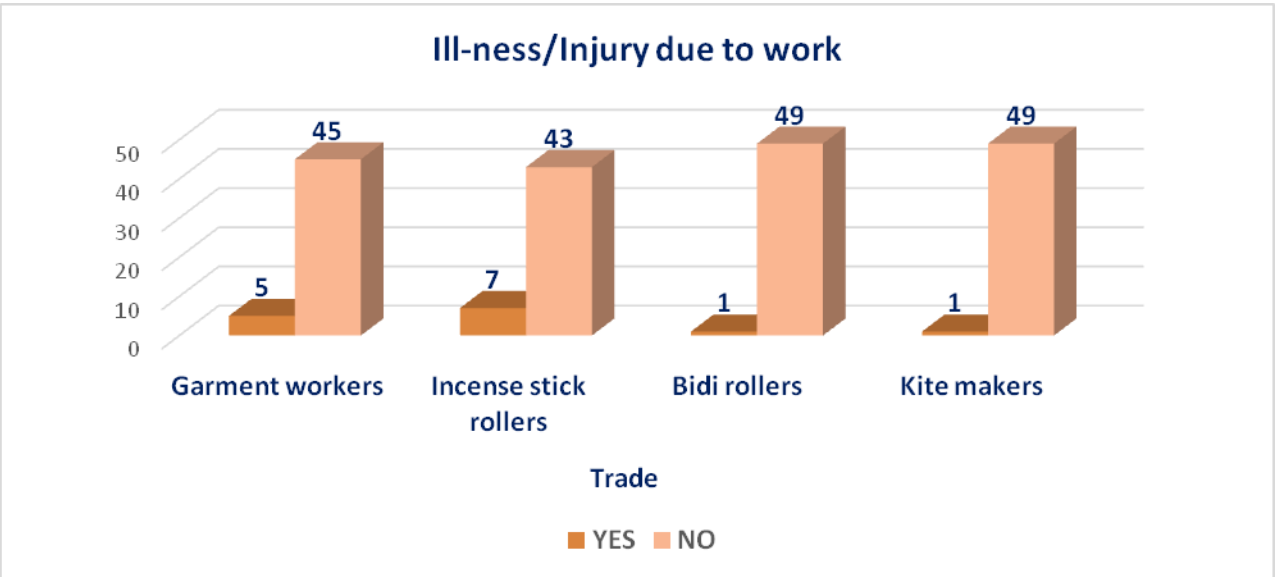

Exposure to Biological Hazards
50
45
40
35
30
25
20
15
10
5
0
0
50
17
33
1
49
39
11
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO


Exposure to poisonous chemicals
50
45
40
35
30
25
20
15
10
5
0
50
50
49
49
0
0
1
1
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO


Exposure to Psycho-social Hazards
50
45
40
35
30
25
20
15
10
5
0
50
50
49
49
0
0
1
1
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

Most respondents confirmed having exposure to Physical, Ergonomic, and Chemical hazards. Most kite-makers and approximately, 30-40% of Incense stick makers were exposed to Biological hazards. Almost all of them refused having exposure to Psycho-social hazards, and violence.

Data obtained through history of illness/injury of Survey respondents

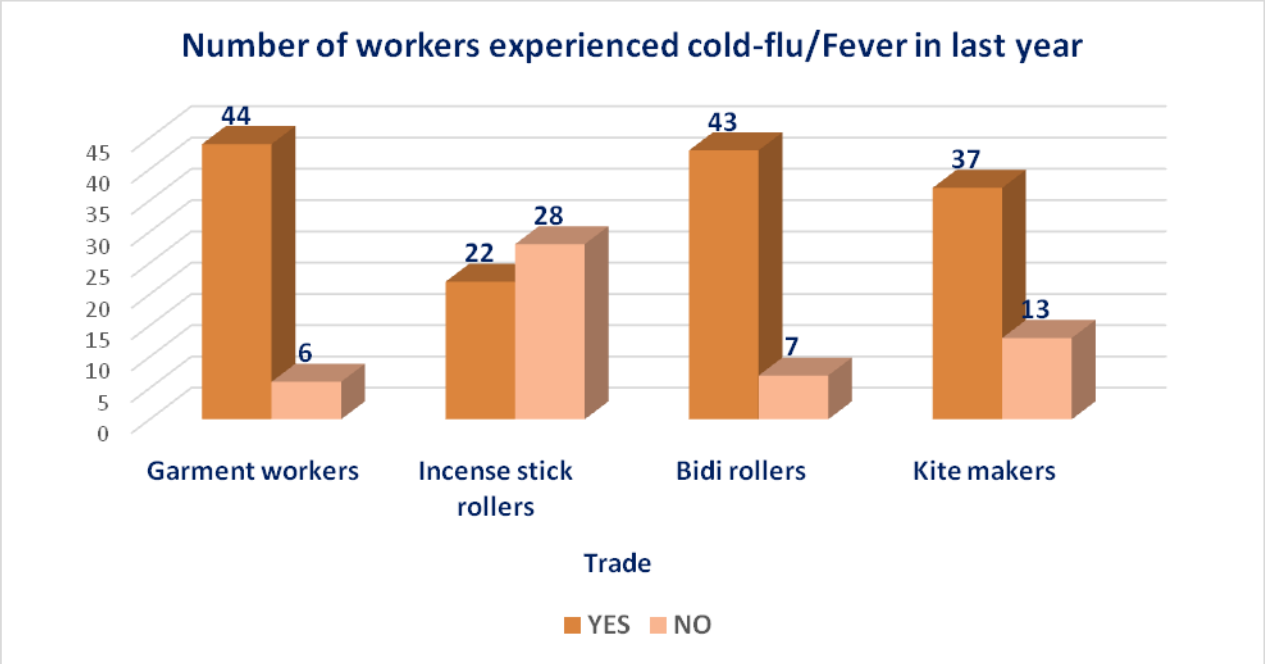


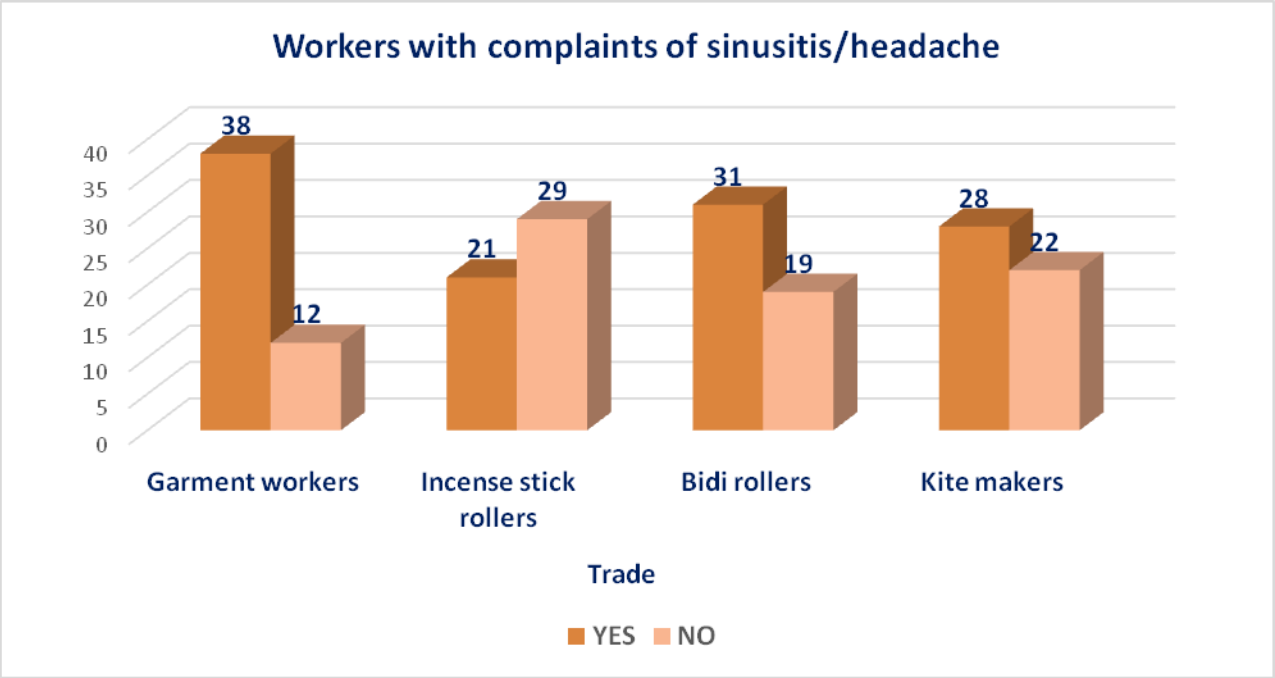
Very few respondents had experienced ill-ness/injury due to work exposure.

Occupational Health Issues-Findings from the Health Check-list

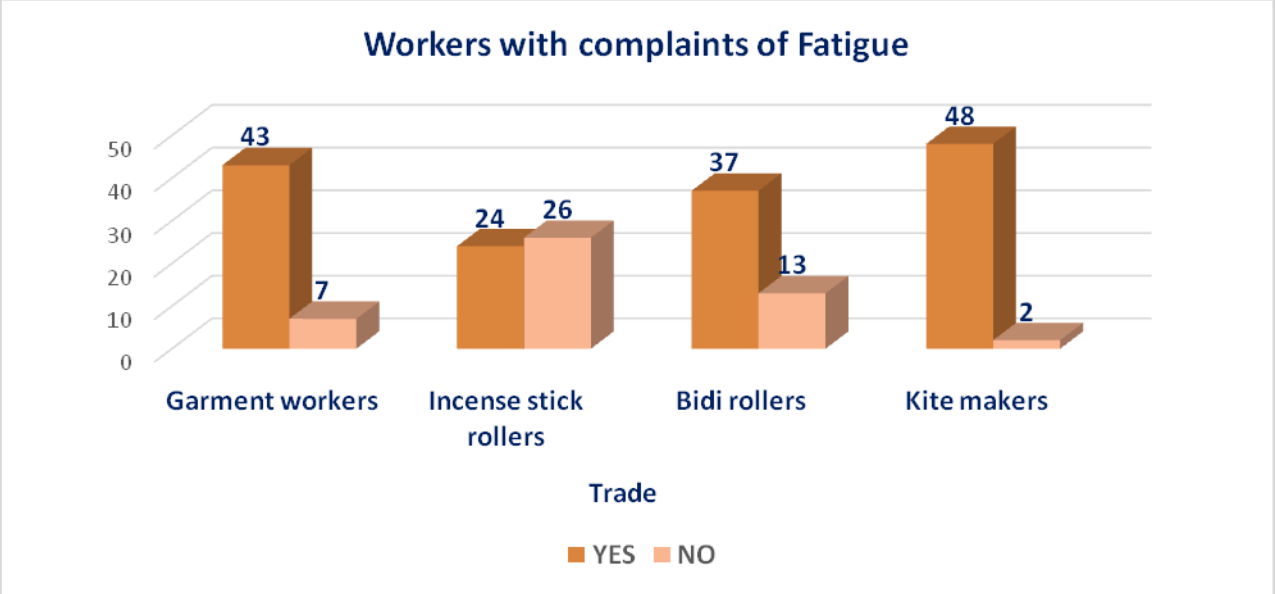
For home-based workers, poor living conditions mean poor health and safety conditions at work. It is a challenge to track home-as-workplace health issues or injuries since incidents in the home are rarely categorized as workplace incidents. In addition, unlike many other poor urban informal workers, home-based workers do not leave the slum for work so their exposure to slum related health and environmental threats is multifaceted. Many home-based workers are overworked and maintain unhealthy postures.

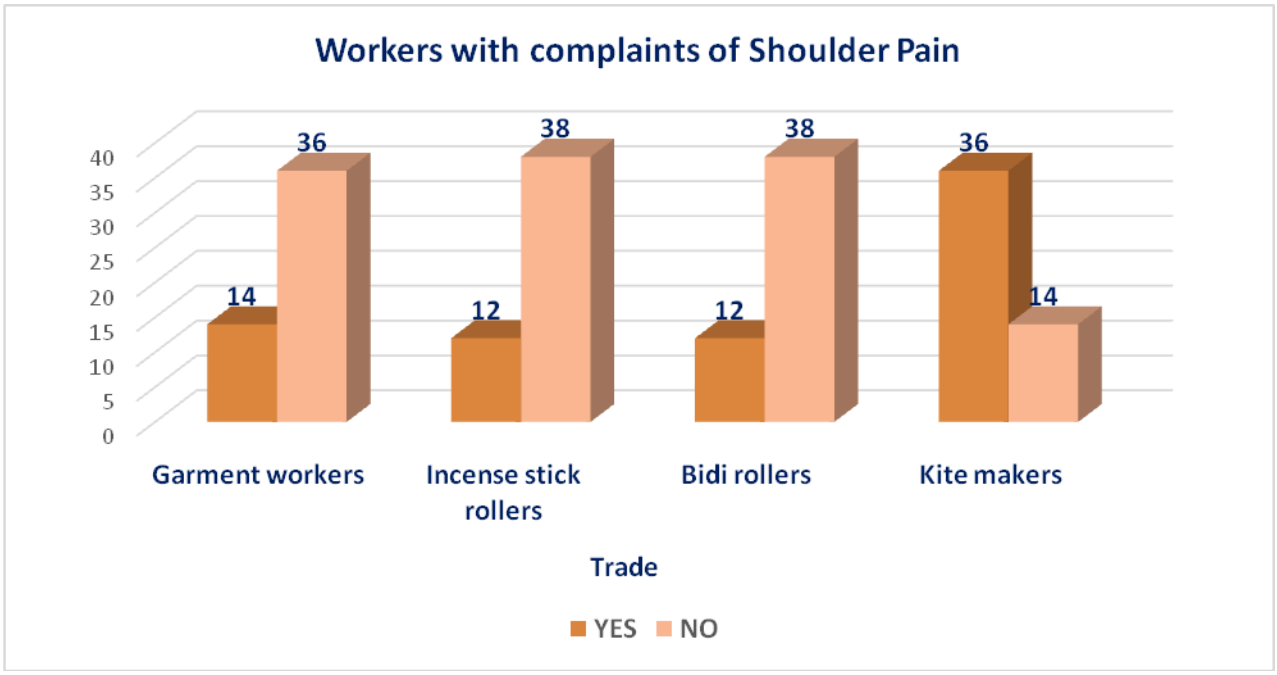
Data obtained through medical history of Survey respondents

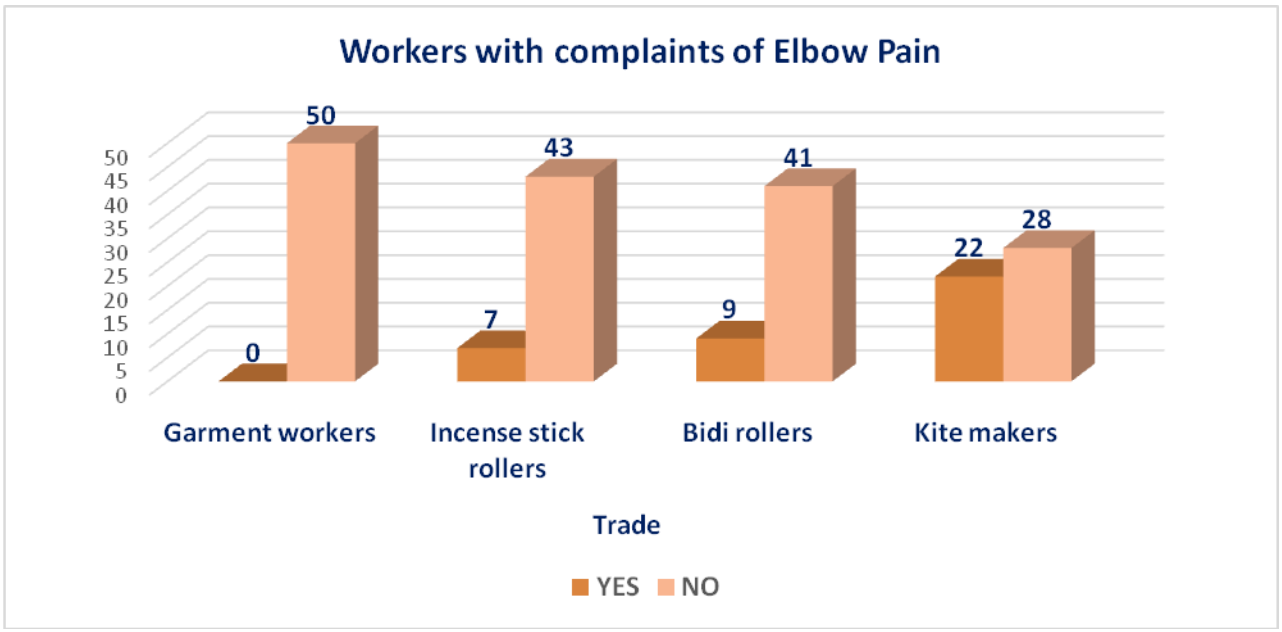


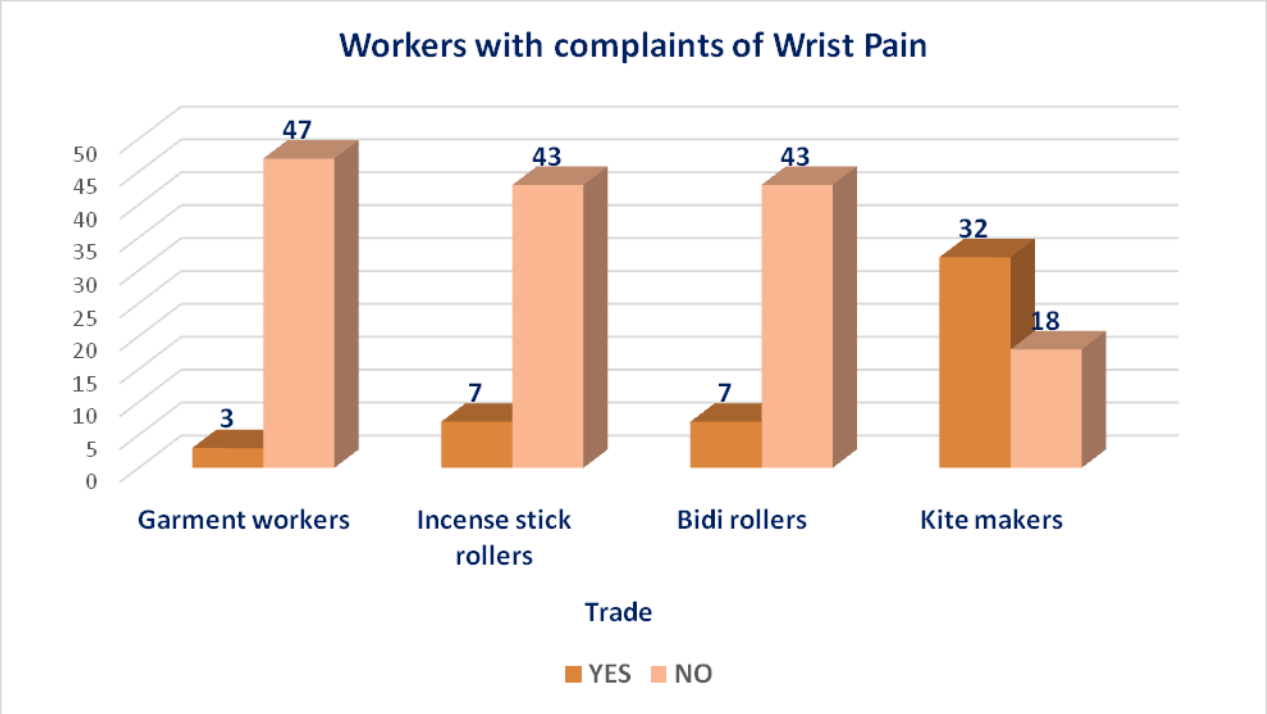


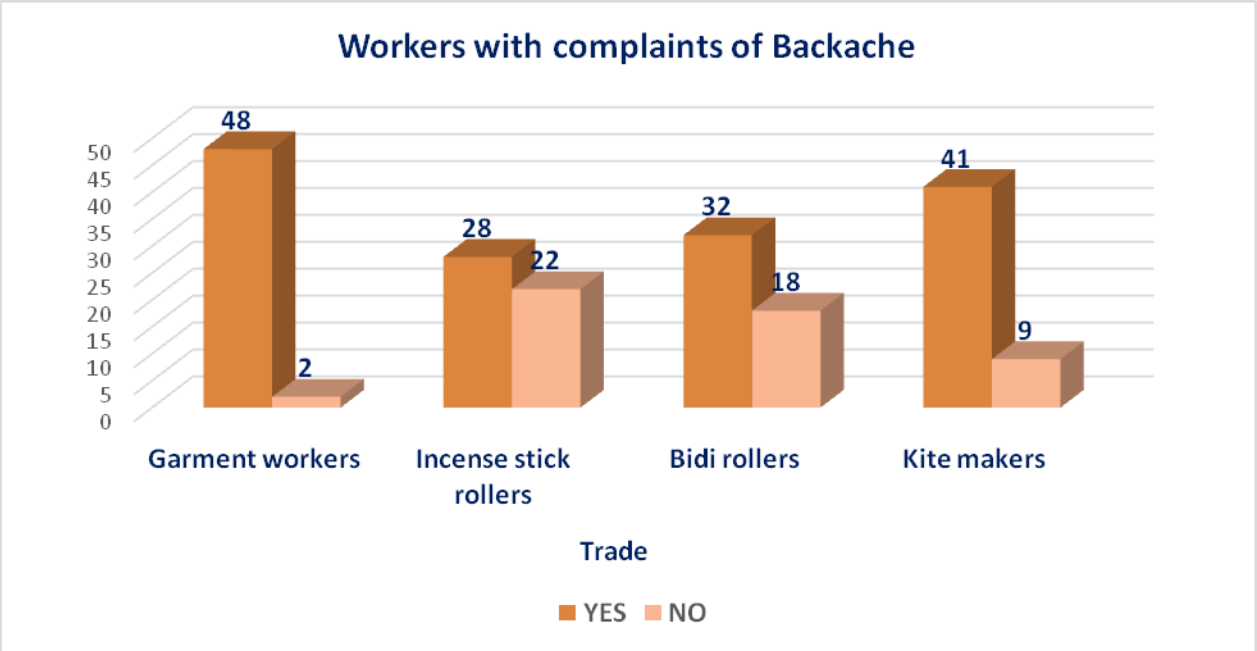
Workers with complaints of Musculo-skeletal problems

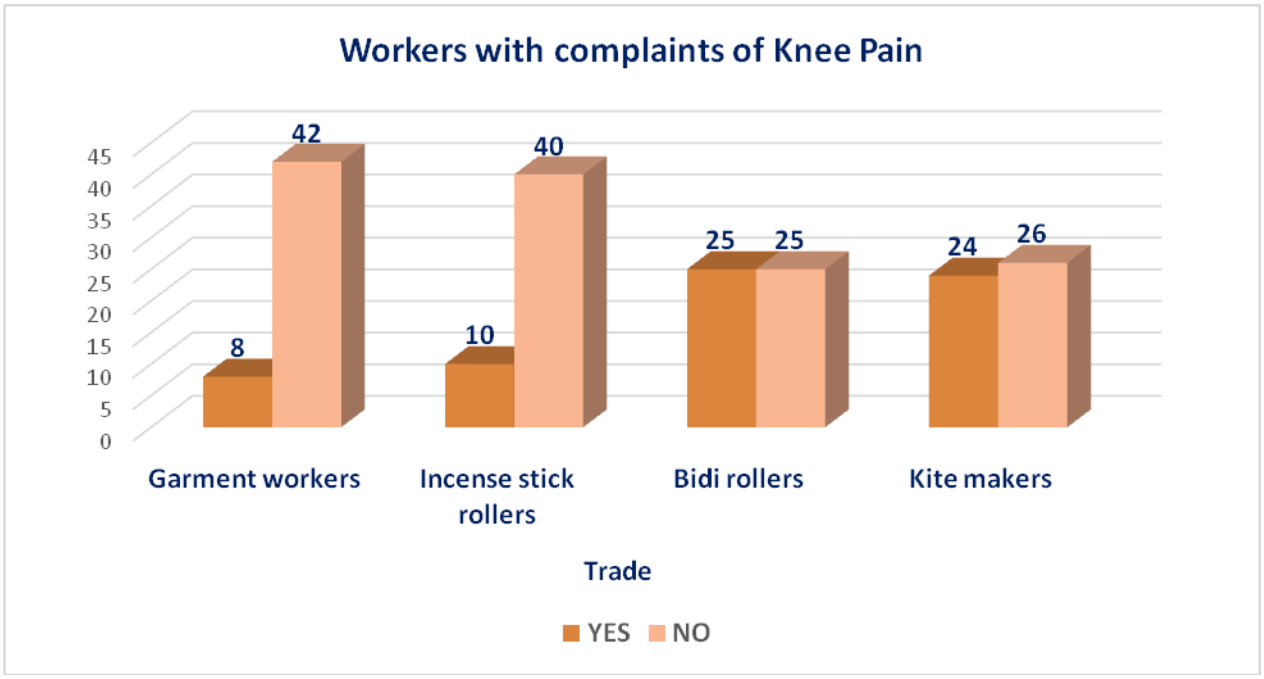


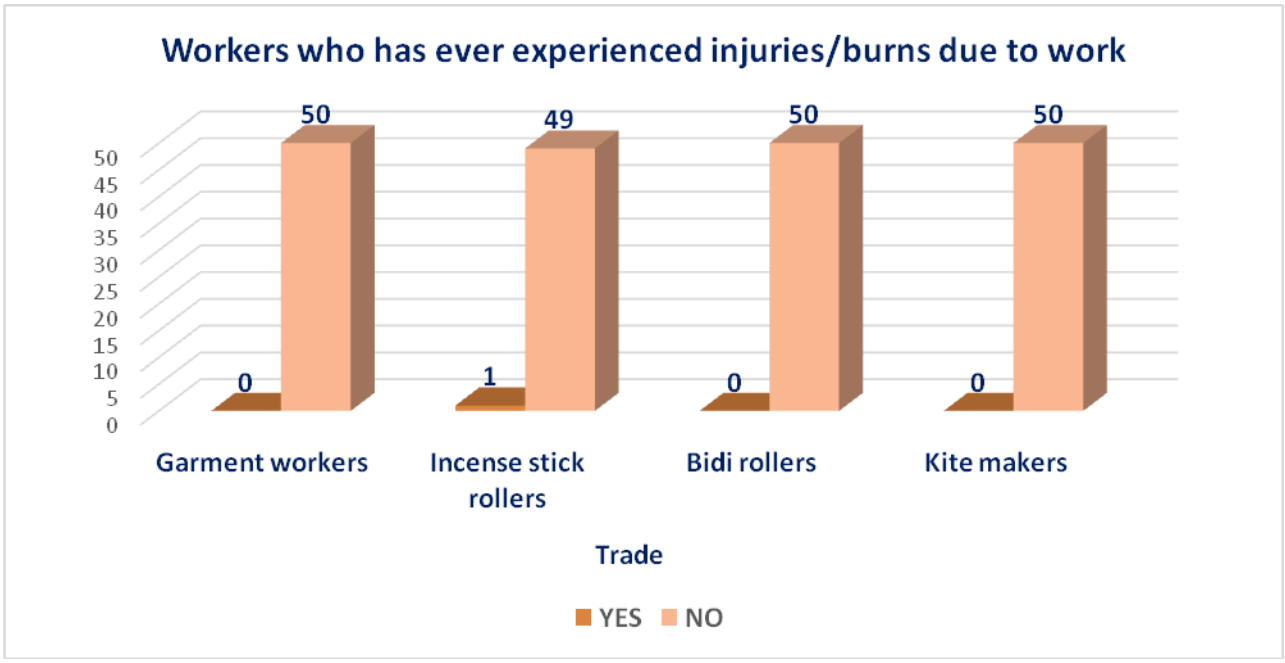

Workers with complaints of Shoulder Pain
40
35
30
25
20
15
10
5
0
14
36
12
38
12
38
36
14
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO


Workers with complaints of Elbow Pain
50
45
40
35
30
25
20
15
10
5
0
0
50
7
43
9
41
22
28
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

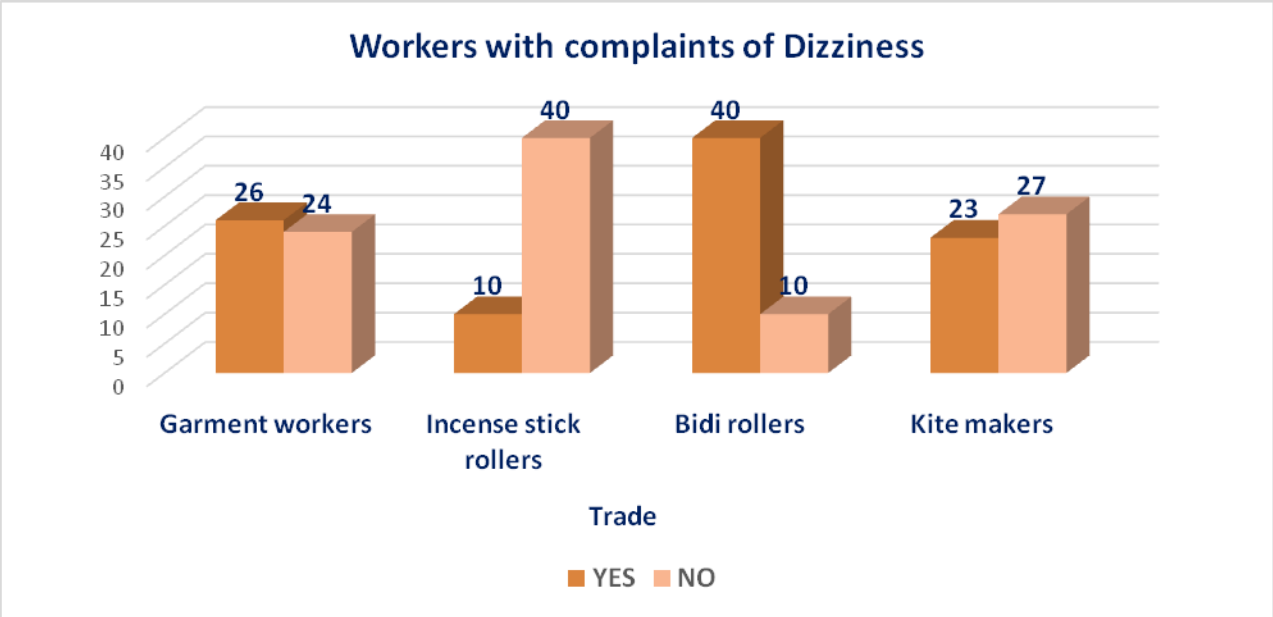

Workers with complaints of Wrist Pain
50
45
40
35
30
25
20
15
10
5
0
47
43
43
32
18
3
7
7
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

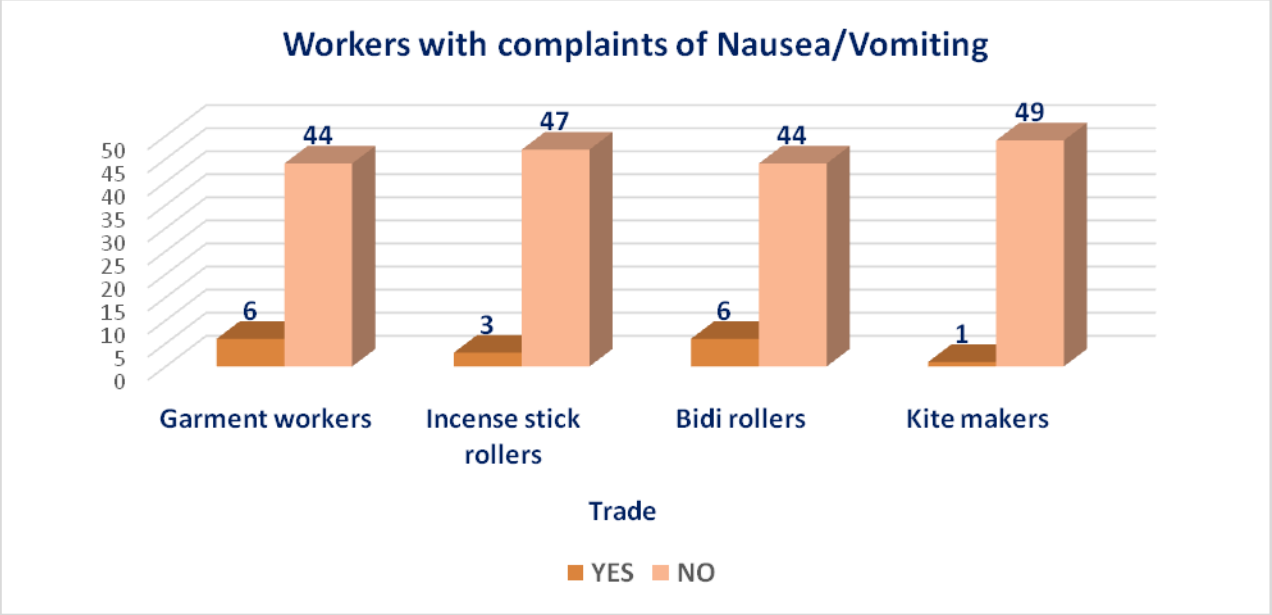

Workers with complaints of Backache
50
45
40
35
30
25
20
15
10
5
0
48
2
28
22
32
18
41
9
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

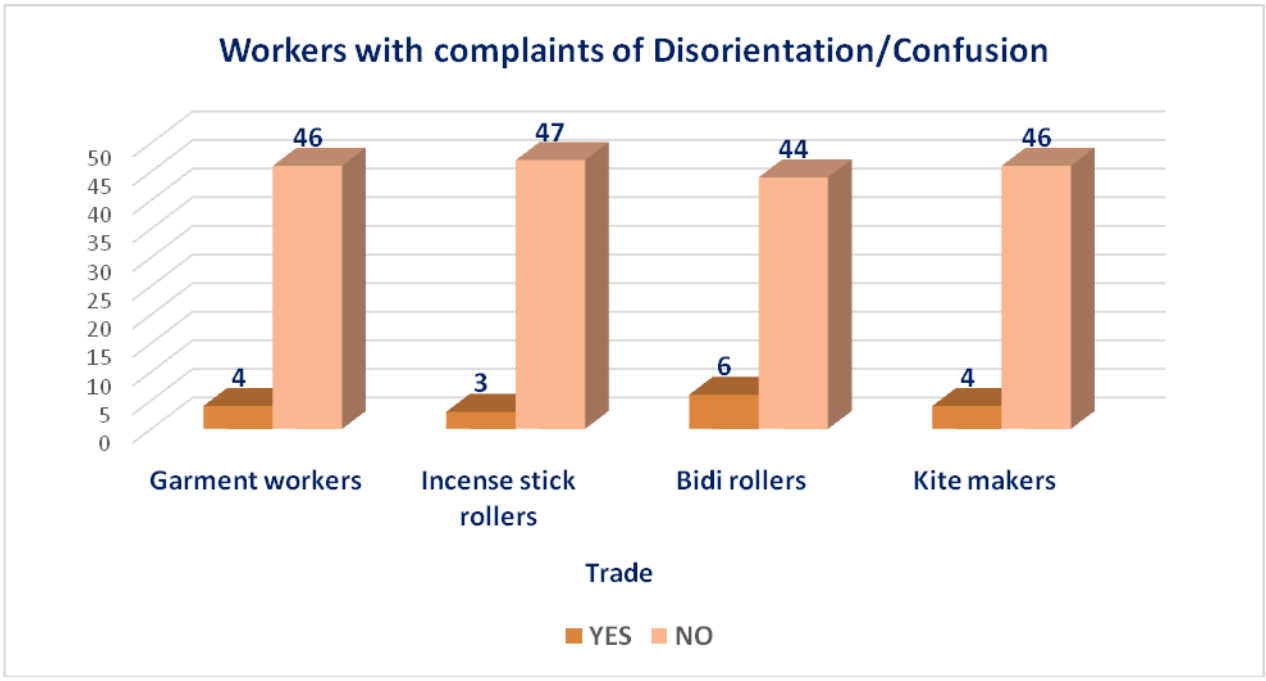

Workers with complaints of Knee Pain
45
40
35
30
25
20
15
10
5
0
42
40
25
25
24
26
8
10
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

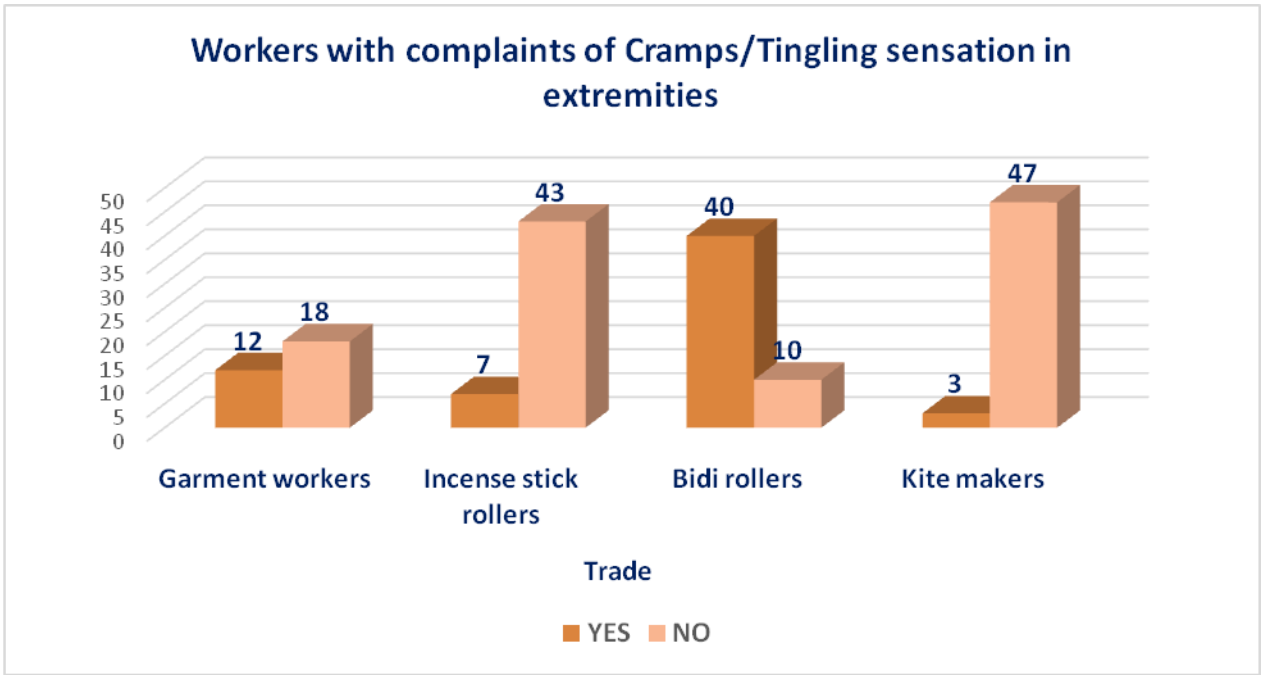

Workers who has ever experienced injuries/burns due to work
50
45
40
35
30
25
20
15
10
5
0
50
49
50
50
0
1
0
0
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

Workers with complaints of Neurological/Neuro-muscular problems

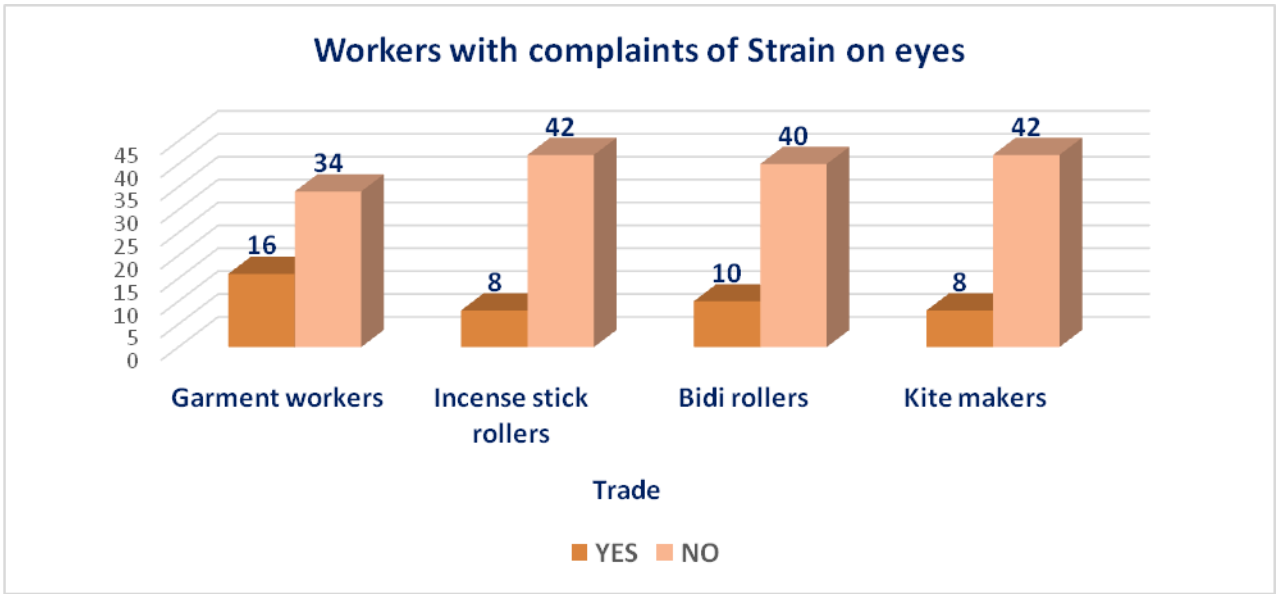


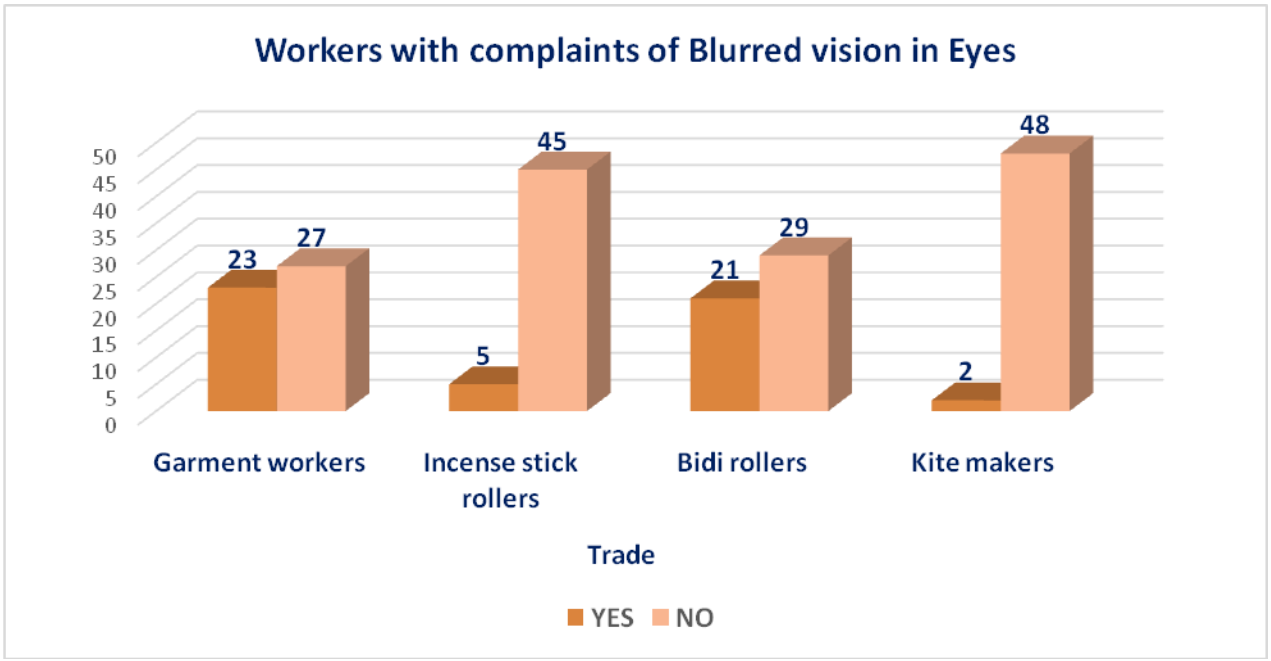


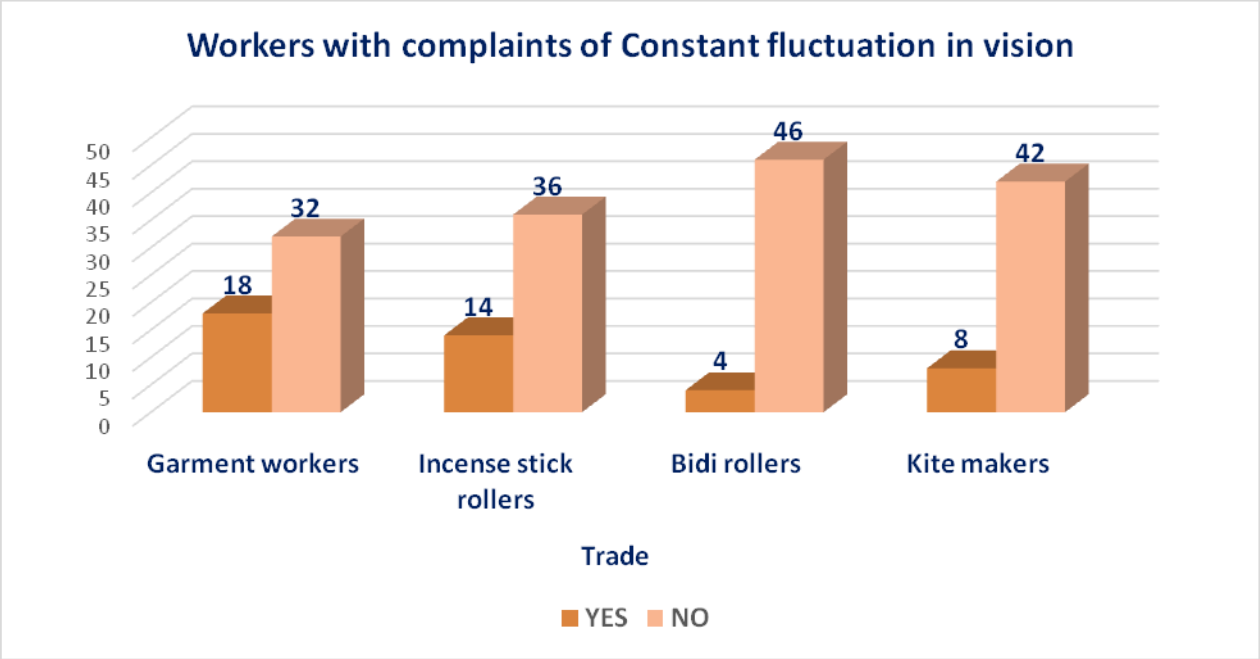

Workers with complaints of Disorientation/Confusion
50
45
40
35
30
25
20
15
10
5
0
46
47
44
46
4
3
6
4
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO


Workers with complaints of Cramps/Tingling sensation in extremities
50
45
40
35
30
25
20
15
10
5
0
12
18
7
43
40
10
3
47
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

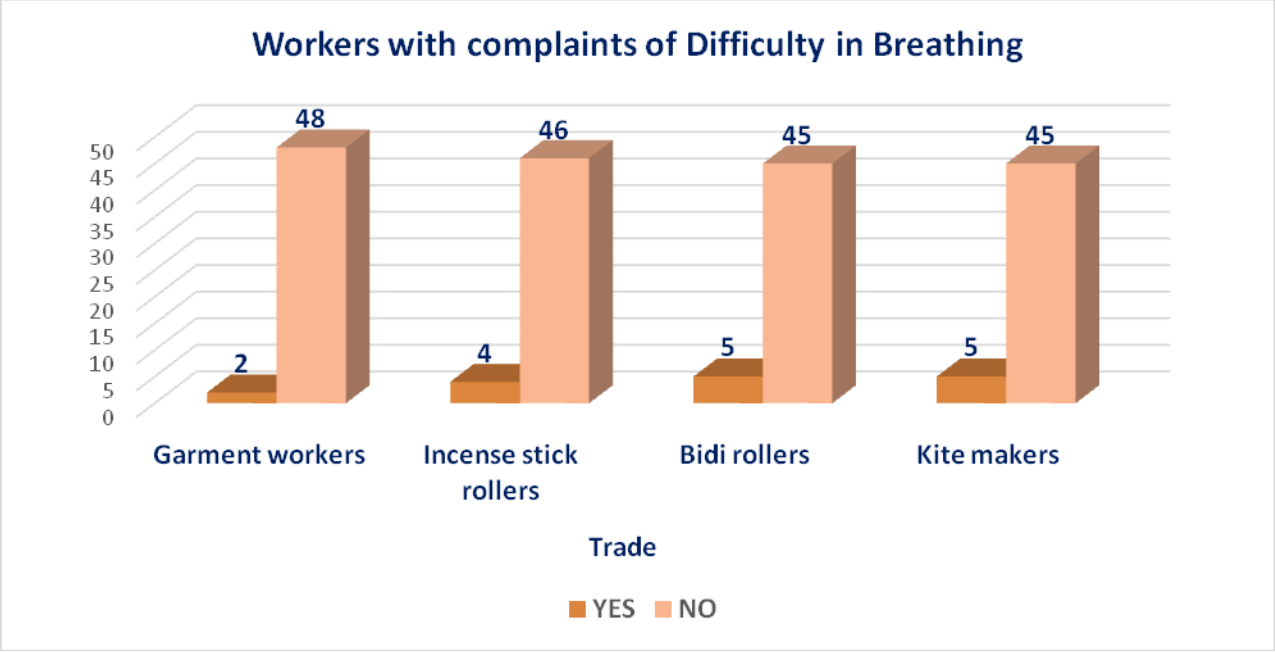
Workers with complaints of Eye problems

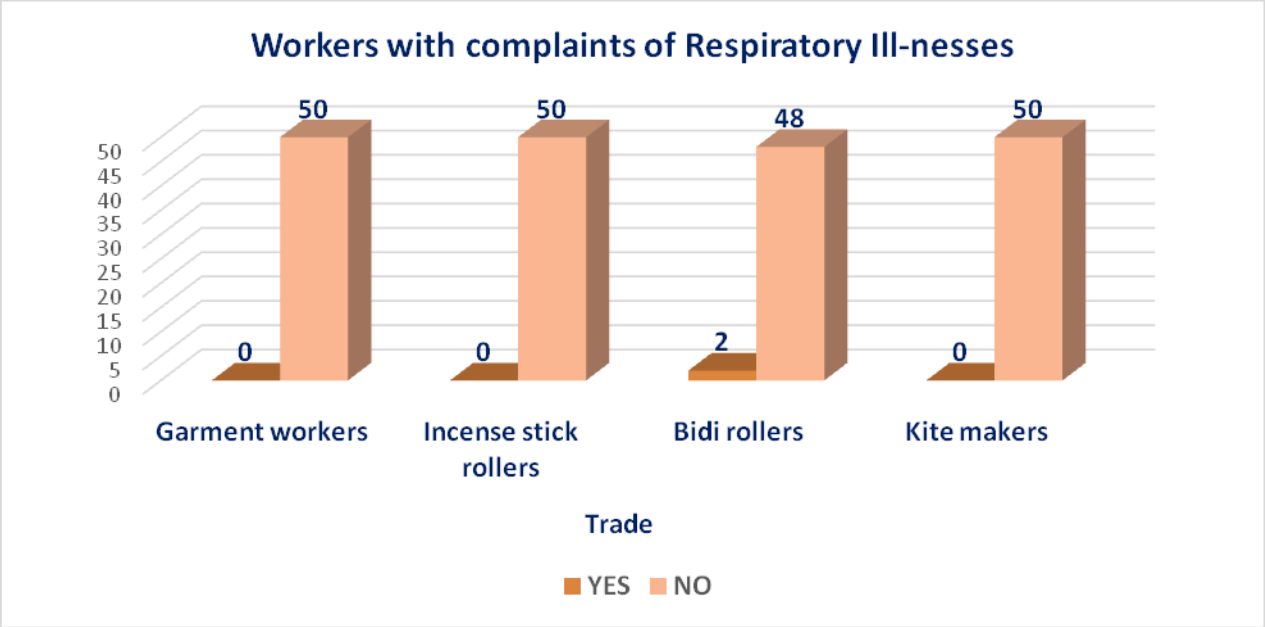






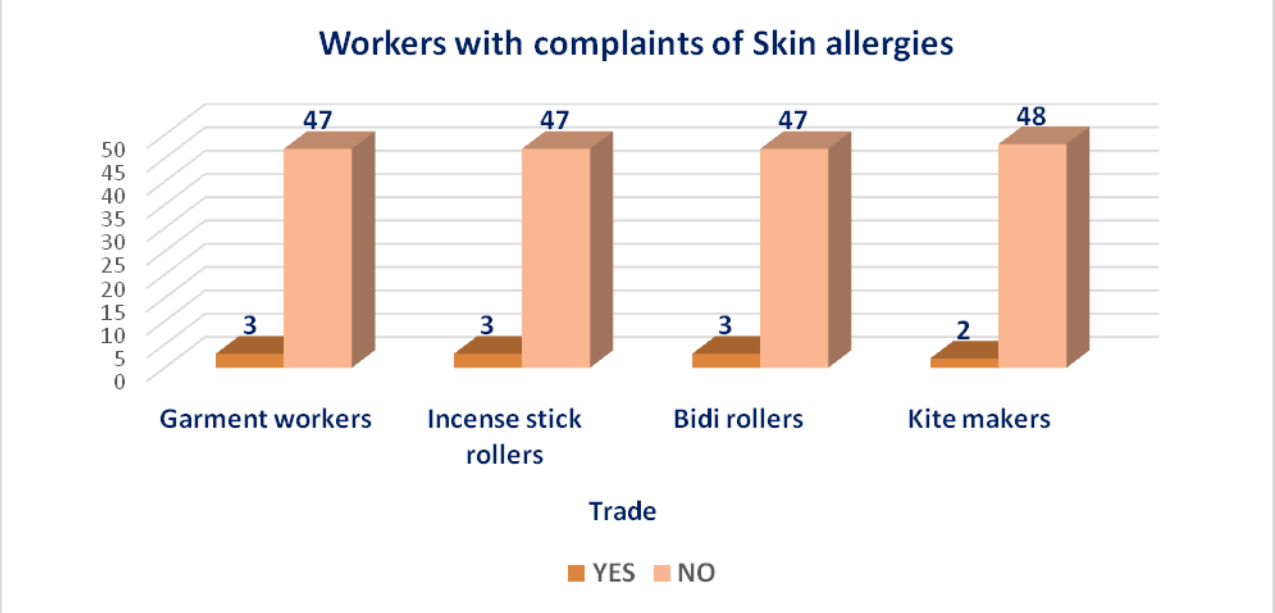
Workers with complaints of Respiratory problems



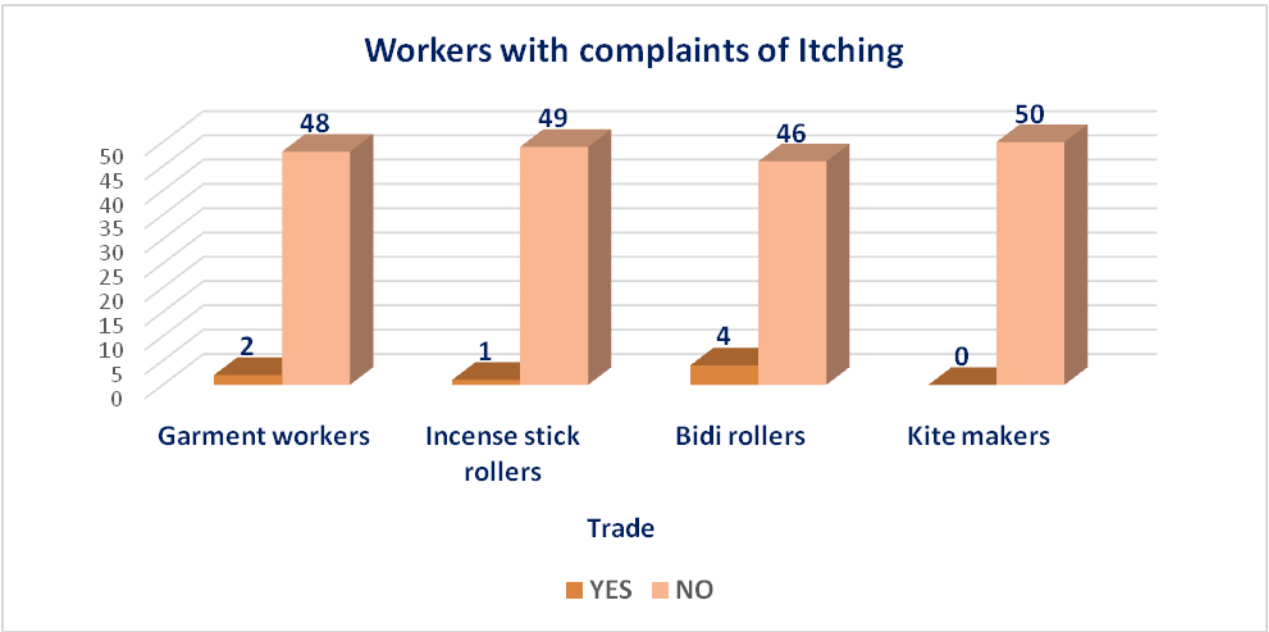


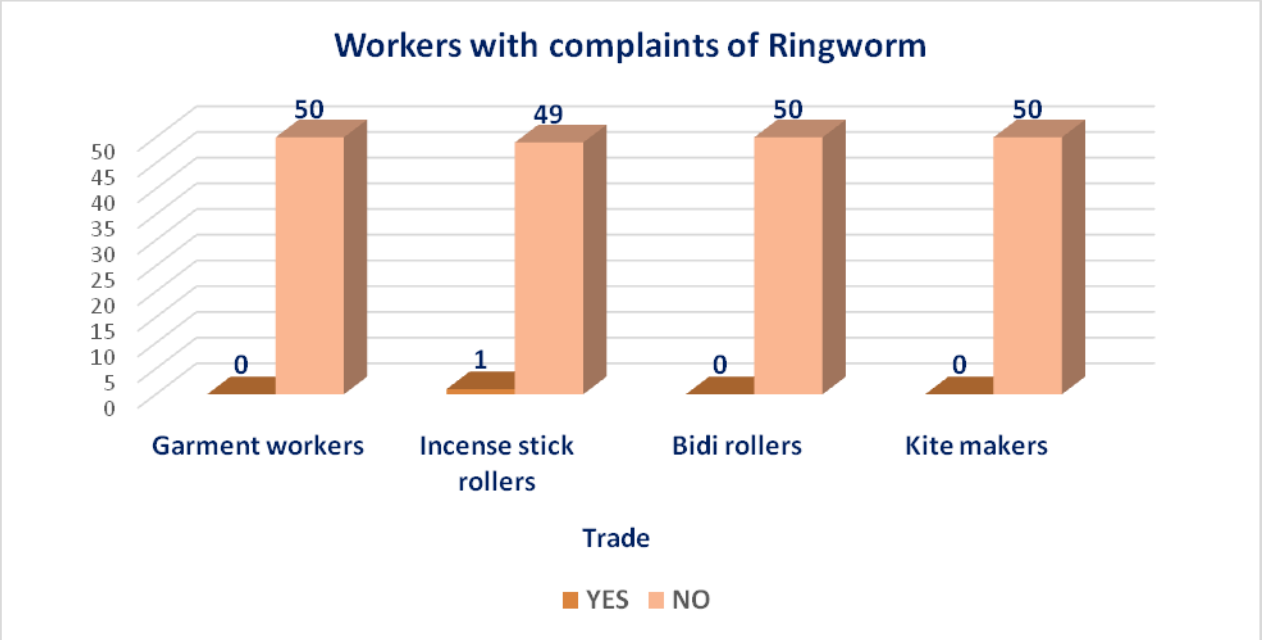
Workers with complaints of Dermatological problems

Findings from the Objective Assessment

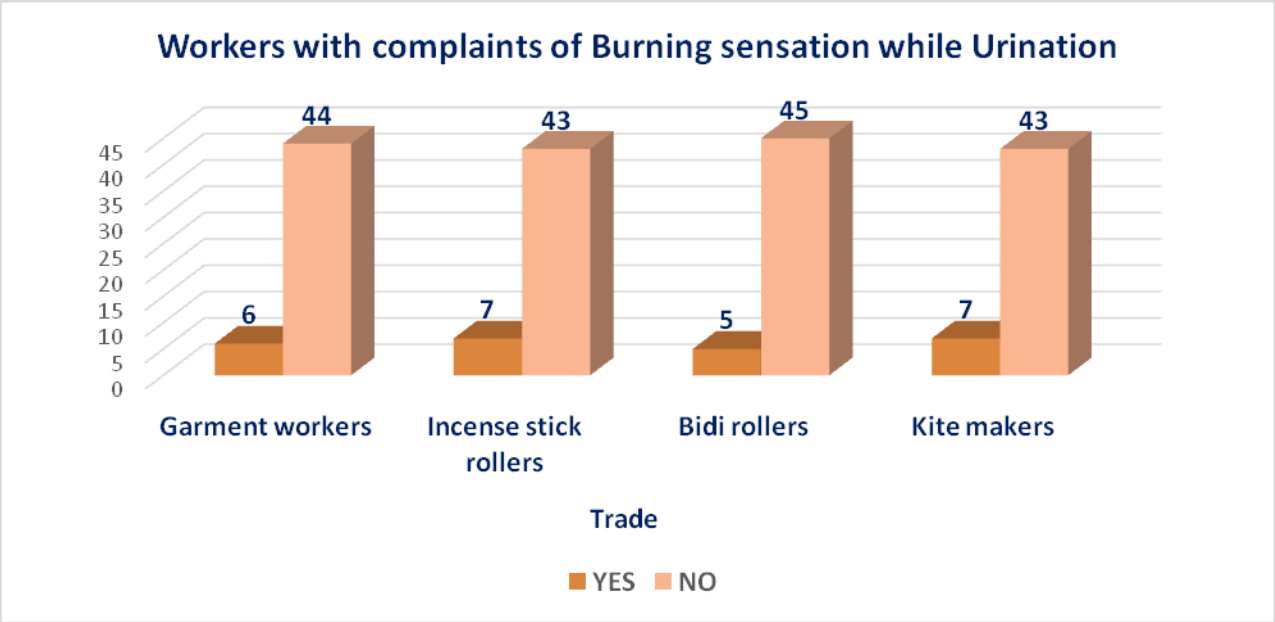


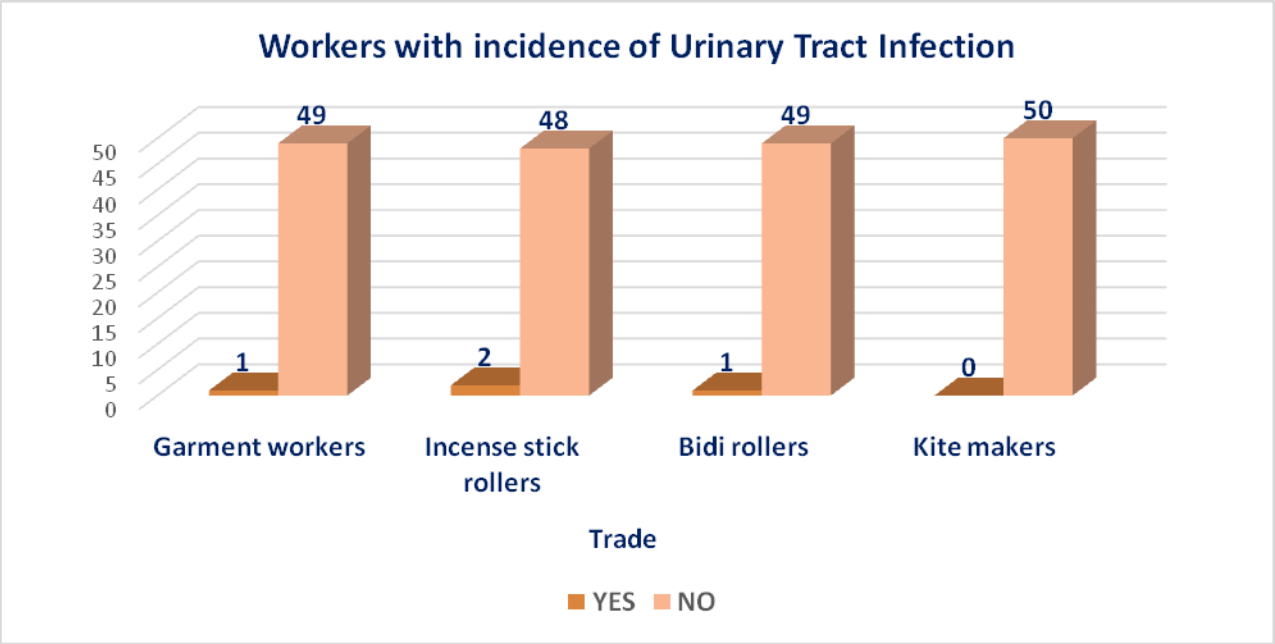

Workers with complaints of Rashes/Blisters
50
45
40
35
30
25
20
15
10
5
0
0
50
3
47
0
50
1
49
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO


Workers with complaints of Itching
50
45
40
35
30
25
20
15
10
5
0
2
48
1
49
4
46
0
50
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

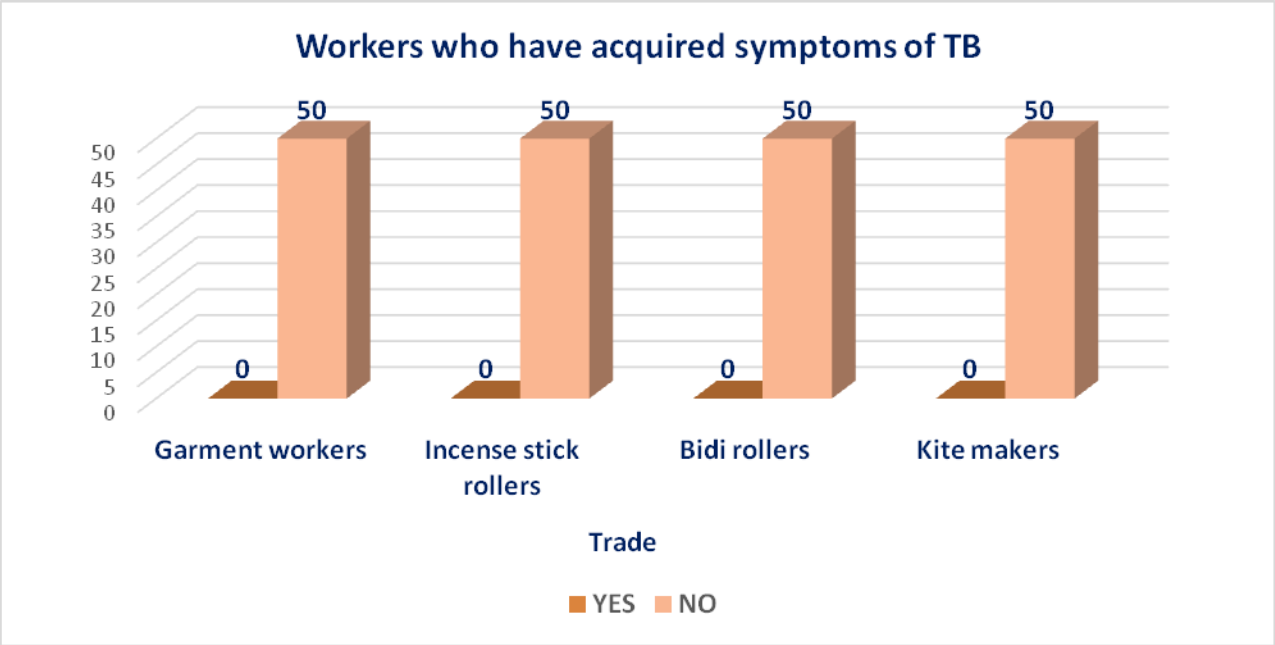


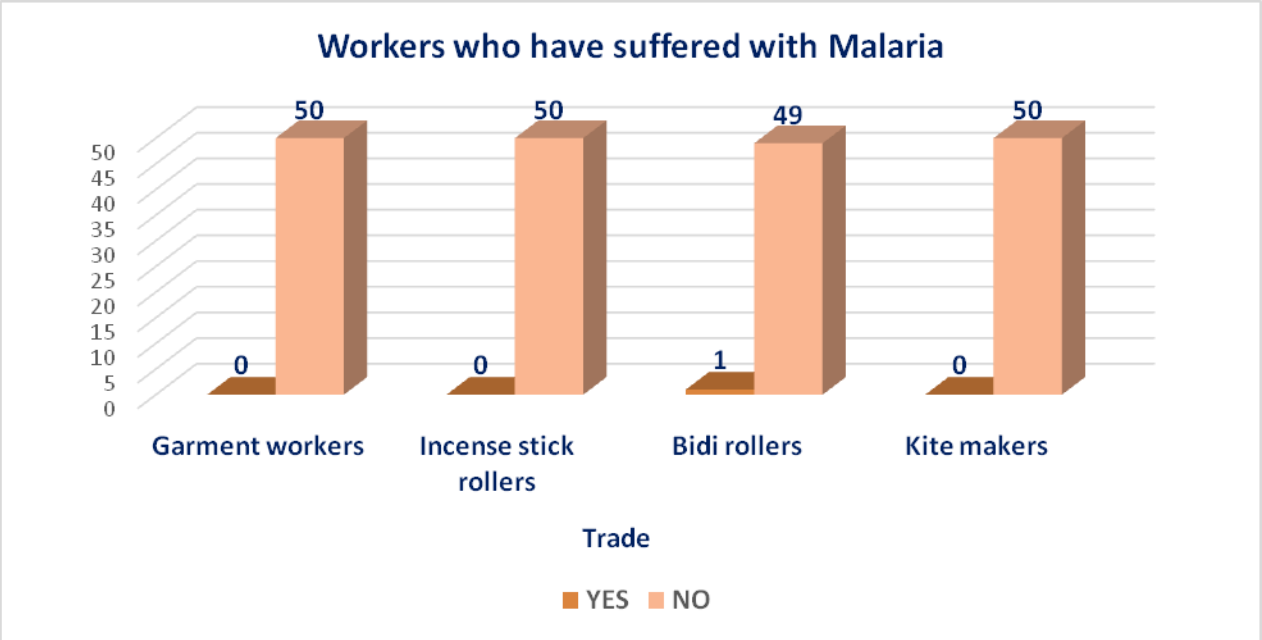
Workers with complaints of Urinary -tract problems



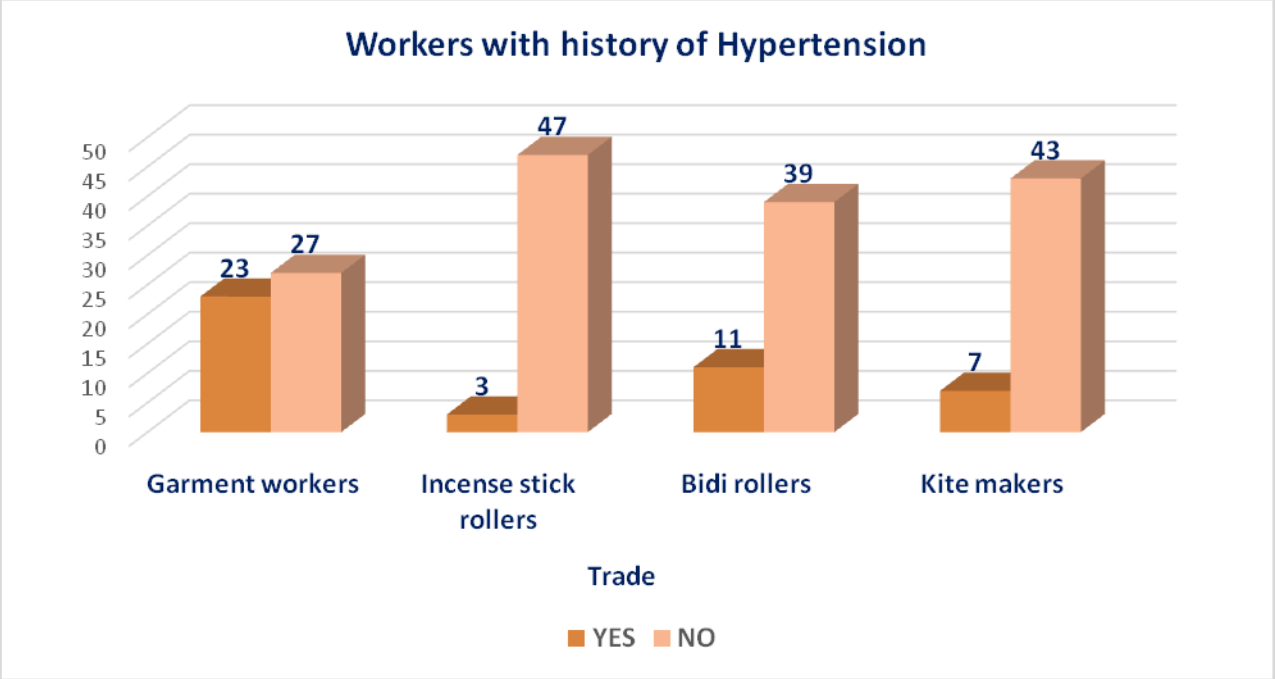


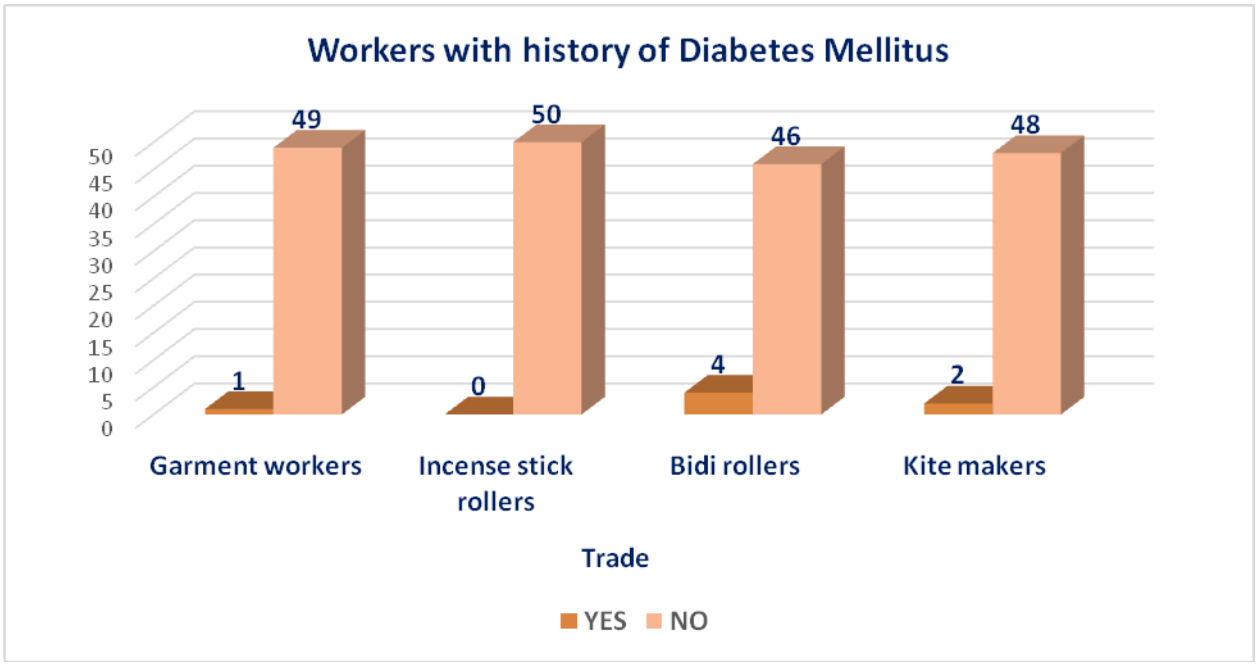
Workers with complaints of Communicable disorders



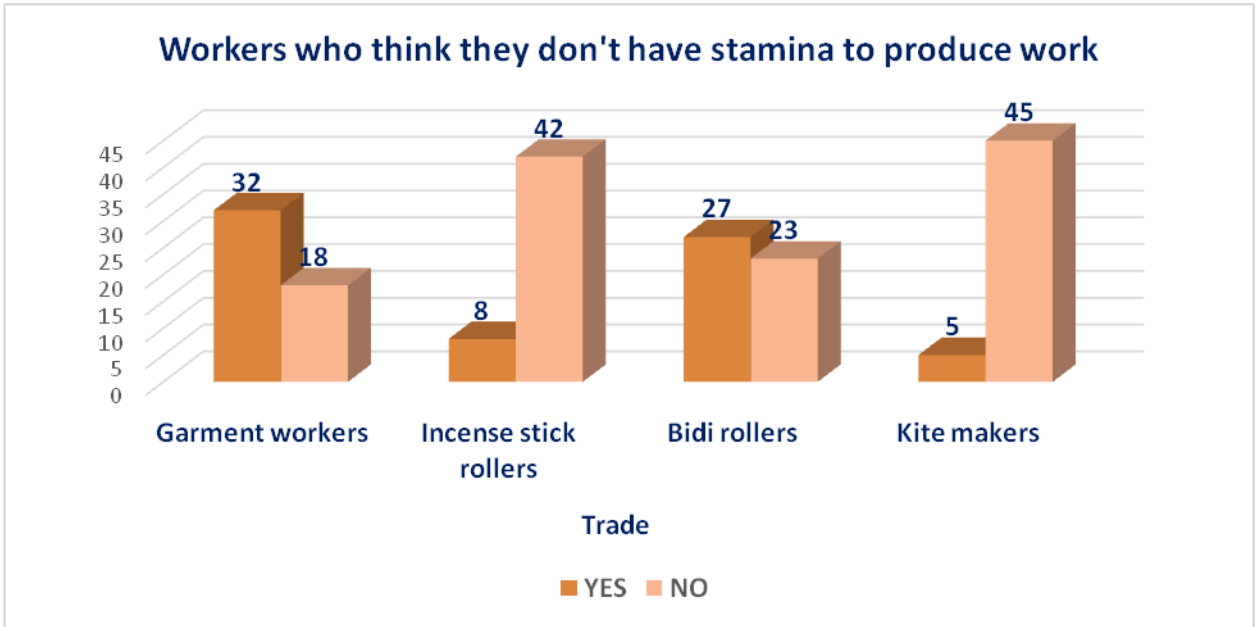


Workers with complaints of Non-communicable diseases

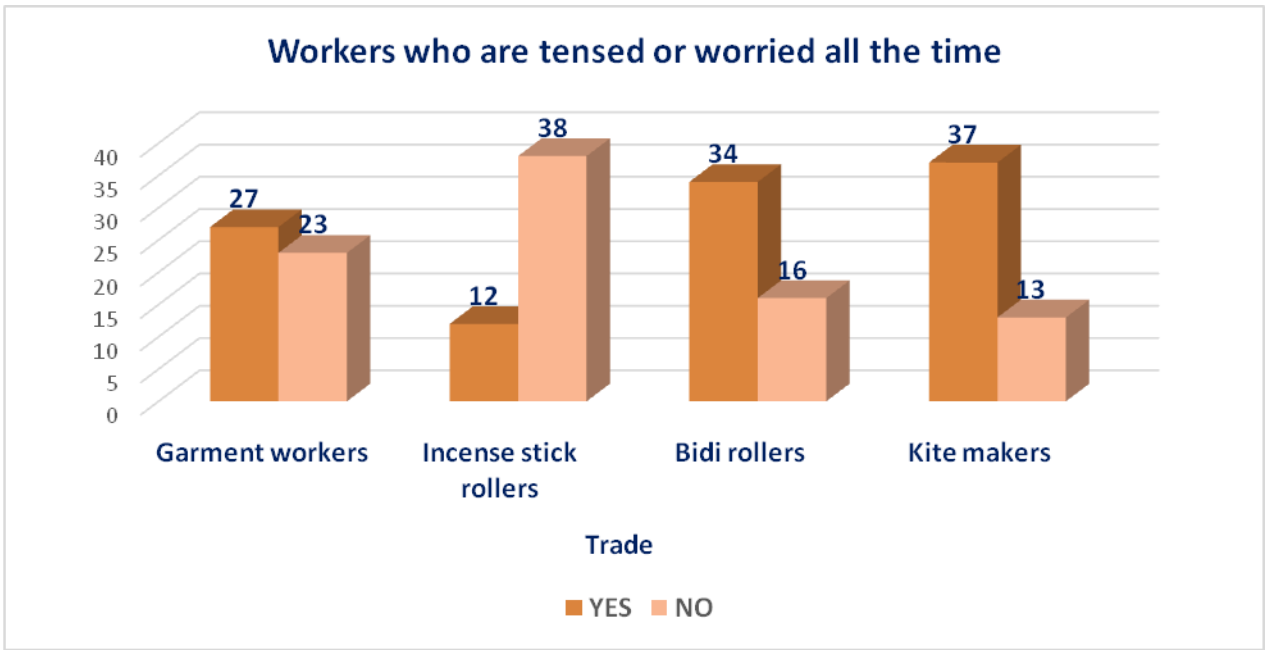


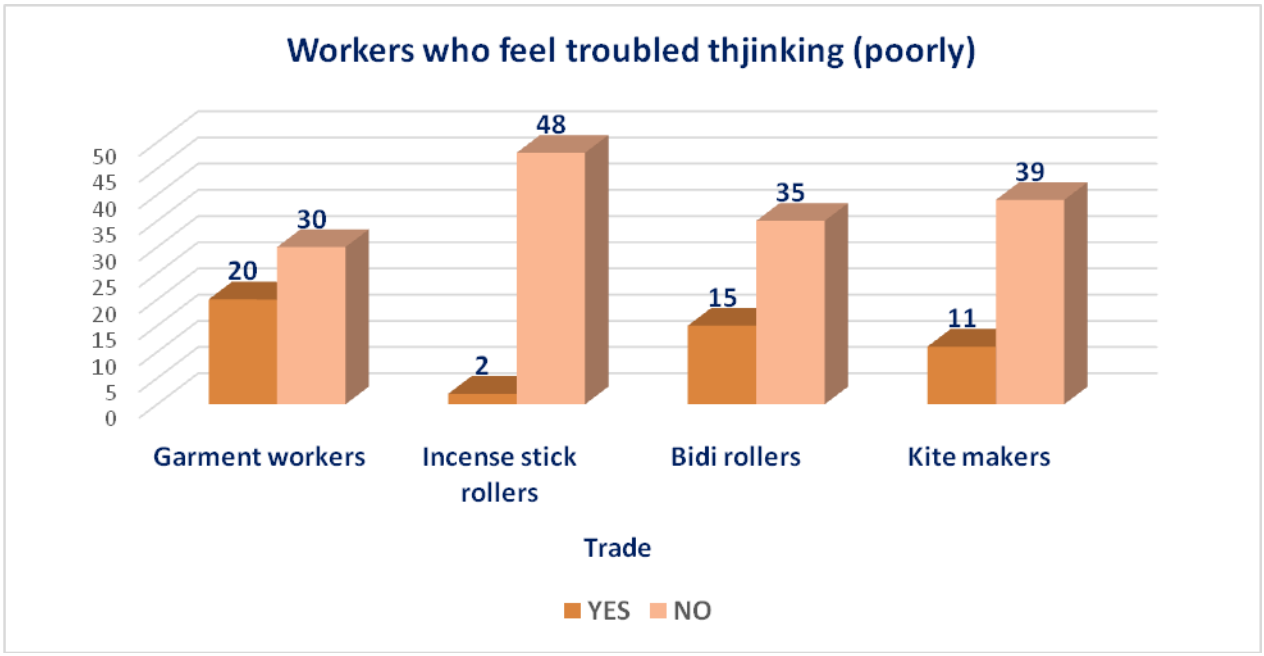


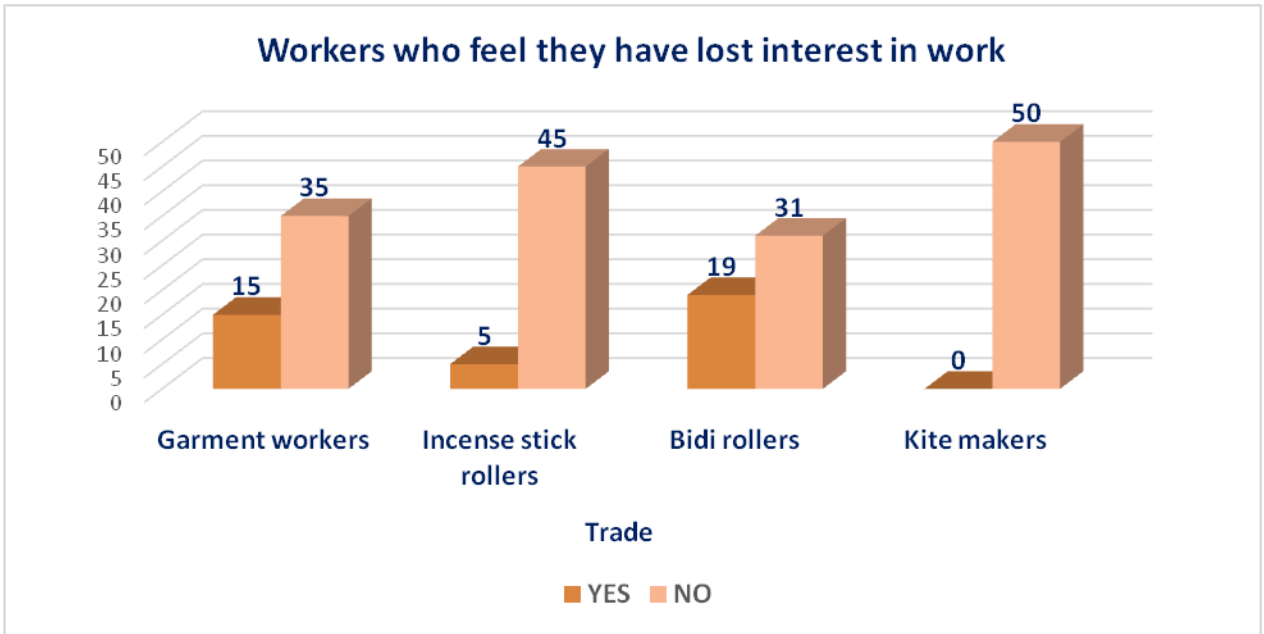
Workers with complaints of Mental Health Issues

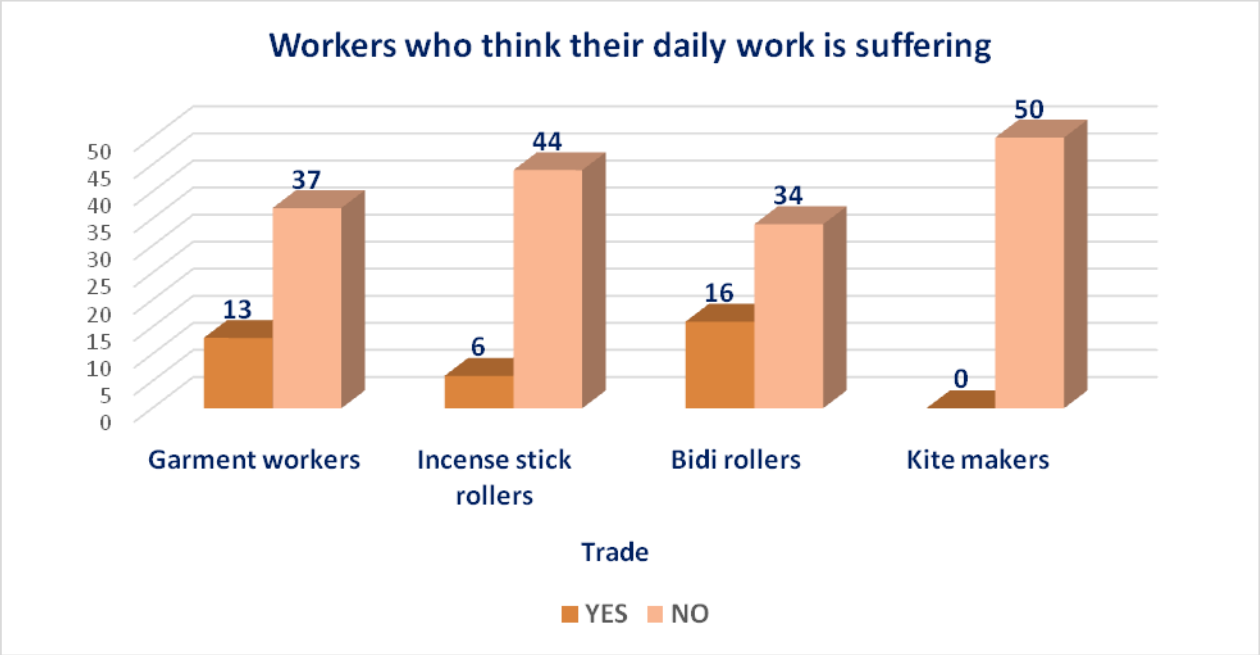



Workers who feel tired all the time
50
45
40
35
30
25
20
15
10
5
0
31
19
16
34
27
23
46
4
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

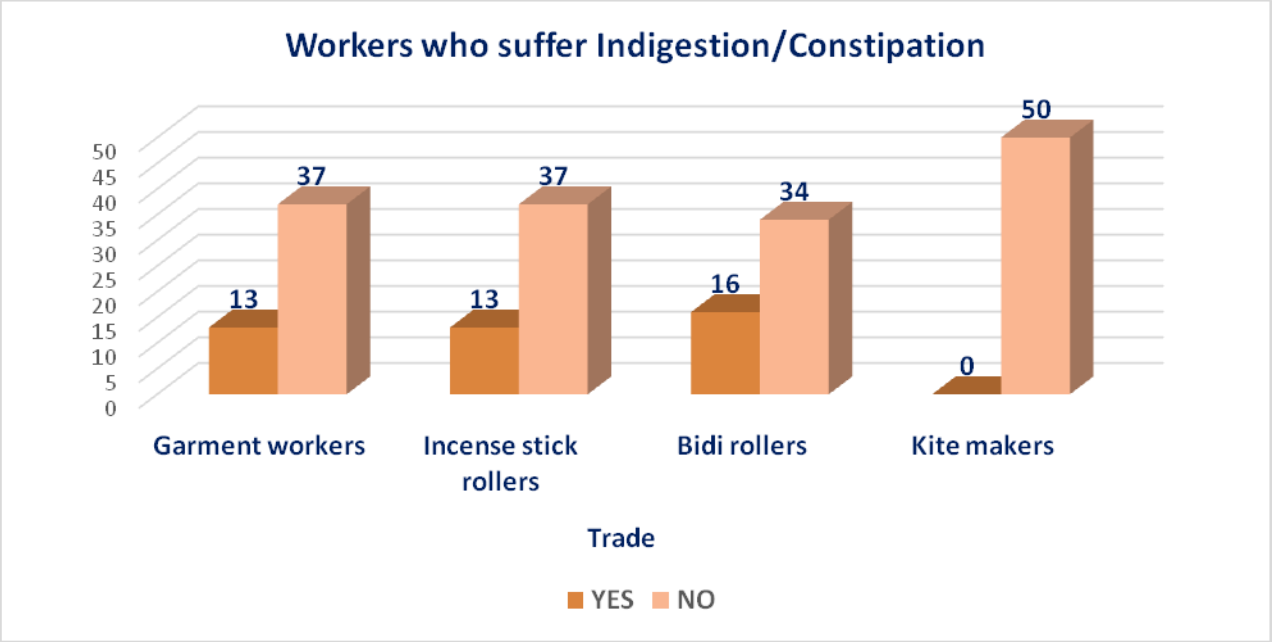

Workers who are tensed or worried all the time
40
35
30
25
20
15
10
5
0
27
23
12
38
34
16
37
13
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO


Workers who feel troubled thjinking (poorly)
50
45
40
35
30
25
20
15
10
5
0
20
30
2
48
15
35
11
39
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO

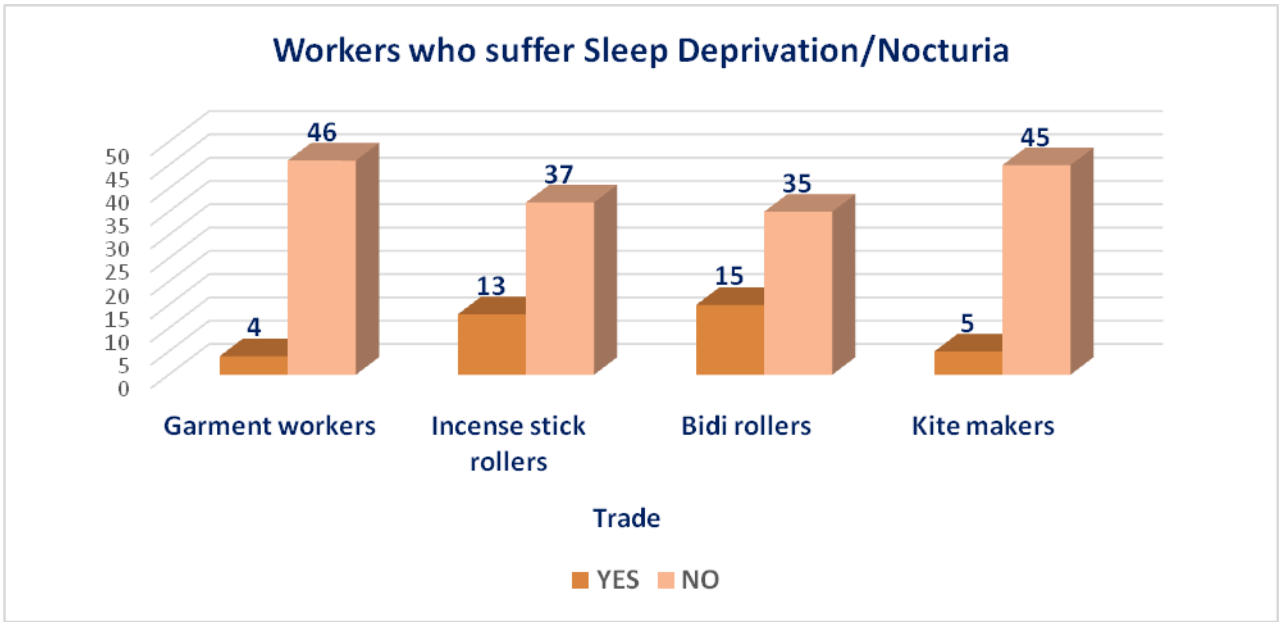

Workers who feel they have lost interest in work
50
45
40
35
30
25
20
15
10
5
0
15
35
5
45
19
31
0
50
Garment workers
Incense stick rollers
Bidi rollers
Kite makers
Trade
YES
NO



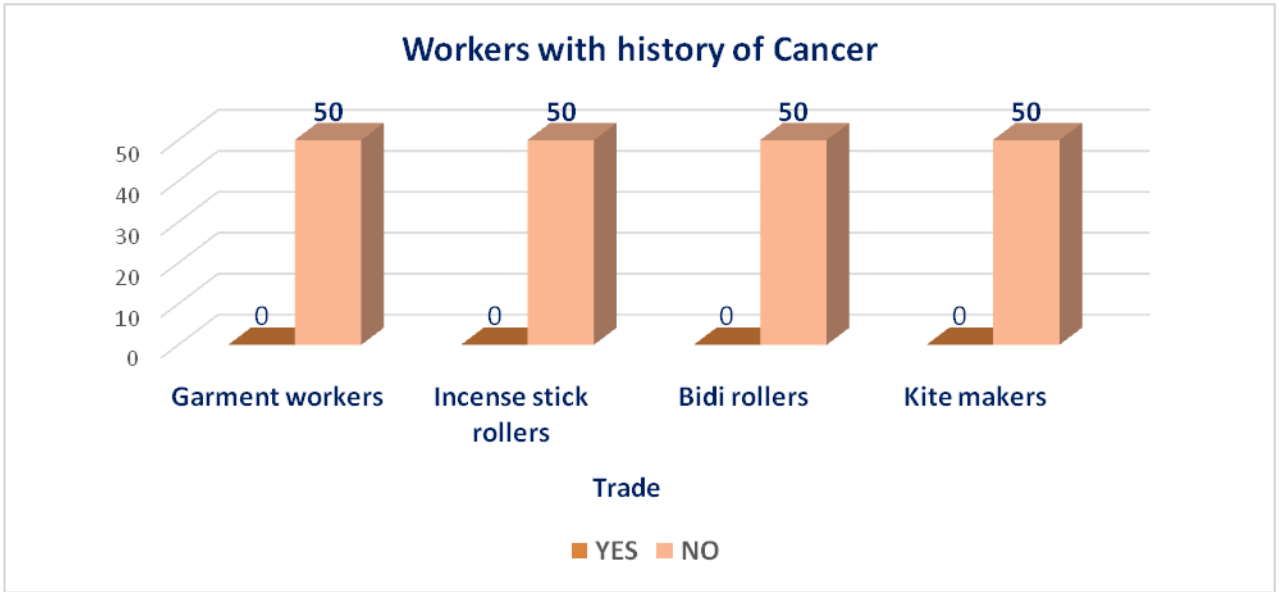
Workers with complaints of Gastro-intestinal problems

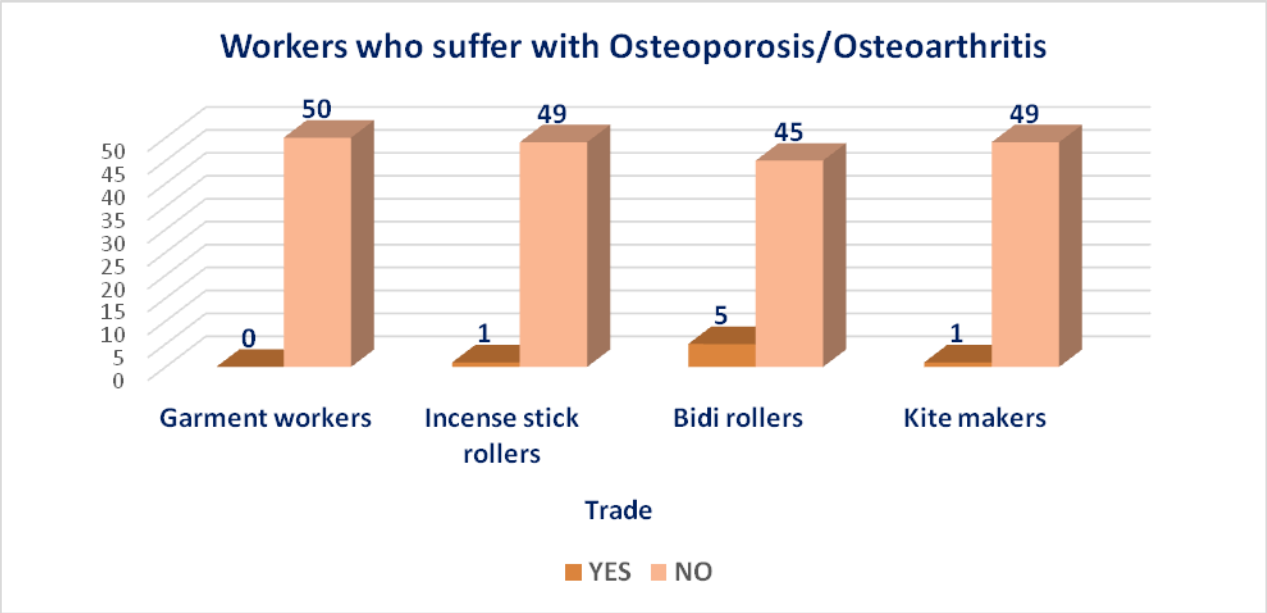


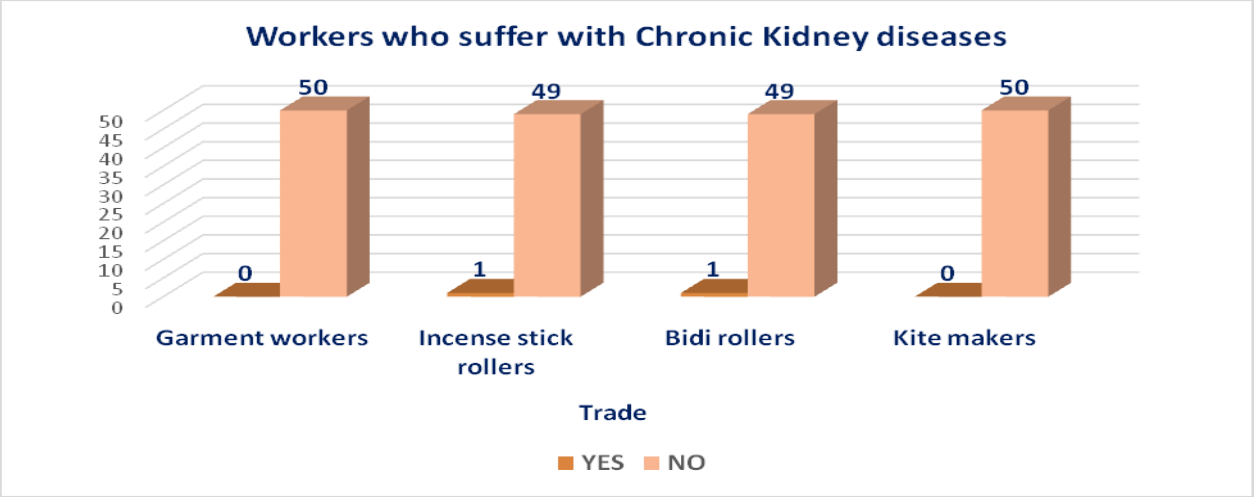
Workers with complaints of Sleep Disorder



Workers with complaints of Chronic Illnesses







Above data reveals that most workers in all the home-based sectors experience Musculo-skeletal, neuro-muscular, stress due to work-loads, disturbed sleep and indigestion, commonly. Some of the narratives from the respondents also reveal that some health problems like, muscular pains/aches, neurological problems, dermatological problems, and other minor illnesses are ignored by them as they prioritize their income rather going to a doctor.

Findings from the Objective Assessment

The table below demonstrates the findings achieved through the observation of HBWs in each sector.

Garment workers- Qutub Nagar, Saiyadwadi, Vatva-1				
No. of Home-based workers observed-04				
Duration of Observation (average)- 2 and a half hour				
Observation of process/steps involved	**Common Hazards (Existing and Potential)**	**Associated Risk**	**Risk Value**	**Use of Personal Protective Equipment**
1. Collecting, organizing and examining the material/Cloth received from the client, 2. Taking measurement- Old dress/use of measure-tape (Duration: more than half an hour), 3. Cloth cutting, 4. Preparing machine for stitching, 5. Stitching clothes, 6. Manual stitching for final finishing	**Physical Hazard:** Heat due to metal roof-top, Dust in the cloth material, cuts and injury due to use of heavy scissor and sharp measure tape which is kept around the material/cloth, Electric motor machine-, cuts due to needles inserted in the machine, use of manual screw-driver may cause serious injuries, Noise and vibration exposure, Cuts/injury due to use of needles and threads	Headache, Respiratory illnesses, Cuts and injury, Noise induced hearing loss	Medium to High	No measures in place
	Ergonomic Hazard: Poor posture, Awkward position, Repetitive movements, often moving/bending, Overuse of wrist fingers, Lack of back support in a chair while sewing and stitching on machine-Awkward	Musculoskeletal Disorder, fatigue, Fine movements may get affected, Strain on eyes		

	sitting position/Bent elbows/Neck Semi-Fully Flexed/Right lower extremity constantly placed on the paddle to run machine/Pupils constricted			
	Safety Hazard: Scissor cuts, Electric motor may get burnt if loose holes exist, Potential to get injured by needles and threads	Needle prick injury/deep wounds, risk of minor deformities, Potential to face burns due to lose electric circuits		
	Psycho-social Hazard: Constant concentration; use of all body parts, Pressure to create a perfect stitching and in-time delivery of stitched suit for the customers	Stress		
Kite-makers-Side & Service, Danilimda				
No. of Home-based workers observed-04				
Duration of Observation (average)- 50 to 60 minutes				
Observation of process/steps involved	**Common Hazards (Existing and Potential)**	**Associated Risk**	**Risk Value**	**Use of Personal Protective Equipment**
1. Preparing supportive desk or stone for placing kite papers, 2. Preparing glue, 3. Preparing workplace-placing bundle of kite-papers, wooden sticks,	**Physical Hazard:** Sitting and working under metal roofs, Exposure to heat- avoiding use of fan (to prevent kite-papers fly away), Cuts and injuries due to use of scissors and sharp edges of the papers used (basically, work implementation)	Headache and other health problems, Cuts and injuries	Medium to High	No measures in place

and glue, cutting small pieces of paper on quadrangle size to stick it on the edges, 4. Sitting at the workplace, 5. Taking a single kite-paper one-by-one from the bunch of hundreds, 6. Picking a wooden stick and immerse it in a glue, 7. Applying stick on a kite-paper and sticking small papers on sides for finishing	**Ergonomic Hazard:** Prolonged sitting, Awkward posture, Repetitive movements, Lifting objects (eg. Supportive desk/stone, raw material) and keeping in place, Ensuring the matching of size and shape for small papers used for fixing the edges of the (kite) paper	Musculoskeletal disorders		
	Safety Hazard: Exposure to heat and odour in the glue making process	Respiratory illnesses, Chances of (minor) burns		
	Psycho-social Hazard: Constant attention to match the size and shape of papers used for fixing the edges of the (kite) papers (waste papers are given to the workers by the sub-contractors to ensure no material goes for wastage), working under constant pressure to finish the target given for the day as it is also linked with the income	Stress		
	Biological Hazard: Lack of ventilation, lack of cleanliness/sanitation, Mosquitos in the surroundings, Pouring (bare) hands in the glue with wooden sticks (with already existing cuts on pulp of the	Difficulty in breathing, Illnesses due to lack of sanitation, Communicable diseases, Infected cuts and wounds		

	fingers and palm), open drainage system adjacent to workers' place			
Incense stick rollers – Panna Estate, Bapunagar				
No. of Home-based workers observed-04				
Duration of Observation (average)- 1 and a half hour				
Observation of process/steps involved	**Common Hazards (Existing and Potential)**	**Associated Risk**	**Risk Value**	**Use of Personal Protective Equipment**
1. Arranging rolling desk, 2. Applying powder/color on rolling desk, 3. Placing (made of bamboo splints) sticks, 4. Taking stick and small portion of semi-solid dough/Maida dough in hand, 5. Applying powder on hands and rolling stick with semi-solid dough, 6. Once, the stick is rolled over, applying dry powder on it, 7. Drying sticks in a verandah or at the door-step after powder application, 8. After drying process, making a bundle of 200 pieces of sticks	**Physical Hazard:** Heat, Inadequate light, Lack of ventilation, Cuts and injuries	Headache, Suffocation or difficulty in breathing due to lack of ventilation, Cuts and injuries	Low to High (Depending on the process, the worker is involved in)	No measures in place
	Ergonomic Hazard: Prolonged sitting in the same position, Awkward posture, Repetitive movements, Lifting objects and moving (eg. Rolling desk, bundle of sticks)	Musculoskeletal disorder, Fatigue, Muscular Cramps, Strain injuries		
	Chemical Hazard: Exposure to powder with various odour and fragrances- Allergic reaction, itching, inhalation and ingestion of chemical through mouth, nose and derma layers	Respiratory illnesses due to inhalation of chemical induced powders (Bronchoconstriction if exposure is prolonged), Sore throat, itching, allergic reaction of skin, headache, difficulty in concentrating		
	Psycho-social Hazard: Stress to finish the target of rolling maximum sticks in a day	Stress		

with the use of thread, 9. Keeping rolling desk back in place	**Biological Hazard:** Bacteria /fungi in the maida dough, mosquitos in the surrounding, Lack of cleanliness and sanitation	Illnesses due to exposure to bacteria and fungus and mosquitos, Illnesses due to lack of cleanliness and sanitation		
Bidi makers/rollers – Pathan Ni Chali, Saraspur				
No. of Home-based workers observed-04				
Duration of Observation (average)- 40 to 60 minutes				
Observation of process/steps involved	**Common Hazards (Existing and Potential)**	**Associated Risk**	**Risk Value**	**Use of Personal Protective Equipment**
1. Taking measurement of leaves using Farmo- a small sharp tin made tool used for taking measurement among bidi rollers, 2. Cutting leaves according to the given size, 3. Storing leaves in a wet cloth, 4. Preparing material-pan, 5. Rolling bidis-filling tobacco, applying pressure and closing one end through knife, 6. Applying	**Physical Hazard:** Exposure to Heat, Cuts/minor injuries- cuts with use of knife, injury with the use of scissor	Headache and other health problems, Cuts/Injuries,	Medium to High	No measures in place
	Ergonomic Hazard: Prolonged sitting in same position, Awkward posture, Repetition of fine movements, Overuse of group of Hand muscles	Muscular and joint aches, repetitive strain injury, overuse injury (thumb and index finger)		
	Safety Hazard: Exposure to tobacco and tobacco dust inhalation	Tobacco induced illnesses		
	Psycho-social Hazard: Stress to cut leaves in the same size and avoid waste; being cautious, looking for perfect procedure measures applied (avoiding minimum rejection -	Stress		

thread, 7. Preparing a bundle of 25 pieces of Bidi	ensuring all the material can be used with minimum rejection), Ensuring bundles are packed as per the specification- final finishing			
	Biological Hazard: Exposure to fungi, bacteria present in the leaves	Illnesses/infection/allergic reactions due to exposure		

Findings from Focus Group Discussions

Garment workers-Qutub Nagar, Saiyadwadi, Vatva-1			
No. of Participants: 10			
Duration: 1 hour			
Key Discussion	**Response from the members**	**Any particular issue discussed**	**Conclusion**
Meaning of Hazard and Listing Hazards with the participants **Discussion on findings from the Subjective and Objective Assessment** **Discussion on possible solution to hazards, what support would be needed and from whom, who could/should have responsibility for implementing these solutions**	Hazard means anything that hurts them physically if not paid attention, for example, sewing needle, use of electric motor, strain on eyes due to lack of proper light, occurrence of vibration that could increase the chances of injury due to fall of a scissor placed on sewing machine, etc. Women in their fifties experience, dual burden of obesity and arthritis, blaming long sitting hours and posture maintained to produce quick work, some of them do	Workers demanded to help them with reducing electricity bills and if possible, provide subsidy to purchase and install solar power units to reduce spending on electricity bills and hence, could save some income from their earning Implementation of GST (Goods and Service Tax) in the state has had a hard hit on their work, getting low and irregular work and income, both Workers also demanded that private company owners or	The participants had developed a good understanding about the hazards and were well responsive. They did agree with us and understood the findings, LSST team reported to them and took it as an educational learning for them. What could be the possible solution to hazards, and who should be responsible for implementing solutions, the immediate answers were either private company owners or small factory owners should be responsible for providing equal wages and all the raw

	experience breathlessness in winter due to dust on cloth material, workers have to be cautious in monsoon especially, due to fear of electrocution and lose plugging holes	small factory owner should be responsible for providing equal wages and all the raw materials used in sewing cloth materials. Currently, approximately 50% of the commission goes to sub-contractors just for providing HBWs work, and HBWs are held responsible for buying raw materials, paying electricity bills as they are working from home	materials used in sewing cloth materials, or the Government must come play an active role for implementation of solutions.

Kite-makers-Side & Service, Danilimda			
No. of Participants: 09			
Duration: 1 hour and 15 minutes			
Key Discussion	**Response from the members**	**Any particular issue discussed**	**Conclusion**
Meaning of Hazard and Listing Hazards with the participants **Discussion on findings from the Subjective and Objective Assessment** **Discussion on possible solution to hazards, what support would be needed and from whom**	Hazard means any substance which has certain elements that are dangerous and could have an impact on health, directly or indirectly No proper drainage/open drainage in front of their home which is also their work-place causing serious troubles, keeping their doors closed and focusing on work Solution used in the	Apart from common, muscular aches and pains, HBWs here, did talk lot about stress and tension due to work. Ill-behaviour of sub-contractors to produce (target) work within 24 hours, and if the work is delayed, they lose work, and hence, income. Taking care of small children is another issue while working. Moreover, verbal abuse from husbands is routine as they (husbands) do not	Women were quite aware about the hazards and how it can have an impact on their health. They cannot demand any solution or protective equipment from them as such demands would lend them losing work and hence, income. The only solution discussed here was, having adjustable (height) table for work implementation would help as to prevent

	kite-making process is a volatile substance; most of them have escaped near fatalities. There is no extra room where they can sit and work, leaving them to forcefully, work near the gas-stove in the kitchen area	like their women working for peanuts, despite the fact that husbands do not earn enough to make ends meet, and women have to work despite verbal abuse to feed their families. After effects of GST (Goods and Service Tax) implementation of this on businesses was another issue discussed in detail. HBWs discussed how the implementation of GST has reduced their income, and contractors and sub-contractors are paying them less per piece rate, blaming GST implementation on their business.	(often) bending and reduce back-pain.

Incense stick rollers-Panna Estate, Bapunagar			
No. of Participants: 07			
Duration: 40 minutes			
Key Discussion	**Response from the members**	**Any particular issue discussed**	**Conclusion**
Meaning of Hazard and Listing Hazards with the participants **Discussion on findings from the Subjective and Objective Assessment** **Discussion on possible**	Hazard means exposure to anything which can increase the chances of illnesses and diseases. Detailed discussion on types of hazards and listing hazards with the	All the workers were involved in incense stick making since the age of 9 or 10. Every one of them have learnt to ignore the mental and physical stress they experience,	The HBWs here work in a hazardous environment which could have serious effect on their health. Due to economic constraints, they do not want to leave this work. The only solution they

solution to hazards, what support would be needed and from whom	workers.	due to their work and work-hours. They all belonged to almost similar family background where earning an income to make ends meet was the priority rather focusing on their health. They also admitted, given a choice, they would not like to do such hard work, and they hope to give better education to their children with the income generated through this work.	think is leaving this work would help them but, they do not enough education as well skills to produce other work and generate income.

Bidi makers/rollers-Pathan Ni Chali, Saraspur			
No. of Participants: 07			
Duration: 35 minutes			
Key Discussion	**Response from the members**	**Any particular issue discussed**	**Conclusion**
Meaning of Hazard and Listing Hazards with the participants **Discussion on findings from the Subjective and Objective Assessment** **Discussion on possible solution to hazards, what support would be needed and from whom**	Hazards means exposure to anything for longer period of time can have an impact on health. Workers keep changing sitting positions to reduce incidence of pain and cramps. Workers do not prefer to go to Doctor for any general health problems or muscular	Husbands of women workers take away their money and use it for alcohol consumption. On refuse, women do face verbal abuse and violence from husbands. Sub-contractors do not care for the HBWs. Bidi workers believe it is their own responsibility to take preventive	The health component is always neglected and income is the priority. Social issues and familial pressures are more prevalent than occupational exposure leading to mental stress. Earning income on a day-to-day basis is the only solution, they see.

	aches and pains. Women do have responsibility to raise their children, feed their families through income, as (most) husbands are addicted to alcohol and do not play any role in raising their children and making their ends meet.	measures to hazards exposure. Personal protective equipment would not be of use as it will reduce the speed in the process of bidi rolling. The workers also discussed about the student scholarship their children were entitled to by the Bidi Workers Welfare Board in the past. The scholarship has stopped now, and this needs to be explored.	

Reflections on the project activities

The first step was to engage different trade workers about the idea of occupational hazards and exposure, and then to request various information on their work prospect. Second step was to build the capacity of CHWs who have worked in the local areas for over decades, and over that time have developed strong relationship with local communities who are different trade workers. The relationship with local communities and capacity-building of CHWs has been strengthened through the participatory approach in which the LSST engages.

This project has tried to encourage the development of tools and database on occupational hazards and exposures amongst home-based workers, because health and safety can only improve if some data or evidence is made available to design preventive measures and tools and develop basic policies which promote worker's health.

Learning & Recommendations

When a woman works from her home, she needs adequate lighting, enough space and a safe, hygienic environment—conditions which are not prevalent and a rare possibility amongst these groups. The cost of utilities cuts into her income, and the lack of or poor quality of these services has a direct bearing on her productivity. Frequent evictions and insecurity of tenure adds to her vulnerability.

Poor health of the worker means not only added expenditure on healthcare and medicines, but also more time spent in taking care of the ill. Health systems should facilitate local strategies to meet

workers' health needs. In moving towards universal coverage, those at greatest risk or having greatest needs should be included first and Occupational Health an important component of primary health care.

Particular measures were required to establish and strengthen core organizational capacities and ensure adequate human resources to assess occupational hazards and exposure amongst home-based workers. Community based Organisations can take up these responsibilities with adequate training and support. Capacities should be built for primary prevention of occupational hazards exposure, associated health risk, including strengthening of human and technological resources, training of home-based workers, introduction of healthy work practices, and of health promoting culture or attitude. Health promotion and prevention of non-communicable diseases should be stimulated by advocating healthy diet and physical activity among home-based workers. Specialized training of CHWs for a community-based programme to promote mental health should be included.

Occupational hazards and exposure assessment tools need to be elaborated, with the involvement or inputs from all stakeholders, for raising awareness about worker's health issues. Research on home-based worker's work- related health problems need to be further strengthened by giving it a priority in national programmes and grant schemes and fostering participatory approach. Empowerment of workers and the encouragement of decision-makers are critical for the promotion of the health and safety of workers.

Finally, the study reinforced the need to promote community health workers to address the OHS needs of informal workers and a community-based approach and model to be developed for this purpose. LSST further recommends the need to do similar studies with a larger sample and for other trades as well. The findings of this study should be used to develop simple educational tools and teaching aids to prevent various exposures and hazards the women workers in the informal sector are facing. The dissemination of this study will also be done to garner the support of multiple stakeholders; government, private institutions, unions, cooperatives, researchers and others. The tools used in the study were very effective in mapping the hazards and exposures of selected HBWs and could therefore be used in other settings, locations and trades for similar outcomes.

Appendices

Annexe I: Subjective Assessment-Survey Questionnaire

OCCUPATIONAL EXPOSURE QUESTIONNAIRE & RECORD

Date: .....

Registration No: .....

SECTION A: PERSONAL DETAILS

A1. Name:
A2. Date of birth/Age:
A3. Marital status: Married /Unmarried/Widow/Other
A4. Family status: Joint/Nuclear
A5. Education status:

SECTION B: SOCIO-ECONOMIC DETAILS

B1. Main Work Sector: Garment Worker/Kite-Maker/Incense Stick Roller/Bidi maker;roller
B2. How many years have you been in this occupation?
B3. Did you ever have another occupation?

B4. Did you change your (previous) occupation and why?
B5. Which of your family members work with you in your current occupation? What is the total number of hours put in by each family member?
B6. Are your young children (under 6 yrs) with you whilst you are working?
B7. Duration of work: …….hours/day, …….hours/week, …….days/month
B8. Income: …….per piece, …….per day, …….per month, Other specification:

SECTION C: WORK ENVIRONMENT

Please circle what applies	
C1: Do you work in a single room workspace?	1 = Yes
	2 = No
C2: What type of cooking facility do you have?	1 = LPG
	2 = Coal
	3 = Kerosene
	4 = Wood
	5 = Other
C3: Is your workspace in a separate room from your living/sleeping space?	1 = Yes
	2 = No
C4: Are your floors even or uneven?	1 = Even
	2 = Uneven

	3 = Other
C5: Do you have adequate ventilation where you work?	1 = Yes
	2 = No
C6: Do you have adequate light where you work?	1 = Yes
	2 = No
C7: What is your source of this light while you work?	1 = Natural light
	2 = Lamp
	3 = Tube light
	4 = Mercury Bulb
	5 = Other
C8: What type of toilet do you have access to while you work?	1 = Flush toilet
	2 = Pit latrine
	3 = Communal latrine
	4 = No toilet
	5 = Other
C9: Do you have access to electricity where you work?	1 = Yes
	2 = No
C10: What is the source of water where you work?	1 – Piped into house
	2 = Communal tap
	3 = River/dam/lake/pond
	4 = Tank water
	5 = Borehole
	6 = Bottled water
	7 = No access to water
C11: Are you able to wash your hands while at work?	1 = Yes
	2 = No
C12 What is your sitting arrangement while you work?	1= On a chair
	2= On a stool
	3 = On the floor
	4 = Other
C13: How often do you take breaks while you are working?	1 = Never
	2 = At least one break per day of work

	3 = At least two breaks per day of work
	4 = At least three breaks per day of work
	5 = More than three breaks per day of work
C14: Who takes care of your young children (under 6) while you work?	1 = Myself, while I work
	2 = Family member
	3 = Child care center
	4 = Husband
	5 = Non-relative

SECTION D: WORK PROCESS

D1. Do you repeat the same action when you are working?	1 = Yes
	2 = No
D2. Do you use any protective equipment?	1 = Yes
	2 = No
D3. If **YES** to D2, what protective equipment to do you use?	1 = Gloves
	2 = Mask
	3 = Other

SECTION E: HAZARD EXPOSURE

E1	Are you exposed to ergonomic hazards whilst at work? (lifting heavy of heavy objects, prolonged bending/standing, awkward postures, repetitive movements)	1=Yes
		2=No
E2	Are you exposed to physical hazards whilst at work?	1=Yes
	(noise, vibration, heat, cold, poor lighting, dangerous work implements)	2=No
E3	Are you exposed to biological hazards whilst at work?	1=Yes
	(fungus, bacteria, poor sanitation, viruses, mosquitoes, snakes, centipedes)	2=No
E4	Are you exposed to poisonous chemicals whilst at work?	1=Yes
		2=No
E5	Are you exposed to psycho-social hazards (stress, mental distress)?	1 = Yes
		2 = No
E6	Are you exposed to violence or harassment whilst at work?	1=Yes
		2=No

SECTION F: PAST MEDICAL HISTORY

B1	Think back over the last calendar year. What has caused you to skip work days **most often?**	1=Because of the weather
		2=Forced eviction
		3=Illness or accident
		4=Child care
		5=Care for an elderly person
		6=Care for a sick person
		7=Maternity
		8=Found other temporary work
		9=Other
B2	Think back to the last time you were ill or injured. Was it your work that caused your illness or injury?	
		1=Yes
		2=No
B3	Did you have to miss days of work because of this illness or	1=Yes

	injury?	2=No
B4	If you answered **YES** to **B3**, how many days of work did you miss?	Write # of days:
B5	If you miss a day of work, are you able to earn any income from that work?	1=Yes
		2=No

END OF SURVEY

PROCEED TO HEALTH CHECKLIST

Annexe II: Objective Hazard Assessment

OBJECTIVE HAZARD ASSESSMENT

- Community Health Workers will watch a worker doing their work for a period of a **one hour**, providing an objective assessment of hazard exposures during the work process.[1]
- Each work process should be broken down into its component activities. For example, during this hour, a garment worker may be involved in the following activities:
    - Preparing cloth
    - Cutting cloth
    - Stitching cloth
    - Ironing and packaging finished products
- The worker may also only be involved in one of these activities – that is fine, as long as all the potential and existing hazards are noted. Efforts should be made to assess different workers during different stages of their work process.
- For each part of the work process, the health worker should note the activity, as well as identifying the **potential and existing** hazards to health and safety she notices. Hazards can be classified in the following way:
    - Physical Hazards (work implements that can cause injury; noise, vibration, heat, cold, poor lighting)
    - Chemical Hazards (potentially poisonous/hazardous chemicals such as strong glues and dyes)
    - Biological Hazards (fungus, bacteria, poor sanitation, poor ventilation, viruses, mosquitoes, snakes, centipedes)
    - Ergonomic Hazards (lifting heavy of heavy objects, prolonged bending/standing, awkward postures, repetitive movements)
    - Psycho-social Hazards (stress, violence, harassment)
    - The health worker should also note any protective equipment that the worker is using, as well as anything else that she feels may impact on the health of the worker and her family.

Name of observer:

Date:

Occupation analyzed: (eg. Garment Worker)

No.	**Activities**	**Hazards (Existing and Potential)** *Identify known and potential hazards for each task.* *(Keep in mind long-term health hazards)*	**Risks** *Identify the risk associated with each hazard.* *These are risks that could affect anyone in the work place*	**Risk Value (Priority)** *Using the matrix below indicate if each risk is Low, Medium, of High.* *Consider the severity and the likelihood as though there are no controls.*			**Protective Equipment** *What (if any) protective equipment is being used?*	**Other Comments** *Anything else you notice that could have an impact on the health of the worker?*
				Likelihood (1-4)	**Severity** (1-4)	**Risk Level** (L + S = Low, Medium High)		
EG	**Stitching**	**Physical hazards:** Cuts to fingers **Ergonomic hazards:** Awkward posture, bent over **Biological hazards:** No ventilation, no access to toilets	Muscle ache; infected cuts; illness due to poor workplace ventilation and sanitation				Uses a cloth to cover the thumb.	- Young children are present and may be exposed to workplace hazards as well. - Thumb protection does not prevent cuts to other fingers

Annexe II: Focus Group Discussion

Participatory Risk Mapping for Home Based Workers

Focus Group Schedule

Focus Group Objectives:

To validate the findings of the objective assessment;

To raise awareness amongst workers of the link between work and ill-health and injury;

To think through, with workers, possible interventions to improve health and safety at work.

Facilitation guidelines:

Each focus group should include 8-10 workers, and should be sectorally specific.

In all groups, there are some who talk a lot and others who talk less. Allow the participation of every one - make every effort to allow the voices and ideas of the low talkers to be heard. You will identify the 'leader' quickly; allow him or her in, then find ways to include others. You are in authority – you can simply say: 'Thanks very much for showing your hand again, but I need to make sure that others ideas are also heard here. Please make way for X.' Use group techniques that allow all to speak, but not in a routine "let's go round the circle" way.

Allow different information and ideas: Some participatory research methods aim to get consensus or agreement between participants. We do not want this. We want different views, where they exist.

Time needed: The FGD will need about 1.5-2 hours.

Guidelines on reporting on the focus groups:

The report on each focus group should contain the following:

All relevant information about the time, date, location of the FG as well as participation and who was facilitator and note-taker.

A translated version of the discussion, with any tables/diagrams (such as the activity clock) replicated in the Word document, and translated into English.

A summary of the discussion and events related to the group discussion WITHOUT ANY ANALYSIS. Include QUOTES, who said what, substance of discussion, observations, etc. Record as much of the discussion as possible – this includes direct quotes from participants. Be on the alert for anything that you feel expresses an issue very well. QUOTES ARE VERY IMPORTANT and take note of who made the comment. Please write direct quotes exactly as they are spoken in local language and translate directly in the report, rather than para-phrasing or summarizing.

A short analysis of the discussion. Were there great surprises? Was everyone given a chance to speak? Which questions worked well and which did not? Please provide any overall observation, impressions, notes, analysis that you would like to share about this focus group. It should not be less than a page, and not more than two.

Below is an excerpt from a very good report of a focus group done with informal workers in Durban, South Africa. The focus group was about the technology that informal workers use. This is a good model to follow when writing your focus group report:

All participants pointed out that they do not use other ICTs in work. "We have never done anything like that" (James). "What I can say is that we work outside. Customers come to us when they see us working outside so we don't advertise. People come to our area of work, see us and then know us" (Sipho). "We only use boards (we write on boards) to advertise, we do not have money to go place adverts in radio stations or newspapers" (Sipho). Participants also indicated that they do not use other ICTs in organizing work. "Our work is local. We would like to use internet. The reason we can't use it is that we are outside; the road side. It is not a shop, so the laptop could get stolen while you are busy or attending a customer. The environment is not safe" (Daniel). "We also do not have electricity around our tables outside (place where we work)" (Lihle). "If the environment is safe, we could use it" (Daniel).

Some important characteristics:

For every statement that the reporter makes, she backs it up with quotes from the discussion. Not every statement will have a quote attached to it and sometimes you will have to make something clear in your own words – but where possible it is good to have the direct words of the workers.

The name of the participant is put in brackets after the quote. This can also be kept anonymous by using P1; P2; P3 etc.

THE FOCUS GROUP DISCUSSION

Introduction:

Explanation of the purpose of the FGD: to hear report back to workers on the findings of the assessments, and also to hear from them about possible solutions.

Explaining the meaning of "hazard":

Explanation of "hazard" to workers, so that they are clear on the meaning of the term.

Activity 1: Listing Hazards

Participants are asked to list the health and safety hazards they experience as part of their working lives [written down on pieces of paper by the facilitator]. For each hazard that is elicited, workers must talk about how and why these constitute a hazard. Participants could also be asked if they know of any specific examples of accidents/ill-health that have occurred as a result of the hazards identified.

Facilitator writes the hazards down onto small pieces of paper and then groups them into broad categories: ergonomic, chemical, physical, psycho-social, biological, using this as a way to explain to workers about how each of these can impact on both their health and their incomes.

Activity 2: Report Back on Objective Assessment

Facilitator then reports back to participants on the findings of the objective assessment.

Key questions: What do the workers think of the results of the objective assessment? Do the results of the objective assessment align with what the workers have said in Activity 1?

If there are differences, why are they there?

Activity 3: Report Back on Subjective Assessment

Facilitator then reports back to participants on the findings of the subjective assessment.

Key questions: What did workers understand about the terminologies used while being surveyed by the SEWA CHWs? Do they agree with the results we have, and which also matches their understanding about hazards.

Activity 4: Thinking through Solutions

This activity draws on the previous two activities. The facilitator should by now have a good idea of some of the common hazards faced by the workers, and can use these to start a discussion on possible solutions. Example questions:

What are possible solutions to these hazards?

Who could/should have responsibility for implementing these solutions?

What support would be needed and from whom?

Closing