

## The Pandemic Lockdown Impact on Employees in Saudi Arabia

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### Abstract

Once COVID-19 lockdown was activated in most countries, people had started to suffer the consequences, among those were employees who are considered one of the important society segments as an engine of economic growth during the pandemic. In this regard, this study employs structural equation modeling (SEM) to determine the impact of COVID-19 lockdown on private sector-employees in Saudi Arabia based on a sample targeting the lockdown period using a survey consisting of three main domains to be measured: physical, psychological, and financial. The correlations between the study variables are within the acceptable range. Confirmatory Factor Analysis (CFA) was conducted using AMOS software to validate each domain construct. The results provide support for the hypothesized model with significant internal consistency reliability for each domain. The estimated model reveals that the lockdown exerted a considerable influence on various aspects of employees' life which therefore may impact their performance in their organizations later. The findings can help guide decision-makers within the business community regarding internal customers' needs and also help governments gain a better understanding of citizens' emotions, issues and, interests during critical times.

### 1. Introduction

At any time, the world is susceptible to crises that could impact individuals and communities. An impact is likely to go beyond the measure, hitting people in their direct life causing undesirable changes. In fact, through the ages, people suffer from crises along with their negative consequences. Pandemics usually influence the community in different dimensions and change life and patterns of behavior, which entails conducting research, particularly for changes that can cause negative consequences.

Employees are one of the effective segments of society as they participate in the promotion of development, with their efforts considered as the engine of economic growth. Hence, it is important to address any problems that may impede their progress during crises.

As the Covid-19 pandemic spread and had deteriorated, few organizations were barely able to cope with the crisis or to have the flexibility for new economic updates. Not only organizations were struggling to survive, but also employees were severely suffering the consequences of being part of the organizations' system. The organizations' management response to the Covid-19 pandemic and the actions taken under pressure were both influenced by employees. That is to say, employees got impacted by governmental actions in general and organizations' decisions in particular.

On March 2, 2020, the first Covid-19 case was confirmed in Saudi Arabia and this figure jumped to 2400 by April 5, 2020. About a quarter of the population experienced severe to moderate psychological impact (Alrashed et al., 2020). The Saudi government announced that about \$32 billion would go for the private sector as an economic relief in reaction to the impact of Covid-19. However, the government had to raise the Value Added Tax (VAT) by 10%, aiming to lessen the budget shortage (Parveen, 2020).

### 1.1. Problem statement

The scope of this research is on private-sector male employees in Saudi Arabia. To investigate the pandemic lockdown effect on their quality of life, a hypothesis is proposed as follows:

*H1: Covid-19 pandemic Lockdown negatively impacted the quality of employees' life.*

## 2. Literature review

On March 11, 2020, the world health organization (WHO) declared the Covid-19 pandemic as a global pandemic. The virus had spread rapidly throughout the world. Exact diagnoses could not be made and the ambiguity in virus seemed to be a great mystery to scientists. In addition, the increment of newly infected cases raised a great uncertainty about when the pandemic is going to end. The elderly and children were more susceptible to infections of Covid-19, more than half of the earliest reported infected cases were having a median age of 56, not to mention that thousands of cases passed away (Sohrabi et al., 2020). In the light of this tragic event, i.e., control and lives losing, containing the situation was a must. Hence, most governments around the world implemented lockdowns. Such action was taken under the pressure to avoid aggravating the situation and to escape the potential consequences.

However, once the lockdown was activated, people had started to suffer the consequences of those decisions taken by authorities. For this reason, several researchers have striven to investigate the numerous negative effects of the Covid-19 pandemic on human health and the world economy. The following sub-sections will shed light on what elements are impacted by crises in particular domains.

### 2.1. Physical domain

Evidence from previous studies demonstrated that seven items got impacted by crises and pandemics. A study revealed that as petrol prices increase, people tend to stay at home and enjoy their physical activities. Hence, it can be argued that during similar crises (such as covid-19), a change may occur to an individual's *mobility*. Obviously, for a happy life, car driving must be supported since it helps in building up social networks (Prakash et al., 2020).

The fourth leading cause of death is *physical inactivity* (Kohl et al., 2012). The lockdown caused a reduction in physical activity levels. About one-third of respondents felt lazy and less energized in UAE during the lockdown (Cheikh Ismail et al., 2020). Nevertheless, people of both sexes were spending extra time in *housework* during the lockdown, particularly for those with children (Del Boca et al., 2020).

Some people felt less satisfied with themselves during the lockdown, investigation revealed that it was attributed to spending less time in *self-care* which also results in feeling sexually less attractive (Dewitte et al., 2020). Another study found an indirect significant relationship between personal hygiene and self-esteem (Umoiyoho et al., 2011). Many participants said they had sleep disturbances, their *sleep quality* had become poorer, and they *gained weight* during the lockdown (Cheikh Ismail et al., 2020).

### 2.2. Financial domain

The pandemic caused a rise in the unemployment rate and thus a *reduction in the income* for those on the job (Dang & Viet Nguyen, 2020). Some economists investigated the economic crisis's impact on workers, respondents stated that they face *limited promotion* prospects (Bispinck et al., 2010).

The *desire for more money* is likely to lower well-being (Diener & Biswas-Diener, 2002). Those with less money orientation are likely to have higher emotional intelligence and the ability to handle challenges (Engelberg & Sjöberg, 2006). *Financial difficulties* lead to stress, depression, and anxiety (Richardson et al., 2017) and could force individuals to *draw on past savings* (Utting et al., 2012).

### 2.3. Psychological domain

*Overthinking* affects performance and causes unhappiness and other negative psychological effects (Lyubomirsky, 2007). An investigation in China revealed that about 80% of the public spent at least one hour a day thinking about the pandemic, about one-third of Chinese expressed *anxiety* amid Covid-19 lockdown (Huang & Zhao, 2021). Some people in the UK including younger adults, students, and women expressed high levels of *loneliness* during the lockdown period (Bu et al., 2020). A study in Canada was conducted to discover how pandemic health anxiety affects the employees where one of the participants reported a high level of frustration with feelings of helplessness and *loss of control* (Trogakos et al., 2020). Arslan and others examined the relationship between *pessimism* and the psychological problems of Covid-19. Results indicate that a high level of pessimism is related to a high level of psychological inflexibility. It was recommended that lower pessimism is likely to help the public to cope with the pandemic stress and to deal with psychological problems (Arslan et al., 2020).

### 2.4. Quality of life domain

Quality of life can be determined by three factors: life satisfaction, happiness, and absence of ill-being. Individuals who experience ill-being, including anxiety or depression may not experience subjective well-being or good QoL (Argyle, 1996; Sirgy, 2012).

Considering the literature discussed above, it can be seen that crises generally affect people in several dimensions. It is worth studying those dimensions comprehensively to investigate the covid-19 pandemic effect and to see the overall impact on the quality of life, particularly for employees as the scope of the study. This could help address the effect or at least mitigate it when further similar crises occur. The method used in this study is discussed in detail in the next section.

## 3. Methodology

A questionnaire was used to collect data for this study. Questions were formed and categorized based on the literature review. Each question was formulated attempting to measure a specific variable, to make it easy for participants, the questionnaire was followed a 4-point Likert scale. A group of certain variables constitutes a factor. A proposed model was constructed as illustrated in Figure 1. Confirmatory Factor Analysis (CFA) was used to validate each factor before implementing structural equation modeling (SEM) for the hypothesized model. AMOS software was used for analysis.

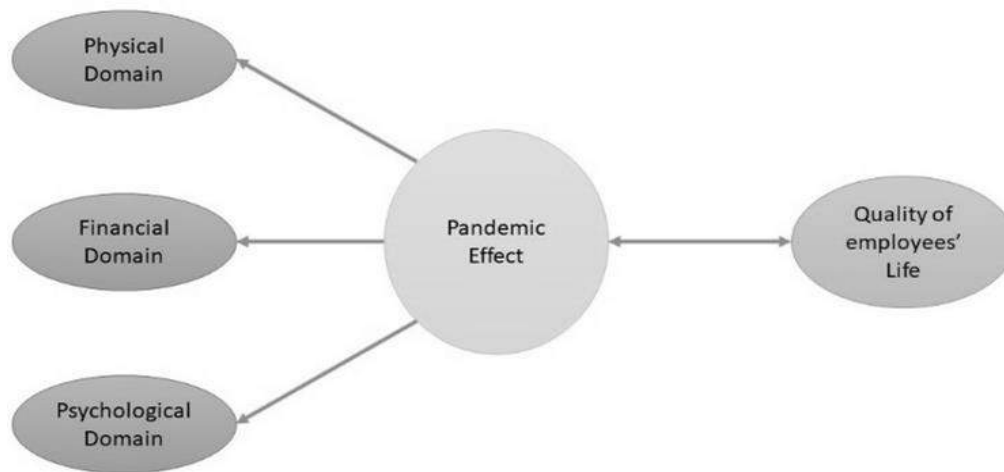


Figure 1. The proposed model

### 3.1. Study variables

Table 1 indicates the study variables and their description:

**Table 1. Study variables**

| Domain   | Symbol | Variable description         | Domain        | Symbol | Variable description      |
|----------|--------|------------------------------|---------------|--------|---------------------------|
| Physical | Ph1    | Getting around               | Psychological | Ps1    | Overthinking              |
|          | Ph2    | Daily activities             |               | Ps2    | Anxiety                   |
|          | Ph3    | Housework burden             |               | Ps3    | Loneliness                |
|          | Ph4    | Energy and vitality          |               | Ps4    | Pessimism                 |
|          | Ph5    | Personal care and appearance |               | Ps5    | Loss of control           |
|          | Ph6    | Sleep quality                | Financial     | Fi1    | Income reduction          |
|          | Ph7    | Weight gain                  |               | Fi2    | Job/Promotion opportunity |
| QoL      | Q1T    | Life satisfaction            |               | Fi3    | Money chase               |
|          | Q2T    | Happiness                    |               | Fi4    | Financial difficulties    |
|          | Q3T    | Overall QoL                  |               | Fi5    | Savings abandon           |

### 3.2. Sample size

A sample size of at least 200 is required in any SEM model to minimize bias for estimates of parameters as well as standard errors to an acceptable level (Boomsma & Hoogland, 2001). The data collected in this study was only 265 respondents, but it was decreased to 234 after eliminating invalid and incomplete responses.

### 3.3. Statistical measures

To assure model adequacy, several measures were considered. Correlation values should be higher than 0.05 but less than 0.85 to avoid multicollinearity, a correlation value of 0.85 or higher flags a collinearity problem (Kline, 1998). Cronbach’s alpha reliability value of 0.70 and above indicates adequacy (Hair et al., 2016). For CFA, a value of at least 0.5 for each factor loading estimate should be secured to assure adequacy in SEM (Hoyle, 2014; Schumacker & Lomax, 2010). Several fit indexes and measures in SEM are commonly used to evaluate the overall model fit. To evaluate each mode in this study, some common measures and indexes were specified, those commonly reported in academia by researchers, such as Chi-square test ( $\chi^2$ ), Chi-square to degree of freedom ratio ( $\chi^2/df$ ), the root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), the Tucker–Lewis index (TLI), goodness-of-fit index (GFI), and comparative fit index (CFI). The fit criteria for each measure will be illustrated in the result section, they are taken from the references (Hoyle, 2014; Schumacker & Lomax, 2010).

## 4. Results and discussion

### 4.1. Demographic data

Of the participants, 38% were aged between 19 and 32, 33% were between 33 and 45 and 29% were between 46 and 59. In terms of education, nearly half of the respondents held a bachelor’s degree while the other half had either a high school or a master’s degree. Participants were from various geographical areas since the sample was randomly chosen. Figure 2 shows the age, educational level, and geographical location of participants.

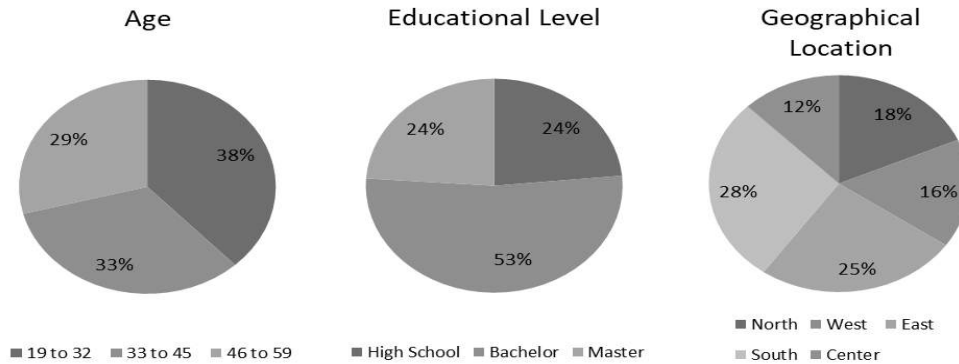


Figure 2. Demographic data

#### 4.2. Correlations and multicollinearity

Using Spearman’s rho method, a correlation matrix was drawn for each variable in this research, all correlations were within the acceptable range, i.e. higher than 0.05 to be significant and less than 0.80 to avoid multicollinearity, except Fi4 and Fi5 as they were correlated by 0.84, also Ph7 had a lower correlation with other variables, thus it was recommended to remove Fi5 and Ph7.

#### 4.3. Common bias method

If one factor explains no more than 50% of the variance among variables, it can be said that common bias is not a concern (Podsakoff et al., 2003). Harman’s method was conducted in this study, indicating that the first factor explains only 26% of the variance among variables, thus no common bias is present.

#### 4.4. Confirmatory factor analysis (CFA)

After conducting CFA, it was necessary to eliminate some variables although this was already done during the correlation check stage. Table 2 indicates the standardized factor loading for each indicator and Cronbach’s alpha ( $\alpha$ ) for each factor in both initial and modified models.

Table 2. Standardized factor loading and reliability values for initial and modified models

| Factor   | Indicator                | Initial | Modified | Factor                   | Indicator | Initial | Modified |
|----------|--------------------------|---------|----------|--------------------------|-----------|---------|----------|
| Physical | Ph1                      | .40     | Deleted  | Financial                | Fi1       | .83     | .76      |
|          | Ph2                      | .61     | .60      |                          | Fi2       | .61     | .71      |
|          | Ph3                      | .46     | Deleted  |                          | Fi3       | .52     | .51      |
|          | Ph4                      | .64     | .65      |                          | Fi4       | .85     | .93      |
|          | Ph5                      | .65     | .66      |                          | Fi5       | Deleted | Deleted  |
|          | Ph6                      | .56     | .56      | Reliability ( $\alpha$ ) | .801      | .801    |          |
|          | Ph7                      | Deleted | Deleted  | Psychological            | Ps1       | .67     | .77      |
|          | Reliability ( $\alpha$ ) | .723    | .705     |                          | Ps2       | .86     | .75      |
| QoL      | Q1T                      | .72     |          |                          | Ps3       | .58     | .68      |
|          | Q2T                      | .94     |          |                          | Ps4       | .36     | Deleted  |
|          | Q3T                      | .58     |          |                          | Ps5       | .38     | Deleted  |
|          | Reliability ( $\alpha$ ) | .785    |          | Reliability ( $\alpha$ ) | .709      | .705    |          |

#### 4.5. Hypothesized SEM model

To construct the Hypothesized model, an SEM model was considered including all study elements. The lockdown effect factor, as a latent factor, was conceptualized by three latent factors addressed earlier in this study which were physical, financial, and psychological domain factors. Furthermore, the lockdown effect factor was linked with the QoL factor to discover the correlation between them. The model is illustrated in Figure 3.

For the lockdown effect factor, CFA was performed to evaluate the factor loadings of each of the three specified domains as well as their critical ratios to discover whether a specified domain factor is significant or not. Running the model with a focus on the lockdown effect factor revealed that all standardized factor loading values for the three factors were sufficient, i.e. higher than 0.5 as illustrated in Figure 3.

Moreover, it was recommended to examine modification indices that are suggested by AMOS which could improve the model fit, and attempting to apply it if possible. Hence, the model is deemed to be adequate as illustrated in Figure 3.

Table 3 shows the goodness-of-fit measurement for the SEM model. The overall result illustrates that the model had adequate goodness-of-fit measures.

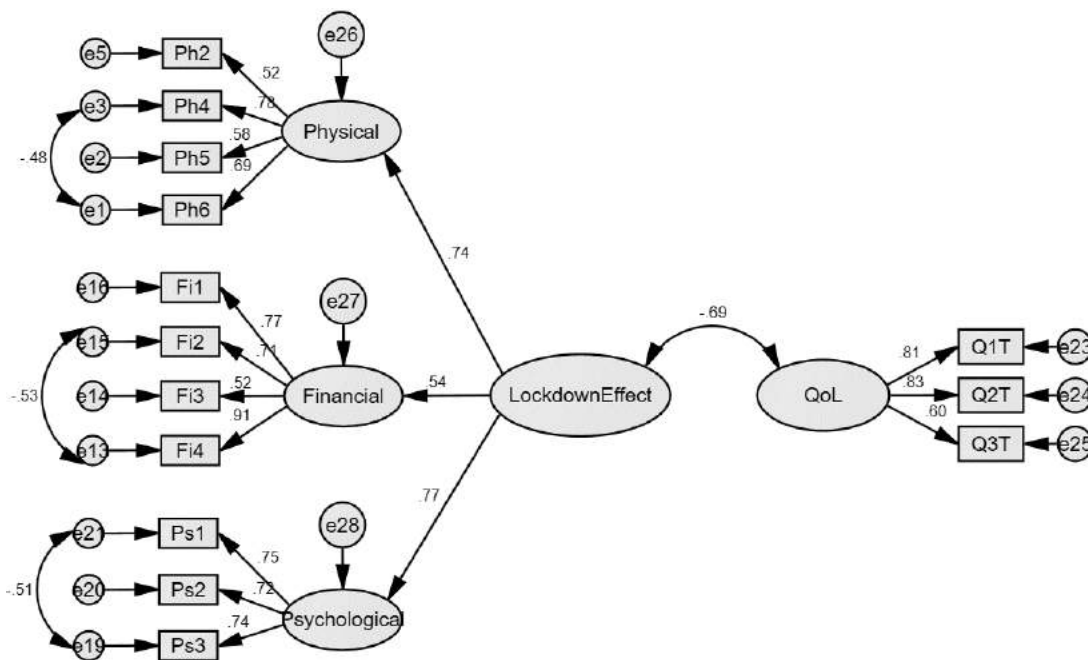


Figure 3. The Conceptualized SEM model and its output

Turning to the crucial point, the lockdown effect factor had a great covariance with the QoL factor. Covariance represents the directional relationship between two items. In this study, the covariance between the lockdown effect and QoL was -0.69, indicating that as the lockdown effect increases, the QoL decreases. This latter point confirms the hypothesis of this research which was:

$$H_1: \text{Covid-19 pandemic Lockdown negatively impacted the quality of employees' life.}$$

Therefore, based on the finding of this study, it was obvious that Covid-19 negatively impacted the quality of employees' life.

**Table 3. The goodness of fit measures for the SEM model**

| Index   | Fit Criteria  | The model measure |
|---|---------------|-------------------|
| Chi-Square statistic ( $\chi^2$ )             | Low           | 98.047            |
| Degrees of Freedom                            | $\geq 0$      | 70                |
| P-value                                       | $> 0.05$      | .015              |
| Chi-Square statistic/df                       | $\leq 4$      | 1.401             |
| standardized root mean square residual (SRMR) | $< 0.05-0.08$ | .048              |
| Tucker-Lewis index (TLI)                      | $> 0.95$      | .965              |
| Comparative fit index (CFI)                   | $> 0.95$      | .973              |
| Goodness of fit index (GFI)                   | $> 0.95$      | .945              |
| Root mean square error of approx. (RMSEA)     | $< 0.05-0.08$ | .041              |
| Probability (p-close)                         | $> 0.05$      | .761              |

## 5. Conclusion and recommendations

When considering the Covid-19 pandemic, it comes to mind the lockdown, which was the main scope of this study. While recent studies have attempted to measure the lockdown effect considering only one dimension, to the best of our knowledge, this is the first study that investigates several significant factors comprehensively and integrating them into the covid-19 pandemic effect aiming to see the overall impact on the quality of employees' life.

Employees got impacted by the lockdown in their personal life as proved by the findings of this study. This finding certainly confirms the earliest imposed hypothesis. Moreover, the result of this study was consistent with the previous literature studies on the same field.

A point to be noticed through this study is that employees probably were pushed beyond their powers of endurance during the lockdown. Organizations should take serious heed of the effects on employees as they are being the internal customers.

Understanding of organizational environment can be improved by considering the effects of crises on employees. One of the basic tenets of safety is that employees cannot withstand severe impact during crises unless management pays attention to critical factors.

In any situation in which crises' serious issues are not well-addressed within the organization, employees tend to be the weakest link in the chain in terms of safety commitment or expectation. Given this, organizational management should broaden the range of caring for employees, not only at the macro level but also down to the individual level, i.e. the employee's personal life level. Bearing in mind that management often turns a blind eye to what happens with employees outside the workplace thinking that this has nothing to do with their business.

## 6. Limitations and future work

As is the case with the majority of studies, the findings of this research, however, are subject to some limitations. First, the employees were of different organizations and with various jobs, unknown how many hours they worked from home or office. This was out of the researchers' control and due to data access limitations. Thus, the authors advise interested researchers who can access extensive data to address this limitation.

Also, it should be noted that the study variables and the model were constructed based on the

literature review and the authors' assessment of the situation. It seems probable that some variables or factors were omitted. Thus, the authors recommend interested researchers explore new elements and factors such as social domain. Managers and relevant authorities may use this study for future reference as a starting point to evaluate the effect of further similar crises.

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