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THE FINANCIAL AND SOCIAL IMPLICATIONS OF CONSTRUCTION SITE ACCIDENTS IN SRI LANKA

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ABSTRACT

Construction site accidents are increasingly prevalent worldwide due to the dynamic and uncertain nature of the construction industry. Such accidents adversely affect overall productivity and performance while imposing significant consequences on construction firms, workers, and their families. Accordingly, this study aims to examine the financial and social impacts of construction site accidents in Sri Lanka. A quantitative research approach was adopted, and data were collected through a questionnaire survey from 68 respondents and analysed using the Statistical Package for the Social Sciences (SPSS). The findings indicate that construction site accidents lead to substantial financial burdens on organisations, including increased insurance premiums, compensation payments for injuries or fatalities, and additional costs associated with remedial and preventive measures to avoid recurrence. Furthermore, the study identifies deterioration of corporate reputation and loss of public trust as the most significant social consequences for construction organisations. At the societal level, an increase in debt was the most prominent financial impact arising from construction site accidents. From a family perspective, the loss of the primary income earner due to a site accident was the most severe social consequence. Although remedial mechanisms exist in Sri Lanka covered under the Workmen's Compensation Policy, the compensation provided is insufficient to adequately support affected families when compared with the comprehensive social security systems available in developed countries. Based on the findings, the study proposes practical recommendations aimed at minimising construction site accidents and mitigating their adverse financial and social impacts on both organisations and affected families.

Keywords: *Construction Sector; Financial Implications; Site Accidents; Social Implications; Sri Lanka.*

1. INTRODUCTION

The Construction Industry is a key sector that significantly contributes to economic growth, particularly in developing countries (Jayamal et al., 2023). Darshana (2017) noted that a considerable number of unskilled and inadequately qualified workers are employed on construction sites, which has led to an unacceptably high rate of workplace

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accidents and safety-related incidents across the country. Compared to other industries, the construction sector is inherently more susceptible to accidents (Mohammadi et al., 2018). Further statistical evidence indicates that the probability of fatal accidents occurring in the construction sector is approximately three to four times higher than in other industries in developed countries, while in developing countries it is about three to six times higher (Melagoda & Rowlinson, 2022).

Such accidents often result in project delays, productivity losses, and adverse consequences for all stakeholders involved, either directly or indirectly (Lee et al., 2018). In addition, construction site accidents have wider societal implications, affecting not only workers but also their families and relatives, project owners, construction professionals, and companies (Arquillos et al., 2012). Moreover, site accidents could result in fatalities and severe injuries to workers while the families can suffer immense loss and agony as a result of these event (Choi et al., 2020). Accordingly, the financial complications and emotional health of the dependents may affect all dependents long after the death of the primary provider (Quadir et al., 2019). Construction accidents can further damage public trust and negatively influence perceptions of construction firms, contractors, and regulatory bodies responsible for enforcing safety regulations on construction sites.

Within the context of Sri Lanka, the ratio between non-fatal and fatal accidents has become high, indicating that fatal accidents are increasingly alarming in Sri Lanka (Dasandara & Dissanayake, 2021). In 2019 alone, the Sri Lankan construction industry recorded forty fatal accidents and fifty-nine non-fatal accidents (Melagoda & Rowlinson, 2022). Moreover, about 4000 workplace accidents occur annually in Sri Lanka (Thalgaspitiya et al., 2018). Furthermore, Accident and Orthopaedic Service of Sri Lanka National Hospital treated more than 102,000 accident patients in 2015, and occupational health risks are thought to be liable for 12% of whole injuries and 50% of entire serious accidents (Darshana, 2017). These challenges highlight the need for effective protective measures and preventive strategies to reduce accident occurrences on construction sites. Given the hazardous nature of the industry, numerous studies, publications, and scholarly works have examined construction site accidents, their causes (Birhane et al., 2020), accident types, and preventive approaches (Ahamed et al., 2011; Darshana, 2017). Identifying the economic and social implications of site accidents within the construction industry may support organisations in adopting proactive measures to mitigate potential losses. Numerous studies were conducted in other countries including Mthalane et al. (2008) have examined the social and economic impacts in South Africa whereas Okorie & Aigabavboa, (2016) examined the impacts in Nigeria. Further, Elsebaei et al. (2020a) has conducted a study on the impacts in Egypt construction sector. Moreover, Okorie & Adindu (2020) have analysed the impacts of site accidents on small and medium construction companies. However, limited studies have been carried out in investigating the social and financial impacts of construction site accidents on both construction workers' families and construction companies in Sri Lanka. Therefore, the aim of this research is to enhance health and safety practices in Sri Lanka by identifying the financial and social impacts of construction site accidents. To achieve this aim, initially a literature review was done to identify the economic and social impacts of site accidents on construction companies and affected families globally. Then, the impacts were analysed in Sri Lanka and classified the impacts based on their characteristics.

2. LITERATURE REVIEW

The literature review was done mainly analysing the journals, conference proceedings, news articles, books and relevant websites. The literature review is essential to identify the impact of site accidents on the construction sector and the society. Therefore, this chapter analyses the background of site accidents in the construction sector and it's social and financial impacts.

2.1 SITE ACCIDENTS IN THE CONSTRUCTION INDUSTRY

Workers engaged in site-related activities are continuously exposed to occupational hazards and injuries, rendering the construction industry one of the most dangerous and high-risk sectors due to its complex and dynamic nature, particularly in developing countries (Zeng & Yoon, 2022). In the Sri Lankan context, the construction industry ranks as the third largest contributor to fatal workplace injuries and accidents among all industries (Udawatta & Rameezdeen, 2012).

The primary causes of construction site accidents can be categorised into environmental, human, and mechanical factors (Chi & Han, 2013). Human factors encompass fatigue, negligence, and inadequate knowledge of safety practices, whereas mechanical factors involve the use of defective tools or malfunctioning equipment. Environmental factors include adverse weather conditions, insufficient lighting, slippery surfaces, falls from heights, trips caused by staircases or balconies lacking handrails or protective barriers, and inadequate safety training (Shamsuddin et al., 2015). Furthermore, occupational risk among non-executive construction workers is significantly higher than that of executive personnel due to the nature of their tasks and the conditions under which they operate (Wang et al., 2018). Approximately 70 to 80% of fatalities and 35 to 40% of accidents are attributed to incompetence or non-compliance with hygiene and safety regulations (Zelalem, 2015).

To address construction related accidents, one key practice is the strict monitoring of safety protocols and employee compliance at construction sites, as emphasised by Ambegaonkar (2020). Furthermore, the implementation of environmental protection measures and building safety practices has been recognised as a significant factor in reducing construction accidents (Shamsuddin et al., 2015). Employees and their representatives have obtained important new rights through amendments to occupational safety and health laws and regulations, including the ability to file complaints, request site wide inspections, access information, and explore new protective standards (David et al., 2020). Accordingly, construction organisations are advised to educate employees on the importance of safe practices and the impacts of site-related hazards (Elsebae et al., 2020a). In Sri Lanka, safety provisions include the adoption of security methodologies such as protective indicators and warning signals, restrictions on harmful narcotics and alcohol at workplaces, and the provision of safety manuals, first aid equipment, and handlers' booklets (Priyadarshani et al., 2013).

2.2 FINANCIAL AND SOCIAL IMPLICATIONS OF CONSTRUCTION SITE ACCIDENTS

The impacts associated with financial conditions can be identified as being linked to financial factors (Elsebaei et al., 2020b). The costs of occupational accidents can be classified into three main categories: direct costs, indirect costs, and quality-of-life costs

(Waehrer et al., 2007). According to this classification, direct costs include medical expenses, police and fire services, emergency transport, property damage, and the wages of injured workers. Indirect costs comprise production losses, wage losses, reductions in household productivity, and administrative expenses related to workers' compensation, wage replacement, and sick leave (Pillay, 2014). Okorie and Adindu (2020) identified the two most significant economic variables as reductions in family income and increases in indebtedness. The principal areas affected by site-related injuries at the family level include loss of household income, deterioration in living standards, limited access to finance and education, increased debt, and difficulties in meeting bill and loan obligations (Haupt & Pillay, 2016). The total financial burden of injuries cannot be fully quantified, as numerous implicit costs are difficult to measure beyond the most visible immediate expenses. Further, significant economic effect can be the resulting reduction in household earnings since the individual involved often had to quit the position or be demoted to a lower salary due to the injuries and damages (Haupt & Pillay, 2016). Further, according to Waehrer et al. (2007), construction accidents cost the United States $11.5 billion in 2002, fatal accidents accounted for $4 billion (40%), and non-fatal accidents accounted for $7 billion. Table 1 presents the financial cost impacts of site injuries and the associated legal implications for construction firms and the families of affected employees.

Table 1: Financial implications of construction site accidents

Impact on Families	Impact on Firms
Deterioration of household living conditions	Production failure & job interruption
Loss of income resulting from death or injury	Damaged tools and equipment
Increased indebtedness leading to financial hardship.	Remedial measures to prevent a recurrence of the disaster.
Adverse impacts on educational expenditure and school dropout of children.	Compensation for affected employees
	Negative impact on the company's reputation
	Judicial protection charges on lawsuits
	Evacuation and machinery charges
	Emergency machinery cost
	Expenses in preparation with backups
	Growing expense of premiums

Adopted from: Battaglia et al. (2014), Kadiri et al. (2014), Mthalane et al. (2008), Pillay (2014), Rauner et al. (2005).

According to Rafieyan et al. (2022), severe site accidents result in worker distress demonstrated through feelings of displacement, sadness, and shame, leading to organisation-wide emotional uncertainty. In examining the social impacts of site accidents on workers and their family members, psychological behaviour is found to change significantly following a serious accident, which can adversely affect family life (Barkhordari et al., 2019). Consequently, long-term emotional and cultural consequences may be experienced by family members, including trauma, anxiety, stress, and broader social harm.

The death or physical injury of a construction worker at a site can generate a highly negative public image of construction firms and may even lead to permanent business closure (Alzahrani & Emsley, 2013). Moreover, site-related injuries can create psychological strain among top management, supervisors, and employees, resulting in reduced morale across managerial and workforce levels. Additionally, fatal site accidents may trigger institutional conflicts and give rise to false allegations, leading to legal

investigations and diverting attention from other construction projects (Kadiri et al., 2014). Table 2 illustrates the social implications of site accidents for workers, family members, and construction organisations.

Table 2: Social impacts of construction site accidents

Affected Families	Affected Firms
Loss or injury of primary earners. Reduced quality of life and family mental health decline.	Loss of confidence among the workforces and public and client mistrust Employee depression Shortage of skilled and professional staff degrades organisational quality

Adopted From: Brauer (2006), Huang & Hinze (2006), Mthalane et al. (2008), Okorie and Aigbavboa (2016).

According to Table 2, construction site accidents have significantly affected firms in terms of social impacts, in addition to their effects on families. Such accidents adversely influence the mental health of the remaining employees and create fear and insecurity within the working environment. Considerable research was conducted globally on impacts of site accidents. The construction sector is significantly affected by the site accidents. In Sri Lanka, the site accidents is a major concern due to reduced safety measures. Therefore, proper research is necessary to identify the impacts on construction firms and affected families.

3. RESEARCH METHODOLOGY

The research process provides a systematic approach for defining research objectives, managing data, establishing a methodological framework, and disseminating findings (Godwill & Ozofor, 2015). This study adopted a quantitative research approach using a structured questionnaire survey to collect and analyse numerical data. Data collection was confined to the Sri Lankan construction industry to maintain contextual relevance and the population is restricted to executive-level employees. Accordingly, construction professionals from Sri Lankan construction firms were selected as respondents. Purposive sampling was employed to ensure the inclusion of executive-level personnel with relevant expertise and direct experience of construction site accidents, as alternative sampling methods could result in the selection of participants lacking the specific knowledge required to address the research objectives effectively and selected a sample of 80 respondents. Descriptive statistical analysis was used to evaluate the social and financial effects of construction site accidents, employing measures of central tendency, including the mean, median, and mode, as well as dispersion measures such as standard deviation. Inferential statistical methods, including regression analysis, correlation analysis, and hypothesis testing, were not adopted, as the primary objective of the study was not to examine relationships between variables or test hypotheses, but rather to identify and prioritise key factors. The collected data were analysed using the Statistical Package for Social Sciences (SPSS). Although questionnaires were distributed to 80 respondents, only 68 valid responses were returned and analysed. Table 3 presents the distribution of respondents according to organisational type, job position, and professional experience.

Table 3: Summary of respondents' details

Type of Organisation		Position of Respondents		Experience	
Type	%	Position	%	Experience	%
Contractor Firm	80.8	Chairpersons/Managing Director	4.4	0 to 5 yrs.	26.5
Engineering Firm	13.2	Directors	16.2	5 to 10 yrs.	17.6
Employer Firm	06.0	CEO/General Manager	22.1	10 to 15 yrs.	19.1
		Project Manager	17.6	15 to 20 yrs.	23.5
		Engineer	13.2	Over 20 yrs.	13.2
		Quantity Surveyor	13.2		
		Accountant	13.2		

According to Table 3, three main stakeholder groups were selected, as they are directly impacted by site accidents. Furthermore, 80% of the respondents were contractors. Contractors were purposively selected, as they are considered key stakeholders with direct connections to affected individuals and employees, and they tend to experience greater losses due to site accidents. Although client and consultant firms possess knowledge regarding site accidents and their impacts, contracting firms maintain closer engagement with affected parties.

4. DATA ANALYSIS AND FINDINGS

This chapter analyses the financial and social impacts of construction site accidents on companies and families using descriptive statistical methods, specifically the mean and standard deviation derived from the collected data. The financial and social implications for families and firms were derived from a review of the global literature, while the questionnaire survey facilitated the identification of additional impacts specific to the Sri Lankan context.

4.1 THE FINANCIAL IMPLICATIONS OF CONSTRUCTION SITE ACCIDENTS ON CONSTRUCTION COMPANIES

To evaluate the financial implications of construction site accidents on construction companies, fourteen indicators were used to assess this variable across the selected firms. The descriptive statistics obtained from these indicators are presented in Table 4.

Table 4: The level of the financial impacts of construction site accidents on construction companies

Financial Impacts (Construction Company)	Mean	Std. Deviation	Rank
Increase in insurance premiums	4.2647	0.44446	01
Payments (fees) for settlements of injury or death claims	4.25	0.74061	02
Remedial actions to prevent the re-occurrence of the accident	4.1471	0.67503	03
Training costs for replacements	4.1176	1.77486	04
Costs of rescue operations and equipment	4.0735	0.79769	05
Reduced efficiency	3.9412	0.66652	06
Medical payments	3.8971	0.57665	07
Slackening of operations while accident causes are determined (safety investigation)	3.7647	0.60143	08
Loss of function and operations income	3.75	0.95222	09

Financial Impacts (Construction Company)	Mean	Std. Deviation	Rank
Emergency equipment expenditure	3.6618	0.97139	10
Legal fees for defence against claims	3.5588	0.85313	11
Damage to plant, equipment, and finished work	2.7794	1.41258	12
Loss of productivity	1.9412	0.82647	13
Disruption of current work	1.9412	0.80821	14

Based on Table 4, the relative importance of the economic effects of construction site accidents to the construction firms is shown. Results show that insurance claims *(M* = 4.26, *SD* = 0.44) and compensation payments *(M* = 4.25, *SD* = 0.74) are of prime importance to the firms, which is an indication that the accident has a multiplying effect on the firm's finances. Preventive and corrective actions initiated after the occurrence of the accident are also important, which is an indication that additional investment is required to avoid a re-accident. Other operational effects, which are less important and reflect secondary economic effects, relate to decreased efficiency, suspension of operations to investigate the accident, and lost earnings. Productivity loss, damage to the work in progress, and disruption of work are of less importance and indicate that these are less serious effects than the other economic and legal requirements.

4.2 FINANCIAL IMPLICATIONS OF CONSTRUCTION SITE ACCIDENTS ON THE AFFECTED FAMILIES

To evaluate the financial implications of construction site accidents on the employee and the affected family, five indicators were used to assess this variable across the selected firms. The descriptive statistics obtained from these indicators are presented in Table 5.

Table 5: The level of financial implications of construction site accidents on the affected families

Financial Implications (Family)	Mean	Std. Deviation	Rank
Increase in debts	4.2353	0.79396	01
Difficult to pay bills/ policies/ bonds	4.0441	0.76165	02
Decrease in family income	4.0147	0. 32289	03
Education and schooling expenses affected	3.7941	0.98585	04
Decrease in the standard of living	3.7206	1.06288	05

The financial implications of construction accidents on affected families are reflected in reduced living standards, decreased household income, increased debt, difficulties in meeting financial obligations such as bills and insurance payments, and constraints on education related expenditures. Increased debt records the highest mean value (M = 4.23, SD = 0.793), while the reduction in living standards shows the lowest mean value (M = 3.72, SD = 1.06) among the assessed indicators.

Survey results indicate that rising debt imposes a substantial burden on affected families, as excessive borrowing is associated with poor credit ratings and limited access to loans at favourable interest rates. High interest borrowing further constrains household cash flow, thereby affecting overall financial stability and quality of life. In addition, construction accidents significantly influence children's education and schooling expenses in affected households (M = 3.79, SD = 0.98), as the mean value falls within the higher impact range. Based on the established decision rule, all indicators of the

financial impact of construction accidents on affected families are categorised as high ($3.5 < \bar{X} \leq 5$).

4.3 SOCIAL IMPACTS OF CONSTRUCTION SITE ACCIDENTS ON CONSTRUCTION COMPANIES

To evaluate the social impacts of construction site accidents on the construction firms, five indicators were used to assess this variable across the selected firms. The indicators were identified in the existing literature. The descriptive statistics obtained from these indicators are presented in Table 6.

Table 6: Level of social impacts of construction site accidents on construction companies

Social Impacts (Construction Companies)	Mean	Std. Deviation	Rank
Loss of public confidence	4.36765	0.48575	01
Loss of customer satisfaction	4.3088	0.46544	02
Degradation of morale	3.9559	0.50175	04
Depression of employees and work fellows	3.7353	0.61372	05
Loss of company image	3.7059	0.81146	06

Loss of public confidence (M = 4.37, SD = 0.49) ranks first, indicating that site accidents critically undermine stakeholder trust. This is followed by loss of customer satisfaction (M = 4.31, SD = 0.47), which highlights the negative influence of accidents on client perceptions and ongoing business relationships. This highlights the importance of accident prevention, as effective safety management enables construction companies to maintain public trust in the quality and safety of their operations. Adverse media coverage following accidents can erode public trust and generate significant social consequences for affected organisations.

Degradation of morale within organisations (M = 3.96, SD = 0.50) ranks fourth, suggesting notable psychological and motivational consequences among management and staff. Employee and coworker depression (M = 3.74, SD = 0.61) further demonstrates the emotional strain experienced within firms following site accidents. Loss of company image (M = 3.71, SD = 0.81) records the lowest mean value, though it remains within the high impact range. Overall, the results confirm that construction site accidents generate significant social consequences for construction companies, particularly in terms of public trust, customer satisfaction, and internal organisational wellbeing.

4.4 SOCIAL IMPACTS OF CONSTRUCTION SITE ACCIDENTS ON THE AFFECTED FAMILIES

Five main social impacts of construction site accidents on the affected families were analysed considering the level of impact on the families. Table 7, summarise the data analysed using SPSS software.

Table 7: The level of social impacts of construction site accidents on the affected families

Social Impacts (Family)	Mean	Std. Deviation	Rank
Loss or injury to the family provider	4.3382	0.97556	01
Loss of workers to the community	4.0588	0.47663	02
Family depression	3.9265	0.67617	04
Reduced superiority of life for individual workers and families	3.8824	0.76352	05

Social Impacts (Family)	Mean	Std. Deviation	Rank
Loss of social welfare	3.8235	0.66784	06

With the highest mean value (M = 4.34, SD = 0.98), the results show that loss or injury to the family provider is the most significant impact, highlighting the extreme socioeconomic vulnerability that families face. The loss of workers to the community (M = 4.06, SD = 0.48) comes next, indicating wider consequences at the community level. Additionally, family depression exhibits a high impact level (M = 3.93, SD = 0.68), suggesting that family members are experiencing significant psychological distress. Since financial support cannot compensate for the loss or disability of the primary income earner, it can be considered a critical component. Building site accidents can affect many families both financially and emotionally because many partners may become widows or widowers. Loss of social welfare and decreased quality of life for individual workers and families are additional indicators of the significant social burden caused by construction site accidents. In general, every indicator is in the high impact range.

Although the data were collected from executive-level employees, the questions were designed to capture information on the impacts experienced by both construction companies and affected families. As these respondents are responsible for providing incentives and relief to affected families, they possess adequate awareness of the families' financial conditions. Therefore, despite not being directly affected as family members, the respondents have sufficient exposure to evaluate and analyse the impacts accurately.

5. DISCUSSION

When considering the financial implications, according to Haupt & Pillay (2016), reduction in family income, and rise in indebtedness are the first and second most important factors affecting individuals or families from an economic standpoint. Whereas in Sri Lankan context, decrease in family income obtains the third position. Further, increase in debts and difficulties in paying utility bills obtained the first two positions respectively. Moreover, among the mentioned economic variable elements, the 'loss of firm productivity' and 'damage to plants/equipment' had the highest impact on many projects (Okorie & Adindu, 2020). However, in Sri Lanka it is considered as a minor impact whereas settlement to victims and increased insurance premiums were the main concerns.

When analysing the social implications, according to Kadiri et al. (2014), fatal accidents at the site can cause conflicts within institutions and create false allegations that can cause legal inquiries and distract attention to other building projects. However, it has no major impact on Sri Lankan construction firms. Moreover, in Sri Lanka, loss of workers to the community and loss of social welfare is identified as a unique social impact on affected families. Further, Okorie and Adindu (2020) reported that losing the family breadwinner and declining quality of life are the two most critical accident variables reported. Similarly, the interviews held by the researcher proved that the most effective social factor impacting families is the loss of the family provider.

In addition, a framework was developed using the empirical data to categorise accident-related impacts according to their severity and temporal progression. The framework was developed based on the characteristics of each impact and the development of the impacts. Accordingly, the impacts were classified as preventable and non-preventable impacts. Further, based on the development of impacts it is classified as immediate impacts,

cascading impacts and long-term impacts. The framework illustrates that a site accident initially gives rise to a set of immediate impacts, which represent the first layer of financial and operational burden on construction projects. These immediate impacts include injuries or fatalities among workers, loss or injury to the family provider, temporary or complete site shutdowns depending on accident severity, emergency response costs largely borne by the company, and medical treatment expenses incurred by either the worker or the employer. Once an accident occurs, such impacts are largely unavoidable and occur instantaneously.

Following the immediate stage, the framework highlights a series of cascading impacts that significantly affect both construction companies and workers. From an organisational perspective, site shutdowns often result in project delays and reduced productivity, leading to direct financial losses. In addition, injuries or fatalities typically place legal and financial responsibility on the contractor, resulting in compensation claims, increased insurance premiums, legal fees, medical expenses, formal investigations, and settlement payments. These cascading impacts can further contribute to financial instability, reputational damage, loss of public confidence, and, ultimately, the loss of skilled workers from the community. Okorie and Adindu (2020) reported that loss of firm productivity and damage to plant and equipment exerted the greatest influence across multiple projects. Furthermore, Brauer (2006) emphasised that the cumulative costs of accidents significantly reduce organisational profitability, particularly through expenses related to rescue equipment, rework, and corrective measures. Spangenberg (2009) also noted that fatal incidents can trigger internal organisational tensions characterised by blame and conflict, diverting managerial attention from core operational activities toward investigations and legal proceedings.

From the perspective of affected families, injuries or fatalities of the primary income earner generate significant cascading impacts. Reduced family income often leads to increased indebtedness and family depression, while long-term consequences include disruption to children's education and a decline in overall living standards. These findings align with Okorie and Adindu (2020), who reported that reductions in family income and increased indebtedness ranked as the most critical economic consequences of site accidents. They further highlighted the loss of the family breadwinner and declining quality of life as the most significant accident-related social variables.

In addition, the framework distinguishes between preventable and non-preventable impacts. Preventable impacts including injuries resulting from inadequate safety training, equipment-related accidents, and avoidable injuries highlight the potential for mitigation through improved safety management practices. In contrast, non-preventable or residual impacts, including natural disasters, fatalities despite safety controls, and unpredictable human error consequences, reflect the inherent risks associated with construction activities. This distinction underscores the importance of proactive safety strategies aimed at minimising preventable impacts while recognising that some residual risks remain unavoidable. Overall, by integrating empirical findings within a cascading impact perspective, the framework demonstrates that the true cost of construction site accidents extends well beyond direct medical and compensation expenses, affecting organisational sustainability, family wellbeing, and community resilience. This emphasises the need for comprehensive safety interventions that address both immediate risk reduction and long-term socioeconomic consequences.

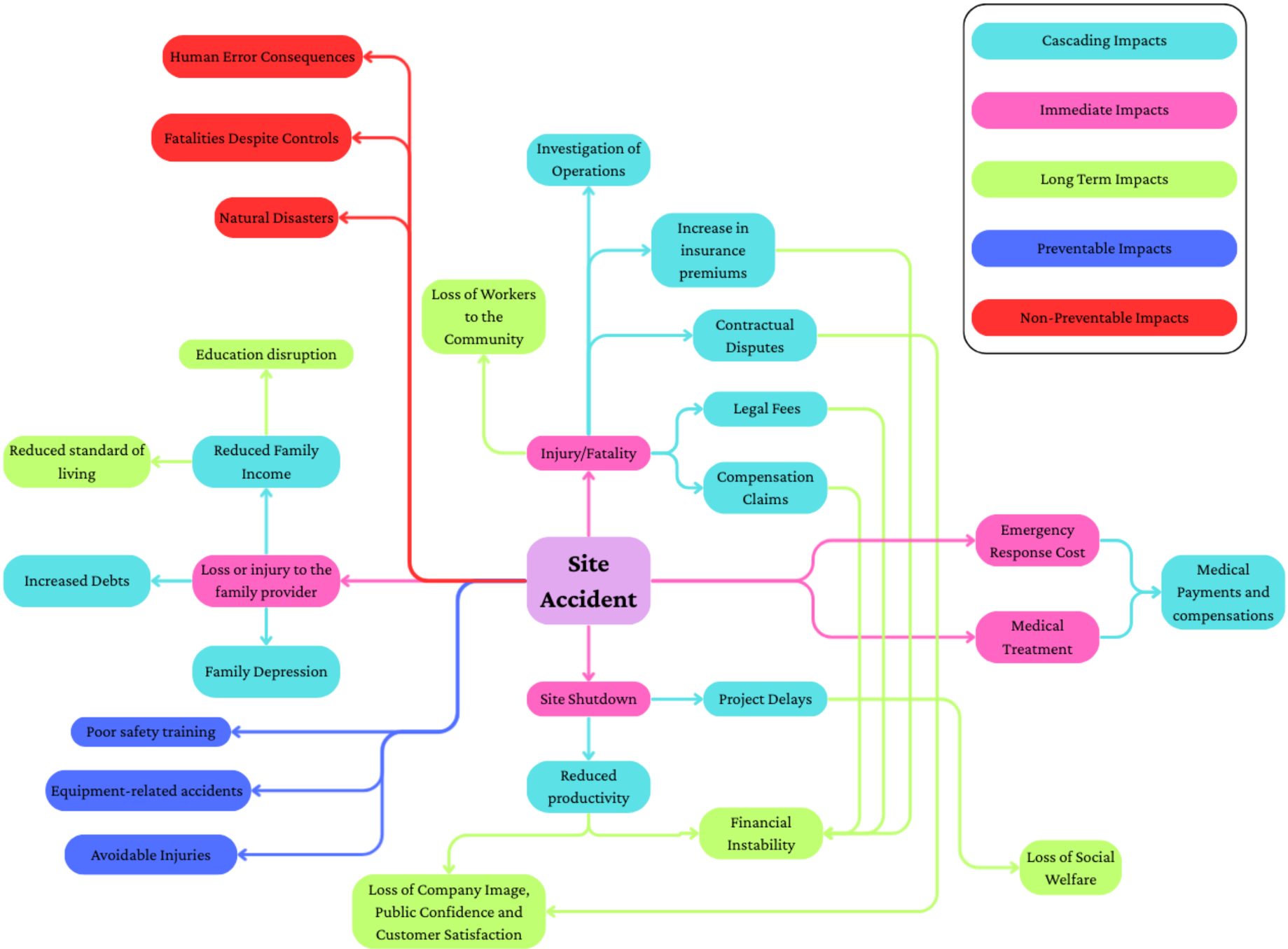

Figure 1: Impacts of construction site accidents on companies and affected families

6. CONCLUSIONS AND RECOMMENDATIONS

The Sri Lankan construction industry experiences a high frequency of site accidents, resulting in significant adverse impacts on construction firms and affected households. This study examined the financial implications of such accidents on organisations and families. Findings reveal that construction companies bear a greater financial burden than households, with increased insurance premiums representing the most significant cost. Overall, accident-related expenses substantially reduce firm profitability through costs related to equipment damage, rescue operations, rework, and corrective actions. In addition to organisational impacts, site accidents impose severe financial stress on affected families. Decline in household income, reduced living standards, increased debt levels, difficulties in meeting financial obligations, and rising education related expenses collectively contribute to significant financial hardship and all indicators measuring the financial impact on families were assessed as high. These findings demonstrate that construction accidents extend beyond individual victims to their families and have broader implications for the socio-economic stability of society. In cases where the injured worker is the primary income earner, disability often results in the loss of income and places substantial financial and emotional strain on the entire household.

Construction site accidents remain a critical health and safety issue both nationally and globally, with consequences that extend beyond affected individuals to the wider economy. To mitigate these impacts, the study recommends strengthening regulatory frameworks, enhancing training and educational programmes, adopting appropriate safety technologies, promoting collaborative approaches among stakeholders, and establishing effective support mechanisms for victims. The implementation of these measures can improve site safety, reduce accident occurrence, and minimise social and financial losses to firms and families, thereby contributing to a safer and more sustainable construction industry in Sri Lanka. Reliance on questionnaires distributed only to executive-level staff limits the diversity of perspectives. In addition, impacts on affected families were assessed through industry stakeholders, as victims were not directly interviewed or surveyed. Future research should examine the impacts of site accidents on other project stakeholders involving minor staff and workers, examine the psychological impacts of construction site accidents, evaluate existing preventive practices, with the aim of developing effective frameworks to reduce accident risks, policy development to support vulnerable groups, and awareness of construction site accidents among all stakeholders.

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