# Effects On Employees' Mental Health During COVID-19 Pandemic

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# **Abstract**

The Covid-19 pandemic has been the most recent disaster impacting people's mental health especially employees. The socioeconomic backgrounds of employees can vary, which can introduce a range of risk factors for mental health. One of the key factors influencing life satisfaction and quality is mental health. Employees in both developed and emerging countries experience the complicated and widespread psychological issue of poor mental health. Mental health-related factors are a substantial and expanding problem in developed nations. This study's primary goal is to determine how the epidemic is affecting workers' mental health. The 104 employees from a private company are the target group for this study and data collection will be done by collecting data from the employees by distributing the questionnaires. Statistical Package for Social Science (SPSS) will be applied to evaluate the data in accordance with the data's objectives.

**Keywords**: mental health risk, depression, anxiety, psychological distress.

#### 1.0 Introduction

The Covid-19 pandemic has been the most recent issue impacting all individuals around the world. Aside from enforcing dramatic changes to the individual's health and economy, the Covid-19 pandemic also has influenced their mental health (Lusca, Pascual & Corradi, 2020).

The pandemic has also brought about significant changes in people's daily living patterns that make people feel anxious which can lead to mental health (Lusca, Pascual & Corradi, 2020). Those with poor mental health increase the chances of suffering from chronic physical health problems, victimization and trauma (Aqeel & Shuja, 2020).

The recent survey shows a 20% increase in mental health since the Covid-19 pandemic (Moreno et al., 2020). In another study conducted in China, 54% of respondents

rated mental health during the Covid-19 outbreak as moderate to severe (Cullen, Gulati & Kelly, 2020). In a nutshell, the Covid-19 pandemic will be the major issue that led to mental health.

Mental health has always existed before the pandemic. According to a WHO survey in 2018 of the estimated 792 million people worldwide living with mental health roughly 10.7% of the global population, 20 million were diagnosed with schizophrenia, and 264 million suffered from depression (Charlson et al., 2018). During the Covid-19 pandemic, the global prevalence of mental health estimated was 28.0% for depression; 26.9% for anxiety, 24.1% for posttraumatic stress symptoms, 36.5% for stress, 50.0% for psychological distress; and 27.6% for sleep problems (Brunier & Drysdale, 2020). Thus, the population of those impacted by mental health is rising dramatically.

Several studies in Malaysia also show that the public has been experiencing mental health before and during the pandemic. In the epidemiological data, published in 2015 by the Malaysian Ministry of Health, the rural region of East Malaysia had the highest prevalence of mental health, at 45%, followed by the capital Kuala Lumpur, where 30% of the population fulfilled the criteria for mental health (Raaj et al., 2020). As, the rural regions have more adverse socioeconomic conditions, higher poverty and unemployment which contribute to an increased risk for the maintenance of mental health problems (Raaj et al., 2020). It had been predicted that in 2020 mental health would be the second biggest health problem affecting Malaysians after heart disease (Beckstein et al., 2020). With approximately 30% of Malaysian adults (18-25 years old) and Malaysian adolescents (13-17 years old) with approximately 40% found to be anxious, 18% depressed, and 10% stressed due to the Covid-19 pandemic (Beckstein et al., 2020). In another study, it implies that Malaysian public mental health continues to rise across the CMCO and RMCO phases with the percentage of anxiety (55.1%) and stress (30.6%) symptoms being the highest (Wong et al., 2020). Furthermore, there is evidence that mental health is associated with suicidal ideations and attempts (Wong et al., 2020). Specifically, depression was found to be the main risk factor associated with suicidal behaviors and Malaysia has seen a rise in suicide cases and attempts during the COVID-19 pandemic (Wong et al., 2020).

Therefore, the impact on mental health should be further studied to find out the possible causes of mental health during this Covid-19 pandemic as it's important to look after our mental health.

There are even lots of studies that have been conducted related to mental health such as social isolation, unemployment and substance use. Social isolation is one of the major risk factors that have been linked with

poor physical and mental health status (Beckstein et al., 2020). In the U.S, approximately one-quarter of communitydwelling older adults are considered to be socially isolated, and 43% of them report feeling lonely (Kim & Bhullar, 2020). In another research in China, it has shown that social isolation is negatively affecting the mental health of young people compared to adults since adults are mentally stronger (O'Sullivan, Clark, et al., 2020). Social isolation has been shown to have a negative association with good physical and mental health and even significantly increased mortality rates (Beckstein et al., 2020). However, there is a lack of research conducted in Malaysia regarding the impact of Isolation mental health among employees (Shanmugam et al., 2020). Thus, the present study will focus on employees in Malaysia.

Unemployment during the pandemic is a major social problem that determines the loss of income, increases the risk of poverty and affects overall mental health (Mokona et al., 2020). The risk of mental health problems is higher among the unemployed than among the employed (Moore, 2017). Globally, International according to Labour Organization (ILO) report, the number of unemployed people was 192.7 million in 2017, 192.3 million in 2018 and 193.6 million in 2019 (Mokona et al., 2020). Furthermore, changes in unemployment rates varied across countries, from a large rise in Greece 256% increase in unemployment from 2007 to 2013 and Spain 218.2% increase for the same period to a more moderate rise in France 47.8% increase from 2008 to 2015 and Hungary 91.4% increase from 2004 to 2010 (World Bank, 2019). It has been said that the overall stress felt by individuals due to the unemployment crisis has been demonstrated to be strongly linked to their mental health (Ezcatel et al., 2021). Nevertheless, there is limited research on this factor, especially during this Covid-19 pandemic in Malaysia (Hanapi & Nordin, 2019). Therefore, the

present study will further explore it to get a better understanding of the topic.

In a study, by The National Anti-Drug Agency (AADK) reported that adolescents as young as 13 years old were found to use illicit drugs (Yee et al., 2018). While another study among adults, in USA and Europe, have shown that alcohol consumption has increased during the Covid-19 pandemic and it leads to mild depression (Horigian et al., 2021). Furthermore, in another study that conducted in US, been reported that 22% for 18-25 years old using drugs, and 38% for 26-34 years old reported severe drug use during the Covid-19 pandemic (Bruce et al. 2019). Moreover, the 38% for 26-34 years old reported that the symptoms of anxiety and depression increased due to severe drug use (Bruce et al. 2019). Besides, the employees in restaurant industry in UK is ranked the highest of any industry for illicit drug use and third highest for heavy alcohol consumption and it led them to severe mental health issues such as depression (Bush & Lipari, 2015). However, there are limited research regarding the impact of Substance use on mental health among employees in Malaysia during Covid-19 pandemic (Bufquin et al., 2020). Therefore, it's essential to study this factor to get a better understanding on how it affects employee's mental health during Covid-19 pandemic.

# **Research Objective**

- 1) To identify whether the work status, is impacting the employees during the pandemic.
- 2) To identify whether the social isolation is impacting the employees during the pandemic.
- 3) To identify whether the substance use is impacting the employees during the pandemic.

# Significance of Study

Under significance of analysis, the results and findings of this study will contribute to a better understanding of the factors which are social isolation, unemployment and substance use that impacting employee's mental health during this pandemic. The study's findings could be shared with Malaysian society to increase awareness about the importance of mental health during this pandemic.

Furthermore, there is a lack of studies that examined the impact on mental health among employees during the COVID-19 pandemic in Malaysia. Therefore, the findings of the present study will offer new knowledge and understanding on the factors that can impact on mental health among employees in Malaysia to provide as a reference for the future research.

Under significance of industry, the results and findings of this study will be beneficial since they are giving more knowledge and awareness about the factors that impacting employee's mental health during this pandemic. Besides, for employees to work efficiently, its essentials the managers and supervisors to provide transitional support and maintain regular catch-ups with their team thus it will reduce the symptoms of mental health. This will allow organizations to focus on and prioritize employee's mental health, especially during COVID-19. Organizations should provide free counselling or therapy session to assist the employees in improving their mental health.

The findings of this study will also offer information to governments and employees on factors that could impact employee's mental health. The government will learn how unemployment and substance use and isolation can affect the employee's mental health during this pandemic. This helps employees to be aware of their issue sooner

rather than later, which can prevent from major problems and improving overall mental health.

The core of this research is to examine the factors that impacting mental health during Covid-19 pandemic. Malaysia is the geographical focus of the study. The target audience of this research are 40 employees from a private company. In addition, the present study used the Statistical Package for Social Sciences (SPSS) for statistical data analysis. The research has a number of limitations.

There are several limitations in the research. Firstly, there are many other factors that impacting the mental health during Covid-19 pandemic. But researcher only studied three main factors that impacting the mental health. Besides, the data collected is only focused on private company employees, thus the findings and outcomes may not be applicable to all the employees in other companies.

### 2.0 Literature Review

#### 2.1 Definition of Mental health

Mental health, according to the World Health Organization (WHO), is a state of well-being in which an individual recognises his or her own capabilities, is able to cope with typical life challenges, is able to work successfully and fruitfully, and is able to contribute to his or her community (Herrman, Saxena & Moodie, 2005).

In addition, mental health, also can be defined as mental health conditions that affect our mood, thinking and behaviour (Dong & Bouey, 2020). Examples of mental health condition include depression, anxiety disorders, schizophrenia, eating disorders and other addictive behaviours (Dong & Bouey, 2020).

However, in another study, mental health has been often conceptualized as a purely positive affect, marked by feelings of happiness and sense of mastery over the environment (Lamers, et al., 2010). People in good mental health are often sad, unwell, angry or unhappy, and this is part of a fully lived life for a human being.

Besides, mental health can be divided into 3 components, which are emotional well-being, psychological well-being and social well-**Emotional** well-being includes being. happiness, interest in life, and satisfaction, psychological well-being includes liking most parts of one's own personality, being good at managing the responsibilities of daily life, along with having good relationships with others, and social well-being refers to positive functioning and involves having something to contribute to society, feeling part of a community, and believing that society is becoming a better place for all people (Keyes, 2013). Therefore, mental health is important at every stage of life, from childhood and adolescence through adulthood. Thus, present study will follow the same concept of definition mentioned by Dong & Bouey (2020), where this can negatively affect a person mood, thinking and behaviour.

# 2.2 Definition of Unemployment

Unemployment is perhaps one of the most serious social problems. Unemployment refers to those who are eligible and actively looking for work but can't find one, as well as persons who are employed but aren't in the right position. (Hanapi & Nordin. 2019). Unemployment usually measured by the unemployment rate, which is dividing the number of unemployed people by the total number of people in the workforce, unemployment serves as one of the indicators of a country's economic status (Mokona et al., 2020). Furthermore, according to European Labour Markets statistics, people aged 15 and over are classified as unemployed if they meet all the following requirements. Firstly, they are without work, they are available to start work within the following two weeks and they

sought employment at some time during the previous four weeks (Eurostat, 1996). In addition, there are several types unemployment include structural unemployment, frictional unemployment, classical unemployment (Brandolini, 2004). Structural unemployment focuses foundational problems in the economy and inefficiencies inherent in labor markets, including a mismatch between the supply and demand of laborer's with necessary skill sets (Brandolini, 2004). While. unemployment focus on voluntary decisions to work based on individuals' valuation of their own work and how that compares to current wage rates added to the time and effort required to find a job (Harris & Seymour, 2005). Classical unemployment, occurs when real wages for a job are set above the marketclearing level, causing the number of jobseekers to exceed the number of vacancies (Harris & Seymour, 2005). Therefore, present study will use the same concept as Hanapi & Nordin (2019), where those who are unable to find a job called as unemployment.

#### 2.3 Definition of Isolation

Social isolation is defined as the absence of relationships with family or friends, (Niolfi, 2017). The absence or weakness of the social support network forms the basis for identifying individuals who are socially isolated (Pancani et al., 2021). This definition is thus a qualitative one denoting the absence of meaningful relationships. Besides, social isolation describes the absence of social contact and can lead to loneliness. It is a state of being cut off from normal social networks, which can be triggered by factors such as loss of mobility, unemployment, or health issues (Bruhn & Phillips, 2017). Social Isolation can be defined as involve staying at home for lengthy periods of time, having no access to services or community involvement, and little or no communication with friends, family, and acquaintances (Bruhn & Phillips, 2017). Therefore, present study will use the same concept as Pancani et al., (2021), where social isolation is known as lack of social connect around an individual.

#### 2.4 Definition of Substance use

The term "substance use" refers to the use of drugs or alcohol, and includes substances such as cigarettes, illegal drugs, prescription drugs, inhalants and solvents (Bush & Lipari, 2017). A substance use problem occurs when using alcohol or other drugs causes harm to you or to others. Besides, substance use can simply be defined as a pattern of harmful use of any substance for mood-altering purposes (Gans, 2020). Furthermore, substances are often referred to as drugs and or alcohol. Many drugs are legal. Some drugs, like alcohol, cannabis and tobacco, are legal if you're above a certain age and other drugs, like caffeine, are legal for everyone (Jones, Compton, & Mustaquim, 2018). Therefore, present study will use the same concept as Bush & Lipari where substance can be defined as refers to the use of drugs or alcohol, and includes substances such as cigarettes.

# 2.5 Factors influencing employee's mental health

# 2.5.1 Unemployment and mental health

Unemployment has negative consequences in mental health and it effect long-term physiological health in the long term (Tansel & Tasci, 2010). Unemployment has a detrimental impact on mental health, as does poor quality of employment (Avendano & Kawachi, 2014). In an survey of American found that people who citizens unemployed are twice as likely to partake in a depression treatment program. previously or presently, than people who are unemployed (Avendano & Kawachi, 2014). Furthermore, in another study it showed that unemployment, job loss is associated with high levels of distress (Olesen, Butterworth, Leach, Kelaher & Pirkis, 2013).

In the context of generous social protection programmes such as those available in Europe, unemployment has negative effects on mental health (Linn, Sandifer, & Stein, 1985). In addition, research suggests that earning losses might be only one among several pathways through which unemployment influences employees' mental health (Murphy & Athanasou, 1999). Unemployment may also lead to increased anxiety and negative health behaviours. Therefore, it shows that unemployment can lead to mental health.

#### 2.5.2 Social isolation and mental health

Researched has shown that social isolation plays an influential role in mental health (Wang, 2017). Among people with severe mental health, social isolation has been linked to higher levels of delusions, lack of insight, and high hospital usage (Wang, 2017). In another study, suggested that maintaining poor social relationships leads to worse mental health (Santini et al., 2015). According to Pancani et al., (2021), have also found that girls who are socially isolated without any social connections around them in general, have low mental health, compared to boys.

In addition, individuals, who are socially isolated, were at a high risk of developing mental health symptoms such as depression (Khumsri, Yingyeun, Mereerat Manwong, Hanprathet, & Phanasathit, 2015). Thus, Beurs et al., (2015) discovered there are impact of mental health in older populations due to the social isolation. Apart from that, anxiety and depression are the most common types of mental health (Ahmed, Zviedrite, & Uzicanin, 2018). It concluded that social isolation has a significant impact on mental Hence, there is a significant health. relationship between social isolation and mental health.

#### 2.5.3 Substance use and mental health

Substance use can trigger or intensify the feelings of loneliness, sadness and hopelessness often associated with mental health (Murphy & Athanasou, 1999). In research, estimated onethird of people with drug issues also have major mental health symptoms (Cranford, Eisenberg, & Serras, 2009). In another study have showed that there are associations between substance use behaviours and mental health among college students (Dawson, Grant, Stinson, & Chou, 2004). Furthermore, results from the National Survey on Drug Use and Health and the Monitoring the future study showed that college students have lower smoking rates than their non-college same-age peers. Epidemiologic studies have found evidence for strong associations between nicotine dependence, mood and mental health (Johnston et al., 2007).

Besides, for example, Husky, Mazure, Paliwal, and McKee (2008) used data from the National Epidemiologic Survey on substance use and Related Conditions (NESARC) and found that taking drug occasionally and daily were significantly related with current major mental health symptoms and these associations were stronger for women compared to men (Breslau, 1995). There is even evidence for associations between substance use and symptoms of mental health such as depression in college samples has also been reported (Saules et al., 2004). Similarly, Stewart, Zvolensky, and Eifert (2001) reported there are positive correlations between mental health symptoms and frequency of heavy drug use. Apart from that, in another research among older people, substance use is associated with a wide range of negative effects, including emotional distress, functional disability, reduced physical health, increased mortality, and suicide (Blazer, et al., 2012). Hence, there is a strong connection between substance abuse and mental health where substance use can affect the mental health.

# 2.6 Underpinning Theory

In the 1950s, psychologist Albert Ellis and psychiatrist Aaron Beck proposed two very similar theories (Beck & Fleming, 2021).

Both of these theories led to the development of successful cognitive therapy. While behavioural learning theory focuses the importance of the surroundings in determining behaviour, and cognitive theory focuses the importance of the brain's acknowledgement through thoughts and behaviours. Thoughts, feelings, beliefs, and perceptions are all part of a person's cognitions. Cognitive behaviour therapy (CBT) is a proven treatment for a variety of mental health and emotional illnesses (McGale, McArdle & Gaffney, 2011).

Cognitive behavioural therapy will help individuals enhance their mental health while also assisting them to obtain work. The use of cognitive behavioural therapy (CBT) among the unemployed is expected to serve both people and communities as a whole (McGale, McArdle Gaffney, & 2011). Unemployment can be associated with increases in mental health symptoms such as depression and anxiety, trouble sleeping, decreased life-satisfaction. Unemployed individuals suffer more from mental strain than those who have jobs. It aids people in achieving specific changes or goals. Its methods have been studied in treatments for many disorders for all ages (Harris et al., 2002). Cognitive-behavioural therapy offers many strategies help cope with unemployment. Cognitive-behavioural therapy is well-suited for helping people cope problems that with the arise from unemployment. In a new study, 41% of unemployed or underemployed undergoing Cognitive Behavioral Therapy (CBT) found a new job or went from part- to full-time work by the end of the 16-week treatment for depression (Proudfoot et al., 1997). CBT had a clear impact for those who had jobs and reported at the beginning of the treatment that depression was hurting their effectiveness.

Furthermore, CBT provides you with practical tools for dealing with social isolation. The goal of CBT is to discover when you have negative thoughts or self-talk. When you're aware that you're doing this, you can begin to challenge these false perceptions you have and learn to replace them with more realistic thoughts. Apart from that, CBT programs for mental health symptoms such as depression and anxiety are likely to be effective at reducing loneliness (Parry et al., 2016). This may be due to shared underlying cognitive and behavioural mechanisms between loneliness, depression, and anxiety such as sensitivity to perceived threat and social withdrawal. But used alongside interventions designed to help on the non-cognitive level of human emotional response, CBT techniques can have powerful effects for those suffering from social anxiety (Parry et al., 2016). CBT are the most effective in treating loneliness. CBT will reduce loneliness to educate individuals to identify the automatic negative thoughts that they have about others and about social interactions more generally, and to regard these negative thoughts (Shafran et al., 2002). CBT approach implies that loneliness can be decreased.

In addition, cognitive behavioural therapy is frequently utilized in the treatment of substance use addictions nowadays (Weingardt et al., 2009). Many negative actions and feelings are not rational or acceptable, according to cognitive behavioural therapy. Past events or environmental circumstances may have influenced this substance use addiction behaviours (Muir et al., 2018). Individuals frequently use drugs to treat themself from the painful memories and sensations. Those in CBT treatment can analyse their instinctive negative thoughts and seek objective proof to justify them (McHugh et al., 2010). The individuals study and compare data for opposing their automatic thoughts. By thoroughly assessing what they're feeling, the objective is to assist them think more reasonable, less unpleasant views. However, when it comes to treating alcohol and substance use disorders, cognitive behavioural therapy can be a powerful tool. It can be used alone or in conjunction with other treatments to aid long-term rehabilitation (Weingardt et al., 2009).

Therefore, CBT can be applied in this study to elaborate the relationship among the variables used in the present study.

# 2.7 Conceptual Framework

Figure 1 below shows the independent variables and dependent variable. The three independent variables are the factors of mental health.

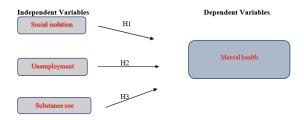


Figure 1: Conceptual Model

Based on the figure 1, the present study will identify the relationship between 3 independent variables which are social isolation, unemployment and substance use and 1 DV which is mental health. First, this study identifies the relationship between social isolation and mental health. Secondly, the current study will identify the relationship between unemployment and mental health. And lastly, the present study will identify the relationship between substance use and mental health. In conclusion all these 3 IV have significant relationship with mental health.

### 2.8 Hypothesis

The following hypothesis are formulated:

**H1**: There is a significant relationship between social isolation and mental health.

**H2**: There is a significant relationship between unemployment and mental health.

**H3**: There is a significant relationship between substance use and mental health.

# 3.0 Research Methodology

The research design is the formal setting in which research takes place, such as the plan for data collection, measurement, and (Raman, 2016). Ouantitative, analysis qualitative, or mixed method research are all possible research designs. The procedure for gathering and analysing numerical data is known as quantitative research (Queiros, Faria, & Almeida, 2017). This can be used to discover trends and averages, predict outcomes, examine causal linkages, and extend results to larger groups. The use of quantitative research to organize data collection and interpret results is typical.

The purpose of this research is to examine the factors that impact the employee's mental health during the covid-19 pandemic. Therefore, quantitative research design will be conducted in this research. Present study, needs to collect data from 140 employees, thus quantitative design will be used since broader study can be made within short period of time. It will assist in improving the study's objective of investigating the relationship between mental health and the factors that influence mental health among employees during pandemic. Apart from that, this quantitative design is cost effective where, the quantitative survey is often cheaper than a qualitative interview (Indu & Vidhukumar, 2020).

To avoid statistical preconceptions or errors, a sample must be of sufficient size to generalise from a random sample. A statistical analysis is performed to estimate the sample size based on the community size (Taherdoost, 2016). In analysis, the sampling size is utilized to define the number of individual samples formulated. When determining the sample size

needed for an experiment, researchers must consider a number of factors. The research sample size is 103, as per Krejcie & Morgan (1970), because to the 140 population. The target population will receive 150 questionnaires in total.

N	or Determ	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Table 1: Determining Sample Size of a Known Population (Krejie & Morgan, 1970)

# 3.1 Factor Analysis

Factor analysis is a powerful data reduction technique that enables researchers to investigate concepts that cannot easily be measured directly (Charlmers, 2012). By boiling down a large number of variables into a handful of comprehensible underlying factors, factor analysis results in easy-to-understand, actionable data. There are three main forms of factor analysis (Zhu et al., 2009).

Firstly, Exploratory Factor Analysis should be used when we need to develop a hypothesis about a relationship between

variables. Secondly, Confirmatory Factor Analysis should be used to test a hypothesis about the relationship between variables. Thirdly, Construct Validity should be used to test the degree to which your survey actually measures what it is intended to measure. Historically, factor analysis was developed for explaining the relationships among many continuous test scores, which led to the expression of the common factor model as a multivariate linear regression model with observed, continuous variables serving as dependent variables, and unobserved factors as the independent, explanatory variables (Hair et al., 2014).

Like statistical any modelling procedure, factor analysis carries a set of assumptions and the accuracy of results is vulnerable not only to violation of these assumptions but also to disproportionate influence from unusual observations. Nonetheless, the importance of data screening and assumption testing is often ignored or misconstrued in empirical research articles utilizing factor analysis (Hair et al., 2014).

The Kaiser-Meyer-Olkin (KMO) test is a statistical measure to determine how suited data is for factor analysis (Stephanie, 2016). The test measures sampling adequacy for each variable in the model and the complete model. The statistic is a measure of the proportion of variance among variables that might be common variance. In general, KMO values between 0.8 and 1 indicate the sampling is adequate (Stephanie, 2016). KMO values less than 0.6 indicate the sampling is not adequate and that remedial action should be taken. In contrast, others set this cut off value at 0.5. Apart from that, communalities, which are similar to factor loadings, are determined for each item. Communality entails the percentage of the variance in responses on an item accounted for by all factors in the proposed model. The communality value for each variable needs to be at 0.5 or above so that the factor solution can describe half of each of the original variable's variance (Tabachnick &

Fidell, 2007). However, the estimation of the factor loadings is not accurate if the communalities are low, even if the sample size is huge. All items need to have a communality which is above 0.3. Eigenvalues is a collection of parameter values for which a differentiated formula has a non-zero solution and for component analysis is that the Eigenvalues is more than 1 (Eaton et al., 1998).

# 3.2 Pilot Test: Reliability Test

The term reliability in research or measuring test is known as psychological research (McLeod, 2013). If an individual checks his weight throughout the day, they should get a similar result. Scales that recorded weight in a different way every time would be ineffective. The similar comparison may be used to describe a tape measuring that measures inches differently every time it's used. This will not be regarded as genuine. Research results are reliable if they are regularly reproducible.

The degree of reliability can be determined using a correlation coefficient. A high positive correlation indicates that a test is reliable (Tavakol & Denmick, 2015). As participants and situations differ, it's unlikely that the exact same findings will be produced each time, but a significant positive correlation between the outcomes of the same test show's reliability. Cronbach's alpha tests are used to determine the reliability of multiple questionnaires. These questions evaluate underlying factors such as conscientiousness, neurotic, and openness, which are concealed or unmeasured (Lavrakas, 2011). In actual life, these are extremely difficult to evaluate. Cronbach's alpha determines how close a group of test items are connected. Cronbach's alpha has a standard value of 0.7, but values over 0.6 are also acceptable. Cronbach's alpha 0.60 is the minimum acceptable number. The internal consistency of the common range is low below this figure (Taber, 2018). However, the projected maximum value is 0.90. Above this level, redundancy or repetition is seen.

Therefore, pilot test is an important part of any quality research design.

#### 3.3 Data collection

For data collection in this study, the present study decided to opt for an online questionnaire. Firstly, to get full authority to perform the study, an approval letter was prepared and sent to the manager of the company. Then, to gather the data, the questionnaires will be distributed to all the employees along with the terms and condition to complete the questionnaires. To verify that the amount of data collected fulfils the requirements, the whole data gathering method will be ongoing for two weeks. After that, the present study will use the Statistical Package for Social Science (SPSS) to evaluate the collected data.

# 4.0 Data Analysis

According to LeCompte & Schensul, (2010) research data analysis is a process used by researchers for reducing data to a story and interpreting it to derive insights. This makes sense since the data analysis process assists in the minimization of a large amounts of data into smaller components.

In addition Data Analysis is known as the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap, and evaluate data (J.Albers, 2017). An essential component of ensuring data integrity is the accurate and appropriate analysis of research findings.

Descriptive research refers to the methods that describe the characteristics of the variables under study (J.Albers, 2017). Descriptive research is a part of quantitative market research or social research study which involves conducting survey research using quantitative variables on a market research tool or social research tool. A descriptive research design can use a wide variety of research

methods to investigate one or more variables. Unlike in experimental research, the researcher does not control or manipulate any of the variables, but only observes and measures them. Demographics and descriptive data are often collected from the sample (Kumar, 2014). It is used to determine the participants' qualities, such as their traits, behaviour, and opinions (Bhandari, 2021). This data can be acquired through surveys, which are shared with the responders, who are the study subjects in this case.

The process of preliminary testing assumptions of a test using the sample data, before performing a test conditional upon the outcome of the preliminary test, is performed by some researchers; this practice is often criticised in the literature (Kumar, 2014). Preliminary studies are usually carried out in order to delicate the intervention and analyse its acceptability, practicality, cost, and uptake. Preliminary Research is research on a topic that helps you get a better understanding on what types of sources are available and what is being said about a topic. This type of research helps solidify a topic by broadening or narrowing it down. This research can also help you when choosing Search Terms. The KMO and Bartlett test evaluate all available data together. A KMO value over 0.5 and a significance level for the Bartlett's test below 0.05 suggest there is substantial correlation in the data. In the preliminary test, the KMO Bartlett's test of sphericity value must be greater than 0.6, and the acceptability of measurements of sample adequacy (MSA) must be significant (p < 0.05), nevertheless, the communalities value must be greater than 0.6 in the preliminary test (Hair et al., 2014). During the pilot test, if the value of communalities is less than 0.6 but between 0.5 and 0.6, the value is still appropriate; it was also pointed out that factor analysis should be done before the reliability test to ensure that any items or constructs which do not meet the general rule are eliminated or modified in for any further evaluations (Zikmund et al., 2014).

# 4.1 Hypotheses Testing

Hypothesis testing is the act of testing a hypothesis or a supposition in relation to a statistical parameter. Analysts implement hypothesis testing in order to test if a hypothesis is plausible or not (Rawat, 2021). In data science and statistics, hypothesis testing is an important step as it involves the verification of an assumption that could help develop a statistical parameter. For instance, a researcher establishes a hypothesis assuming that the average of all odd numbers is an even number.

# **4.2 Multiple Regression Model**

Multiple regression is a statistical approach for examining the relationship between numerous independent variables and a single dependent variable. The objective of multiple regression analysis is to use the independent variables whose values are known to predict the value of the single dependent value. Each predictor value is weighed, the weights denoting their relative contribution to the overall prediction. Apart from that, multiple regression analysis allows researchers to assess the strength of the relationship between an outcome which is the dependent variable and several predictor variables as well as the importance of each of the predictors to the relationship, often with the effect of other predictors statistically eliminated (Gogtay, Deshpande, & Thatte, 2017).

The p-value for each term tests the null hypothesis that the coefficient is equal to zero. A low p-value (< 0.05) indicates that you can reject the null hypothesis. Typically, you use the coefficient p-values to determine which terms to keep in the regression model. The beta coefficient, on the other hand, is defined as the percentage change in the dependent variable for every unit change in the independent variable. The beta coefficients might be positive or negative, and the t value and the significance of the t-value are connected. (Gardner, Mcgowan & Moeller, 2013).

addition. the coefficient determination is a statistical measurement that examines how differences in one variable can be explained by the difference in a second variable, when predicting the outcome of a given event (Dhakal, 2018). Apart from that, there is Cohen's f also known as ANOVA. Cohen's f is a population-wide measure of a standard average effect throughout all ranges of the independent variables. The basic rule for determining impact size is that if the f2 value is less than 0.02, the effect size is small. If the f2 value is 0.15, the effect size is considered medium. Moreover, if the f2 value is 0.35, the effect magnitude is huge. Therefore, present study will be using multiple regression model to examine the relationship between mental health and three independent variables.

#### 5.0 Conclusion

In order to sustain the study's value and integrity, the present study must collect data in an ethical manner. The study's ethical consideration is useful in assisting the researcher in maintaining the research's quality (Kumar, 2014). The data in the study was obtained ethically, and the respondents were allowed to speak their thoughts without fear of being misunderstood, and the participants are joining in the study freely.

Participants are reassured by the present study that the information they given will not be altered in the future, and that their private details will not be publicly released (Sekaran & Bougie, 2016). As a result, there are more opportunities for the researcher to obtain truthful responses. Additionally, before handing out questionnaires, a short briefing is given to the respondents so that they are aware of the research topic and why it is being conducted.

Furthermore, secondary data relying on a literature review was obtained from a credible source and carefully cited to ensure that no copied information was used. The questions in the questionnaire were clearly written and were based on the research hypotheses so that participants could comprehend them quickly. The study must protect and emphasize the participant's integrity while simultaneously ensuring the participant's confidentiality.

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