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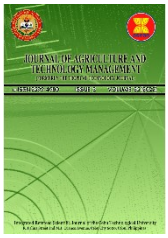

Original article

The impact of COVID-19 on the construction industry in Metro Cebu

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ABSTRACT

The Philippines "golden age" of infrastructure was shattered when a global health threat - the coronavirus disease 2019 (COVID-19) - struck the country and the rest of the world, resulting in a massive recession and economic crisis, notably in the building asset procurement and facility management industries. Following a significant increase in COVID-19 instances, many countries have imposed a total national lockdown that has restricted people's movement and resulted in the closure of several firms in various industries, specifically in the construction industry, to which all plans and initiatives have been put on hold till further notice. As a result, it is reasonable to address the pandemic's impact at the start and end of the crisis to prepare for any future possibilities and learn lessons for plans. This study aimed to assess the impact of COVID-19 and produce baseline information that may guide the government, non-government agencies, organizations, and companies in the construction industry to make valuable refinements of policies, motivate new interventions, and integrate post-pandemic and pre-pandemic plans, programs, and investments to address the impact of COVID-19 and other similar crisis. The study found that COVID-19 had a prominent effect on the overall project development, particularly from the delay of several processes and procurement of materials. Also, the result shows the reasons for not complying with the COVID-19 health guidelines. It suggests several methods to help fellow contractors or construction companies in dealing with the continuation of the construction business amidst the challenges faced by COVID-19.

KEYWORDS: *building staff, construction, contractors, COVID-19, minimum health standards*

1 INTRODUCTION

What was supposed to be the 'golden age' of infrastructure in the Philippines with President Rodrigo Duterte's "Build, Build, Build" plan for the period of 2017 to 2022 (Rabena, 2018) was disrupted when the global health threat — the coronavirus disease 2019 (COVID-19) — affected the Philippines and the rest of the world, resulting in massive recession and economic downturn.

With different countries deploying stringent interventions to minimize the spread of the infections, many businesses and industries were affected, the construction industry included (Ogunnusi et al., 2020), since only the essential companies and industries were allowed to operate during the imposed lockdown, therefore, ceasing the operations of construction projects (Gershman, 2020; Gamil & Algahar, 2020).

The situation of the construction industry first drastically deteriorated with the shortage of construction materials due to the delivery delays brought about by the health and safety protocols set by the government (Gamil & Algahar, 2020). Following the spread of the disease, construction sites had to adjust to maintain the minimum health standards such as social distancing and the wearing of personal protective equipment (PPEs) or face masks and face shields and to consider the work-from-home scheme for roles that are deemed unessential on the site (Stiles et al., 2020; Gumble, 2020), which then paved the way for the increase in the unemployment rate among construction workers following the massive shrink in demand because of the low number of operational construction projects (Alsharef et al., 2021).

The pandemic has affected the construction industry in one way or another. However, in the Philippines, particularly in Cebu, no research studies on the impact of COVID-19 on the construction industry have been done. Hence, there is a need to assess the impact of COVID-19 on the construction industry in Cebu, Philippines, especially that Cebu has 2,025 approved multi-billion infrastructure projects in the fourth quarter of 2019 and was ranked by the Philippine Statistics Authority (PSA) as the province with the second most number of construction projects next to Cavite (Cebu Daily News, 2020). The conduct of this study would assess the impact of COVID-19 and would produce baseline information

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that might guide the government, non-government agencies, organizations, and companies in the construction industry to make valuable refinements of policies, motivate new interventions, and integrate post-pandemic and pre-pandemic plans, programs, and investments to address the impact of COVID-19 and other similar epidemic, pandemics, and emergencies.

2 MATERIALS AND METHODS

Research Design and Instrument

The study employed a quantitative-qualitative approach, utilizing a questionnaire. The questionnaire was face-validated by experts and was pre-tested using Cronbach alpha. Google forms and actual visits (if possible) were used. There were 2 questionnaires (contractors and building staff or workers) administered that consist of three sections:

For contractors, 1) socio-demographic data, 2) perceptions of the contractors on the impact of COVID-19, and 3) open-ended questions.

For building staff or workers, 1) socio-demographic data, 2) perceptions of the contractors on the impact of COVID-19, and 3) COVID-19 compliance checklist.

Research Participants and Environment

The study was conducted in Cebu, Philippines. During the time of proposal writing, no studies on the impact of COVID-19 on the construction industry have been done in Cebu, Philippines in this time of pandemic. The research respondents of this study are contractors and building staff or workers who are on-site working on construction projects.

Research Procedure

Conduct survey on the impact of COVID-19 on the construction industry to contractors and building staff or workers who are on-site working on construction projects.

Data processing and analysis

The data gathered from the questionnaires were encoded in Microsoft Excel, and the file was imported into statistical software. Descriptive statistics was employed to present data on socio-demographic variables and on the perceptions relevant to COVID-19 while answers in the open-ended questions were processed using qualitative approaches, where emerging themes were identified.

Ethical considerations

The study was conducted in accordance with the principles of the Helsinki declaration developed by the World Medical Association and the Philippine Health Regulations Ethical Board. Informed consent was obtained from the respondents. Approval was also acquired from the University Research Ethics Committee of Cebu Technological University.

3 RESULTS AND DISCUSSION

A total of 60 respondents comprised 25 contractors and 35 building staff or workers working on site. Majority of them were aged 26-30 (32.0%, contractors) (25.7%, building staff), male (84.0%, contractors) (82.9%, building staff), married (60.0%, contractors) (48.6%, building staff), and most of the contractors were bachelor's degree (48.0%) while high school level/graduate (40.0%) for building staff.

These contractors become one of the organization members through their professions (84.0%); the category of contractors mostly participating in the study was class D (32.0%). Most of them were already 6-10 years in the construction industry (32.0%), while most of the building staff were just less than five years in the construction industry (45.71%). A year before and after the onset of COVID-19, respondents earned an approximate cost of the total project of less than ten million (48.0% before, 32.0% after). Since most of the contractors were class D, the project size range is at Small A, which costs less than or equal to 15 million on a Single Largest Project (SLP) with an allowable range of contract cost up to 30 million (PCAB, 2017). The construction business, like many others, is dominated by cost-driven rivalry. The lowest bidder is often chosen for building projects (Chan & Au, 2007). Clients would prefer contractors who offered a meager price for projects, significantly when the pandemic plunged the nation's economy.

The contractors mostly got projects/clients from the government during the new normal (52.0%). Most projects undertaken by the respondents are commercial buildings (80.0%), such as offices, retail stores, healthcare facilities, leisure buildings, housing, etc. During the pandemic, the restriction was limited to only the government sector that could freely move in society. The growing number of COVID-19 cases poses a severe threat to the country's health system's long-neglected laboratory and diagnostic services—the inadequate number of isolation and unfavorable pressure rooms in hospitals and the lack of isolation facilities. The suspect and mild COVID-19 cases exacerbate the situation (Crisostomo, 2020).

The Department of Public Works and Highways (DPWH) has completed 758 healthcare facilities with a total capacity of 28,102 around the country as part of the task force's response to the need to enhance healthcare capacity (DPWH, 2021). The location of the respondents' projects is primarily located in the city's central district (60.0%), especially in Cebu City, which is a strong focal

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Table 1. Profile of the respondents

Parameters	Contractors (n=25)		Building staff on site(n=35)	
	f	%	f	%
Age				
21-25	1	4.0	7	20.0
26-30	**9**	**32.0**	**9**	**25.7**
31-40	5	20.0	5	14.3
41-45	5	20.0	6	17.1
46 and above	6	24.0	8	22.9
Total	25	100	35	100
Sex				
Male	**21**	**84.0**	**29**	**82.9**
Female	4	16.0	6	17.1
Total	25	100	35	100
Civil Status				
Single	10	40.0	16	45.7
Married	**15**	**60.0**	**17**	**48.6**
Widowed	0	0.0	1	2.9
Separated	0	0.0	1	2.9
Total	25	100	35	100
Highest Educational Attainment				
Elementary level/graduate	0	0.0	8	22.9
High school level/graduate	0	0.0	**14**	**40.0**
Bachelor's Degree	**12**	**48.0**	12	34.3
Master's Degree	6	24.0	1	2.9
Professional Degree	6	24.0	0	0.0
Doctorate	1	4.0	0	0.0
Total	25	100	35	100
Affiliations on membership of an organization				
Civic society	6	24.0	--	--
Religious	4	16.0	--	--
Professional	**21**	**84.0**	--	--
Others	3	12.0	--	--
Total	34	136	--	--
Number of years in the construction industry				
Less than five years	5	20.0	**16**	**45.71**
6 – 10 years	**12**	**48.0**	7	20.0
11 – 20 years	5	20.0	6	17.1
21 – 30 years	1	4.0	5	14.3
More than 30 years	2	8.0	1	2.9
Total	25	100	35	100.0
Approximate total costing of projects, a year before the on-set of COVID-19				
less than 10M	**8**	**32.0**	--	--
10 M - 20 M	4	16.0	--	--
20 M - 30 M	3	12.0	--	--
30 M - 40 M	4	16.0	--	--
40 M and above	6	24.0	--	--
Total	25	100	--	--
Approximate total costing of projects, at the on-set of COVID-19 to present				
less than 10M	**9**	**36.0**	--	--
10 M - 20 M	4	16.0	--	--
20 M - 30 M	5	20.0	--	--
30 M - 40 M	2	8.0	--	--
40 M and above	5	20.0	--	--
Total	25	100	--	--

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Parameters	Contractors (n=25)		Building staff on site (n=35)	
	f	%	f	%
Types of client/project during the new normal				
Government	**13**	**52.0**	--	--
Private	9	36.0	--	--
Semi-Private	5	20.0	--	--
Total	27	108	--	--
Types of projects undertaken				
Residential	17	68.0	--	--
Commercial buildings	**20**	80.0	--	--
Educational buildings	8	32.0	--	--
Industrial buildings	7	28.0	--	--
Institutional buildings	8	32.0	--	--
Total	60	240	--	--
Location of the project				
North district within the city	8	32.0	--	--
South district within the city	9	36.0	--	--
Central district of the city	**15**	**60.0**	--	--
North district outside the city	6	24.0	--	--
South district outside the city	8	32.0	--	--
Total	46	184	--	--
Civil Works				
Roads	9	36.0	--	--
Bridges	0	0.0	--	--
Ports	1	4.0	--	--
Others	**17**	**68.0**	--	--
Total	27	108	--	--
Presence of services offered to subcontractors				
No	0	0.0	--	--
Yes	**25**	**100.0**	--	--
Total	25	100	--	--
Services mostly offered to subcontractors				
mostly, foundation works	5	20.0	--	--
mostly, concrete and masonry works	7	28.0	--	--
mostly, wood works and carpentry	6	24.0	--	--
mostly, paintings	**16**	**64.0**	--	--
mostly, steel works	8	32.0	--	--
mostly, roofing works	10	40.0	--	--
mostly, other skills did not mention above	6	24.0	--	--
Total	59	232	--	--
Number of regular employees the company have				
Less than 20	**11**	**44.0**	--	--
20 - 30	6	24.0	--	--
30 - 40	3	12.0	--	--
40 and above	5	20.0	--	--
Total	25	100	--	--
Number of non-regular employees the company have				
Less than 20	**10**	**40.0**	--	--
20 - 30	5	20.0	--	--
30 - 40	4	16.0	--	--
40 and above	6	24.0	--	--
Total	25	100	--	--

point of business, exchange, and training in the Visayas and where quality hospitals were also located (in response to COVID-19). Other civil works, particularly sewerage. treatment plant, office renovation, and slope protection (68.0%). All of the respondents have offered services to subcontractors, especially painting works. The company

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has less than 20 both regular (44.0%) and non-regular (40%) employees. Companies are experiencing a scarcity of competent personnel, primarily from the provinces. Due to the pandemic issue in the metropolis, many provincial employees were returning to their home provinces. As a result, building activity will be delayed (Zamani et al., 2021).

Perceptions of the contractors on the impact of the COVID-19

The contractors mostly labeled least affected to affected categories during the COVID-19. Categories such as processing of building permits (44.0%), canvassing of projects (32.0%), delivery of construction materials (40.0%), and supervising a project (36.0%) were affected by the COVID-19. The vertical structure/construction (28.0%), planning stage (28.0%), meeting with clients were least to somehow affected by the pandemic while horizontal construction (36.0%), relation with supplier (36.0%), and site visit (32.0%) were least to slightly affected. This suggests that it has a considerable influence on construction projects; nevertheless, the legal implications vary from contract to contract and nation to nation (Bailey et al., 2020). The pandemic did disrupt and delay construction procedures. Some projects have been placed on hold indefinitely. Because of the pandemic's effects, some engineering and construction companies may be forced to restructure debt, look for alternate sources of finance, or file for bankruptcy (Hook, 2020). Looking ahead, engineering and construction enterprises will enter a new age marked by a shift in the marketplace and infrastructure investment by a certain "national government" to kick-start their recovery.

Several additional safety precautions have been implemented, such as quarantine limitations that prevent simple access to transportation, which is another element that causes project delays. Stay-at-home orders were also imposed to avoid the spread of the new coronavirus. This would be a danger to the building sector since it would cause material supply delays. Given the severe delays in material delivery, particularly from overseas and across the nation, many businesses began to take proactive actions to discover alternate material suppliers to limit the risk of project delays (Stiles, 2020). Alternative local suppliers and manufacturers were given preference because they were more likely to deliver on short notice. In many cases, contractors could identify alternate materials and equipment that local suppliers and manufacturers could quickly ship after consulting with architects and designers (Alsharef et al., 2021). The demand for these local suppliers surged. Significant delays in securing permits were also reported. These delays were mainly driven by governmental agencies transitioning to working remotely from home and difficulties obtaining the necessary information and documentation—new construction projects (Stiles, 2020). These delays were projected to slow the overall project development and cause substantial timetable problems.

Perceptions of building staff or workers on the impact of COVID-19

Most of the building staff or workers' perceptions on

Table 2. Perceptions of the contractors on the impact of the COVID-19 (n=25)

Categories	f	%
Vertical structure/construction		
Not affected	1	4.0
Least affected	**7**	**28.0**
Slightly affected	5	20.0
Affected	**7**	**28.0**
Most affected	5	20.0
Total	25	100
The Planning stage		
Not affected	3	12.0
Least affected	**7**	**28.0**
Slightly affected	4	16.0
Affected	**7**	**28.0**
Most affected	4	16.0
Total	25	100
Horizontal construction		
Not affected	1	
Least affected	**9**	**36.0**
Slightly affected	7	28.0
Affected	5	20.0
Most affected	3	12.0
Total	25	100

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Categories	f	%
Processing building permit		
Not affected	2	8.0
Least affected	3	**12.0**
Slightly affected	4	16.0
Affected	**11**	**44.0**
Most affected	5	20.0
Total	25	100
Meeting with clients		
Not affected	2	8.0
Least affected	**7**	**28.0**
Slightly affected	5	20.0
Affected	**7**	**28.0**
Most affected	4	16.0
Total	25	100
Canvassing of projects		
Not affected	1	4.0
Least affected	6	24.0
Slightly affected	7	28.0
Affected	**8**	**32.0**
Most affected	3	12.0
Total	25	100
Relation with supplier		
Not affected	1	4.0
Least affected	**9**	**36.0**
Slightly affected	**9**	**36.0**
Affected	5	20.0
Most affected	1	4.0
Total	25	100
Delivery of construction materials		
Not affected	1	4.0
Least affected	5	20.0
Slightly affected	6	24.0
Affected	**10**	**40.0**
Most affected	3	12.0
Total	25	100
Supervising a project		
Not affected	1	4.0
Least affected	7	28.0
Slightly affected	6	24.0
Affected	**9**	**36.0**
Most affected	2	8.0
Total	25	100
Site a visit		
Not affected	0	0.0
Least affected	**8**	**32.0**
Slightly affected	6	24.0
Affected	7	28.0
Most affected	4	16.0
Total	25	100

the impact of the COVID-19 statement provided range from agreeing to strongly agree. They were very afraid that they might be laid off from work because of the community quarantine restrictions (60.0%). Due to these constraints, their job on-site will be affected (42.9%). The Philippine labor market was put down to its lowest in April 2020 after only weeks of lockdown that started on March 16, 2020. The unemployment rate reached 17.6

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%, which represents 7.2 million unemployed individuals. The 28.2 % rate, which represents the age population of 25 to 34 years old, placed the highest number of unemployed individuals and the majority of them, with a rate of (81.1 %), indicated that their reason for not having work or not finding one is the ECQ lockdown, or COVID-19 pandemic (Philippine Statistics Authority, 2020). These job losses are partly attributable to work interruptions following work-related restrictions imposed to curb the virus spread. An enormous amount of the workforce had to be shed in response to the economically challenging period brought about by the pandemic. Government mobility limitations have created an impediment for certain people who reside in the province but work in the metropolis. Due to the health protocols implemented by the World Health Organization (WHO) and the government, people are forced to stay at home and limit their exposure outside; this is unfortunate for the construction industry staff working on-site (Stiles, 2020).

Most of the building staff or workers obey the health guidelines (51.4%) such as the necessary wearing of PPEs and maintaining social distancing (42.9%). Hence, they agreed with the idea of the authorities to release guidelines to curb COVID-19 (51.4%). Imposition of PPEs regarding safety measures is a critical element in every industry. In the worst situation of COVID-19, following personal protection is essential to protect the employees from becoming infected by colleagues. Employees should wear gloves, masks, gaiters, glasses, and face shields all the time on site. All the construction practitioners must follow manufacturers' recommendations regarding the sanitization and decontamination of PPEs and clothing before using those (Iqbal et al., 2021).

Also, building staff are willing to take part in COVID-19 testing (42.9%) but are not well-informed about the COVID-19 situations and its related regulations and laws (31.4%). Also, to incorporate the COVID-19 protocols, the new handling of materials and equipment is not a hassle for them (45.7%), and they believed that limiting workers is not a good COVID-19 protocol as it would affect delays on the completion of the project (42.9%). Some organizations assume that their employees are well informed regarding the realities of virus disease. The most significant challenge for government and health officials is to prevent misleading information of COVID-19 on social media (Iqbal et al., 2021). Furthermore, to enforce the COVID-19 policies for workers and other construction practitioners, concerned authorities should discuss the standard of policies (SOPs) (Iqbal et al., 2021). All employers should be vigilant and informed about changing pandemic conditions, including community viral transmission and testing availability, execute infection prevention and control measures accordingly.

Compliance checklist of building staff workers

Respondents were asked to indicate the specific measures instituted on site to curb the spread of virus. Most of the building staff or workers admitted that their company observes guidelines such as excluding underage, senior citizen, pregnant and people with comorbidities in the workforce (88.6%) as they are at a high risk of obtaining the virus.

The crises brought by the COVID-19 pandemic can have an unequal impact on certain sections of the population. Still, these are identified persons at risk to inherit and transmit the virus in the workplace easily. Contractors also take part by providing facilities and amenities (60.0%) that follow minimum health standards such as social distancing, proper hygiene etc., to avoid widespread infection of the virus as well as providing a continuous supply of vitamin C (37.1%) to at least boost the immune system of the workers. Evidently, vitamin C administration will improve outcomes in COVID-19 from clinical trials of patients with pneumonia and sepsis and preliminary observational and interventional studies of COVID-19 patients (Carr & Rowe, 2020). Proper facilities and amenities and providing vitamin C would keep the workers feel safe in their workplace and realize that the employer values their workers' health.

Maintaining proper sanitation in handling construction supplies and materials (82.0%) was also observed apart from the minimum health standards such as wearing face masks; face shields, etc. (71.4%). The level of risk of exposure determines the virus that causes COVID-19. Employers should implement infection prevention and control methods based on a complete workplace hazard assessment, including suitable combinations of engineering and administrative controls, safe work practices, and personal protective equipment (PPE) to prevent worker exposures. Minimum health standards must always be observed in work and public spaces (DTI, 2020).

Construction companies must adopt safety measures without much challenges, such as administering temperature checks before entry into the workplace, the placement of sanitizers and hand wash stations at the entrance and various locations in the worksite, disinfecting tools and surfaces, discouraging sharing of tools and equipment, including PPE, encouraging workers with any COVID-19-like symptoms to remain at home, adopting air purification and filtration systems (Alsharef et al., 2021) and also strict access for visitors on-site (91.4%). According to Government Gazette No. 43400 (2020), it is the responsibility of the employer to, free of charge, provides sufficient quantities of hand sanitizers for workers and at the entrance, and where applicable, provide enough hand-sanitizer at that worker's workstation for both the worker and those that he/she will interact with; disinfect the areas, equipment,

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Table 3. Perceptions of the building staff or workers on the impact of the COVID-19 (n=35)

Categories	f	%
1. I was afraid that I might be laid off from work because of the community quarantine's restrictions to curb the spread of COVID-19.		
Strongly Disagree	1	2.9
Disagree	0	0.0
Neutral	5	14.3
Agree	**21**	**60.0**
Strongly Agree	8	22.9
Total	35	100
2. My job at the construction site has been very much affected by COVID-19.		
Strongly Disagree	2	5.7
Disagree	2	5.7
Neutral	9	25.7
Agree	**15**	**42.9**
Strongly Agree	7	20.0
Total	35	100
3. Physical/social distancing and good hygiene (sanitation) are some of the most effective ways to keep safe in these times of pandemic, especially when you are on-site.		
Strongly Disagree	0	0.0
Disagree	0	0.0
Neutral	6	17.1
Agree	**19**	**54.3**
Strongly Agree	10	28.6
Total	35	100
4. Wearing personal protective equipment (PPE) such as face masks and face shields in addition to the usual PPEs worn on construction sites may be unnecessary.		
Strongly Disagree	3	8.6
Disagree	4	11.4
Neutral	12	34.3
Agree	**15**	**42.9**
Strongly Agree	1	2.9
Total	35	100
5. It is just right that the authorities release COVID-19 related guidelines and measures for the construction industry to follow.		
Strongly Disagree	0	0.0
Disagree	0	0.0
Neutral	12	34.3
Agree	**18**	**51.4**
Strongly Agree	5	14.3
Total	35	100

with the COVID-19 situation (91.4%) (Stiles, 2020). Prior to the COVID-19 outbreak, individuals were dependent on social media to get information and news. Respondents indicate visitor's access on-site which has

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Categories	f	%
6. I willingly follow all the health and safety measures and guidelines for implementing infrastructure/construction projects issued by the authorities to minimize the spread of COVID-19 on construction sites.		
Strongly Disagree	0	0.0
Disagree	1	2.9
Neutral	7	20.0
Agree	**18**	**51.4**
Strongly Agree	9	25.7
Total	35	100
7. I am willing to take part in any COVID-19 testing.		
Strongly Disagree	0	0.0
Disagree	5	14.3
Neutral	12	34.3
Agree	**15**	**42.9**
Strongly Agree	3	8.6
Total	35	100
8. I do not keep myself informed on the COVID-19 situation and its related regulations and laws.		
Strongly Disagree	6	17.1
Disagree	9	25.7
Neutral	9	25.7
Agree	**11**	**31.4**
Strongly Agree	0	0.0
Total	35	100
9. To incorporate COVID-19 protocols, the new system of handling materials and equipment is too hassle.		
Strongly Disagree	1	2.9
Disagree	4	11.4
Neutral	12	34.3
Agree	**16**	**45.7**
Strongly Agree	2	5.7
Total	35	100
10. Limiting the number of workers working on-site is not a good COVID-19 protocol to follow as it just delays the completion of a construction project.		
Strongly Disagree	1	2.9
Disagree	4	11.4
Neutral	13	37.1
Agree	**15**	**42.9**
Strongly Agree	2	5.7
Total	35	100

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Table 4. Compliance checklist of building staff or workers (n=35)

Categories	f	%
1. Only those that are not below twenty-one (21) nor sixty (60) years of age older, are not pregnant, and do not have pre-existing health conditions or comorbidities are included in the workforce.	31	88.6
2. Construction personnel have undergone quarantine for fourteen (14) days and were tested for COVID-19 before deployment.	11	31.4
3. Contractors provided their employees with the necessary facilities and amenities in compliance with minimum health standards such as social distancing and proper hygiene, among others, while staying on-site.	21	60.0
4. Contractors provided their personnel with a continuous supply of vitamins, other over-the-counter medicines, quarantine facilities, and oxygen tanks for emergency purposes.	13	37.1
5. Proper sanitation was maintained in handling construction supplies and materials.	29	82.0
6. The minimum health standards such as social distancing, the use of face masks, face shields, and proper hygiene are strictly maintained on-site	25	71.4
7. Contractors do not easily give access to visitors. If a necessary permit were given to enter, visitors are sanitized prior to entry.	32	91.4
8. Measures are done to make sure that workers are well-informed or aware of the COVID-19 situation.	32	91.4

has been put into strict. Worth noting, only granted access after visitors completed a register, went through the screening process and complied generally (91.4%). People in many countries have relied on social media to obtain information about the virus, yet its negative impact especially fake news caused panic among the individual (Ahmad & Murad, 2020). Hence, valid facts on the current situation of COVID-19 must be informed to avoid spreading panic to the people.

Emerging themes of the contractors

Reasons for failure to comply with some of the COVID-19 safety guidelines

Most of the respondents have stated that they have complied with the safety protocols to avoid some problems in the workplace. The contractors and their company have strictly adhered to the COVID-19 protocols that could benefit them and the company and the people working in the company. Thus, in a critical period like the COVID-19 pandemic, employers and employees should build a stronger relationship than before. Firms should adopt employee-protecting policies to run business operations smoothly. In the same vein, employees should positively react to implementing firms, philanthropic policies to be the winner in the battle against the COVID-19 (Mahmud, Ding & Hasan, 2021)

However, some respondents have cited reasons for not complying with the COVID-19 safety guidelines, such as the project budget constraints and neglecting protocols as there are some not applicable for their workers. It is challenging to apply it to the on-site setting for the workers.

Project budget constraints

Respondents failed to comply with COVID-19 safety guidelines due to lack of budget. Allocated project budget to provide the necessities for COVID-19 health protocols such as facilities and amenities, minimum health standards, and continuous supply of vitamins may not be attainable because the budget may only be limited. Employers are responsible for supplying proper PPE to their employees and ensuring that employees wear it. But the higher material caused by the changes in foreign exchange rates and the increased demand for supplies and COVID-19 test procedures would be an additional cost to the company (Zamani et al., 2021). This hinders the COVID-19 safety guidelines, as it only adds up to the budget cost of the existing projects and for the clients.

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Neglecting to protocols

Respondents or the construction company failed to comply with the COVID-19 safety guidelines by simply ignoring the protocols without looking at their consequences. Wearing a face mask, face shield, regular hand washing, maintaining social distance, etc., would help improve health and safety at construction sites, but some contractors and companies fail to comply with it, knowing that it can curtail the spread of the COVID-19 among construction workers. Further, some health protocols are said to be not applicable especially to construction workers such as wearing facemasks while doing physical strength in construction. With the emergence of the COVID-19 pandemic, further improved precaution is needed to control the spread among the site workers (Zamani et al., 2021). Thus, contractors or construction companies must have a broader view of the pros and cons of complying and not complying with the safety guidelines to curb COVID-19.

Suggestions for other contractors who are failing in the challenges encountered but still determined to continue with the construction business

The respondents would like to address the following to their fellow contractors; follow safety protocols of the government as this can benefit in the long run, control operating expenses (increase budget, adopt cost cutting measures), and in project management to be wise and determined in achieving the goal.

Following the safety protocols of the government

This benefit in the long run, it may be an add-up to the project's cost not just to prevent spreading of the virus but it could help to sustain the operation of the construction firms as they prioritized safety over productivity. Thus, effective management of health and safety must be instituted to finish construction projects within schedule baseline, cost and quality (Damon, 2014). Health and safety regulations are formulated to minimize or prevent accidents at the workplace and enhance construction workers' sustainability.

Controlling the project's expenses

It would be better to adopt cost cutting measures or to increase budget in order to comply with the additional precautionary measures. Achieving the stakeholder's satisfaction and the completion of a project within predefined time, cost and quality constraints is not an easy task in building construction (Al-Tmeemy, Abdul-Rahman & Harun, 2011). Likewise, the process of measuring quality costs is often difficult due largely to the complexity of construction processes.

Strategized Project Management

Adjusting project cost is necessary especially now that there is an increased cost of construction materials due to the turndown of the economy. Setting deadlines on every project properly can contribute to a well-managed project. Issues related to risk factors such as site conditions, labor skills and availability, materials delivery, and equipment malfunction would result in project cost and schedule overruns (Abd El-Karim et al., 2017). However, it should be noted that there might be interactions between these two risk consequences since the measures of catching up with schedule require additional investment, which might lead to an increase in project cost. These risks encountered by the construction industry under the COVID-19 pandemic were of great difference compared to the traditional ones, which called for a more flexible and wider scope of project management and coordination skills to raise suitable and effective response strategies.

4 CONCLUSION

This paper demonstrates the situation of the construction industry during the spike of COVID-19 in Metro Cebu. Based on the findings, participants were slightly to severely impacted by the effects of COVID-19 in their work. Contractors categorized as class D were identified in a drastic situation on the effects caused by the pandemic. Hospitals, quarantine rooms and residential which were situated in the provinces in Cebu, were the most projects of these contractors, may it be due to the response of the surged COVID-19 cases in the country. Also, several categories in the construction phase were slightly to severely affected but still managed to keep going as planning and motivation were put into mindset.

On the other hand, building staff or workers were also assessed especially in governing the "new normal" brought by the COVID-19 and the compliance to the COVID-19 guidelines of contractors or construction companies. Due to implemented quarantine restrictions, these workers were concerned that they may be laid off from work and get infected with the disease. Perhaps, the contractors and construction companies, on their part, were prudent to comply with the COVID-19 safety guidelines for the benefit of their workers.

Furthermore, some minimum health standards may be overlooked since they may create health difficulties or are not applicable in working on-site particularly those working people to exert more physical strength. Yet, construction companies have offered significant assistance to its workers. Thus, to continue the construction business, both the construction company and contractors must be innovative and adopt some changes in their project management to respond quickly to the interests of their clients while also emphasizing the health of its workers.

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RECOMMENDATIONS

In order to continue with the construction business, it is prudent that the reference points of various stakeholders involved are known. This will be essential in coping with the challenges brought by the pandemic or any crisis that may occur. Hence, below are the recommendations to guide contractors or construction businesses while pursuing their business amidst a crisis.

1. There should be no social stigma or discrimination at the workplace for any reason, including access to information and protection from COVID-19.
2. Be initiative or flexible to any crisis that may occur in the workplace.
3. Adopt technology innovation to survive in this rapidly changing environment.
4. Forecast on the planning stage, include the unforeseen constraints and difficulties and its equivalent strategic action plan.

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