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Impact of Covid 19 on Human Resource Management (HRM) For Construction Project – A Review

¹Ankit.M.Godwe, ²Dr. N.W. Ingole, ³Prof. P.S.Mahatme

¹ M.E Student, ²Professor, ³Assistant Professor

¹ Construction Engineering & Management,
¹ PRMCEAM, Badnera, India

Abstract: Human resource is required for an organization to conduct different business activities. Without the support of human resource, the organization cannot exist or operate effectively. The success of any organization depends on the effective use of human resources. Human resource is the major contributory force for any kind of organization in India. Due to this, management of this human resource, i.e. Human Resource Management (HRM) must have more significance in India. Also, human resources are major risky to manage in the construction field, as they are not mostly permanent like other industries. This paper focuses on various factor affecting Human Resource Management on a construction site. From questionnaire and the interview during the site visit we found various factor effecting Human Resource Management. Site visits were carried out in various region of Amravati, Maharashtra, to understand the impact of covid 19 on HRM. Online Questionnaire survey was made to understand the impact of covid on HRM in the construction sector. After collecting data from questionnaire survey data was analyzed using RII method and factors were ranked respectively according to their RII value. Then various respondents' point of views were compared and the top factors affecting HRM on a construction site was found out with respect to their RII value. It was found that finding experience and skilled labour, candidates having technical knowledge and providing hygiene environment were top three challenges faced by the HR mangers on construction site during COVID-19.

Index Terms - Covid-19, Human Resource Management, Construction Industry.

I. INTRODUCTION

Human Resource Management or HRM is the process of managing people in a company/firm as well as managing their existing interpersonal relationships. These two processes are key in the success and growth of a business. Human resource management is the management process of an organization's workforce, or human resources. It is responsible for the attraction, selection, training, assessment, and rewarding of employees, while also overseeing organizational leadership and culture and ensuring compliance with employment and labour laws. In a few short months from January 2020 the corona virus that spread across the globe transformed the world of work. Millions of workers lost their jobs or were placed on government support schemes as businesses and consumers changed their behavior in response to the risks of contracting the virus (Mohammad Reza Azizi, 2021). During the pandemic, the situation drastically deteriorated by firstly shortage of construction material supply, which then impacted the construction industry. Following the spread of the virus, many countries started implementing several measures to reduce movement of people, and that has mainly obstructed the construction because it requires on-site work and every project member must be available to work, check, and monitor all the work activities. Human resource managers who are in charge of hiring people, managing performance, salaries and benefits, and also developing and revising labor's classifications are looking for innovative, creative, and effective ways to solve the problems, maintain their health and support them by creating a reliable management strategy. The purpose is to identify unknown challenges, strategies, and unusual decisions related to human resource management other than clinical organizations during the COVID-19 crisis and to learn from current covid situation and take action in future if similar situation occurs.

II. HRM IN COVID

The coronavirus, commonly known as COVID-19, is caused by the coronavirus 2 (i.e., SARS-COV-2), a serious acute respiratory disorder (O. (O) and Coronavirus, 2020). It has been reported that the virus can be transmitted from person-to-person and causes symptoms that include fever, dry cough, fatigue, and shortness of breath. As of January 2021, the virus had spread to more than 200 countries, affected 91.5 million people, and caused 1.96 million deaths. The most critical part of the outbreak has been its rapid spread and long incubation period (Hen-dricksen and Rilett, 2020). In addition to the serious health emergency, the outbreak has resulted in a global economic decline. The National Bureau of Economic Research (NBER) declared that the United States entered a period of recession in February; they called it the "Recession of COVID-19" (Chodorow-Reich and Coglianesi,

2020). The U.S. had record-high unemployment rates of 14.7 percent in April 2020 due to the economic downturn, which is appalling when compared with the unemployment rate of about 3.8 percent in February 2020. The construction sector, like many other sectors, has been affected in a number of ways. Since the pandemic began, there have been fewer employment opportunities, partially due to the work disruptions that were caused by following constraints that were put in place to stop the progression of the virus, and a shortage of personal protective equipment (PPE) that was caused by the more pressing need for it by healthcare employees. Due to an interrupted supply chain and employee shortages due to quarantines, many projects have been halted or postponed (Rouhanizadeh, 2019). A shortage of workers is always a concern for the construction industry, but the pandemic has intensified it as a large percentage of construction staff has reportedly screened positive for the coronavirus (Karimi, 2018). As the propagation of COVID-19 is largely related to individual contact, encounters between construction employees have played a major role in the delays in reopening projects. Physical distancing policies intended to decrease the virus spread have affected the number of workers permitted to work in an area, how the staff handles their jobs, and how project managers foresee the working environment (Araya, 2021). Although recent studies have focused on the impacts of COVID-19 on the construction industry, few insights have been provided for the construction workforce in particular.

III. RESEARCH METHODOLOGY

3.1 The process of methodology

Following steps has been adopted as a part of methodology for the project to analyze the factors affecting Human resource management during COVID-19.

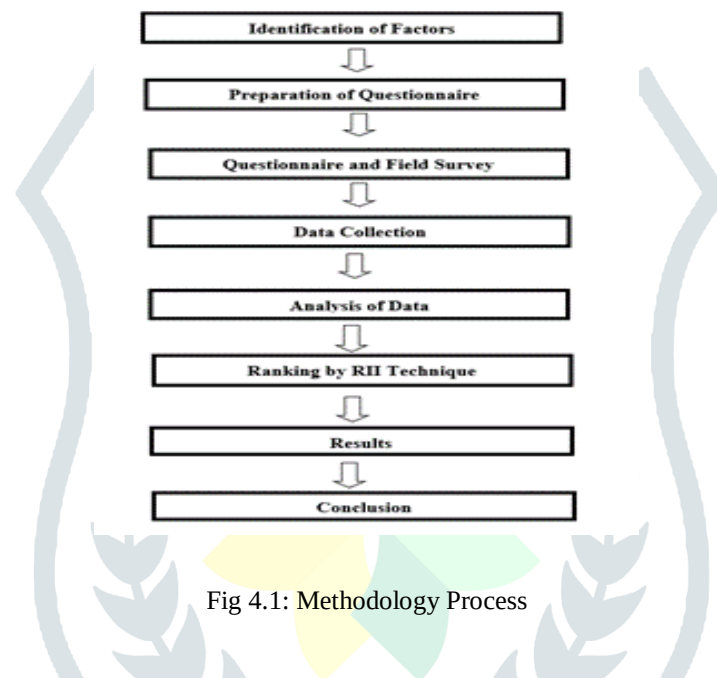


Fig 4.1: Methodology Process

3.2 Factors

Based on the literature work, various factors has been identified which may affect Human Resource Management during covid-19 at construction site. Among all those most commonly recurring factors as shown in table 1.

Table 1: Identified Factors Affecting Human Resource Management during covid-19 at construction site

Sr.No	Factors Affecting Human Resource Management during covid-19
1.	Efforts in selection
2.	Lack of technical knowledge
3.	Lack of skilled and experienced candidate's during covid
4.	Attendance of workers during pandemic on construction site
5.	Poor communication on the construction site
6.	Type of work in covid
7.	Implementing Systematic structured training process during covid
8.	Providing Hygiene environment
9.	Good working culture
10.	Paying competitive wages during covid
11.	Timely payments during covid
12.	Bonuses, incentives and regular performance appraisal during covid
13.	Clearly defined duties
14.	Health service provided during covid
15.	Job security during covid(uncertainty regarding future of workplace)
16.	Employees involvement in decisions
17.	Accommodation during covid
18.	Lack of safe working environment

19.	Cash flow delays due to covid
20.	More technology in recruitment due to covid
21.	Supply chain disruptions
22.	Challenges due to work from home
23.	Length of work day during covid
24.	Adjusting to new work schedules
25.	Shortage of construction material
26.	Time and cost overrun
27.	Re-skilling and re-training in covid
28.	Organizational instabilities
29.	Regular human resource planning
30.	Local government legislation
31.	Local economic condition

3.3 Preparation of Questionnaire Survey and site visit:

To understand the effect of covid-19 on HRM various site were visits of Amravati region and the questionnaire survey was carried online via goggle form. The questionnaire design practice advanced on a communicating basis. It was categorized into profile of the respondent and various factors affecting Human Resource Management during covid-19 in building construction. Questions in the respondent profile were created to collect information such as job position, experience of the work, locations of the current and/or previous works and contact information. It was studied; these questions in the survey were of great important to the research by analyzing factors affecting HRM during covid-19 concerns from a variety of different profiles from different regions. The set of questions was targeting the factors affecting Human Resource Management during covid-19. Each respondent had a choice to select only one option for each factor. The responses were to be based on the understanding, knowledge and experience of the respondents and not related to any definite project. To capture the responses online Questionnaire survey was made by google forms. This simple and straight method was selected to establish a means of developing a list of factors affecting HRM during covid-19 in building construction.

Information obtained and the recommendations provided in from pilot survey are discussed below.

- Questionnaire should always start with the general information of the organization.
- Some factors are not related to construction. They should be removed or modified.
- To get more suitable and consistence meaning some factors should be rearranged.
- Some factors should be revised with additional information.
- Factors repeated with similar meaning should be removed.
- Some factors should be changed to give clearer importance and understanding.

3.4 Data Collection & Analysis

1st stage: Online Questionnaire survey was made to understand the impact of covid on HRM in the construction sector.

2nd Stage: Site visit was carried out to understand the impact of covid on HRM for construction projects.

Data Collection: As mentioned earlier data collection was done by collecting data from online questionnaire survey using Google Forms. Prime focus of questionnaire was to take response of mainly construction professionals to understand and derive conclusion of the research. Professional Included in the study were in field of Architecture, Engineering and contractor. For collecting data related to the factors it was decided to use scale to rank each the factors related to its effect. This range was from 1 to 5.

Data Analysis: After the data collection by the questionnaire survey, the analysis was done. Collected data was analyzed using Graphs and RII method for ranking to the factors. Data analysis was done to determine the most affecting factors on construction during the pandemic.

3.5. Relative Importance Index

The data collected in the questionnaire was analyzed by Relative Importance Index (RII) method to determine relative importance of factors affecting Human Resource Management during covid-19 in building construction. The RII was used to rank those different factors which made it possible to cross compare the relative importance of those factors.

The formula to calculate relative importance index is as follows,

$$R. I. I. = \frac{\sum W}{A \times N}$$

Where,

RII = Relative Importance Index

W = Weightage given to each factor by respondent ranging from 1 to 5.

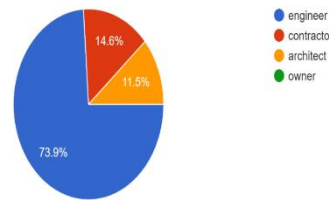
A = Highest Weight (i.e. 5)

N = Total number of respondents

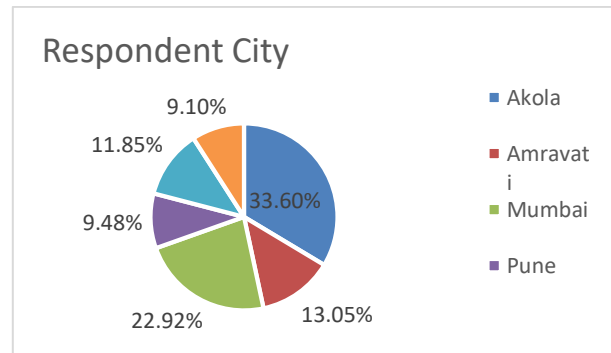
IV. QUESTIONNAIRE ANALYSIS

4.1 Questionnaire analysis

Total 253 survey responses were received from the different stakeholders of construction sector. Figure 2 shows profiles of the respondent were Engineer (73.9%) Contractor (14.6%), Architecture (11.5%). The respondents were given the option of responding through online mode (i.e. Google form) designed to be as user friendly as possible were respondents required to scroll down and point to select the appropriate responses for each question

Respondent profile
253 responses**Fig. 2: Respondent Profile**

As we know total 253 survey responses were received from the different cities of Maharashtra. Figure 3 shows the total percent of responses collected from different cities in which Akola (33.60%), Amravati (13.05%), Mumbai (22.92%), Pune (9.48%), Nagpur (11.85%), and Yavatmal (9.10%).

**Fig. 3: Respondent City**

4.2. Results of Questionnaire Survey

The data collected from questionnaire survey was analyzed by using Relative Importance Index. Different professionals have given their respective responses on the basis of their own experience and opinions. Table 2 represents R.I.I. and Ranking given to those selected factors. A factor whose R.I.I. is maximum has been given first rank and thus ranking has been assigned with decreasing R.I.I.

Table 2: RII & Ranking of Identified Factors Influencing HRM during Covid-19 in Building Construction

SR.	FACTORS	WEIGHTGE			TOTAL	ΣW	A*N	R.I.I	RANK
		1	2	3					
1	Efforts in selection	3	3	3	253	733	1265	0.579	23
2	Lack of technical knowledge	4	4	2	253	921	1265	0.728	2
3	Lack of skilled and experienced candidate's during covid	4	4	3	253	954	1265	0.754	1
4	Attendance of workers during pandemic on construction site	4	2	4	253	719	1265	0.568	27
5	Poor communication on the construction site	5	4	3	253	841	1265	0.665	12
6	Type of work in covid	3	4	1	253	754	1265	0.596	20
7	Implementing Systematic structured training process during covid	5	4	4	253	863	1265	0.682	10
8	Providing Hygiene environment	5	4	4	253	905	1265	0.715	3
9	Good working culture	4	3	5	253	770	1265	0.609	19
10	Paying competitive wages during covid	5	4	3	253	897	1265	0.709	4
11	Timely payments during covid	4	4	3	253	869	1265	0.687	9
12	Bonuses, incentives and regular performance appraisal during covid	4	4	3	253	830	1265	0.656	13
13	Clearly defined duties	5	4	4	253	724	1265	0.572	26
14	Health service provided during covid	5	4	5	253	824	1265	0.651	15
15	Job security during covid	3	4	5	253	783	1265	0.619	18
16	Employees involvement in decisions	3	3	3	253	705	1265	0.557	31
17	Accommodation during covid	3	3	3	253	710	1265	0.561	30
18	Lack of safe working environment	2	4	4	253	804	1265	0.636	17
19	Cash flow delays due to covid	4	4	3	253	889	1265	0.703	6

20	More technology in recruitment due to covid	5	4	5	253	857	1265	0.677	11
21	Supply chain disruptions	4	3	4	253	894	1265	0.707	5
22	Challenges due to work from home	5	4	2	253	826	1265	0.653	14
23	Length of work day during covid	3	4	4	253	710	1265	0.561	29
24	Adjusting to new work schedules	5	3	4	253	870	1265	0.688	8
25	Shortage of construction material	4	4	5	253	815	1265	0.644	16
26	Time and cost overrun	5	4	5	253	876	1265	0.692	7
27	Re-skilling and re-training in covid	5	3	2	253	732	1265	0.579	25
28	Organizational instabilities	4	3	3	253	733	1265	0.579	24
29	Regular human resource planning	3	4	4	253	742	1265	0.587	21
30	Local government legislation	4	5	5	253	719	1265	0.568	28
31	Local economic condition	3	5	4	253	735	1265	0.581	22

The factor Lack of skilled and experienced candidate's during covid has been ranked highest i.e. first with RII of 0.754. Most of the respondents have given importance to skill and experienced of the candidate in construction work. Finding skilled and experienced candidates during covid was very tough job for human resource managers. Second rank is obtained by factor lack of technical knowledge with RII of 0.728. This result can be justified as getting well qualified candidates with technical knowledge for doing the technical work with full dedication during the covid was one of the hardest thing for human resource managers. Providing Hygiene environment has been ranked on third position with RII of 0.715. This result can be justified as providing hygiene environment on construction filed was very important due to the spread of corona virus. It was very risky to keep the construction site unhygienic because candidates would have carried fear of getting infected by the virus. Paying competitive wages during covid has been ranked at fourth position by respondents with RII equals to 0.709. Due to covid there was shortage of candidates at this crucial time it was must that the organization pays them a competitive wages so that the candidates stick and work for the organization. Supply chain disruptions due to covid has been ranked at position fifth with RII of 0.707. Thus, Lack of skilled and experienced candidates during covid, lack of technical knowledge, Providing Hygiene environment, paying competitive wages during covid, Supply chain disruptions due to covid have been found as top five factors affecting HRM on construction site. Cash flow delays due to covid has been ranked sixth with RII equals to 0.703 by the respondents. Cash flow delays occur due to delays in construction activities as contractors struggle to pay their employees, subcontractors, and suppliers on time. Time and cost overrun has been ranked at seventh position with RII of 0.692. This result can be justified as due to covid, all projects were closed due to lockdown so as a result there was time overrun and due to time overrun cost of the project increased. Adjusting to new work schedules has been ranked at eighth position by respondents with RII of 0.688. Covid-19 came and changed the whole situation of construction industry to fight this situation various new work schedules was design by the human resource manager which was not so easy to adapt in such little time. The respondents have ranked timely payments during covid at ninth position with RII equals to 0.687. There was already shortage of candidates during covid so it became very important factor for human resource manager to pay them timely so they can handle their daily expenses and stick to the organization. Implementing Systematic structured training process during covid has been ranked position tenth with RII of 0.628. Persons entering the construction industry directly from high school usually start as inexperienced in construction industry or as laborers. They can learn from their job quickly by working closely with experienced people. Whereas, skilled laborers, such as carpenters, bricklayers, plumbers, and other construction trade specialists, most often get their formal instruction by attending a local technical school or through an employer-provided training program. Eleventh rank is given to the factor more technology in recruitment due to covid with RII of 0.677. Due to covid various restrictions came in so to overcome them technology was used by the human resource managers. Poor communication on the construction site has been ranked at position twelfth with RII equals to 0.665. This result can be justified as if there is poor communication on site it will directly affect the construction project. Bonuses, incentives and regular performance appraisal during covid has been ranked thirteenth with RII equals to 0.656. Appraisal and bonuses are given to encourage the good work they are doing and to motivate them during this covid situations. Challenges due to work from home have been ranked at position fourteenth with RII equals to 0.653. Health service provided during covid has been ranked at position fifteenth with RII equals to 0.651. It is responsibility of human resource manager to provide candidates with good health service. Sixteenth rank is given to Shortage of construction material with RII of 0.644. A lack of material refers to the inaccessibility of certain materials or the excessive time expended to obtain them. This can cause time overrun. Lack of safe working environment is ranked at seventeenth position by respondents with RII equal to 0.636. This factor can be justified as worker will give 100% when they will feel safe while working on the construction site. Job security during covid (uncertainty regarding future of workplace) have got eighteenth rank by the respondents with RII of 0.619. Nineteenth rank is given to good working culture with RII of 0.609. Twentieth rank is given to type of work in covid with RII of 0.596. Regular human resource planning has been ranked at twenty first positions with RII equals to 0.587. Regular human resource planning by human resource manager to avoid any kind of shortage in manpower which may affect the construction project. Local economic condition has been ranked at 22nd positions with RII equals to 0.581. Efforts in selection have been ranked at 23rd position with RII equals to 0.579. Selecting right person for right position of work is also a factor for human resource manager. Organizational instabilities has been ranked at 24th position with RII equals to 0.579. Re-skilling and re-training in covid has been ranked at 25th position with RII equals to 0.579. Human resource manager has to identify which candidates are lacking in skills and then provide them re-training. Clearly defined duties has been ranked at 26th position with RII equals to 0.572. Human resource manager should give candidates clearly defined duty so that they can do that with full commitment and organization gets full benefit of the work done. Attendance of workers during pandemic on construction site has been ranked at 27th position with RII equals to 0.568. Due to fear of the covid condition candidates may not come regularly which have direct effect on

project completion. Local government legislation has been ranked at 28th position with RII equals to 0.568. Length of work day during covid have been ranked at 29th position with RII equals to 0.561. Accommodation during covid has been ranked 30th position with RII equals to 0.561. Employee's involvement in decisions has been ranked thirty first with RII equals to 0.557.

4.3. Result of questionnaires as per contractor's point of view

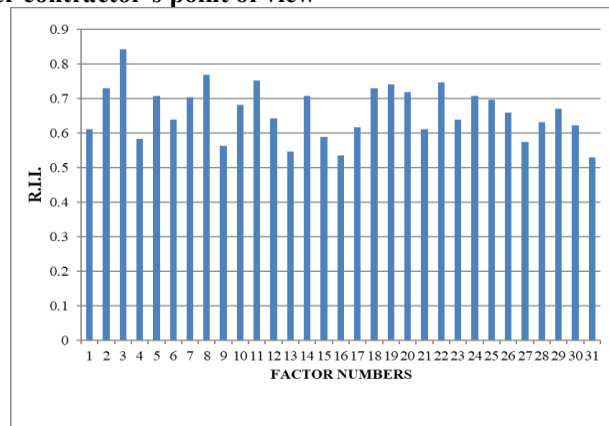


Fig. 4: R.I.I. against Factor Number

The factor Lack of skilled and experienced candidates during covid has been ranked highest i.e. first with RII of 0.843. Most of the contractors have given importance to experience of the labour in particular construction work. Second rank is obtained by Providing Hygiene environment with RII of 0.768. Timely payments during covid has been ranked on third position with RII of 0.751. Challenges due to work from home has been ranked on fourth position with RII of 0.746. Cash flow delays due to covid has been ranked on fifth position with RII of 0.741. Lack of technical knowledge have been ranked on sixth position with RII of 0.73. Lack of safe working environment have been ranked on seventh position with RII of 0.73. More technology in recruitment due to covid have been ranked on eighth position with RII of 0.719. Poor communication on the construction site have been ranked on ninth position with RII of 0.708. Health service provided during covid has been ranked on tenth position with RII of 0.708. Adjusting to new work schedules been ranked on eleventh position with RII of 0.708. Implementing Systematic structured training process during covid have been ranked on 12th position with RII of 0.703. 13th rank is given to Shortage of construction material with RII of 0.697. Paying competitive wages during covid ranked on fourteenth position with RII of 0.681. Fifteenth rank is given to Regular human resource planning with RII of 0.67. Sixteenth rank is given to Time and cost overrun with RII of 0.659. Bonuses, incentives and regular performance appraisal during covid has been ranked on 17th position with RII of 0.643. Type of work in covid ranked on eighth position with RII of 0.638. Length of work day during covid ranked at 19th position with RII of 0.638. Organizational instabilities ranked on 20th position with RII of 0.632. 21th rank is given to Local government legislation with RII of 0.622. Accommodation during covid has been ranked at 22nd position with RII of 0.616. Efforts in selection has been ranked at 23th position with RII of 0.611. Supply chain disruptions has been ranked on 24th position with RII of 0.611. Job security during covid (uncertainty regarding future of workplace) has been ranked at 25th position with RII of 0.589. Attendance of workers during pandemic on construction site have been ranked on 26th position with RII of 0.548. Re-skilling and re-training in covid has been ranked at 27th position with RII of 0.573. Good working culture has been ranked at 28th position with RII equals to 0.562. Clearly defined duties have been ranked at 29th position with RII equals to 0.546. Employee's involvement in decisions has been ranked 30th position with RII equals to 0.535. Local economic condition has been ranked thirty first with RII equals to 0.53.

4.4. Result of questionnaires as per engineer's point of view

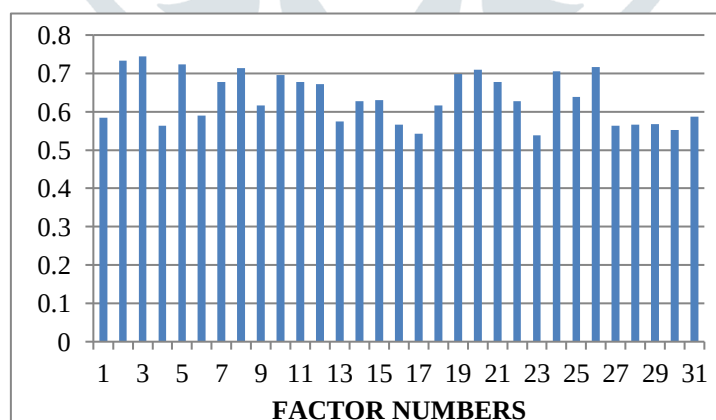


Fig. 5: R.I.I. against Factor Number

The factor Lack of skilled and experienced candidates during covid has been ranked highest i.e. first with RII of 0.747. Most of the engineers have given importance to experience of the labour in particular construction work. Second rank is obtained by Lack of technical knowledge with RII of 0.733. Poor communication on the construction site has been ranked on third position with RII of 0.724. Time and cost overrun has been ranked on fourth position with RII of 0.717. Providing Hygiene environment has been ranked on fifth position with RII of 0.714. More technology in recruitment due to covid have been ranked on sixth position with RII of 0.709. Adjusting to new work schedules have been ranked on seventh position with RII of 0.705. Cash flow delays due to covid have been ranked on eighth position with RII of 0.698. Paying competitive wages during covid have been ranked on ninth position with RII of 0.695. Implementing Systematic structured training process during covid has been ranked on tenth position with RII of 0.678. Timely payments during covid been ranked on eleventh position with RII of 0.678. Supply chain disruptions have been ranked on 12th position with RII of 0.678. Bonuses, incentives and regular performance appraisal during covid 13th rank is given to with RII of 0.672. Shortage of construction material ranked on fourteenth position with RII of 0.639. Fifteenth rank is given to Job

security during covid (uncertainty regarding future of workplace) with RII of 0.63. Sixteenth rank is given to Health service provided during covid with RII of 0.628. Challenges due to work from home has been ranked on 17th position with RII of 0.628. Good working culture ranked on eighth position with RII of 0.616. Lack of safe working environment ranked at 19th position with RII of 0.616. Type of work in covid ranked on 20th position with RII of 0.59. 21th rank is given to Local economic condition with RII of 0.587. Efforts in selection has been ranked at 22nd position with RII of 0.584. Clearly defined duties has been ranked at 23th position with RII of 0.575. Regular human resource planning has been ranked on 24th position with RII of 0.567. Organizational instabilities has been ranked at 25th position with RII of 0.566. Employee's involvement in decisions have been ranked on 26th position with RII of 0.565. Re-skilling and re-training in covid has been ranked at 27th position with RII of 0.564. Attendance of workers during pandemic on construction site has been ranked at 28th position with RII equals to 0.563. Local government legislation have been ranked at 29th position with RII equals to 0.552. Accommodation during covid has been ranked 30th position with RII equals to 0.542. Length of work day during covid has been ranked thirty first with RII equals to 0.539.

4.5. Result of questionnaires as per architect point of view

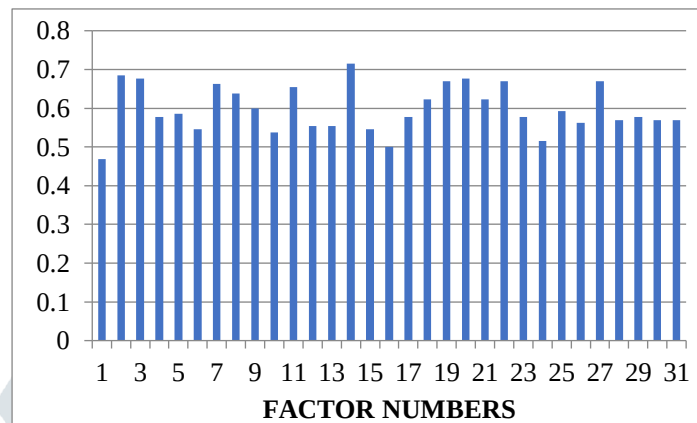


Fig. 6: R.I.I. against Factor Number

The factor provided during covid Health service has been ranked highest i.e. first with RII of 0.715. Most of the architects have given importance to health service provided to labors during construction work. Second rank is obtained by Lack of technical knowledge with RII of 0.685. Lack of skilled and experienced candidates during covid has been ranked on third position with RII of 0.677. More technology in recruitment due to covid has been ranked on fourth position with RII of 0.677. Cash flow delays due to covid has been ranked on fifth position with RII of 0.669. Challenges due to work from home have been ranked on sixth position with RII of 0.669. Re-skilling and re-training in covid have been ranked on seventh position with RII of 0.669. Implementing Systematic structured training process during covid have been ranked on eighth position with RII of 0.662. Timely payments during covid have been ranked on ninth position with RII of 0.654. Providing Hygiene environment has been ranked on tenth position with RII of 0.638. Lack of safe working environment been ranked on eleventh position with RII of 0.623. Supply chain disruptions have been ranked on 12th position with RII of 0.623. Good working culture 13th rank is given to with RII of 0.6. Shortage of construction material ranked on fourteenth position with RII of 0.592. Fifteenth rank is given to Poor communication on the construction site with RII of 0.585. Sixteenth rank is given to Attendance of workers during pandemic on construction site with RII of 0.577. Accommodation during covid has been ranked on 17th position with RII of 0.577. Length of work day during covid ranked on eighth position with RII of 0.577. Regular human resource planning ranked at 19th position with RII of 0.576. Organizational instabilities ranked on 20th position with RII of 0.569. 21th rank is given to Local government legislation with RII of 0.569. Local economic condition has been ranked at 22nd position with RII of 0.569. Time and cost overrun has been ranked at 23th position with RII of 0.562. Bonuses, incentives and regular performance appraisal during covid has been ranked on 24th position with RII of 0.554. Clearly defined duties has been ranked at 25th position with RII of 0.554. Type of work in covid have been ranked on 26th position with RII of 0.546. Job security during covid (uncertainty regarding future of workplace) has been ranked at 27th position with RII of 0.546. Paying competitive wages during covid has been ranked at 28th position with RII equals to 0.538. Adjusting to new work schedules have been ranked at 29th position with RII equals to 0.515. Employee's involvement in decisions has been ranked 30th position with RII equals to 0.5. Efforts in selection has been ranked thirty first with RII equals to 0.469.

4.6 Top five factors affecting labour productivity

Table 3: Top five factors influencing HRM during Covid-19 in Building Construction according to type of respondents.

SR. NO.	Factors affecting labour productivity according to type of respondents			
	Overall factors	According to contractors of point of view	According to engineers point of view	According to architects point of view
1	Lack of skilled and experienced candidates	Lack of skilled and experienced candidates	Lack of skilled and experienced candidates	Health service
2	Lack of technical knowledge	Providing Hygiene environment	Lack of technical knowledge	Lack of technical knowledge
3	Providing Hygiene environment	Timely payments during covid	Poor communication	Lack of skilled and experienced candidates
4	Paying competitive wages during covid	Challenges due to work from home	Time and cost overrun	More technology in recruitment due to covid
5	Supply chain disruptions due to covid	Cash flow delays due to covid	Providing Hygiene environment	Cash flow delays due to covid

V. CONCLUSIONS

The questionnaire survey showed ranking of factors as per experience and knowledge of the respondents. Relative importance index values of all factors come out to be in between 0.557 to 0.754. Apart from that, some affecting factors that can be controlled on site by the professionals have studied. Based on questionnaire survey and field survey, following salient conclusion has been drawn.

1. Most of the respondents have given importance to experience and skills of the labour in construction work. This factor has been ranked on first position with RII 0.754. During covid-19 there was shortage of labors in whole country in such situation finding experienced and skilled was the biggest challenge for HR managers.

2. During this study it was found that the factor lack of technical knowledge was the second most affecting with RII 0.728. Getting well qualified candidates with technical knowledge for doing the technical work with full dedication during the covid was one of the hardest thing for human resource managers.

3. Providing Hygiene environment has been ranked on third with RII of 0.715. As a HR manager providing hygiene environment on construction field was very important due to the spread of corona virus. It was very risky to keep the construction site unhygienic because candidates would have carried fear of getting infected by virus and eventually it would have affected the work. It was mandatory to follow covid restriction such as using masks, maintain social distancing and sanitizing the work place regularly.

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