Assessment of Fire Safety Knowledge, Perception, and Practices Among Healthcare Workers in Srinagar City, India

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Abstract

Fire safety knowledge, perception, and practices among healthcare workers are fundamental for ensuring the safety of patients, staff, and infrastructure within hospital settings, especially in areas like Srinagar, Jammu & Kashmir, which are susceptible to natural calamities. Notably, Srinagar has experienced a high incidence of fire events in recent years, resulting in significant loss of life and property damage. This research emphasizes the necessity of evaluating fire safety awareness and preparedness among healthcare professionals. The methods employed in this research encompassed a cross-sectional survey design, utilizing structured questionnaires to assess fire safety knowledge, attitudes, and behaviour among healthcare workers. The results of the study revealed significant gaps in fire safety knowledge and preparedness among healthcare workers in Srinagar. Despite a positive perception of the importance of fire safety, there was a notable lack of awareness regarding fire prevention strategies, emergency response protocols, and proper utilization of firefighting equipment. Implications of these findings underscore the urgent need for targeted interventions aimed at improving fire safety training programs and raising awareness among healthcare workers in Srinagar City. Enhanced education and training initiatives should focus on fostering a culture of safety, enhancing emergency response capabilities, and promoting interdisciplinary collaboration to mitigate fire hazards effectively within hospital settings. Future research should include longitudinal studies to evaluate the impact of training interventions, qualitative research to identify factors affecting fire safety practices, and the creation of specific guidelines and protocols that address the distinct challenges of hospitals in Srinagar and similar environments.

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This study contributes to improving fire safety practices in healthcare facilities, ensuring the safety of patients, staff, and infrastructure in Srinagar and comparable regions.

Keywords: *Fire safety, Healthcare workers, Perception, Practices, Emergency preparedness, Srinagar City*

1. Introduction

Fire is a chemical reaction involving rapid oxidation, producing heat, light, and flames at the ignition point. It is classified into five types based on fuel. Class A includes combustible solids, Class B includes flammable liquids, Class C includes flammable gasses, Class D includes combustible metals and Class K includes cooking oils. A fire hazard in buildings refers to the potential risk of accidental or intentional fires that pose a threat to life, structural integrity, and property safety. As global development accelerates, fire hazards in buildings have evolved significantly in both severity and complexity, becoming an increasing concern in recent years. Between 1993 and 2015, there were 86.4 million recorded fire incidents, resulting in over one million fatalities (Brushlinsky et al., 2017). Fire safety refers to a set of practices aimed at preventing or minimizing the occurrence of fires and controlling their spread and impact, with the goal of keeping potential losses within acceptable limits. In modern buildings, fire safety measures are implemented by adhering to the guidelines outlined in building codes of practice (Kodur 2014; Martin et al., 2016). Fire can make homes unsafe. Homes can become dangerous after a fire. It may result in property destruction, house collapses, or even fatalities (Supermedia, 2011). The study by Chandrakantan Subramanian (2004) titled "Human Factors Influencing Fire Safety Measures" focuses on the human factors affecting fire safety in India. Ramachandran (1999) analyzed the impact of fires, noting they cause fatalities, injuries, and material damage to buildings, along with indirect losses like reduced production and unemployment. G.B. Menon, in his handbook on building fire codes, emphasized the need for updated fire protection measures due to technological advancements and increased fire hazards. Studies, including one by Ramesh Holla et al. (2016) in Karnataka, India, and another by Khademian et al. (2019) in Iran, found healthcare workers had adequate general knowledge of fire safety but lacked specific knowledge about fire extinguishers and hazard response.

The NCRB Report 2022 states that there were 7,566 fire accident instances reported in India during year 2022, resulting in 7,435 fatalities and 329 injuries. The location-wise analysis of fire incidents showed that in the year 2022, residential/dwelling buildings accounted for 53.5% of all reported fatalities (3,979 out of 7,435). Approximately 25,000 people in India lose their lives to fires and associated incidents/causes each year. India has seen a number of significant fires, according to India Risk Surveys 2022, which is why the country's fire risk was placed third in the year 2012 and fifth in the year 2013. Subsequently, it fell to the lowest position in the year 2014. It grew gradually until 2018, when it once more secured the third position. It fell to tenth place once more in 2019. However, in 2021, it surged to the fourth position once more. A fire outbreak puts operations and business continuity at risk. India ranks third in the world for fire occurrences, with the majority of them occurring in the country's northern and western regions. Most of the fire seen in the hospital areas is due to the gaseous and chemical substances. Thus, fire safety precautions and measures are essential for preventing fires or other worsening complications of existing fires. A crucial element and prerequisite of constructing infrastructure planning is fire safety. Even in hospitalized areas, the provision of fire safety measures like as emergency exits, various kinds of fire extinguishers, safe assembly areas, and fire hydrant systems is required. In Japan, General Provisions, Building Codes, and Zoning Codes make up the Building Standard Law (BSL), which also include fire safety standards. The BSL was established in 1950 and has had multiple amendments since then. The most recent fire safety reform placed a strong emphasis on the adoption of globally recognized fire test procedures as well as the potential for performance-based fire rules. The year June 2000 saw the implementation of the Enforcement Order and Notifications outlining the specifics of the new fire classification system. The cone calorimeter test ISO 5660-1 is the primary test technique used in the new Japanese fire classification system. It is applicable to all classes of materials referred to as fire preventative products. Providing adequate fire protection for property and ensuring life safety are the main objectives of fire safety regulations. To achieve this objective, requirements for structures, building materials, evacuation arrangements, and relative location of buildings are set to define how building should be designed and constructed for their respective use. The requirement is related to prevention of ignition and fire spread, limitation of fire growth, evacuation provision, load-bearing capacity of structures, and prevention of spread of fire between

buildings. Most fires can be prevented by a few simple precautions and maintenance of fire safety measures. These measures can be incorporated in to buildings either during construction or renovation works. In addition, well trained staff with their knowledge, perception and appropriate attitude can play an equally important role in preventing and tackling fires.

The World Bank and US Geological Survey estimated that economic losses worldwide from natural hazards in the 1990s could be reduced by $280 billion if $40 billion were invested in preparedness, mitigation and prevention strategies (Dilley and Heyman, 1995). Understanding the knowledge, perception, and practices of healthcare workers regarding fire safety is crucial for effective risk management and the prevention of fire-related incidents, Rather et.al (2019), Perception of fire safety among healthcare workers also plays a significant role in shaping preparedness and response efforts. A study by Nguyen et al. (2017) in Vietnam revealed that while healthcare workers perceived fire safety as important, there was a lack of confidence in their ability to effectively respond to fire emergencies. This discrepancy between perceived importance and perceived competency underscores the need for targeted training and education programmes to bridge the gap between awareness and action. In terms of practices, studies have shown varying levels of adherence to fire safety protocols among healthcare workers. A study by Gershon et al. (2019) in the United States found that while the majority of healthcare workers reported receiving fire safety training, there were inconsistencies in the application of safety practices, particularly during high-stress situations such as emergencies. Similarly, research by Al Thobaity and Plummer (2016) in Saudi Arabia identified deficiencies in fire safety practices among healthcare workers, including inadequate fire drills and evacuation procedures.

In the context of Srinagar City, Jammu & Kashmir, there is a paucity of research specifically addressing fire safety knowledge, perception, and practices among healthcare workers. Given the unique socio-economic and environmental factors present in the region, such as and extreme weather conditions, understanding the preparedness of healthcare facilities for fire-related emergencies is essential for safeguarding both personnel and patients.

This study aims to fill the gap by accessing perception, and practices among healthcare workers regarding Fire hazards gap by assessing the fire safety knowledge,

perception, and practices among healthcare workers in selected hospitals of Srinagar City. By identifying areas of strength and weakness, the findings of this research can inform targeted interventions and policy recommendations to enhance fire safety preparedness within the healthcare sector, thereby reducing the risk of fire-related incidents and minimizing their impact on public health and safety.

2. Method and Materials

2.1 Need of the Study

Several hospital fires in India have exposed critical gaps in fire safety. The 2011 AMRI Hospital fire in Kolkata killed over 90 people due to inadequate safety protocols (Chatterjee, 2011), and a 2021 fire at Vijay Vallabh Hospital, Maharashtra, claimed 13 lives (PTI, 2021). In the study area, a 2018 fire at Jammu's Government Medical College Hospital and a 2022 fire at a Baramulla district hospital led to evacuations but no casualties (Mir, 2018). In Srinagar, a fire at SMHS Hospital in 2019 caused significant damage, emphasizing the need for better fire safety in hospitals (Raina, 2019). These incidents underscore the importance of improving fire safety knowledge and preparedness in healthcare settings (Holla et al., 2016; Khademian et al., 2019). Based on official data from the Directorate of Fire and Emergency Services, J&K, there were 448 fire occurrences in the summer capital (Srinagar), which is more than any other district of the Kashmir Division of the UT of J&K, in which five individuals died and 12 persons were injured as a result of the fire, which is the second-highest number of casualties across the district in Kashmir Division. Property in Srinagar valued at Rs. 26.32 crore was also damaged in these fire incidents. Several cases of fire incidences have been witnessed in various hospitals of Srinagar City. On 04.03.2022 at 21.25 hours fire had broken out in the only State Level Orthopedic 250 beded Hospital under the name of Bone & Joints Hospital Burzulla, Srinagar. The U-shaped IPD Block sprawled over an area of more than 300 sq. meters in which 113 orthopedic patients were admitted in the hospital at the time of the incident. Some patients were operated upon three hours before and these patients were not in a position to move. The second floor of the hospital comprising of Operation Theatre and In-patient Wards was fully involved in fire. Besides pressing into dozens of Fire Tenders and imported portable fire pumps, Hydraulic Platform (Bronto Sky Lift) played a vital role in aerial extinguishing the fire from the rooftop of the hospital which made rescue operation possible. The

rescue team was able to launch the rescue operation and the prompt and effective firefighting and rescue operation simultaneously resulted in saving the life of hundreds of trapped patients without any harm or injury to them during the rescue operation. In another incident, the fire broke out in the 1st floor of Ward 16 store room of the SMHS Hospital, Srinagar, however, no injuries were reported, patients and attendants including the hospital staff were rescued to safer places.

This study was conducted in response to concerns over fire safety and readiness that were raised by many, widespread fire incidents that were reported in different hospitals throughout the city of Srinagar. Thus, the goal of this study was to find out how healthcare staff in the various buildings perceived, knew about, and were prepared for fire risks. The study's conclusions and recommendations can help the City Administration of Srinagar, hospital administrators and owners and occupiers by providing them with knowledge that will help them redefine and improve fire safety on their properties and raise public awareness. The scope of the study was reduced to include just hospitals and healthcare facilities.

2.2 Objectives of the Study

i. To assess the fire Safety knowledge among Health Care Workers in Srinagar city.

ii. To assess the levels of perception of satisfaction of health care workers on fire preparedness and mitigation measures in Hospitals of Srinagar city.

2.3 Data Base and Methodology

The Study Area

Spread across 294 square kilometers, Srinagar City is situated at an elevation of 1585 meters located between 34o5/ N and 74o 47/ E. Srinagar City is situated on both banks of the Jhelum River, also known as Vyath in Kashmir. The river flows past the city and into the valley, where it meanders before deepening into Dal Lake. Srinagar has a humid subtropical climate (Saleem, S. et al.,2021; Mushtaq, S. et al.,2024; Saleem, H. et al.,2024), much cooler than what is found in much of the rest of India, due to its moderately high elevation and northerly position. Srinagar city has a population of 1273312 as per census January 2011. The population density of Srinagar city is

8523/Km^2. The sex ratio is 888/1000. According to the January 2011 census, Srinagar city has a literacy rate of 71.45%, while the national average has 74.04%. Approximately 12% of the entire population lives in the city and the metropolitan agglomeration as children. The population is made up of 47% females and 53% males.

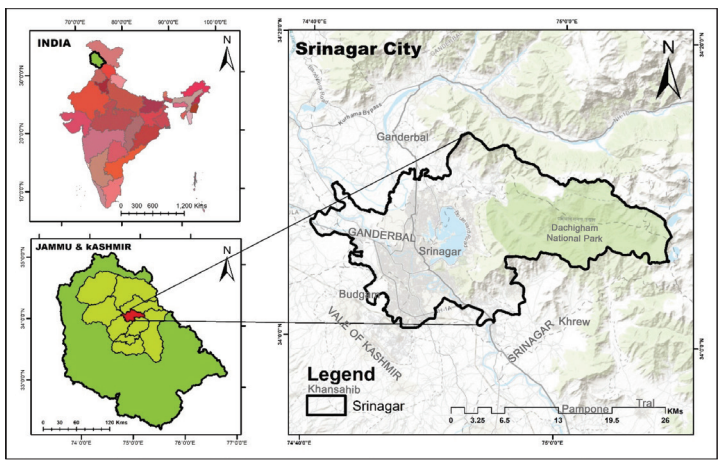

Figure 1: Location Map of Srinagar City

Both primary and secondary sources of data were used in the present study. The Census of India manual, Jammu and Kashmir Series, the Directorate of Fire and Emergency Services, J&K, Srinagar, journals, books, etc. are the sources of the secondary data. The information has been compiled and analyzed using various statistical methods. The study's target population for primary data consisted of medical staff from a few chosen hospitals in Srinagar City. Due to the limited time and financial resources available for the study, a sample size of 160 respondents was chosen as a representative of all healthcare personnel working in Srinagar City hospitals who were accessible at the time of study.

Two data collection instruments consisting of two kinds of questionnaires (including both closed and open-ended questions) and an observation schedule were constructed in order to investigate the objectives, hypotheses, and relevant literature. The questionnaires served as a schedule for the interviews as well. Conducting an interview facilitated additional questioning to get additional details. The questionnaire was chosen as the primary data collection tool because it saved time and made it

possible to get information from a wider range of people. Important research components that were actually visible were documented using the observation schedule. These included the fire safety precautions that the buildings had in place, such as the availability of escape routes, fire assembly locations, the presence of detecting equipment, and other firefighting supplies. To guarantee a high return rate, the researcher physically administered each instrument, which asked for specific information from the respondents.

Data Analysis Techniques

To ensure correctness, consistency, and completeness, the compiled data was modified. After then, Microsoft Excel was used to cross-tabulate the data so that statistical analysis of the responses was possible. The compiled Data was analyzed using descriptive statistics and displayed using charts and graphs, as well as percentages and means. Tables, percentages, charts, and graphs were used to analyze the objectives based on the questionnaire replies. The responders were asked to check the appropriate response or responses out of the available options given. Additionally, space was also given for the respondent to express any opinions they may have regarding the suitability of the response selections. The majority of respondents' recommendations were tallied against the frequency and percentages. Microsoft Excel was used for data analysis.

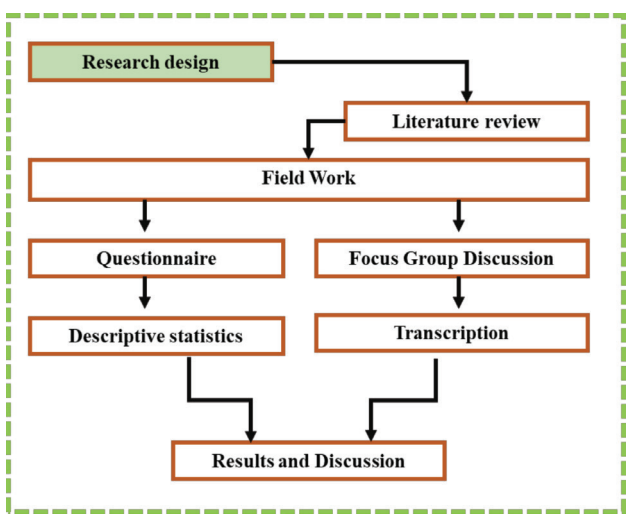

Figure 2 : Methodological Flow Chart

3. Results and Discussions

Fire Risk Profile: Srinagar City; Fire risk profiles are essential tools for understanding the vulnerabilities and potential hazards within a specific geographic area. In the case of Srinagar City, several factors contribute to its unique fire risk profile. Overall, Srinagar City's fire risk profile is characterized by a combination of urban density, environmental factors, socio-political dynamics, and cultural practices. Understanding these factors is crucial for developing effective fire prevention and mitigation strategies to protect lives, property, and infrastructure in the city. The Directorate of Fire and Emergency Services, J&K, reports that from 2016 to 2021, there were 2288 fire incidents in the summer capital (Srinagar), which is more than any other district in the Kashmir division. During that time, 1568 structures were involved in fires. The total property (in crores) involved in fire for the said period was 1693.91 crores, out of which 79.94 crores were damged and 1613.97 crores were saved. According to sources and data on fire incidents, the fire resulted in 29 fatalities, the highest number of casualties across the district Srinagar in Kashmiri division. 43 other persons were injured in fire incidents throughout Srinagar, according to the data. It is now become necessary to implement comprehensive fire hazard planning for mitigation and preparedness measures in order to reduce the fire hazard risks associated with the study area, particularly in the down town area of Srinagar City, as a result of the alarming fire incidents in the city, as revealed by the fire statistical data.

Table 1 : Fire Statistical Data from the Year 2016-2021 of Srinagar City

Year	No. of Fire Calls	Structures involved in fire	Property Involved	Property Damaged	Property Saved
2016	485.00	344	476.56	23.03	444.53
2017	469.00	324	340.07	21.455	314.11
2018	488.00	326	203.57	19.88	183.69
2019	389.00	279	173.27	10.55	162.72
2020	478.00	265	2.13	0.16	1.97
2021	448.00	354	838.38	26.32	812.06

Source: Directorate F&ES, J&K, Srinagar

Figure 3 and 4 : Show Fire call, structures involved property values affected and saved in crores from 2016 to 2021

3.1 Distribution of Respondents by Socio-economic Characteristics

Understanding the demographic profile of the respondents facilitated identification of the age cohorts active within the hospital premises and their awareness levels regarding fire safety. Participants were requested to specify their socio-economic characteristics.

Table 2 : Distribution of Respondents by Socio-economic Characteristics

S. No	Demographic variables		Frequency	%
1	Age in years	i. Below 30 (18-30)	51	31.87
		ii. 30 to 40	45	28.12
		iii. 41 to 50	39	24.38
		iv. Above 50	25	15.63
2	Gender	i. Male	88	55
		ii. Female	72	45
3	Profession	i. Nurse	61	38.12
		ii. Doctor	49	30.63
		iii. Class IV workers	27	16.88
		iv. Others	23	14.37

4	Work experience	i. 1 to 10 years	97	60.62
		ii. 11 to 20 years	43	26.88
		iii. Above 20 years	20	12.50
5	Educational qualifications	i. Illiterate	0	0
		ii. SSC	23	14.37
		iii. HSC	19	11.88
		iv. Graduate	84	52.50
		v. Post Graduate	34	21.25
6	Fire safety training attended	i. Yes	120	75
		ii. No	40	25

Table 2 provides the frequency and percentage distributions of demographic variables among healthcare workers. The largest proportion of the sample, comprising 51 individuals (31.87%), fell within the age range of below 30 years (18-30). Additionally, the majority of the sample, accounting for 88 individuals (55%), were male. Furthermore, 61 individuals (38.12%) reported nursing as their profession, while 97 individuals (60.62%) indicated having work experience ranging from 1 to 10 years. Moreover, a significant majority of the sample, totaling 120 individuals (75%), had participated in fire safety training. Lastly, 84 individuals (52.50%) possessed a graduate-level educational qualification.

3.2 Fire Safety Measures, its Availability and Knowledge

The respondents were asked to identify the firefighting equipment that is available in the buildings where they work. Out of the 160 respondents surveyed, 101 said that dry chemical extinguishers were present in the buildings where they worked, whereas 46 respondents said they were not.

Table 3 : Fire Safety Measures and Responses

Fire Equipment	Exists	Do Not Exist	Not sure	Total
Dry chemical extinguishers	101	46	13	160
Halon extinguishers (vaporising liquids)	10	135	15	160
Foam cylinders	11	135	14	160
Carbon dioxide extinguishers	95	55	10	160
Sprinklers/Hose reels (pressurised water extinguishers)	50	103	07	160
Wet chemical	03	146	11	160
Fire blankets	09	144	07	160
Any other (specify)	0	160	0	160

Source: Field Survey, 2022

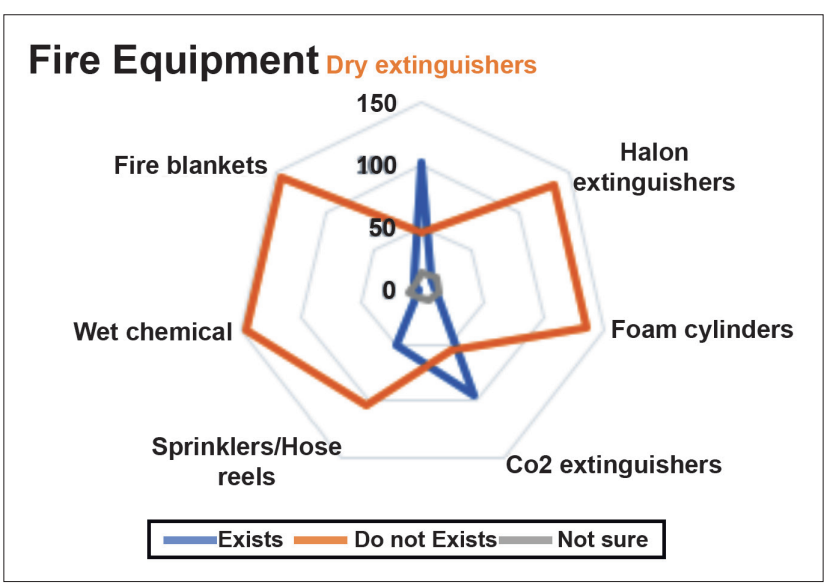

Figure 5 : Illustrate Fire Safety Measures and Responses

According to the responses gathered from the study, it was revealed that there are notable disparities in the reported presence of various types of firefighting equipment within buildings. Among the surveyed respondents, a substantial proportion, consisting of 135 individuals, asserted the absence of halogen extinguishers in buildings. Conversely, merely 10 respondents confirmed the existence of such extinguishers, indicating a stark contrast in perceptions regarding their prevalence. Likewise, research revealed that 135 respondents claimed that foam cylinders were not present in structures. Moreover, ninety-five respondents claimed that most buildings had carbon dioxide extinguishers. Wet chemical extinguishers and fire blankets, on the other hand, were said to be absent from most buildings as stated by 146 and 144 respondents, respectively). Remarkably, only a negligible number of respondents, specifically 3 and 9 individuals, respectively, confirmed the presence of wet chemical extinguishers and fire blankets.

Additionally, when queried about the existence of any other fire equipment in their respective buildings, none of the respondents indicated its presence, with 160 individuals confirming the absence of any additional fire equipment. Conversely, a noteworthy proportion of respondents, comprising 103 individuals, supported the existence of sprinklers or hose reels within their buildings. The study findings suggest that only two types of firefighting equipment, namely dry chemical extinguishers and carbon dioxide cylinders, were commonly reported as present in the surveyed buildings.

3.3 Perception of Availability of Fire Equipment

The study sought to gauge the perceptions of respondents regarding the availability of firefighting equipment within their respective environments. Among the 160 participants included in the analysis, a notable majority of 55 individuals, constituting 65.62% of the sample, expressed dissatisfaction with the current state of fire equipment availability. Conversely, 55 respondents, comprising 34.38% of the sample, conveyed satisfaction with the existing firefighting resources. These findings suggest a prevalent sentiment of dissatisfaction among the surveyed individuals regarding the accessibility and adequacy of fire equipment. The observed high level of dissatisfaction underscores potential concerns regarding the effectiveness of current fire safety measures and the perceived preparedness for fire incidents within the surveyed environments.

Table 4 : Perceptions on Availability of Fire Equipment

Perception	Satisfied	Not satisfied	Total
Respondents	55	105	160
Percentage	34.38	65.62	100

3.4 Proficiency to Operate Fire Equipment

The responders were questioned about their proficiency to use any of the firefighting apparatus that was currently in use. Table 5 shows the respondents' proficiency levels and possible training needs in using the firefighting equipment already in use. Figure 6 presents a comprehensive breakdown of respondents' responses to the inquiry, revealing in their capabilities across various types of firefighting apparatus. It becomes apparent that a considerable proportion of respondents expressed difficulty in operating specific types of firefighting equipment. Notably, 127 respondents indicated their inability to operate dry chemical extinguishers, while an even larger cohort of 152 individuals reported similar challenges with halon extinguishers. Conversely, a modest number of respondents, 30 and 38, respectively, demonstrated proficiency in operating dry chemical and carbon dioxide extinguishers.

Table 5 : Proficiency to Operate Fire Equipment

Fire Equipment	Able to operate/use	Not able to operate	Not sure	Total
Dry chemical extinguishers	30	127	3	160
Halon extinguishers (vaporising liquids)	5	152	3	160
Foam cylinders	7	151	2	160
Carbon dioxide extinguishers	38	120	2	160
Sprinklers/ Hose reels (pressurized water extinguishers)	0	146	2	160
Wet chemical	0	146	2	160
Fire blankets	0	147	1	160
Any other (specify)	0	0	0	0

Field Survey, 2022

Figure 6 : Shows the Proficiency of Respondents to Operate Fire Equipment

Furthermore, the analysis unveils substantial impediments in respondents' aptitude to handle foam cylinders, sprinklers/hose reels, wet chemicals, and fire blankets. Specifically, 151, 146, and 146 respondents conveyed their inability to operate foam cylinders, sprinklers/hose reels, and wet chemicals, with a marginal number of respondents expressing uncertainty regarding their handling. Similarly, a significant majority of 147 respondents expressed their incapacity to utilize fire blankets effectively, with a lone respondent indicating uncertainty in this regard. Interestingly, the absence of any specified proficiency in operating additional fire equipment highlights potential gaps in respondents' training or familiarity with broader firefighting apparatus beyond those explicitly queried. This observation underscores the need for comprehensive training programs to equip healthcare professionals with the requisite skills to navigate diverse fire safety scenarios effectively. The findings suggest that while a subset of respondents demonstrates proficiency in operating available firefighting equipment, their capabilities are predominantly limited to apparatus that are currently accessible. Moreover, the distribution of proficiency across different types of equipment appears varied.

3.5 Perception of the Proficiency to Operate Fire Equipment

Table 6 : Perceptions on the Proficiency to Operate Fire Equipment

Perception	Satisfied	Not satisfied	Total
Respondents	32	128	160
Percentage	20	80	100

The respondents when questioned about their proficiency using the firefighting apparatus at workplace, the responders answered in the affirmative. The responses to the question are displayed in Table 6 above. When asked how satisfied they were or not with their competence to operate fire equipment, 32 (20%) respondents said they were, while 128 (80%) said they were not. The study's findings indicate that the majority of these medical professionals lack the knowledge or skills necessary to operate the firefighting equipment that was p1ut in place in the buildings in which they worked.

3.6 Preparedness to Fire Disasters

The respondents were questioned about their knowledge of the fire preparedness measures that were in place at their place of employment. The answers to the query are displayed in Table 7. The study revealed noteworthy insights into respondents' awareness and preparedness regarding fire safety protocols within their respective environments. The findings shed light on the presence of emergency communication systems, maintenance practices for fire equipment, training in fire emergency services, and the existence of fire assembly points. A substantial majority of respondents, totaling 148 individuals, demonstrated awareness of the existence of an emergency communication system in the event of a fire incident. Further exploration elucidated that these systems encompassed fire alarm mechanisms that enabled individuals to swiftly alert firefighting personnel, complemented by access to an emergency contact number, notably 101. Conversely, findings concerning the regular inspection and maintenance of fire equipment unveiled a concerning trend, with a significant majority of 125 respondents indicating a lack of awareness regarding such practices.

Table 7 : Preparedness to Fire Disasters

Preparedness	Yes	No	Not Sure	Total
Being aware of an emergency communication system (alarm, phone, cell number, etc.) in the event of a fire	148	0	12	160
Frequent regular inspection and maintenance of firefighting equipment	20	125	15	160
Training on emergency services in case of fire outbreak	40	107	13	160
The structure has an emergency shelter or fire assembly point in case of a fire	110	36	14	160
The structure is equipped with an emergency fire disaster kit.	100	47	13	160
Fire hydrants' efficiency and accessibility during fire outbreaks.	12	135	13	160
Existence of Emergency population warning methods in the building.	48	106	6	160
Conducting of Regular fire drills	10	146	4	160
Other preparedness strategies	0	-	-	0

Field Survey, 2022

Merely 20 respondents reported awareness of regular inspection and maintenance procedures, while a meagre 15 respondents expressed uncertainty regarding the implementation of these protocols. Regarding training in fire emergency services, the study revealed a notable gap, with a majority of 107 respondents asserting a lack of training in this domain. Conversely, only 13 respondents indicated uncertainty regarding their training status, highlighting potential deficiencies in fire safety education and preparedness initiatives among the surveyed cohort. In terms of infrastructure, responses regarding the existence of fire assembly points varied. While a substantial number of buildings were reported to have designated fire assembly points,

with 110 respondents affirming their presence, a notable proportion of 36 respondents indicated the absence of such facilities within their buildings. Additionally, 14 respondents remained indifferent to the presence or absence of fire assembly points, suggesting potential inconsistencies in fire safety infrastructure across surveyed environments. In addition, when asked if their building had an emergency fire disaster kit, the majority of respondents (100) said that it did. Of the total responders, 47 admitted that it didn't exist. 13 respondents were indifferent. When asked how easy it is to reach fire hydrants in the event of a fire, the majority of respondents (135) believed that they are difficult to reach, ineffective, and typically remain non-functional. Just twelve people said it was easily accessible to get there. Thirteen respondents had no opinion. Subsequent investigation revealed that the fire hydrants, which are primarily run by the local authorities, were ineffectual in past fire breakouts in and around the study areas because they were empty at the time.

When asked whether emergency population warning systems were in place at their work places, 48 respondents said they were, while 106 said they weren't. There were only six who had no opinion. Casual observation showed that the most typical population warning sign was “No Smoking” sign and was in written on the walls. Additionally, the respondents were questioned about whether or not fire drills were conducted in the buildings and if so, how frequently. Ten (10) of the respondents said they had ever been present for or participated in a fire drill. Four (4) respondents expressed indifference, while the majority of respondents (146) said it had never been done. From the study it can be concluded that health professionals are mostly aware of emergency communication system, warning signs and fire assembly points.

3.7 Perceptions on Level of Preparedness in the Buildings

Table 8 : Perceptions on Level of Preparedness in the Buildings

Perception	Satisfied	Not satisfied	Total
Respondents	47	113	160
Percentage	29.37	70.63	100

The table displays the responses to the question about respondents' perceptions of the preparedness level in their buildings. 47(29.37%) of the total respondents said that they were satisfied, while the majority (70.63) said they were not. The study's findings indicate that the majority of these respondents knew insufficiently about fire safety precautions.

4. Conclusion

In conclusion, the study examined the preparedness and satisfaction levels of healthcare workers regarding fire safety measures in selected hospitals in Srinagar City. This had to do with the fact that numerous other installations had experienced fires that resulted in property loss and fatalities. As a result, Srinagar City's fire authority could be able to take action based on this information and implement the necessary preventative and preparation measures. At this regard, it was crucial to take into account the different precautions implemented at a number of carefully chosen hospitals that may guard against potential fire hazards and prevent them from happening. After evaluating the fire safety protocols and equipment used by the hospital owners/administrators in the chosen hospitals, the study found that the majority of buildings only had carbon dioxide and dry chemical extinguishers. In order to increase preparedness, additional equipment must be installed or supplied by those being responsible, because different types of fires require different types of fire extinguishers. Similarly, it was discovered that relatively few inhabitants could operate the two regularly encountered types of equipment; as a result, training is required to ensure that they are prepared to handle any emergency involving a fire. The purpose of this study was to evaluate the healthcare personnel's degree of fire preparation. These are the individuals using these spaces to conduct their daily emergency business. The results clearly demonstrate that the level of preparedness is still below expectations, as the majority of respondents only demonstrated knowledge of the fire assembly point and an emergency communication system. For this reason, it is essential that the relevant authorities take the necessary steps to raise the level of preparedness, such as regular inspections, fire drills, emergency services training, and the availability of fire disaster kits. The study also aimed to find out how health care workers were satisfied with the degree of preparedness and mitigation. The study found that the majority of healthcare professionals were not entirely content. In this instance, the

tenants suggested that, in order to increase their level of satisfaction, they must receive frequent training in fire safety and that warning signs be positioned in a way that makes them visible to patients, guests, and building attendants. They also want exits to be well indicated. On their part, healthcare professionals sought routine inspections of fire apparatus. Collaboration among building administrators/owners, property managers, and occupants is therefore essential in raising their level of satisfaction and firefighting proficiency. Since hydrants serve as a backup source of water supply in the event of a fire, the study also aimed to ascertain the opinions of healthcare professionals regarding the functionality of the hydrants in the city. The investigation found that although there were fire hydrants in the city, they were either broken or inefficient.

5. Recommendations

This present study investigated the level of Knowledge, Perception and Practices of Health Care Workers, besides the fire risk preparedness and mitigation in selected hospitals in Srinagar City. Following the analysis of the data from respondents, it is recommended that there is need to inspect the firefighting infrastructure in existence in buildings in all the health institutions of Srinagar City with a view of upgrading them to an acceptable standard. Programs for emergency procedures and evacuation drills, routine fire safety inspections, upkeep and servicing of fire apparatus, staff and trainee training, informing building occupants, maintaining records, and emergency situations should all be implemented to improve fire safety measures. The effectiveness and functionality of the fire hydrants in the urban area need to be inspected. The authorities and owners/property managers of the medical facilities should invite fire professionals to speak to the residents of their buildings about fire safety and the actual application of firefighting and safety equipment.

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