Measuring the Risk Level of Employees for COVID-19: A Case in Government Sector

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Abstract

The rise of COVID-19 changed the way how people work. Some are permitted to work from home, however, some workers are still required to always report. This increases the risk for COVID-19 infection. This study measures the risk level of employees for COVID-19 infection of workers in the government sector of the Philippines. The RIKA Assessment Tool was utilized to evaluate the different risk factors associated with the COVID-19 infection. Based on the results of the study, the researchers can conclude that the comparisons with a low significant relationship are the total risk score and comorbidities, total risk score and smoking habit, total risk score and anxiety, as well as the lockdown and compliance. For the comparisons with a moderately significant relationship are the age and comorbidities, total risk score and hand washing, total risk score and sanitizing, anxiety and government trust, total risk score and government trust, total risk score and residential, as well as the total risk score and lockdown. The comparisons with a highly significant relationship are the total risk score and travel history, as well as the total risk score and compliance.

Keywords
COVID-19, risk level, government sector

1. Introduction

The ongoing COVID-19 crisis has had a massive impact on workplaces all across the world. Many workplaces have been modified or closed as a result of the widespread viral infection, illness, and mortality, resulting in huge numbers of people being temporarily furloughed or unemployed. The elderly and physically vulnerable are the most exposed to the virus and its effects, but physical separation, stay-at-home orders, and isolation have had devastating social, economic, and health ramifications for employees of all ages, with a disproportionate impact on the most disadvantaged (Shaw et al. 2020). In connection to the aspect of the Government Employees in the Philippines, where they are also in charge of implementing precautionary measures and guidelines which the Inter-Agency Task Force for the Management of Emerging Infectious Diseases (IATF) spearheaded, have also been challenged by the difficulty of the circumstances. Workplaces in every branch faced different dilemmas on how to provide efficient services to the people while monitoring the health safety protocols.

According to the study of Lilja et al. (2018) Some of the challenges of inviting workers back to the workplace mirror some of the issues that we recognize as commonplace in the return-to-work and occupational rehabilitation literature—the idiosyncratic nature of health and work, individual disease vulnerability, susceptibility to environmental hazards, the need for job flexibility and modification, and differences in work style, social capital, and organizational support. A recurring theme in the work disability literature is the heterogeneity of return-to-work outcomes for workers with a wide range of injuries, illnesses, and medical procedures (e.g., cardiac arrest, major trauma). Within medical conditions, this variation has been attributed to demographic and health variables (age, fitness, health status, anthropometry), workplace factors (e.g., supervisor support, ability to accommodate, physical demands), psychological factors (e.g., perceived impairment, job stress, coping, fears of re-injury or worsening health conditions, catastrophizing), and social factors (e.g., perceived impairment, job stress, coping, fears of re-injury or worsening health conditions), as the COVID-19 workplace opening process may also need to address this complexity of factors (Cancelliere et al. 2016, de Vries et al. 2018, Gragnano et al. 2018).

1.1 Objectives

Given this scenario were working in Government workplaces during the pandemic have a high chance of acquiring different hazards and diseases in the working area, which can increase the spread of the virus in different places. Therefore, the researchers sought to measure the risk level of the employees in the government workplaces to identify the main cause of the risk and determine various factors that contribute to the spread of risk and hazards in the work area. To attain the goal of the study, researchers will utilize the RIKA Risk Assessment Tool to analyze and achieve the stated goals to have an accurate assessment of the condition of the Government Employees.

2. Literature Review

A study conducted by Baker, Peckham, and Seixas (2020) called "Estimating the burden of United States workers exposed to infection or disease: A key factor in containing the risk of COVID-19 infection", states that there is a surge in public health interest in classifying people who are at increased risk in getting the COVID-19. Being in public and staying in close quarters may not only put workers at risk but also, can be a contributor to the transmission of the disease to the community. The study used a survey that measures how frequently the workers in each occupation are being exposed to the infection at work. This enabled the researchers to estimate the number of United States workers, ranging from different occupations, that are exposed to the infection at their work. The results of the study, showed that 10% of the workers have an occupation in which exposure to the infection occurs at least once per week, this increases to 18.4% when in terms of at least once per month. With the health sector, a given for the risk, protective service, office and administrative, education, community and social, and construction and extraction occupations are also at high risk

In a study performed by Asnakew et al. (2020) with a title of "Community Risk Perception and Compliance with Preventive Measures for COVID-19 Pandemic in Ethiopia", the study evaluated the community's level of risk perception of COVID-19, compliance with precautionary measures, and factors that influence this behavior. The study used and an online survey with the use of google forms and a total of 521 respondents were obtained. The results show that 90.4 % are aware that they are vulnerable to COVID-19, 87.5 % believe that COVID-19 is a major disease. It was also found out that 81% of the respondents knew about COVID-19 from television and social media.

According to a study done by Rozenfeld et al. (2020) that is called “A model of disparities: risk factors associated with COVID-19 infection”, Earlier studies have mainly focused on the clinical risk factors related to serious illness and death of COVID-19. There are only a few analyses conducted on the clinical, sociodemographic, and environmental factors linked with beginning infection of COVID-19. The study used a multivariable statistical model to characterize the risk factors in 34,503 cases of COVID-19 infection in the Providence Health System (U.S.). The results show that there is a higher risk of COVID-19 infection associated with older age, male gender, Asian race, Black/African American race, Latino ethnicity, non-English language, residing in a neighborhood with financial insecurity, low air quality, housing insecurity, or transportation insecurity, and living in senior living communities.

Based on the research of C. Ranit. et al. (June 2, 2020), a study called "COVID-19 Risk Assessment Tool: Dual application of risk communication and risk governance", this study is about an Indian based social entrepreneurship startup that made use of the COVID 19 Risk Assessment tool as a way to spread innovative strategies, decision making and awareness in terms of getting fully prepared to combat any problems one might face in the COVID pandemic. The first part of the risk assessment focuses on and explores risk communication in the context of emergencies in light of the COVID-19 pandemic. Where this process operates by undertaking existing risk assessments and information tools available online in the form of apps and surveys. The second part focuses more on the main key features of RIKA's Risk Assessment Tool and discusses the methodology used for the development of the tool. The third part focuses on data analysis based on the responses of the Risk Assessment Tool. Where it made use of Pearson's correlation coefficient to identify if there is any linear relationship between two variables as well as the strength of the relationship. Based on the study's results or data, wearing a mask and following social distancing has a weak correlation with a coefficient of 0.298. Indicating that while one may practice social distancing, they might not follow the rule of wearing a mask. As for washing hands and compliance with social distancing, it has a higher correlation coefficient of 0.364. For gender and behavior, it correlates with a coefficient of 0.017 which means behavior factors are not dependent on gender. Lastly, for age group and behavior it has a negligible correlation with a coefficient of 0.048. For smoking and total risk, it has a moderate positive correlation coefficient of 0.302. While for the social policy and individual behavior, it has a positive and moderate correlation with a coefficient of 0.266.

According to the study of S. Suzanne M. et al. (November 12, 2020), a study called “A Risk Assessment Tool for Resumption of Research Activities During the COVID-19 Pandemic”, the researchers in this study developed a risk assessment tool through a combination of expert consultations, national and local expertise, institutional guidance and review of emerging literature. In building a framework, the researchers drew or took note on historical occupational health frameworks for infectious disease biosafety and risk assessment, the most recent peer-reviewed grey literature about infection dynamics, as well as staff experience that is susceptible to evaluate the risk of exposure to SARS-CoV-2. For its results, the Risk criteria for each procedure consist of the age of the participant, location, physical proximity necessary, exposure time, aerosolization potential, and criteria for use of available PPE. Using these criteria, the researchers then established a four-level schedule that includes minimal risk, moderate risk, high risk, up to unacceptably high risk. The researchers then concluded that the activities with the highest level of risk were those that potentially aerosolize the virus during the procedure. So, by applying this risk assessment, the researchers believe that using this risk assessment tool that they developed will help protect our research staff and participants in a way that can maximize the integrity of research aims while minimizing infection risk.

According to the study of T. Matthew P. et al. (May 21, 2021), a study called "Supporting Wildfire Response During a Pandemic in the United States: the COVID-19 Incident Risk Assessment Tool", the researchers in this study built an online dashboard to combat or fill the gap which is to create a scale and scope appropriate tool to support incident level assessment of COVID-19 risk. Initially, the COVID-19 Incident Risk Assessment Tool was designed for individual incidents where the information and results are intended only for local users. The researchers' objectives for the use of this tool are to capture local and up-to-date knowledge of conditions, track changing conditions over time, promote situational awareness, help identify mitigations within the scope of control of the incident management organization, and, most importantly, facilitate communication, deliberation, and information sharing throughout the interagency response network. The main goal or purpose of this study is to summarize usage statistics, provide examples of real use on wildfire incidents, and report feedback from users. Where this tool intends to support risk-informed decision-making regarding incident logistics, operations, and COVID-19 mitigations. The results obtained are that the Camp Risk Status and Mitigation Risk Status both were rated as moderate, while the COVID Risk Status was rated as high due to multiple cases among fire personnel and concerns over limited local healthcare capacity.

According to the study of Zhou et al. (2020) that risk awareness is the best way to prevent and slow down the transmission of the COVID-19 pandemic. Risk awareness is achieved through the communication of risk assessment. Effective risk communication is an important measure to control the infodemic. Most risk assessment tools focus on either tracking the affected patients or diagnosing a probable health condition through symptoms. The study's scope is in the country of India, and the RIKA India introduces an innovative Risk Assessment Tool that goes beyond symptom detection and patient tracking. It includes four factors in the assessment of risk: Health, Behavior, Exposure, and Social Policy. Each of these four factors has sub-factors that help to assess the overall risk more comprehensively and also present it to the user in a simplified way.

3. Methods

Throughout the study, the researchers were guided by the following conceptual framework, which is represented below in Figure 1. It shows that the independent variable is the selection of Government Employees with having the following indicators: (sex, age, area of residence, position, years employed, and monthly income). For the dependent variables, researchers utilize several statistical analysis tools to analyze the data. It uses descriptive statistics that describe the basic features of the data in a study and provided simple summaries about the sample and the measures, and the Pearson Correlation Analysis to correlate various factors that the researchers identified upon conducting the study. Also, using the RIKA Risk Assessment Tool to further investigate the respondent's working condition amidst COVID -19 and to determine in-depth factors that are being the cause of hazards and risk in the workplace.

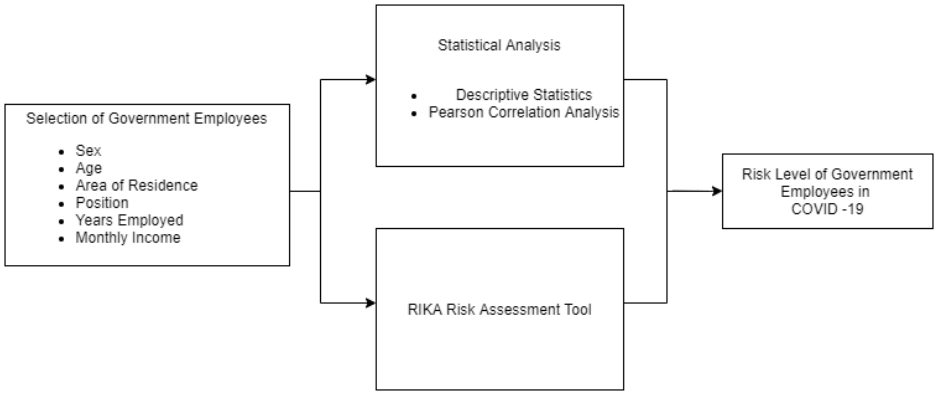

Figure 1. Conceptual Framework

3.1 Respondents of the Study

The respondents of the study consist of employees ranging in age from 21 and above who are working under the government sector of the Philippines. The different employees that took part in the survey are professionals working in different sectors such as the security, education, healthcare, and business sectors. Most of the respondents are from the public education profession. The hours of work spent by each respondent outside their homes are not identified that's why it is assumed that these respondents are reporting to work. Hence, they are mostly classified as essential workers.

3.2 Risk Assessment Tool

The ergonomic tool utilized in this study is the RIKA Assessment Tool. The RIKA Assessment Tools is a type of ergonomic assessment that will assess the respondent's risk level for COVID-19 infection. This assessment tool consists of a questionnaire that is composed of four subparts. The first sub-part of the questionnaire asks about the health factors, the second subpart asks about the behavioral factors, the third sub-part asks about the exposure factor, while the fourth sub-part asks about the social factor.

It should first be noted that each option or choice that the respondent in the study gets to select from each question under the four sub-parts are assigned a risk scale number of either one, two, three, or four depending on the number of choices available. The scale of 1 is known to be the best or most efficient option or in terms of age, the youngest age group option is the one with the least chances of getting the virus. While the scale of four is known to be the least efficient option or in terms of age, the oldest age group choice is the one with the highest chances of getting the virus. As to how the risk scoring is obtained, the researchers took the sum of all the choices that each respondent chose under each subpart of the questionnaire from the RIKA Risk Assessment Tool and the total sum will reveal whether the respondents is under a low, moderate, or high-risk level for the COVID-19 infection. To know if one has obtained a low-risk level is if their total risk level is in the range of 15-27, a medium risk if their total risk level is in the range of 28-41, and high risk if their total risk level is in the range of 42-53.

3.3. Statistical Treatment of Data

The data collected from the survey questionnaire through google forms were statistically analyzed for the intended findings of the study. The respondents were asked to answer the RIKA's Risk Assessment to find out the risks that are present to COVID-19 when they are working. The data collected from the survey were analyzed with the use of descriptive statistics including mean, frequency, count, and percentage. The count, frequency, and percentage were mainly used for the summary of the respondents' profile and the summary of risk factors. The scores from the different risk factors were totaled to identify what level of risk they classify as, and they were also summarized. The Pearson correlation analysis was applied to the data to identify if there is a correlation between the different risk variables to COVID-19 infection.

4. Results and Discussion

Table 1. Summary Statistics of Demographic Profile

Respondent's Profile	Category	N	%
Sex	Male	20	23.81%
	Female	64	76.19%
Age	21 - 30	13	15.48%
	31 - 40	16	19.05%
	41 - 50	29	34.52%
	51 - 60	23	27.38%
	61 and above	3	3.57%
Area of Residence	NCR	48	57.14%
	Others	36	42.86%
Position	Teachers	61	72.62%
	Staff	19	22.62%
	Principal	4	4.76%
Years Employed	less than 10 years	34	40.48%
	10-20 years	15	17.86%
	more than 20 years	35	41.67%
Monthly Income	10,000 and below	2	2.38%
	10,000-20,000	6	7.14%
	20,000-40,000	49	58.33%
	40,000-70,000	22	26.19%
	70,000-130,000	4	4.76%
	130,000 and above	1	1.19%

The summary of the profile of the respondents is shown in table 1. There were more female respondents with 64 and only 20 respondents for males. The age groups are very well distributed but there are more respondents in the age group of 41-50 with 29 respondents and followed by 51-60 with 23 respondents. The majority are from the NCR which consists of 48 respondents while 36 respondents have various locations outside of NCR. The employees were mostly teachers which are the 61 respondents followed by staff with 19 respondents and the least are principals with 4 respondents. For the number of years employed, 35 respondents are employed for more than 20 years group, 34 respondents are employed for less than 10 years, and 15 respondents are employed for 10-20 years. Our respondents mostly earn an income of around 20,000-40,000 pesos.

Table 2. Summary of Risk Factors

HEALTH RISK				
FACTOR	VARIABLE	RISK SCALE	N	%
Age	21 - 30	1	13	15.48%
	31 - 40	2	16	19.05%
	41 - 50	3	29	34.52%
	51 - 60	4	23	27.38%
	61 and above	5	3	3.57%
Co-morbidities	none	1	44	52.38%
	1	2	28	33.33%
	2	3	10	11.90%
	3 or more	4	2	2.38%
Sex	Female	1	64	76.19%
	Male	2	20	23.81%
Smoking habit	Never	1	75	89.29%

	Seldom	2	5	5.95%
	Occasionally	3	1	1.19%
	Very frequently	4	3	3.57%
BEHAVIORAL RISK				
FACTOR	VARIABLE	RISK SCALE	N	%
Use of face mask	N95 mask	1	7	8.33%
	medical mask	2	74	88.10%
	cloth mask	3	3	3.57%
	others	4	0	0.00%
Frequency of hand washing	very frequently	1	48	57.14%
	frequently	2	35	41.67%
	seldom	3	1	1.19%
	never	4	0	0.00%
Sanitizing before touching the face	yes	1	62	73.81%
	sometimes	2	20	23.81%
	no	3	2	2.38%
Following social distancing	yes	1	74	88.10%
	sometimes	2	10	11.90%
	no	3	0	0.00%
Anxiety about situation	not very	1	4	4.76%
	a little bit	2	30	35.71%
	very much	3	50	59.52%
Trust in gov't measures	yes	1	40	47.62%
	maybe	2	34	40.48%
	no	3	10	11.90%
EXPOSURE RISK				
FACTOR	VARIABLE	RISK SCALE	N	%
Residential type	detached home	1	49	58.33%
	condo	2	5	5.95%
	apartment	3	29	34.52%
	informal settlement	4	1	1.19%
Occupation	offsite worker	1	0	0%
	essential worker	2	81	96%
	frontliner	3	0	0%
	medical personnel	4	3	4%
Travel history	no history	1	56	66.67%
	with travel history	2	15	17.86%
	attended mass gathering	3	11	13.10%
	travel history & mass gathering	4	2	2.38%
SOCIAL POLICY RISK				
FACTOR	VARIABLE	RISK SCALE	N	%
Effectiveness of lockdown	most are following	1	47	55.95%
	some are following	2	33	39.29%
	very few are following	3	4	4.76%
Community compliance	most are following	1	45	53.57%
	some are following	2	36	42.86%
	very few are following	3	3	3.57%

For the summary of risks factors, the data obtained here as shown on the table is first done by getting the frequency of all the answers and then the researchers computed the percentages of them. The summary of risks factors is divided into four categories, mainly into: health risk, behavioral risk, exposure risk, and social policy risk. The factors of age and sex that are mentioned earlier are also considered here in the health risk. Our respondents are people from the workforce and the working environment and their home environment come with different risks. With this it was identified that almost half of the respondents have comorbidities, 28 respondents have one comorbidity, ten respondents have already two comorbidities, and two respondents, unfortunately, have three or more comorbidities. Most of the respondents do not smoke but there are only 9 that are smoking in different frequencies, five respondents smoke seldomly, three respondents smoke very frequently, and only one smoke occasionally.

For the behavioral risk, most of the respondents are following the safety and health protocols which are the following: use of face mask, hand washing, sanitizing before touching the face, and social distancing. The respondents were also questioned about their level of anxiety regarding the current situation and if they trust the government measures. Most of the respondents answered that they are anxious about the current situation of which 50 respondents answered that they are very much anxious, and 30 respondents are a little bit anxious about the current situation in the battle against the COVID-19 infection. Meanwhile, it was known that 40 respondents trust the government while 34 respondents are not sure about how they are feeling, and there are ten that do not trust the government.

In the exposure risk factor, the respondents were asked about the type of residence that they live in and what are their recent travel history. It was found out that the respondents mostly live in a detached home in which there are 49 respondents, while 29 respondents are in an apartment, five people live in a condominium, and there is one respondent that is an informal settler. The respondents were also classified for the type of occupation they are currently in. Mostly are essential workers with 81 respondents and 3 respondents that are medical personnel. Most of the respondents have no history of travel, only 15 have traveled, 11 have attended a mass gathering and two respondents have traveled and attended a mass gathering.

The last one is the social policy risk factor, for this one, the respondents are asked about the current situation in their respective communities, if the lockdown is effective in their locality and if people are wearing masks and following social distancing. In the observance of the effectiveness of lockdown, 47 respondents answered that most are following, 33 said that only some are following and, four responded that only very few are following. In the observance of the safety and health protocols of their community, 45 respondents said that most are following, 36 said that only some are following, and three respondents said that very few are following the safety and health protocols.

Table 3. Summary of Risk Level

Risk level	**Freq.**	**%**
low	63	75%
moderate	21	25%
high	0	0%

The scores from the health risk, behavioral risk, exposure risk, and social policy risk that was collected from the survey questionnaire were tallied and totaled in consideration of the different risk factors. The worded responses were converted into numerical levels and the responses requiring negative connotation were reversed to be coherent as was shown in table 2 in which there are corresponding risk scores for each response. After the risk scores of each respondent are added, they are classified into low, moderate, and high-risk levels. If the totaled scores are in the range of 15-27, it is classified as low risk. If it is in the 28-41 score range, then it is considered a moderate risk. Finally, if the score is from 43-53, then it is classified as high risk. The breakdown of the data is shown in Table 3. It was found out that 63 respondents have a low risk which consists of 75% of the respondents, 21 respondents have a moderate risk which is 25% of the respondents, and luckily there were no respondents that had a high risk for the COVID-19 infection.

Table 4. Correlation Analysis between the pair of chosen variables highlighted

Variables	Pearson Correlation	P-Value	Remarks
Age and Comorbidities	0.408	0.000	*moderate correlation

Age and Face Mask	-0.02	0.854	no correlation
Age and Hand Washing	-0.068	0.537	no correlation
Comorbidities and Hand Washing	-0.17	0.123	no correlation
Age and Sanitizing	-0.158	0.152	no correlation
Comorbidities and Sanitizing	0.17	0.123	no correlation
Age and Anxiety	0.169	0.124	no correlation
Comorbidities and Anxiety	-0.119	0.281	no correlation
Total Risk Score and Age	0.053	0.623	no correlation
Total Risk Score and Comorbidities	0.257	0.018	low correlation
Total Risk Score and Smoking Habit	0.29	0.008	low correlation
Face Mask and Anxiety	-0.16	0.145	no correlation
Hand Washing and Anxiety	-0.01	0.926	no correlation
Sanitizing to Anxiety	0.035	0.754	no correlation
Face Mask and Government Trust	-0.141	0.201	no correlation
Total Risk Score and Face Mask	0.043	0.698	no correlation
Total Risk Score and Hand Washing	0.359	0.001	*moderate correlation
Total Risk Score and Sanitizing	0.373	0.000	*moderate correlation
Anxiety and Government Trust	0.393	0.000	*moderate correlation
Total Risk Score and Anxiety	0.235	0.032	low correlation
Total Risk Score and Government Trust	0.33	0.002	*moderate correlation
Total Risk Score and Residential	0.385	0.000	*moderate correlation
Lockdown and Compliance	0.246	0.024	low correlation
Total Risk Score and Travel History	0.502	0.000	**high correlation
Total Risk Score and Lockdown	0.449	0.000	*moderate correlation
Total Risk Score and Compliance	0.536	0.000	**high correlation

The basis of the ranges used regarding the values of R or strength of the relationship utilized by the researchers is Pearson's correlation coefficient. An R-value of 0.3 and below represents a low correlation which will have no asterisk, 0.3 to 0.5 represents a moderate correlation which will be represented with a single asterisk, 0.5-0.7 represents a high correlation which will be represented with two asterisks, while 0.7-0.9 represents a very high correlation which will be represented with three asterisks. All p-values less than 0.05 mean there is a significant relationship between the two variables. While all p-values greater than 0.05 mean that there is no significant relationship.

In a comparison of the variables of Age and Comorbidities, Age and Comorbidities has a moderate correlation. That's because the value obtained for R or the Pearson correlation is 0.408, which indicates a moderate strength between the two variables as it is in between the range of 0.3-0.5. The p-value obtained is 0.000 indicating that there is a significant relationship since 0.000 is less than the p alpha value of 0.05.

In a comparison of the variables of Total Risk Score and Comorbidities, the Total Risk Score and Comorbidities have a low correlation. That's because the value obtained for R or the Pearson correlation is 0.257, which indicates a weak strength between the two variables as it is below 0.3. The p-value obtained is 0.018 indicating that there is a significant relationship since 0.018 is less than the p alpha value of 0.05.

In the comparison of the variables of Total Risk Score and Smoking Habit, the Total Risk Score and Smoking Habit has a low correlation. That's because the value obtained for R or the Pearson correlation is 0.29, which indicates a weak strength between the two variables as it is below 0.3. The p-value obtained is 0.008 indicating that there is a significant relationship since 0.008 is less than the p alpha value of 0.05.

In a comparison of the variables of Total Risk Score and Hand Washing, the Total Risk Score and Hand Washing have a moderate correlation. That's because the value obtained for R or the Pearson correlation is 0.359, which indicates a moderate strength between the two variables as it is in between the range of 0.3-0.5. The p-value obtained is 0.001 indicating that there is a significant relationship since 0.001 is less than the p alpha value of 0.05.

In a comparison of the variables of Total Risk Score and Sanitizing, the Total Risk Score and Sanitizing have a moderate correlation. That's because the value obtained for R or the Pearson correlation is 0.373, which indicates a moderate strength between the two variables as it is in between the range of 0.3-0.5. The p-value obtained is 0.000 indicating that there is a significant relationship since 0.000 is less than the p alpha value of 0.05.
In a comparison of the variables of Anxiety and Government Trust, the Anxiety and Government Trust has a moderate correlation. That's because the value obtained for R or the Pearson correlation is 0.393, which indicates a moderate strength between the two variables as it is in between the range of 0.3-0.5. The p-value obtained is 0.000 indicating that there is a significant relationship since 0.000 is less than the p alpha value of 0.05.

In a comparison of the variables of Total Risk Score and Anxiety, the Total Risk Score and Anxiety have a low correlation. That's because the value obtained for R or the Pearson correlation is 0.235, which indicates a weak strength between the two variables as it is below 0.3. The p-value obtained is 0.032 indicating that there is a significant relationship since 0.032 is less than the p alpha value of 0.05.

In a comparison of the variables of Total Risk Score and Government Trust, the Total Risk Score and Government Trust has a moderate correlation. That's because the value obtained for R or the Pearson correlation is 0.33, which indicates a moderate strength between the two variables as it is in between the range of 0.3-0.5. The p-value obtained is 0.002 indicating that there is a significant relationship since 0.002 is less than the p alpha value of 0.05.

In a comparison of the variables of Total Risk Score and Residential, the Total Risk Score and Residential has a moderate correlation. That's because the value obtained for R or the Pearson correlation is 0.385, which indicates a moderate strength between the two variables as it is in between the range of 0.3-0.5. The p-value obtained is 0.000 indicating that there is a significant relationship since 0.000 is less than the p alpha value of 0.05.

In a comparison of the variables of Lockdown and Compliance, the Lockdown and Compliance have a low correlation. That's because the value obtained for R or the Pearson correlation is 0.246, which indicates a weak strength between the two variables as it is below 0.3. The p-value obtained is 0.024 indicating that there is a significant relationship since 0.024 is less than the p alpha value of 0.05.

In a comparison of the variables of Total Risk Score and Travel History, the Total Risk Score and Travel History has a high correlation. That's because the value obtained for R or the Pearson correlation is 0.502, which indicates a strong strength between the two variables as it is in between the range of 0.5-0.7. The p-value obtained is 0.000 indicating that there is a significant relationship since 0.000 is less than the p alpha value of 0.05.

In a comparison of the variables of Total Risk Score and Lockdown, the Total Risk Score and Lockdown have a moderate correlation. That's because the value obtained for R or the Pearson correlation is 0.449, which indicates a moderate strength between the two variables as it is in between the range of 0.3-0.5. The p-value obtained is 0.000 indicating that there is a significant relationship since 0.000 is less than the p alpha value of 0.05.

In a comparison of the variables of Total Risk Score and Compliance, the Total Risk Score and Compliance have a high correlation. That's because the value obtained for R or the Pearson correlation is 0.536, which indicates a strong strength between the two variables as it is in between the range of 0.5-0.7. The p-value obtained is 0.000 indicating that there is a significant relationship since 0.000 is less than the p alpha value of 0.05.

5. Conclusion

In a comparison of the different chosen variables highlighted under Table 4. of the correlation analysis, the comparisons with a low significant relationship are the Total Risk Score and Comorbidities, Total Risk Score and Smoking Habit, Total Risk Score and Anxiety, and the Lockdown and Compliance. The reason why this is the case for the total risk score and comorbidities is that almost half of the respondents are in the lower risk areas of the scoring for the comorbidities factor under the health risk. For the total score and smoking habit, a large majority of the respondents do not smoke which therefore doesn't affect the total risk score under the health risk. For the total risk score and anxiety, based on the answers of the responses, a majority are very much anxious about the situation but because of that, they are more aware of the protection procedures that they need to perform and thus knowing how to keep safe. Also, this can be because there are more pressing matters or options that the respondents feel are more important than the anxiety factor thus there is a low significant relationship. For the lockdown and compliance, this has a low significant relationship because implementing lockdowns does not necessarily stop people from going out

and staying at home to follow the rules because not everyone in the Philippines has the privilege to stock food at home as not everyone has the financials to support oneself or their family for a long period without going out to work.

For the comparisons with a moderately significant relationship are the Age and Comorbidities, Total Risk Score and Hand Washing, Total Risk Score and Sanitizing, Anxiety and Government Trust, Total Risk Score and Government Trust, Total Risk Score and Residential, and the Total Risk Score and Lockdown. The reason why this is the case for age and comorbidities is that age does play a role in determining one's ability to withstand and against any disease or any medical conditions that an individual has. The older someone is the harder it is for them to combat any comorbidities they may possess. For the total risk score and hand washing, this has a moderately significant relationship because a majority of the respondents frequently washes their hands, and a good amount under the second safest risk level for the washing of hands factor under the behavioral risk. And washing hands is one of the most important things to do especially when going out as it is really easy to not notice that you may have touched your eyes, nose, and mouth without realizing that you touched something before that could have any bacteria or viruses present. For the total risk score and sanitizing, a majority of the respondents do sanitize but there are a few that only perform the task of the second safest risk level. Sanitizing is crucial especially in the process of cleaning where this should be done before and after certain activates are done to make sure that everything is clean and safe. For anxiety and government trust, there are people out there that are anxious a lot of times if the government can provide them with the necessities needed to help them combat the COVID-19 virus during the pandemic. For the total risk score and government trust, almost half of the respondents do have trust and faith towards the government believing that they can help and provide for the people during these hard times. For the total risk score and residential, almost half of the respondents live in detached homes which are in the lowest risk areas of the scoring for the residential type factor under the exposure risk which indicates the lowest risk for exposure to the virus. For the total risk score and lockdown, the majority of the respondents are following the lockdown protocols, therefore, are in the lower risk areas of the scoring for the effectiveness of lockdown factor under the social policy risk.

The comparisons with a highly significant relationship are the Total Risk Score and Travel History, as well as the Total Risk Score and Compliance. The reason why this is the case for the total risk score and travel history is that the RIKA risk assessment focuses or prioritizes the outgoing activities and their interactions when outdoors, therefore it will have a high relationship with the travel history. Where even when the majority of the respondents have no travel history, there are still quite a few that went to mass gatherings and have a travel history. As for the total risk score and the compliance, this comparison has a highly significant relationship because compliances are what help people take precautionary measures to protect themselves from the virus, and performing them is vital to staying safe not only for the individual but also for everyone around them. Where almost half of the respondents chose the option that is the second safest risk level for the community compliance factor under the social policy risk which is why this will affect the total risk score.

6. Recommendation

It is recommended for future researchers of the same field or topic to have a fixed source of the sector of respondents. It is better to have the respondents from one company or one sector only to have fixed and uniform data to have it easier in the classification of data. It is recommended to the respondents of the study to have the risk factors that can be controlled by themselves to be lessened. The safety and health protocols should be followed and try to avoid mass gatherings and travels. The vices should be eliminated like smoking and drinking, and exercise should be done always. No matter what we are feeling towards the government, we should follow the lockdown procedures and guidelines as much as possible. It is recommended to employers to always have their employees safe. The jobs and tasks that can be done at home should be done at home, and the frequencies of going to the workplace should be limited.

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