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## **Contents**

1. A CONCEPTUAL FRAMEWORK FOR ENVIRONMENTAL MANAGEMENT ACCOUNTING PRACTICES IN THE MALAYSIAN MANUFACTURING INDUSTRY.....	1
2. A CONCEPTUAL FRAMEWORK ON THE IMPACT OF CUSTOMER BUYING BEHAVIOR TOWARDS SMALL AND MEDIUM ENTERPRISES PERCEPTION DURING PANDEMIC (COVID-19) IN JOHOR.....	7
3. FACTORS AFFECTING NON-ADHERENCE TO TREATMENT OF HEMODIALYSIS PATIENTS IN MAKKAH CITY, KINGDOM OF SAUDI ARABIA.....	13
4. ENABLING EMPLOYMENT FOR PEOPLE WITH DISABILITY (PWD): READINESS, COMMITMENT, AND DISPOSITION OF MALAYSIAN EMPLOYERS.....	29
5. BUILDING CORPORATE REPUTATION: THE ROLE OF CSR COMMUNICATION .....	44

# A CONCEPTUAL FRAMEWORK FOR ENVIRONMENTAL MANAGEMENT ACCOUNTING PRACTICES IN THE MALAYSIAN MANUFACTURING INDUSTRY

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**Abstract:** *Environmental management accounting practices (EMAP) is one of the environmental management tools that have been implemented in the accounting field. This study presents a conceptual framework for EMAP in the Malaysian manufacturing industry. This study discusses the implementation of EMAP and summarises the frameworks that have been suggested for this purpose. Then, this study explains, in detail, the proposed conceptual framework consists of Physical Environmental Management Accounting and Monetary Environmental Management Accounting. This study's main contribution consists of the proposal of novel approach for the implementation of EMAP in the Malaysian manufacturing industry. Thus, EMAP can be used in the Malaysian manufacturing industry for reducing the environmental costs.*

**Keywords:** *Environmental Management Accounting Practices, Manufacturing Industry, Malaysia*

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## Introduction

Based on the accounting aspects, environmental accounting can be divided into two aspects, which are environmental financial accounting and environmental management accounting. Environmental management accounting is a subset of environmental accounting (Zhang, 2014). The implementation of environmental management accounting practices (EMAP) has attracted the increasing attention and interest of organizations. EMAP uses environmental accounting methods to identify, analyse, manage, and reduce the environmental impacts of the organization. This is supported by Jamil and Mohamed (2017) who stated that EMAP has become an important part of environmental accounting. Due to this, it focuses on environmental information for decision-making of the organization, particularly information that can be used for EMAP. Thus, the subsequent literatures in this study relate to the implementation of EMAP.

EMAP is one of the environmental management tools that have been implemented in the accounting field (Christine, Yadiati, Afiah, & Fitrijanti, 2019). Setthasakko (2015) defined EMAP as an instrument that helps organizations to improve the environmental management and environmental information for the stakeholders. Companies have begun to face the stakeholder concerns regarding the environmental impact of the organizations. This is because

the implementation of EMAP is important in managing the environmental management to reduce the negative impact on the environment. Thus, companies are striving to become more effective and efficient, and utilize the resources in a way to ensure sustainability of the environment.

One of the environmental management practices that include organization's activities is EMAP implementation which can provide the environmental information for reducing the environmental issues, enhancing performance, and sustainability (Solovida & Latan, 2017). Regarding this, the implementation of EMAP can improve environmental management; by providing useful environmental information that assists organizations to increase performance, particularly in the Malaysian manufacturing industry. Several studies have shown that EMAP can be significant in reducing costs in the organization (Keddie, 2017; Jama, Kiet, Saat, Othman, & Ramakrishnan, 2019). In this regard, EMAP covers the environmental costs, such as analysing the cost of environmental protection, wastes, and energy. Therefore, EMAP can be used in the Malaysian manufacturing industry for reducing the environmental costs.

### **Literature Review**

EMAP is a practice in environmental management for managing activities in the organization (Fuzi, Habidin, Janudin, & Ong, 2019). EMAP refers to the process of identifying, collecting, and analysing the environmental management activities for decision-making, such as reducing energy, materials (wastes), water, and costs. Furthermore, EMAP focuses on the environmental information related to materials, energy, water, and also information pertaining to the environmental costs (Qian, Burritt, & Monroe, 2018). Therefore, EMAP helps to increase interest in the manufacturing industry in order to improve environmental management, such as reducing emissions, energy efficiency, and water usage.

Most of the research is related to EMAP and focuses on the manufacturing industry (Gunarathne & Alahakoon, 2016). This may help in reducing environmental impacts, enhancing environmental programs, environmental management, and performance. The implementation of EMAP in the manufacturing industries operating in Malaysia may help to address the environmental issues. EMAP can contribute to reducing the environmental impact, and improving the environmental awareness, and benefits that can enhance environmental management (Agustia, Sawarjuwono, & Dianawati, 2019). In this regard, organizations can gain some benefits through the implementation of EMAP. These benefits include complying with the environmental legislation, controlling the resources used, improving productivity, increasing profitability, company's reputation, competitive advantage, environmental decision-making, reducing the environmental costs, and environmental risks, as well as improving EMAP for the Malaysian manufacturing industry.

As suggested by Chathurangani and Madhusanka (2019), EMAP helps to increase interest in the manufacturing industry in order to improve environmental management such as reducing emission, energy efficiency, and water usage. Besides, EMAP focuses on environmental information related to materials, energy, water, and also information of environmental costs (Al-Mawali, Sharif, Rumman, Kerzan, & Liu, 2018). Therefore, EMAP is beneficial for the Malaysian manufacturing industry to manage the environmental management including energy efficiency, reduce pollution abatement, and efficient cleaner production.

In summary, EMAP is one of the practices that can assist the Malaysian manufacturing industry to improve the environmental management accounting and performance in order to achieve the environmental objectives and goals. The summary findings of EMAP implementation are presented in Table 1.

**Table 1: Summary Findings of EMAP Implementation**

Summary Findings of EMAP Implementation	Authors
Encourage environmental activities, environmental sustainability, and compliance with environmental laws.	Doorasamy (2015)
Motivate companies to improve environmental management and improve environmental operations.	Christ, Burritt, and Varsei (2016) Jamil and Mohamed (2017)
Enhance material efficiency, provide environmental strategy, and reduce environmental impacts.	Keddie (2017) Gibassier and Alcouffe (2018)
Improve cost savings, profitability, environmental information, and environmental evaluation.	Johnstone (2018)
Promote environmental awareness, integrates environmental strategy, and continuous improvement.	
Improve environmental processes, environmental strategy, and increase profitability.	Chathurangani and Madhusanka (2019)

According to previous studies, the implementation of EMAP is important for environmental management to become more efficient (Le, Nguyen, & Phan, 2019). This is because the implementation of EMAP is a concern in the Malaysian manufacturing industry. Thus, EMAP implementation helps companies improve environmental management, such as energy efficiency, and efficient cleaner production, as well as reduce pollution, and achieve better performance, especially for the Malaysian manufacturing industry.

EMAP's main goal is to obtain useful information for decision-making. EMAP refers to the practices in determining the use of materials, energy, and environmental costs in the process of decision-making to protect the environment (Krivacic & Jankovic, 2017; Fuzi, Habidin, Janudin, Ong, & Bahador, 2019). EMAP provides the development of practices for reducing pollution, materials, costs, and recycling. Thus, EMAP can provide the information to meet all of the requirements for decision-making. EMAP encourages companies to adopt environmental practices for managing the issues concerning the environment. This highlights that EMAP can assist companies to manage the environmental issues in the organization. Additionally, EMAP provides the environmental information to increase and evaluate the performance (Johnstone, 2018). Hence, EMAP could be an effective instrument to manage environmental management activities in the organization. In conclusion, the implementation of EMAP can be applied to the Malaysian manufacturing industry in order to improve the environmental management, such as improve the production process, and environmental conservation, as well as reduce pollution, costs, waste, energy, and materials.

## Dimension of EMAP

### *Physical Environmental Management Accounting (PEMA)*

Physical Environmental Management Accounting (PEMA) includes all existing organizational environmental accounting methods and processes that discuss environmental effects across organizational structures. PEMA systems represent the environmental impacts of the organization related operations planned to satisfy the increasing demands of the diverse internal and external stakeholders for details on the company's environmental results. From previous research, traditional accounting primarily uses monetary indicators and places less importance on non-monetary information. Environmental performance aspects involving physical information may be entirely overlooked in traditional EMA accounting, including practical processes for material and energy use, flows and final disposal (Karimi, Dastgir, & Saleh, 2017).

### ***Monetary Environmental Management Accounting (MEMA)***

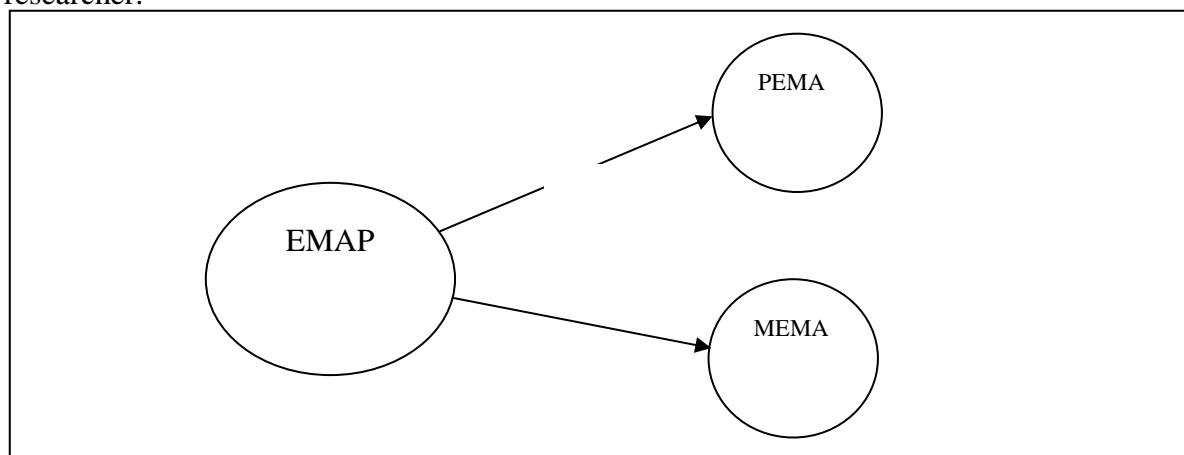
Environmental costs are significant part of the organization’s total operating costs. Monetary Environmental Management Accounting (MEMA) provides critical environmental cost detail needed to control environmental efficiency (IFAC, 2005). The redistribution of costs, a successful EMA method may also affect environment efficiency, since proper accounting for environmental costs are vital to long-term sustainability. Organizations with a strong knowledge of their environmental issue is best prepared to manage costs (Phan, Baird, & Su, 2017). MEMA includes the economic effects of environmental impacts on businesses, including historical, current and future capital reserves and flows, presented in financial terms.

### **Methodology**

The data for this study was collected through a survey technique, using an adopted and adapted instrument from previous studies to measure variables specified within the suggested framework, namely, EMAP. The population of the Malaysian manufacturing industry comprised 2,700 manufacturing companies (Federation of Malaysian Manufacturers [FMM] Directory, 2020). The data would be collected using a questionnaire survey from 2,700 manufacturing companies selected from the FMM Directory 2020. In this study, the unit of analysis is the companies. The manufacturing companies that participated in the survey comprised of automotive/machinery, plastics/rubber/metal, food/tobacco, electrical/electronics, and chemical/woods.

### **Research Framework**

The research framework aims to identify the EMAP implementation in the Malaysian manufacturing industry. Figure 1 represents the research framework proposed by the researcher.



\*Notes: PEMA=Physical Environmental Management Accounting, MEMA=Monetary Environmental Management Accounting

**Figure 1: Research Framework**

MEMA as part of the environmentally distinct traditional accounting systems, integrates the environmental monetary effect on the organization. This is the primary accounting basis of information for most internal management decisions and describes the monitoring, analysis, and distribution of environmental costs and benefits on environmental (Ong, Noordin, & Jaidi, 2020). PEMA represents environmental impacts of organizations-related operations intended to satisfy the increasing demands of the numerous internal and external for information on the environmental performance.

## Conclusions

EMAP is one of the practices that can assist the Malaysian manufacturing industry to improve the environmental management accounting and performance in order to achieve the environmental objectives and goals. This study indicates that the practitioners also can recognize that the implementation of EMAP is important to the Malaysian manufacturing industry. For future research, the researcher would like to suggest that this research to be expanded and developed in other industries to provide substantial results. Therefore, the implementation of EMAP can be concerned in the Malaysian manufacturing industry. EMAP implementation helps companies to improve the environmental benefits and achieve better performance especially for the Malaysian manufacturing industry.

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# A CONCEPTUAL FRAMEWORK ON THE IMPACT OF CUSTOMER BUYING BEHAVIOR TOWARDS SMALL AND MEDIUM ENTERPRISES PERCEPTION DURING PANDEMIC (COVID-19) IN JOHOR

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**Abstract:** *The objective of this study is to identify the conceptual framework of customer buying behavior and Small Medium Enterprises perception during Pandemic Covid-19 in Johor. The variables consist of Customer Buying Behavior (panic buying, herd mentality, role of the media in influencing consumer behavior) as independent variable and Small and Medium Enterprises (SMEs) perception during Pandemic Covid-19 is the dependent variable. This study adopted quantitative approach using IBM SPSS version 26. The survey was conducted on Johor SMEs firms. The conceptual framework has been developed in this study. The expected findings show there is a positive relationship between herd mentality, panic buying and role of the media have significance relationship toward SMEs enterprises during Pandemic Covid-19 in Johor.*

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**Keywords:** *Customer Buying Behavior, Small and Medium Enterprises, Covid-19, Johor*

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## Introduction

Pandemic Covid-19 outbreak was first reported in Wuhan, China, in December 2019. As of this writing, new science is published regularly as the resources of the world's health systems pour into learning about, treating and preventing human infections in more than 100 countries and on six continents. To bring this disease outbreak into context and discuss global health security and pandemic response preparation, we will first include some history of coronaviruses in this two-part article series (McLeod, 2020). There are many coronaviruses known to circulate in different populations of animals which have not yet infected humans. COVID-19 is the latest to make a leap towards human infection (McLeod, 2020).

Small and medium enterprises (SMEs) are enterprises that below a certain level retain their profits, assets or a number of employees. Every nation has its own idea of what constitutes a small and medium-sized business (SME). These size criteria must be met and the sector in which the organisation operates is often taken into account as well (Bartik et al., 2020). However, on a small scale, small and medium-sized enterprises (SMEs) play a significant role in the economy. They outnumber large corporations greatly, employ a large number of people and are typically entrepreneurial in nature, helping to shape innovation (Bartik et al., 2020).

SMEs play a key role in the Malaysian New Economic Policy. Since SMEs have been a significant generator of jobs and growth, they have long been recognised as the backbone of any economy. In Malaysia, for instance, SMEs account for about 99% of total business establishments and contribute to 38.3% of the Gross Domestic Product (GDP) of the country

(Department of Statistics Malaysia, 2019). The GDP of Malaysia's SMEs surpassed Malaysia's GDP by 6.2 percent, which reached 4.7 percent in 2018. (Department of Statistics Malaysia, 2019). Johor is the country's third largest contributor to GDP, behind Selangor and Kuala Lumpur.

The coronavirus (Covid-19) has a far-reaching effect on companies, especially small and medium-sized enterprises. It's taken many lives already, and it's taking them, too. In addition, each country follows lockdown procedures as a means of preventing steps, and the same has been adopted by Malaysia as well. Both the private and the public sectors appear to be messed up because of this virus. It is inevitable that the effect of the new coronavirus will have a significant impact on the country, economy, and society. The rising risk of new coronavirus is a public health concern that hampers the entire macro economy. It has also cut off the firm's supply chain. Further hampering is required of the production and the manufacturers. China is the main production centre for many companies worldwide. Any disruption to Chinese output will therefore simply have repercussions (Hasanat et al., 2020).

During Pandemic Covid-19 in Malaysia, consumers have several concerns to bear, worrying about the safety of their self and families, whether they can pay for their basic needs, and losing the ability to fly. When clients change their old habits and adopt new ones, such growing issues manifest differently. It is clear that the MCO has had an influence on what people buy and how they buy it, but also on how much they spend while shopping (Kong, 2020). According to a special survey conducted by the Malaysian Department of Statistics on the effect of Covid-19 on the economy and individuals (Round 1) from 23 to 31 March 2020, there was a significant change in spending on daily needs before and after the outbreak of Covid-19. The buying pattern of raw materials on the market or in the warehouse or in the grocery store indicates that before the outbreak, the existing sales mostly and seldom changed according to Covid-19 (Kong, 2020).

### **Problem Statement**

Covid-19 has affected companies, especially small and medium enterprises, to survive in the industry as they take various risks to keep their company going. Consumers should take the requisite precautions and be more likely to take proactive action based on the possible effects of this pandemic (Yannelis, 2020). Therefore, the consumer behaviour of Malaysia primarily impacts the e-commerce business market to a large extent. Consumer buying behaviour will be affected instead of national lockouts because there would be a lack of availability of goods and services in the various outlets and markets. To this end, the user will rely primarily on the online platform to fulfil the basic needs needed to survive (Craven, 2020).

Owing to confusion, people are postponing buying decisions in several categories. After the immediate menace has dissipated, this will continue. In China, for example, gold and silver sales fell in January and February 2020, year on year, by 41.1 percent. There will be a wait-and-see attitude. It will affect several sectors, especially SMEs. Regardless of the strain caused by the COVID-19 pandemic, significant constraints are being forced on the SME. The dependent variable is known as the SME since the rise or decrease in demand for the particular platform is heavily dependent on the widespread COVID-19 and on the consumer's behaviour towards this global problem as well. The company is mainly reliant on these two factors that influence its overall market demand. For this reason, clients have switched to online network approaches. It is seen as the only way the population of the world can survive the pandemic situation. Increased viewer numbers are seeking to take advantage of digital facilities.

## **Literature Review**

### ***Customer Buying Behavior***

Customer buying behaviour is the study of consumers and the mechanisms they use to use, select, and dispose of goods and services, including mental, emotional and behavioural responses from consumers. In how Covid-19 influences SMEs, consumer behaviour integrates concepts from many disciplines, including psychology, genetics, chemistry, and economics (Hasanah et al., 2020). Customer buying behavior has led to the retention of customers in Johor SMEs. Recent research shows that the main purpose of consumer behavior is to help retain and create customers (Ding et al. 2020). A customer who is happy about a particular product or service repeatedly purchases the same product. Marketing of products is done in a way that customers can repeatedly make purchases of similar products (Muniyappa & Gubbi, 2020). Thus, to track and retain more customers during the pandemic, more small and medium enterprises have paid attention to consumer behavior.

Customer buying behavior during the pandemic in Johor has led to the prediction of market trends. According to recent trends of consumers, more customers are attracted by healthy food and a friendly environment (Bayissenge et al. 2020). By considering customer's behaviors, more small and medium enterprises have saved a lot of resources by putting on hold commodities that are not in high demand during the pandemic to avoid losses and wastage. Basing on consumer behavior, small and medium enterprises have decided on a production strategy that is saving marketing and warehouse costs.

As a result of buyer behavior, customer service in Johor and its environments has been improved during the pandemic. In small & medium enterprises, consumers need different customer services. Comprehending the differences in customer base has led to the production of the most appropriate customer service which has impacted positively in the sales and market. For instance, to help catch customer's attention over a certain product, say a newly innovated product, one has to employ more customer service to help the public understand the usage of similar products. In this case, as a result of buying behavior, new products were innovated in Johor (Shamsuddin et al. 2020). Many customers were employed to serve customer service and aid in understanding the usage of new products in the market. For instance, when the pandemic struck Johor, many people opted to buy televisions to keep following the updates during the lock down (Krishnan, 2020). As a result, marketers learned consumer's preferences and imported a lot of televisions as well as human support to help customers comprehensively understand how to use electronic gadgets.

### ***Dimension of Customer Buying Behavior***

#### ***Panic Buying***

Yuen et al. (2020) conducted some research had identified 4 key factors that trigger panic purchases in response to the coronavirus fear of the unknown, awareness and social psychology coping behaviour. They concluded that when consumers consider the probability and effects of contracting a disease to be higher, they are motivated to conduct self-protective behaviours, including panic purchasing, to minimise perceived risk. In addition, if people demand a product to become unavailable and thus restrict their personal freedoms by not having it, panic buying would be encouraged; or alternatively, if they may expect a sense of guilt that they do not pursue a certain action or purchase, leading them to make these scheduled purchases (Yoon et al. 2017). Fear of the unfamiliar is expressed in panic buying behaviours as clients turn their lack of knowledge of emergencies into behaviours that are seen as calming, offering protection or relieving stress (Elmore 2017). This is expressed in research showing that, in anticipation of imminent disasters, SME sales have traditionally risen.

### ***Herd Mentality***

Herd mentality is defined as an alignment of the ideas and/or behaviours of individuals in a community that emerges without the purposeful planning of a central authority or leading figure, rather than through local interactions between agents (Kameda and Hastie, 2015). The impact of a knowledge cascade is shown by behavioural economics, whereby clients with a network are influenced by others' behaviours and choices (Easley and Kleinberg 2010). Furthermore, 'shortage heuristics' often play a role in the growth of market anxiety during times of shock, so that usually boring products frequently see their value irrationally inflated by the demand (Cheung et al. 2015).

### ***Role of Media in Influencing Consumer Behavior***

In the digital world, mass media plays a key role in the growth, remodelling and leadership of public opinion (Yang et al. 2019). The research of the 2014-15 Ebola outbreak is the most recent and significant indicator for observing the effect of media coverage on consumer behaviour. Therefore, when the first death took place in the US, other behavioural anomalies mentioned earlier in the study, such as panic buying and herd mentality, were affected by scaremongering and panicked media coverage. Mass media positions across channels have grown. SMEs need to use media channels carefully during the Pandemic Covid-19 since only this channel is deemed acceptable as an approach to finding customers.

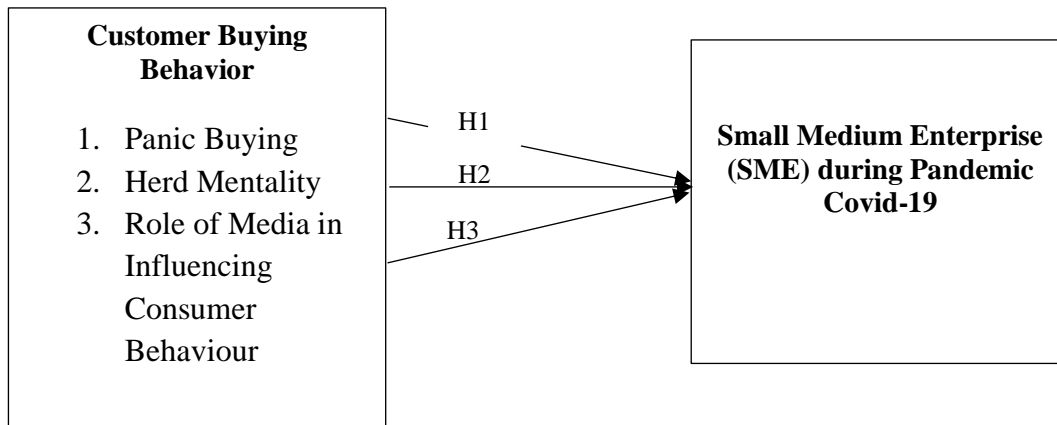
### ***Small Medium Enterprises Problem During Pandemic Covid-19***

Small and medium enterprises (SMEs) are enterprises that below a certain level retain their profits, assets or a number of employees. Every country has its own concept of what constitutes a small and medium sized enterprise (SME). Such size criteria must be met and the sector in which the company operates is also often taken into account (Bartik et al., 2020). Small Medium Enterprises (SMEs) is an independent company with a small market share and controlled by its owner or part-owners (Margaretha & Supartika, 2016). SME are wide diversity of the businesses, so there is no single definition of a small firm because each country has their own definition for SME Firm.

Malaysia's economic is forecast to fall after the Pandemic Covid-19 with 93 per cent of small and medium enterprises (SMEs) expected to face problem business within six months. The government needs at least six months after the crisis in an effort to restore the country's economy (Raman, 2020). SMEs in Johor also affected due to Covid-19 and having a lot of problem such as deterioration in business performance; declining demand and product offerings; lack of stock of raw materials; limited product production; difficulty paying rent for business premises; and difficulty repaying business loans (Idris, 2020). There are many sectors affected by the Covid-19 outbreak including the manufacturing, tourism, education sectors and food industry (Zainuddin, 2020).

### **Research Framework**

The conceptual framework of this study has been developed as follows;



**Figure 1: Research Framework**

### Methodology

The population of this study consists of SMEs companies in Johor. A quantitative approach using self-administered questionnaire was adopted. Stratified sampling technique was adopted to distribute questionnaire to SMEs companies in Johor. The data will be analysed using the Statistical Package for the Social Sciences (SPSS) version 26 to evaluate the impact of consumer buying behavior during Covid-19. Numerous data analysis sets will be used in this study such as analysis on reliability, descriptive analysis, t-test, one-way ANOVA, analysis of multicollinearity, and analysis of multiple regressions.

### Conclusions

The conclusion, this study will benefit the small-medium enterprise (SME) to help them for better understanding in preparing strategies to support their company during the Covid-19 pandemic. This study also will help the SME to unlock their potential to further explore and construct effective strategies to reach the right customer, that eventually would boost their sales especially during pandemic.

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# FACTORS AFFECTING NON-ADHERENCE TO TREATMENT OF HEMODIALYSIS PATIENTS IN MAKKAH CITY, KINGDOM OF SAUDI ARABIA

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**Abstract:** *Background:* Adherence of hemodialysis patients to medical instructions is considered crucial for a longer life expectancy and better quality of life. There is a solid evidence that non-adherence of end stage renal disease patients correlates with morbidity and mortality, is the norm for dialysis patients rather than the exception, multiple factors influence it and inconsistencies exist in findings about the relationships between risk factors and non-adherence. Despite the importance of this topic, there is remarkable paucity in the studies which identify factors associated with non-adherence in hemodialysis patients in Saudi Arabia. *Objectives:* To determine factors related to non-adherence to fluid, diet, medication and hemodialysis sessions among hemodialysis patients in Makkah. *Materials and Methods:* The current study is a cross sectional one, where a sample of 361 hemodialysis patients were selected randomly from hemodialysis centers in three governmental hospitals in Makkah in order to determine factors related to their non-adherence to treatment by using end stage renal disease-adherence questionnaire (ESRD-AQ) in addition to clinical examination and laboratory investigation for other data. *Results:* Younger (<30 years), unmarried, non-Saudis, those with chronic diseases other than hypertension and diabetes mellitus and those with long dialysis duration (60+ months) were found more likely to be non-adherent to fluid. Females patients and those with short dialysis duration (<60 months) were found more likely to be non-adherent to diet and medications, respectively. *Conclusion:* Patients who had factors associated with non-adherence deserve special attention and support to improve their adherence behavior. The findings from this study can be used as a base for designing an intervention aimed to increase the adherence to treatment in end stage renal disease patients who are undergoing hemodialysis in order to decrease the direct and indirect cost that appear as a consequence of non-adherence.

**Keywords:** Hemodialysis, Non- Adherence, Factors, Makkah, Treatment, Saudi Arabia.

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## Introduction:

Adherence (or compliance) is a dynamic, relative, complex, and multidimensional concept (KM, MH, JP, & NW, 1982; NG, 2001; Rosner, 2006) which is defined as “the extent to which a person’s behavior such as taking medications, following diets, or executing lifestyle changes coincide with medical or health advice” (Organization, 2003)(p.17).

Poor adherence to complex multimodal therapies is a widely recognized problem in the daily care of hemodialysis (HD) patients, which contribute to excess morbidity and mortality of this population (S. H, B, & H, 2009). This argument comes in the time where the incidence of chronic renal diseases is reported to be rising globally by about 6% annually (DL et al., 2004), and the incidence of dialysis patients is increasing by around 7% worldwide (Laeson Jr & Hakim, 2011). In Saudi Arabia, according to the latest dialysis statistics performed by the Saudi Center for Organ

Transplantation (SCOT) in 2012; there was a total of 14,171 patients on dialysis, out of them there were 12,844 (90.6%) treated by HD while the rest (1,327; 9.4%) were treated by peritoneal dialysis (PD); the overall mortality rate accounted for (11.6%) (Transplantation, 2012).

There is a solid evidence that non-adherence of ESRD patients' correlates with morbidity and mortality (S. H et al., 2009), Specifically, the literatures indicated that skipping treatment and poor dietary adherence are strongly associated with greater risk for mortalities among dialysis patients in general and ESRD in specific (ML, IV, NE, NR, & KB, 2005); as patients with ESRD require lifetime commitment to their treatments including renal replacement therapy (RRT) and the medical treatments for their underlying disease for survival, and are faced with a lot of challenges related to their adherence to treatment ((NKF). 2002). Despite severe consequences, noncompliance with their medical regimen is the norm for dialysis patients rather than the exception (SI, N, & NP, 1993).

HD patients are well suited for studying non-adherence because they have a number of features that characterizes their lifestyle and put them at an increased risk of non-adherence including prolonged, intensive treatment and their medical regimens are clear cut and easily determined with objective measures (SI et al., 1993). Despite these signaling facts and figures, the reviewed literatures indicated that reports concerning adherence vary widely and the rates to attendance at HD, medications, fluid and diet restrictions range from up to 100% to as low as 17.6% (CL, M, V, & F, 2004; Hecking et al., 2004; SH & A, 2002). These wide ranges of adherence behavior in the literature is most likely related to different population being studied, inconsistency in the measures used to investigate adherence behavior of patient and lack of clinically relevant operational definitions of non-adherence (Chan, Zaililah, & Hii, 2012; Kim, 2010). Moreover, it had been reported that there is paucity of studies which included all four aspects of the HD regimen, namely adherence related to fluid restrictions, dietary guidelines, medication, and dialysis appointments (Denhaerynck et al., 2007).

According to the World Health Organization (WHO) there are 5 categories of factors influencing the degree of adherences of the patients; they include (i) socioeconomic factors, (ii) therapy- related factors, (iii) patient-related factors, (iv) condition- related factors and (v) health care system-related factors (PV & E, 2003). In this respect, it was found that adherence is increased significantly with the higher percentage of highly trained staff and presence of a dietitian (Saran et al., 2003).

Despite the importance of this topic, there is remarkable paucity in the studies which identify factors associated with non-adherence in HD patients in Saudi Arabia. (Eida, 2010).

The current study aims at ameliorating the adverse consequences of non-adherence among HD patients through providing scientific background and better understanding for the factors associated with non-adherence, so decrease the direct and indirect cost that appear as a consequence of non-adherence. The objectives of current study were to determine factors related to non-adherence to fluid, diet, medication and HD sessions among HD patients in Makkah city.

### **Literature Review:**

Lacks of adequate knowledge, inadequate self-efficacy skills, forgetfulness and financial constraints were the major perceived barriers towards better compliance to fluid, dietary, medication and dialysis (Chan et al., 2012; Green et al., 2013). In a study conducted in Malaysia it was found that younger, male, working patients and those with longer duration on HD were found more likely to be noncompliant (Chan et al., 2012). In another study done in Turkey, it was found that age, marital status and family support were also main variables affecting diet non-adherence; the results of this study showed that non-adherence was more common among younger, married patients, and those with lower levels of perceived social support (B, K, & S, 2007). Nevertheless, in

this respect, it had been found that although social support is important for increasing adherence, yet, it was found that when diet is prepared by someone else in the family, patients are more likely to be noncompliant<sup>(Lee & Molassiotis, 2002)</sup>.

Also, adherence was found to be positively associated with higher educational level<sup>(Christiane Kugler, Maeding, & L.Russell, 2011)</sup> and higher monthly income<sup>(Y & LS, 2010)</sup>. Other studies have shown that adherence to treatment in patients receiving HD is influenced by personal characteristics such as age, gender, smoking, HD duration and comorbidity<sup>(C Kugler, Vlaminck, Haverich, & Maes, 2005; NG, 2001; Takaki et al., 2003)</sup>.

Also, it was found that the need to change eating habits and inability to resist favorite foods in addition to complexity of dietary recommendation were the major factors cited for dietary non-compliance, and lack of knowledge about fluid management was the major factor for fluid non-compliance, followed by the complexity of fluid management<sup>(Mellonemail, Regan, & Curtis, 2013)</sup>. Moreover, it was addressed that the majority of the patients reported they had difficulty adhering to phosphate binder per se due to its associated side effects such as constipation and the unpleasant experience to take large quantities with meals. The same study indicated that some patients had difficulty to comply with dialysis attendance due to financial constraint and lacks of transportation facility<sup>(Latham, 1998)</sup>. Studies showed that compliance to treatment is positively associated with knowledge of the patients about their diet and better attitude towards compliance in addition to perceiving lower barriers<sup>(LK et al., 2001)</sup>.

The role of the health team was also investigated to examine its impact on the level of adherence of patients, where it was reported that better communication between physicians and their patients lead to better adherence<sup>(Zolnierek & DiMatteo, 2009)</sup>.

In summary, the literature indicates that adherence is a difficult issue for staff and patients, and multiple factors influence non-adherence to treatment. However, inconsistencies exist in findings about the relationships between risk factors and non-adherence. Most studies have also been conducted in Western countries and none have been done to examine the non-adherence in Saudi patients receiving HD.

### **Materials and Methods:**

This study was a cross-sectional one conducted in three HD centers at three major governmental hospitals in Makkah city which is located in the Western region of Saudi Arabia. The HD machines are always busy through the year with four shifts daily. Sometimes a fifth shift has to be arranged to overcome the heavy workload with large influx of patients during the Holy months of Ramadan and Hajj due to a large number of visitors from outside the city of Makkah and there is an arrangement for visitors who have ESRD and need dialysis to do it in governmental hospitals. Small HD units are also available in other governmental and private hospitals, which accommodate for only a small percentage of patients.

The study population represents patients registered in the three HD centers present in three major governmental hospitals in Makkah city. Their total number was estimated to be around 2000 patients at the time of the study; they included all patients with ESRD requiring HD and they are all registered in the HD units of kidney centers. Patients at the HD centers in the three hospitals undergo HD for an average of 3 times a week, with a small percentage undergoing HD only twice a week. The HD sessions usually take place in four shifts, from 7:30 A.M to 10:30 A.M, from 11:00 A.M to 2:00 P.M, from 2:30 P.M to 5:30 P.M and from 6:00 P.M to 9:00 P.M.

The sample size needed for estimating prevalence of adherence and exploring factors associated with non-adherence was calculated by using Epi-Info program version 6.04; the required sample size was 385 patients.

The responded who completed the participation accounted for 361; making a response rate of 93.8%. Inclusion criteria were any patient, conscious, understands, able to give an informed consent (if the patient was less than 18 years, the consent was taken from his parents) and regular on HD.

Stratified sampling was conducted to ensure representativeness of male and female patients. Stratification was based on the available list of patients at each HD center in each hospital. This list cover patients from all wards, including male and female wards, the isolation section, both hepatitis C positive and negative patients and at different times of the day.

As the number of patients who were available at the time of the study accounted for 770 patients, an estimated sample size was 385 which represented one half of the patients; therefore, the estimation designated sample in each place was half of available listed patients.

The allocation of patients from each list was done by systematic sampling selecting every second patient in each list. There were separate lists for males and females which facilitated allocation of the sample by gender.

Adherence to treatment regimens in patients with ESRD was measured by a variety of methods, with no one method being superior <sup>(Denhaerynck et al., 2007)</sup>, however, the (ESRD-AQ) was considered the most appropriate for evaluating treatment adherence or non-adherence in patients with ESRD on maintenance HD. The ESRD-AQ instrument is a self-administrated questionnaire consists of 46 items; it addresses all components of adherence behaviors of patients with ESRD, and it was found to be valid and reliable. It is easy to administer; its completion takes approximately 20 to 40 minutes <sup>(Kim, 2010; Kim, S.Evangelista, R.Phillips, Carol Pavlish, & D.Kopple, 2010)</sup>.

The questionnaire measures treatment adherence behaviors in four dimensions: HD attendance, medication use, fluid restrictions and diet restrictions recommendations. It is divided into five sections; the first section includes general information about patients' ESRD and RRT related history (5 items), and the remaining four sections ask about treatment adherence to HD treatment (14 items), medications (9 items), fluid restrictions (10 items), and diet restrictions recommendations (8 items). These four final sections directly measure adherence behaviors (14, 17, 18, 26, 31, and 46), and patients' knowledge and perceptions about treatment (11, 12, 22, 23, 32, 33, 41, and 42). Responses to the ESRD-AQ utilize a combination of Likert scales and multiple-choice items, as well as "yes/no" answer format. The adherence behavior subscale was scored by summing the responses to questions 14, 17, 18, 26, and 46. The weighting system for scores was determined based on the degree of importance relevant to clinical outcome of each dimension. For example, missing or shortening HD has been reported to have a stronger association with mortality of patients with ESRD than other components of adherence behavior; therefore, it was given more weight in computing the adherence scores. In addition, the ESRD-AQ adjusts scores for question numbers 14 ("During the last month, how many complete dialysis treatments did you miss?"), 18 ("During the last month, when your dialysis treatment was shortened, what was the average numbers of minutes?"), and 26 ("During the past week, how often have you missed your prescribed medicines?") depending on the reasons for not adhering. For example, patients with medical reasons for missing or shortening the HD treatment (such as having HD access problems or physical symptoms during HD) obtained a full score (see appendix A). The attitude/perception subscale was scored by summing the responses to questions 11, 12, 22, 23, 32, 33, 41, and 42. The remaining questions obtain information about patients' ESRD and RRT related history. The ESRD-AQ was designed such that higher scores indicate better adherence <sup>(Kim et al., 2010)</sup>.

The original English version of questionnaire was translated to Arabic then it was back translated to ensure lexical equivalence. Additionally, it was subjected to validity testing after being translated into Arabic language.

A set of a structured list was developed by the researcher to ascertain information on patients' demographic characteristics and factors associated with non-adherence of patients and was translated into Arabic and reviewed by consultant of family medicine, consultant of community medicine and nephrology consultant; and was added to the End-Stage Renal Disease- Adherence Questionnaire (ESRD-AQ).

Each patient's adherence behavior was rated based on IDWGs, dialysis attendance, serum potassium and phosphorous levels over the previous month. These criteria were used separately to distinguish between adherent and non-adherent patients (Saran et al., 2003).

Dry weight (weight at the end of dialysis treatment) which is taken as the lowest tolerable weight at the end of dialysis treatment without the development of symptoms or hypotension, and the inter dialytic weight gain (IDWG) is calculated as the difference between the patient's weight obtained at the onset of a dialysis treatment and the weight obtained at the end of the previous dialysis (Leggat Jr et al., 1998).

The clinical measurements included biological measurements which included in addition to interdialytic weight gain (IDWG), biochemical markers which included pre-HD serum potassium or phosphorous levels.

Patients were considered non-adherent in the following situations (JM, M, R, P, & R, 2005; Kim et al., 2010; Leggat Jr et al., 1998).

1. If IDWGs were greater than 5.7% higher than the previous weight more than once weekly (for non-adherence to fluid restrictions) (the last cut-off was based on a > 4 kg IDWG in a 70 kg patient).
2. If they skipped one or more sessions of HD per month, or shortened one or more sessions by more than 10 minutes per month (for non-adherence to HD). A session missed because of hospitalization was not considered non-adherence.
3. If serum potassium was higher than 6.0 mmol/L (>6.0 mEq/L) (for non-adherence to diet restrictions) on monthly laboratory results.
4. If serum phosphorus was higher than 7.5 mg/dL (>2.4 mmol/L), (for non-adherence to medication).

Upon arrival to the dialysis centers, the physicians in charge were contacted and the researcher used to present the study design and explain the purpose of the research to the HD staff. Information regarding the HD center was obtained from the chief HD nurse. According to selection and inclusion criteria, designated patients were invited to participate in the study after explaining to them the purpose of the study.

Medical files of the patient were examined to check the weight of patients pre HD, weight of patients post HD (dry weight), number of co-morbid diseases and the presence of chronic disease (such as DM, HTN), psychiatric diseases, hospitalization history, kidney transplant history, causes of kidney failure, hepatitis profile, potassium and phosphorus level, for how long is he or she on dialysis, number of daily tablet, others... These information were available for every patient as they are doing a monthly blood test examination pre and post HD session to evaluate the level of potassium, phosphorus and others chemical indicators. By asking patients, nurses and confirmed by reviewing patients' files, the researcher could identify how many times patients skipped and shortened their HD session per month. These information were used to specify adherence and non-adherence according to definitions disclosed above.

Weight for each patient was measured before and after each HD sessions by well-trained nurses. The patient's weight at the beginning of dialysis session was subtracted from

the weight at the end of previous dialysis session (dry weight) to calculate the interdialytic weight gain (IDWG); then this IDWG is divided by weight at the end of previous dialysis session (dry weight) to get IDWG percentage. If IDWG percentage was more than 5.7% more than once weekly, then patient was considered as non-adherence to fluid restriction recommendations.

A standard electronic weighing chair was used to obtain the weight. The scale was placed on a hard floor surface. Participants were asked to remove their heavy outer garments; female patients were weighed with Abaya (ladies body cover), and Abaya was weighed and its weight was subtracted from the total. Weight was measured in all participants and taken to the nearest 0.1 kg using weighing scale. The scale was calibrated at the beginning and end of each examining day. The scale was checked using the standardized weights and calibration was corrected if the error was greater than 0.1 kg.

Statistical Package for Social Science (SPSS) program, version 20 was used for statistical analysis of data. The level of statistical significance was set at  $P < 0.05$  throughout the study.

### Results:

The study included 361 patients. The majority of them (78.9%) aged  $<65$  years, with a mean age of  $50.1 \pm 15.8$  years. There was almost equal distribution of males and females with an overwhelming majority of Saudis (93.9%). About two thirds of them were married (62.3%) and around one third (31.3%) were illiterate. The great majorities (88.9%) were unemployed and almost two thirds of the patients (60.1%) had monthly income between 1000 and 3000 SR.

The most commonly identified causes of renal failure were diabetes mellitus (23%) and hypertension (21.9%). On the same line, it was found that the overwhelming majorities of the patients (93.9 %) were currently hypertensive and a considerable proportion (39.6%) were currently diabetic and almost one half (49.9%) were positive for HCV. One half of the patients (50.3%) were on dialysis for 60 months or more and the majority (77%) had previous history of hospitalization. Clinically, the average number of co-morbidities accounted for 3.0 diseases; the median IDWG was 2.0 kg; the average number of daily tablet(s) taken by patients was 5.0. The mean levels of pre- HD serum potassium ( $K^+$ ) and phosphorus ( $po_4$ ) were  $5.1(0.9)$  mmol/L and  $5.3(1.8)$  mg/dl; respectively.

A relatively low adherence to regular attendance to dialysis sessions (56%) was reported, the great majority of patients were found to be adherent to other adherence behavior namely: diet, fluid restrictions and medications.

**Table 1: Adherence of The Patients to Fluid Restriction Recommendations According to Their Demographic Characteristics**

Characteristics	Adherence to Fluid Restriction				$\chi^2$	P	
	YES		NO				
	No	%	No	%			
Gender	Males	154	89.5	18	10.5	0.948	0.330
	Females	162	86.2	26	13.8		
Nationality	Saudi	300	88.8	38	11.2	Fisher	0.039
	Non-Saudi	16	72.7	6	27.3		
Age	<30 Years	28	60.9	18	39.1	36.262	<0.001
	30-<60 Years	183	90.6	19	9.4		
	60+ Years	105	93.8	7	6.3		
Age Mean $\pm$ SD		51.3 $\pm$ 15.2		40.5 $\pm$ 17.2			<0.001*
Marital Status	Married	208	92.9	16	7.1	19.203	<0.001
	Single	57	74.0	20	26.0		
	Divorced	16	88.9	2	11.1		

<b>Educational Level</b>	<b>Widowed</b>	35	85.4	6	14.6	1.675	0.247
	<b>Illiterate</b>	100	88.5	13	11.5		
	<b>Primary School</b>	79	89.8	9	10.2		
	<b>Intermediate School</b>	51	89.5	6	10.5		
	<b>Secondary School</b>	54	84.4	10	15.6		
<b>Employment Status</b>	<b>University</b>	32	84.2	6	15.8	Fisher	0.486
	<b>Employed</b>	37	92.5	3	7.5		
	<b>Not Employed</b>	279	87.2	41	12.8		
<b>Monthly Income</b>	<b>&lt;1000 SR</b>	38	82.6	8	17.4	2.600	0.457
	<b>1000-&lt;3000 SR</b>	189	87.5	27	12.5		
	<b>3001-&lt;6000 SR</b>	53	93.0	4	7.0		
	<b>6000+ SR</b>	36	87.8	5	12.2		

\*Based on Independent Sample T Test.

**Table 2: Adherence of The Patients to Fluid Restriction Recommendations According to Their Clinical Background**

Characteristics	Adherence to Fluid Restriction				χ <sup>2</sup>	P	
	YES		NO				
	No	%	No	%			
<b>Duration of Dialysis</b>	<b>&lt;60 Months</b>	164	92.1	14	7.9	6.534	0.011
	<b>60+ Months</b>	149	83.2	30	16.8		
<b>Main Cause of Renal Failure</b>	<b>Hypertension</b>	72	92.3	6	7.7	6.182	0.045
	<b>Diabetes Mellitus</b>	77	92.8	6	7.2		
	<b>Others</b>	167	83.9	32	16.1		
<b>Previous Kidney Transplant</b>	<b>Yes</b>	20	90.9	2	9.1	Fisher	0.481
	<b>No</b>	296	87.6	42	12.4		
<b>Diagnosed With Psychiatric Illness</b>	<b>Yes</b>	33	89.2	4	10.8	Fisher	0.517
	<b>No</b>	283	87.6	40	12.4		

Table 1 demonstrates that the Saudi patients are significantly more adherent to fluid restriction recommendations (88.8%) than the non-Saudis (72.7%) with an odds ratio (2.96; 95% CI: 1.09- 8.02) and older patients are more likely to adhere to fluid restriction than do the younger patients aged <30 years. Meanwhile, it was noted that single patients are significantly less likely to adhere to fluid restriction (74%) than either the married (92.9%), the divorced (88.9%) or the widowed (85.4%)  $p < 0.05$ . On the other hand, the table shows that neither the gender, the educational level, the employment status nor the monthly income had significant association with differences in adherence to fluid restriction  $p > 0.05$ .

Table 2 shows that the longer the duration of dialysis the less likely the patient will be adherent to fluid restriction recommendations, the proportion of adherent patients accounted for 92.1% for patients who were treated with dialysis for less than 60 months compared to 83.2% for those who had dialysis for 60 or more months with an odds ratio (2.36; 95% CI: 1.20-4.62). Also, it was observed that hypertensive and diabetic patients are significantly more likely to adhere to fluid restriction if compared to those with other chronic diseases; these differences are statistically significant  $p < 0.05$ . On the other hand, it was found that although that patients with previous kidney transplant (90.9%) and those with psychiatric illnesses (89.2%) were more adherent to fluid restrictions, nevertheless, these differences are not statistically significant  $p > 0.05$ .

Table 3 shows that although the females, the non-Saudis, those aged between 30-<60 years, married, employed, with lower educational levels and have monthly income between 3000-<6000 SR had relatively higher level of adherence to dialysis session, however, these differences are not statistically significant  $p > 0.05$ .

Table 4 shows that there were no significant differences in adherence of the patients to HD sessions according to their clinical characteristics namely: duration of dialysis, main cause of renal failure, previous history of kidney transplant or previous diagnosis of psychiatric illnesses  $p > 0.05$ .

Table 5 illustrates that the percentage of males who were adherent to dietary restrictions' recommendations (91.9%) was significantly higher than that among females (85.2%)  $p < 0.05$ , with an odds ratio (1.96; 95% CI: 1.00-3.87). Meanwhile, it was noted that the frequency of adherence to dietary restriction was relatively higher among non-Saudi patients, older ages, those who are married, with university qualifications, employed and higher monthly income, nevertheless, these differences are not statistically significant  $p > 0.05$ .

Table 6 shows that despite of the relatively higher frequency of adherence to diet restrictions' recommendations among patients with duration of dialysis for <60 months, hypertensive, patients with previous kidney transplant and those with previous history of psychiatric illnesses, nevertheless, these differences are not statistically significant  $p > 0.05$ .

Table 7 shows that although the females, the non-Saudis, those aged 60+ years, married, with higher educational levels, not employed and have monthly income <1000 SR had relatively higher level of adherence to dialysis session, however, these differences are not statistically significant  $p > 0.05$ .

**Table 3: Adherence of The Patients to Hemodialysis Sessions According to Their Demographic Characteristics**

Characteristics	Adherence to Hemodialysis Sessions						χ <sup>2</sup>	P
	YES		NO					
	No	%	No	%				
Gender	Males	96	55.8	76	44.2	0.003	0.959	
	Females	106	56.1	83	43.9			
Nationality	Saudi	186	54.9	153	45.1	2.674	0.102	
	Non-Saudi	16	72.7	6	27.3			
Age	<30 Years	21	45.7	25	54.3	3.136	0.208	
	30-<60 Years	120	59.4	82	40.6			
	60+ Years	61	54.0	52	46.0			
Mean±SD		51.0±14.6		48.8±17.2			0.192	
Marital Status	Married	137	60.9	88	39.1	7.623	0.054	
	Single	34	44.2	43	55.8			
	Divorced	11	61.1	7	38.9			
	Widowed	20	48.8	21	51.2			
Educational Level	Illiterate	64	56.6	49	43.4	4.722	0.317	
	Primary School	56	62.9	33	37.1			
	Intermediate School	33	57.9	24	42.1			
	Secondary School	32	50.0	32	50.0			
	University	17	44.7	21	55.3			
Employment Status	Employed	23	57.5	17	42.5	0.044	0.835	
	Not Employed	179	55.8	142	44.2			
Monthly Income	<1000 SR	28	60.9	18	39.1	1.132	0.769	
	1000-<3000 SR	117	53.9	100	46.1			
	3001-<6000 SR	34	59.6	23	40.4			
	6000+ SR	23	56.1	18	43.9			

\*Based on Independent Sample T Test

**Table 4: Adherence of The Patients to Hemodialysis Sessions According to Their Clinical Background:**

Characteristics	Adherence to Hemodialysis Sessions						χ <sup>2</sup>	P
	YES		NO					
	No	%	No	%				
Duration of Dialysis:	<60 Months	95	53.4	83	46.6	0.704	0.401	
	60+ Months	104	57.8	76	42.2			
Main Cause of Renal Failure:	Hypertension	44	55.7	35	44.3	0.020	0.990	
	Diabetes Mellitus	47	56.6	36	43.4			
	Others	111	55.8	88	44.2			
Previous Transplant:	Kidney Yes	12	52.2	11	47.8	0.143	0.706	
	No	190	56.2	148	43.8			
Diagnosed with Psychiatric Illness:	Yes	186	57.4	138	42.6	2.703	0.100	
	No	16	43.2	21	56.8			

**Table 5: Adherence of The Patients to Dietary Restrictions According to Their Demographic Characteristics:**

Characteristics	Adherence to Dietary Restriction						χ <sup>2</sup>	P
	YES		NO					
	No	%	No	%				
Gender	Males	158	91.9	14	8.1	3.903	0.048	
	Females	161	85.2	28	14.8			
Nationality	Saudi	298	87.9	41	12.1	Fisher	0.247	
	Non-Saudi	21	95.5	1	4.5			
Age	<30 Years	38	82.6	8	17.4	3.071	0.215	
	30-<60 Years	177	87.6	25	12.4			
	60+ Years	104	92.0	9	8.0			
Mean±SD	51.4±15.6		47.6±17.6				0.275	
Marital Status	Married	204	90.7	21	9.3	Na	Na	
	Single	64	83.1	13	16.9			
	Divorced	16	88.9	2	11.1			
	Widowed	35	85.4	6	14.6			
Educational Level	Illiterate	103	91.2	10	8.8	4.781	0.311	
	Primary School	74	83.1	15	16.9			
	Intermediate School	50	87.7	7	12.3			
	Secondary School	56	87.5	8	12.5			
Employment Status	Employed	37	92.5	3	7.5	Fisher	0.285	
	Not Employed	282	87.9	39	12.1			
Monthly Income	<1000 SR	39	84.8	7	15.2	2.601	0.457	
	1000-<3000 SR	190	87.6	27	12.4			
	3001-<6000 SR	51	89.5	6	10.5			
	6000+ SR	39	95.1	2	4.9			

\*Based on Independent Sample T Test Na: Not Applicable

**Table 6: Adherence of The Patients to Dietary Restrictions According to Their Clinical Background:**

Characteristics		Adherence to Dietary Restriction				$\chi^2$	P
		YES		NO			
		No	%	No	%		
Duration of Dialysis:	<60 Months	161	90.4	17	9.6	1.263	0.261
	60+ Months	156	86.7	24	13.3		
Main Cause of Renal Failure:	Hypertension	73	92.4	6	7.6	1.632	0.422
	Diabetes Mellitus	72	86.7	11	13.3		
	Others	174	87.4	25	12.6		
Previous Kidney Transplant:	Yes	21	95.5	1	4.5	Fisher	0.247
	No	298	87.9	41	12.1		
Diagnosed with Psychiatric Illness:	Yes	33	89.2	4	10.8	Fisher	0.564
	No	286	88.3	38	11.7		

**Table 7: Adherence of The Patients to Medication Recommendations According to Their Demographic Characteristics:**

Characteristics		Adherence to Medications				$\chi^2$	P
		YES		NO			
		No	%	No	%		
Gender	Males	147	87.0	22	13.0	0.307	0.580
	Females	168	88.9	21	11.1		
Nationality	Saudi	294	87.5	42	12.5	Fisher	0.230
	Non-Saudi	21	95.5	1	4.5		
Age	<30 Years	36	78.3	10	21.7	5.720	0.057
	30-<60 Years	177	88.1	24	11.9		
	60+ Years	102	91.9	9	8.1		
Mean $\pm$ SD		50.5 $\pm$ 15.7		46.5 $\pm$ 16.3			0.126
Marital Status	Married	198	89.2	24	10.8	NA	NA
	Single	65	84.4	12	15.6		
	Divorced	15	83.3	3	16.7		
	Widowed	37	88.2	4	11.8		
Educational Level	Illiterate	100	88.5	13	11.5	0.381	0.984
	Primary School	77	86.5	12	13.5		
	Intermediate School	49	89.1	6	10.9		
	Secondary School	55	87.3	8	12.7		
	University	34	89.5	4	10.5		
Employment Status	Employed	32	82.1	7	17.9	Fisher	0.170
	Not Employed	283	88.7	36	11.3		
Monthly Income:	<1000 SR	43	93.5	3	6.5	1.831	0.608
	1000-<3000 SR	188	87.0	28	13.0		
	3001-<6000 SR	49	86.0	8	14.0		
	6000+ SR	35	89.7	4	10.3		

\*Based on Independent Sample T Test

Na: Not Applicable

**Table 8: Adherence of The Patients to Medication Recommendations According to Their Clinical Background:**

Characteristics	Adherence to Medications				χ <sup>2</sup>	P	
	YES		NO				
	No	%	No	%			
Duration of Dialysis	<60 Months	149	84.7	27	15.3	4.122	0.042
	60+ Months	164	91.6	15	8.4		
Main Cause of Renal Failure	Hypertension	71	89.9	8	10.1	3,500	0.174
	Diabetes Mellitus	77	92.8	6	7.2		
	Others	167	85.2	29	14.8		
Previous Kidney Transplant	Yes	21	95.5	1	4.5	Fisher	0.254
	No	295	87.5	42	12.5		
Diagnosed with Psychiatric Illness	Yes	32	88.9	4	11.1	Fisher	0.560
	No	283	87.9	39	12.1		

Table 8 shows that the higher the duration of dialysis the more likely the patient will be adherent to medications' recommendations; the percentage of non-adherent patients decreased significantly from 15.3% among patients with dialysis for less than 60 months to 8.4% among patients with dialysis for 60+ months  $p < 0.05$ . Otherwise, although there was relatively higher adherence frequencies among diabetic patients, those with kidney transplant and who have history of psychiatric illnesses, these differences are not statistically significant  $p > 0.05$ .

### Discussion:

The results of the current study came in line with what was previously addressed that, among the ESRD population, older patients are more likely to be adherent to treatment (C Kugler et al., 2005; Kutner, Zhang, McClellan, & Cole, 2002) especially to fluid restrictions' recommendations. Same findings were elaborated in other studies (B et al., 2007; KA, KS, YM, & SB, 2008; NG, 2001), this notion could be explained by the argument that older patients may have more structured lifestyle that accommodates the demands of the treatment regimen while younger patients may perceive themselves as less vulnerable to negative health outcomes (NG, 2001).

The significantly higher non-adherence rates to fluid restriction in young patients are similar to findings in other studies (V. H, B, A, S, & G, 2001; C Kugler et al., 2005; Takaki et al., 2003). The relatively low level of adherence among this group of patients had been partially attributed to the feeling of independence which is usually intense in young people, this feeling lead to possible disregard of health instructions, and they could have under estimation for the adverse consequences that might result from non-adherence (NG, 2001). For this reason, it has been ascertained that younger patients under dialysis could have poorer quality of life in the future and higher mortality rates (NG, 2001; Takaki et al., 2003).

Similarly, older patients had been found more adherent to dietary recommendations with phosphorus and sodium restrictions, these findings came in congruence with what was found among Korean HD patients (Y.-J, K.-S, Y.-R, J.-S, & J.-B, 2009). The same was also reported by Park et al (2008) who pointed that older patient are usually having lower appetite and limited physical activity, therefore their need and graving to food is more less than the younger patients, accordingly the older patients are more likely to be adherent to dietary restrictions (KA et al., 2008).

Even when controlled for other factors, age was found to be significantly associated independently with the level of adherence of the HD patient to diet that showed itself in IDWG, this notion was introduced by Lisa Mellonmail et al in 2012 who studied factors influencing

adherence among Irish HD patients and by regression analysis it was revealed that younger patients had poorer adherence, that was attributed to the claim that younger patients may experience greater difficulty integrating complex treatment demands into their lifestyles, and non-adherence may be a consequence of the severe lifestyle limitations imposed by the HD treatment regime (Mellonemail et al., 2013).

Patients with longer duration on HD (60 months and greater) were found to be less adherent to fluid restrictions recommendations (P:0.011), Although that this finding comes in accordance with other studies (M & W, 1999; PL et al., 2000; SH & A, 2002), these studies draw the attention that there is no single convincing explanation for this change of adherence level of the patients being more less along time. Nevertheless, Yoke Mun Chan et al (2012) suggested that it is likely that the long duration of dependence on dialysis (length of time on dialysis) may cause HD patients to be accustomed to the restrictions imposed by the disease that might create false perception of better compliance than they actually do. Secondly, the use of clinical data for example serum potassium and phosphorus as the direct measures of dietary compliance could be misleading as these clinical data may also be affected by factors such as dialysis adequacy, medication and other factors yet to be identified (Chan et al., 2012).

Another plausible explanation is that end stage renal disease patients may be more eager to change their dietary and fluid intake habits to meet the requirement of a newly-received life-saving HD treatment. However as time passes, these patients may feel bored and easily get frustrated with the need to comply with long lists of restrictions (LW, SF, & SW, 2010).

From another perspective, it had been postulated that patients new to dialysis treatment may receive more social support, therefore they exhibit higher degree of compliance (LW et al., 2010). However, over the long run, it may be difficult for patients to resist the wide variety of foods and fluids. In view of this, it had been addressed that healthcare providers should identify the individual's perceived barrier, explore patients' willingness and readiness to make changes to their dietary and fluid habits to achieve the optimum effect of compliance (Chan et al., 2012).

On the other hand, this study showed that subjects with longer duration on HD (60 months and greater) were more adherent to medications (p:0.042), that could be attributed to notion that with time, the patients are becoming more knowledgeable and would having clear understanding of medications instructions about importance, timing, dose of medications; these information are expected to be reinforced by nurses and physicians about the value of medications and importance of incorporating drug administrations into patients daily lives, that will ultimately make patients with longer duration on HD to be more adherent to medications.

The current study showed that male are more adherent to diet restrictions than female (P:0.048) which is consistent with other international study carried out by Saran et al (2003) (Saran et al., 2003). Possible explanation is that in Saudi people culture female usually less educated than male, so, they are more adherent than female. Other possible explanation is that in Saudi community, females are usually stay in homes most of their time in contrast to males who are usually spend most of their time outside homes (in work, recreation, etc.), therefore, females have longer time for being close to food and available facilities for preparing meals.

On the other side, and in contradiction to our findings, a study conducted by Yoke et al (2012) revealed that male patients were more likely to be non-adherent (Chan et al., 2012); their explanation was that women are more likely to be health conscious than men and this explain how gender differences in adherence may benefit patients concerning health outcomes in the long run.

Our study showed that being married is an important factor in adherence to fluid restriction (p:0.001). Similar findings were found in a study conducted by Kelly et al (2009), through a review of the published literature from 1948 to 2001, they could argue that marital status and living with another person (for adults) increase adherence modestly (Zolnierek & DiMatteo, 2009). Kutner (2001) and Rosner(2006) reported that spouses have positive effects on

compliance with the treatment<sup>(Kutner et al., 2002; Rosner, 2006)</sup>. On the same line, it was revealed that single patients are less likely to be adherent than married patients<sup>(Sherry, Nancy, & Nelda, 2013)</sup>, which reflect the effect of spouse on increasing adherence of the patient to medical instructions and recommendations.

Our study showed that hypertensive and diabetic patients are significantly more likely to adhere to fluid restriction if compared to those with other chronic diseases; these differences are statistically significant  $p < 0.05$ . This finding is inconsistent with what was observed by a study conducted in USA, where the researchers found that there was no significant association between the presence of diabetes mellitus and changes in IWG (adherence to fluid restrictions)<sup>(Kimmel, Varela, Peterson, & al, 1999)</sup>. This notion could be presumably attributed to the claim that diabetic and hypertensive patients may be more afraid from complications and its consequences more than non-diabetic and non-hypertensive; so they are more adherent to their fluid restrictions recommendations.

Saudi patients were found to be more adherent to fluid restriction recommendations than non-Saudis ( $p:0.039$ ). No other researches available concerned about exploring association between nationality and adherence. However, this low adherence among non-Saudi may be attributed to poor language communication between patients and healthcare professional staff especially in misunderstanding the medical instructions about changing adherence behavior. Other possible explanation is that non-Saudi patients are usually having a lower socioeconomic status than Saudi. The association between socioeconomic status and level of adherence had been disclosed by Sherry et al (2013) who found that low income patients are less adherent to fluid restrictions than high income patients<sup>(Sherry et al., 2013)</sup>.

The main limitation of this study is the inherited drawback of the cross-sectional being unable to detect causal relationship between variables. A longitudinal design might be better to display changes of over time.

In conclusion, younger ( $< 30$  years), unmarried, non-Saudis, patients with chronic diseases other than HTN&DM and those with long dialysis duration (60+ months) were found more likely to be non-adherent to fluid. Females patients and those with short dialysis duration ( $< 60$  months) were found more likely to be non-adherent to diet and medications, respectively. These groups warrant special attention and support to improve their adherence behavior.

The findings from this study can be used as a base for designing an intervention aimed to increase the adherence to treatment in ESRD patients who are undergoing HD, used as a database for further studies in other parts of Saudi Arabia and internationally, assisting in planning screening programs to detect high risk patients, enabling the government and other health agencies to establish strategies and national health care approaches to ameliorate the NA problem.

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3<sup>rd</sup> IRCMST 2021

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## ENABLING EMPLOYMENT FOR PEOPLE WITH DISABILITY (PWD): READINESS, COMMITMENT, AND DISPOSITION OF MALAYSIAN EMPLOYERS

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**Abstract:** *People with disabilities (PWD) struggle with prejudices, narrow-mindedness, and maltreatment. This situation has brought many questions on how the public serves them. Concerning PWDs' employment, the source of income and the wellbeing of this community frequently be neglected and depreciated. The research issues a call to this agenda and suggests action to empower employment among PWD. Descriptive quantitative research was employed to 136 employers from various industries. This article reports three variables: readiness, commitment, and disposition of industrial players on hiring PWD. The result of the study describes that employers are more likely to hire PWD in their organization based on readiness and commitment factors. The disposition, on the other hand, is insignificant. In addition, the types of industry play a major role in employers' readiness and commitment to hire PWD. In summary, employment of PWDs is afflicted by skeptical and dubious perspectives due to their capabilities and capacities to fulfill job responsibilities. With encouragement and empowerment of skilled development programs, PWD is supposed to be allowed to join the workforce, performing a job that suits their impairment. Ongoing support must be advocated among the grassroots of the nations that ultimately flourish the life of PWD.*

**Keyword:** *readiness, commitment, disposition, employment, people with disability*

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### Introduction

In recent years, there has been an increasing interest in research related to People With Disabilities (PWD). Notably, the contribution and well-being of PWD have been questioned for many years. Research provides ample evidence of PWD struggles and injustice of those people and community on the grounds. PWD is tormented by a virulent and skeptical perception of community reflected on those individuals who experience some form of disabilities. PWD accumulates over 15% of the world's population, numbered at one billion people (The World Bank, 2021) creates sensationalism, often extending a welcome of such controversial statements on how we treat them as a human being.

Approximately there are 61 million disabled people among adult people in the USA (CDC, 2020). This number resonates with the gruesome facts of those who fall under poverty and become homeless. PWD are subjected to ill-treatment and isolation by numerous entities due to their condition. It is also a pertinent fact that most PWD are unemployed, causing long standing issues of their well-being and how they lead their life. According to the report from the U.S. Bureau of Labor Statistics, a proportion of only 17.9 PWD were successfully employed by industries in 2020. The issue of unemployment among PWD is evident in which this number decreased to 19.3% in 2019 (BLS, 2021). A report by the parliament of the UK



regarding employed PWD in the workforce states that 4.4 million of them were successfully hired by various industries.

Information related to the number of PWDs in Malaysia described the proportion of percentage of those PWD with types of impairment. According to the department of social welfare in 2017, 453,258 people are categorized as PWD. PWD in the physical category recorded the highest number which was 35.2 percent, followed by the learning disability (34.8%) and visually impaired (8.9%). The verbal impaired recorded the lowest registration of 0.5 percent (Department of Statistics Malaysia, 2020).

The Malaysian government has put forth to empower PWD in the employment market based on the PWD action plan blueprint for 2016-2022. In this blueprint, the job market will be more accessible and comprehensive enough to ensemble the capacities and proficiency of this group. The job availability will be more transparent and open to PWD. Attached to this initiative, skills and educational programs are provided from time to time to ensure PWD be more independent and eventually help them to earn a living. This whole idea is to prosper the human capital development of the nation as a whole (Wanita dan Masyarakat, 2016).

It is visible to claim that the jobless PWDs are a long extended issue. Based on the media report from the statement of the Ministry of Women, Family and Community Development in 2019, the number of PWD employees in the government agencies stood at 3,856 (0.31%). This number is a proportion the total of 1,268,701 public government sector employees. Nevertheless, the government has exerted PWDs' employment through the ruling of 1% job opportunities in government agencies (Wanita dan Masyarakat, 2016). This relatively imposes the hiring opportunities for PWDs in the government sector.

### **Literature Review**

Views in employment range of many aspects from the perspective of employers and the capabilities of PWD to deliver their job responsibilities. Suppose research related to PWD encouraged consensus between both parties in determining the middle-ground. Equally important, the proactive action from the grassroots level, must be systematically developed to empower PWD readiness to join the job market. Portraying from the psychological well-being of the PWD, it is indeed, this group tends to be deeply deprived of the whole life experience. Emerson et al (2020) measured the PWDs' well-being inventory and found that this community suffered many complicated issues that trigger negative drawbacks in their sociological and physiological well-being. Certainly, people are loath to deny the right of PWD to cherish life as a normal human being.

The primary factor toward PWD employment as suggested by Saidi et al (2018) was the working environment. They enunciated that PWDs encounter struggles to venture into the job market due to the unconducive workplace. Neglects and attitudes of employers trigger a challenge to most PWD in finding a job. As highlighted by Nicholas et al. (2019), the perceptions and reluctance of employers involving autistic individuals were evident. It is an anomaly for PWD to perform regular job responsibilities just like other people. They have a propensity for a specific task that suits their type of disability.

Additionally, the chances of PWD to join the workforce is emphasizing on strategy on fulfilling the specific job. Bezyak et al. (2020) found differences suggesting that disability participation strategies and recruitment objectives are essential in the purpose of recruitment. For example, policy from the government and policymakers in encouraging employers in PWDs to provide various benefits and incentives are one of the effective strategies. Nevertheless, it is difficult to allay the concern of employers about how susceptible PWD is to the specific task and how easily they succumb to the risk of being manipulated by other colleagues.

Numerous studies have attempted to explain significant factors that contribute to the disparity of PWD in the workforce. Unit (2005), for example, discovered that geographical and logistic factors of people with physical disabilities have become the major barrier for them to obtain employment and improve living standards. Similarly, Cohen et al. (2019) posited that time of task completion adding the encumbrance of PWDs in the job market as this would attenuate their chances of getting a job.

Despite the finding from Cohen et al. (2018) , that employer perspective, especially with PWD with some form of mental illness, showed that employers consider more barriers to hiring people with disabilities who have intellectual disabilities and mental disorders than physical disabilities. Employment for this group is hampered by a lack of skills and legal issues. Cohen et al. (2019) again suggested that skeptical beliefs about disability can shape performance, participants in simulated disability situations can complete tasks more accurately than controls. All in all, having the right mindset and reducing negative connotation, the barrier to social participation especially to enter the labor market

Following many proactive attempts in placing PWD in the job placement, the concurrent study delves into the important contribution of technology. Numerous assistive tools and apparatuses have been developed to assist PWD to perform myriad functions and responsibilities. Oware and Mallikarjunappa (2019) highlighted the need to integrate suitable technology to empower PWD in the job environment. In the finance and banking sector, Oware and Mallikarjunappa (2019) identified technological innovation as providing essential support for PWD. It is interesting to note that, of disabled employees with technological innovation, the firm's financial performance can be alleviated with minimal physical effort and voracious investment in the skill development program.

### ***Employers' Readiness***

With the trivial and ongoing assault in some locations and dignitaries to PWD, efforts are being made by numerous agencies to make sure job placement is warranted for PWD. However, it is vital to reflect and obtain feedback from employers about their experience and readiness for hiring PWD. This group struggles in life and is feeling far from complacent about their job placement and survival. Because of this matter, some employers have become tremendously choosy and skeptical when hiring PWD. For example, Nurul (2017) denoted most employers in the hospitality industry accepted people with hearing impairment. In addition, a study on employers' views on youth workers with disabilities by Yusof, Ali, and Salleh (2015) indicated that employers play an important role in creating job opportunities as well as providing encouragement to the disabled workforce. In this study, it is also stated that employers need to play an important role in ensuring that these disabled employees are comfortable, have fun, and are satisfied with their job.

A job associated with life survival and sustainability in earning. Hence, getting a job has become the primal factor to warrant stability in life. Contrastingly, there were bureaucracies and unfair processes of employment selection. According to Richard and Hennekam (2020) espoused the quota system effects is one of the major issues in hiring PWD. The decision of employing workers most likely is influenced by initiatives by the government in the form of tax exemption and incentives.

A previous study pointed out organizational readiness in accepting PWD in their company. Notably, the managerial behavior and positive attitudes towards accepting PWD will prosper their commitment to perform specific responsibility and job tasks (Diab, Safan, & Bakeer, 2018). Moore and Huberty (2020) on another note, stated that few employers invested in training and extension for temporary workers among those with disabilities and this further increased employment opportunities for PWD shall be appraised.

### ***Employers' Commitment***

The commitment of employers in hiring PWD drove social scientists to advocate a myriad scope of studies. Bonaccio et al. (2019) stated eleven concerns that employers have about people with disabilities. They recommend organizations committed to creating an effective and inclusive workplace for all individuals. The study of Romeo, Yepes-Baldó and Lins (2020) involving 245 employees with different types of disabilities noted that the value of commitment was moderate in the relationship between intention and satisfaction with the supervisor relationship. In this context, a work culture based on people with disabilities is particularly important.

The study of Ramachandra et al. (2017) found that physical access at work sites was of concern to 95% of respondents. The majority of respondents argued that communication, people's attitudes, discrimination, harassment in the workplace, and information were critical barriers. Only 3.8% of employers are aware that their company has a written policy regarding employing people with disabilities. On another note, Tahir et al. (2020) found Malaysia's commitment to helping people with disabilities when the government ratified the United Nations (UN) Convention on the Rights of Persons with Disabilities and signed the Proclamation on Full Participation and Equality of Persons with Disabilities in Asia.

Koerber and Jennings (2020) study of telephone access improvement strategies for the hearing impaired found several categories of telephone effectiveness strategies that support speech comprehension on the telephone and improve telephone skills as well as communication strategies in the workplace. In the study of Hashim et al. (2016), there was a positive relationship between organizational commitment and human resource management. Meanwhile, Aladwan, Bhanugopan, and D'Netto (2015) who have made a study of the relationship between organizational commitment with human resource management practices involving selection and recruitment showed a significant positive relationship to the three types of organizational commitment. Organizational commitment with recruitment practices has a positive relationship in the research conducted by Suriani (2015).

### ***Employers' Disposition***

Several attempts have been made to understand employers' disposition towards employees with disabilities. Among the studies is the study of Botha and Leah (2020) related to the attitude of public sector managers towards people with disabilities with a total of 283 respondents. This study found that managers are positive towards people with disabilities and these people with disabilities do not have unique characteristics compared to people without disabilities. The study also clarified that managers have a perception that people with these disabilities lack communication skills, technical skills, and social skills.

Marzo Campos et al. (2020) related to the disposition of employers towards the entry of the workforce with borderline intellectual functioning showed a lack of knowledge about the characteristics of this type of disability. In addition, lack of empathy would hinder socialization within the company resulting in the low self-esteem of people with a lack of intellectual abilities. A similar study by Waugh et al (2017) which aimed to determine the attitudes towards mental illness who interviewed 24 healthcare professionals found that they have positive attitudes towards colleagues with mental illness. However, there were still quite a significant number of other professional health care providers who have had a negative attitude towards colleagues who have a mental illness. As professional healthcare, to have such skeptical perspectives towards PWD is unethical.

## Methodology

The research employed descriptive survey research. The questionnaire consisted of three main variables: readiness, commitment, and disposition which was distributed to 148 employers from various industrial sectors in the state of Terengganu, Malaysia. The sample was derived from a random sampling technique from 240 employers. The studied location was chosen due to accessibility to obtain as many respondents involved in this research due to the COVID-19 pandemic. 136 employers (91.89%) answered the questionnaire completely. The instrument used for this study was adopted from the perspectives of U.S. employers, which was also published online (Domzal, Houtenville, & Sharma, 2008). The questionnaire was translated to the Malay language based on the perception that the meaning and transferability of the terms used in the instrument were easily understandable. The scale used in this study instrument is a 5-point Likert scale and the instrument used is divided into five sections (Table 1).

**Table 1. Instrumentation**

Section	Variables	No. of item
A	Demographic Profiles	9
B	PWD Hiring Factors	10
C	Readiness	10
D	Commitment	10
E	Disposition	10

### *Demographic Profiles*

This study involves 136 out of 240 employers in Terengganu. The demographic profile of respondents consists of gender, age, race, position in the workplace, types of industry, number of PWD, types of disability, PWD hiring factors, and reasons to exclude PWD from job placement. Overall, the study respondents comprised 45.6% males and 54.4% females. In terms of age, 36.8% of respondents are between 20 years and 30 years old, 41.9% between 30 and 40, 18.4% between 40 and 50 years, and 2.9% respondents between 50 years old and above. Of 136 respondents, a total of 120 (88.2%) respondents is Malay, 14 (10.3%) Chinese and 2 (1.5%) Indian. For the position in the workplace, the majority of the respondents (69.1%) are business owners, 5.9% manager, 2.9% supervisor, 7.4% shop assistant, and 14.7% posted as others. In addition, types of industry run by the respondents are services 41.2%, apparel 9.6%, food and beverages 40.4%, art and craft 4.4%, and other types of industries accumulate 4.4%. Additionally, a total of 97.1% of employers stated no disabled employees in their organization and 2.9% of employers had at least one disabled employee in their organization. The types of disability of those who are working in the organizations are 2.2% slow learner and 0.7% deaf or hearing impairments, while 97.1% have no employees with any form of disabilities. The findings also report that the majority of the employers (34.6%) agree that the source of employment information for PWDS is coming from the local rehabilitation and community center endorsement. Job advertisements (12.5%) and references from friends (11.8%) as well as colleague referrals (11.8%) are among the important sources of seeking PWD who are ready to enter employment.

**Table 2. Demographic findings**

Item	Frequency ( <i>f</i> )	Percentage (%)
<b>Gender</b>		
Male	62	45.6
Female	74	54.4
<b>Age</b>		
20 -30	50	36.8
30 - 40	57	41.9
40 – 50	25	18.4
50 and above	4	2.9
<b>Race</b>		
Malay	120	88.2
Chinese	14	10.3
Indian	2	1.5
<b>Position</b>		
Business Owner	94	69.1
Manager	8	7.4
Supervisor	10	5.9
Shop Assistant	4	2.9
Other	20	14.7
<b>Number of PWD in organization</b>		
None	132	97.1
1 person	4	2.9
More than 1 person	0	0
<b>Types of the employee with a disability</b>		
Physical	0	0
Deaf or hearing impairment	1	0.7
Slow learner	3	2.2
No employee with a disability	132	97.1
<b>Source of PWD employment</b>		
Reference from colleagues	16	11.8
Reference from friends	16	11.8
Job advertisement	17	12.5
State and Federal Government	9	6.6
Rehabilitation or community center	47	34.6
Others	31	22.8

\*n= 136

### ***Reasons for Not Hiring PWD In the Organization***

Table 3 presents employers' reasons for not hiring PWD in their organizations. Unqualified candidates (29.4%) set the main reason for employers' exclusion on hiring PWD. The second reason is discomforting among other employees within the organization with 18.4%. Employers are also concerned about the cost of providing facilities to disabled employees (17.6%) and since there are no available job vacancies (17.6%), it is therefore difficult for job placement among PWD. Finally, about 16.9% fall under other undisclosed reasons, contributing to hiring PWD becomes more difficult.

**Table 3. Reasons for not hiring PWD in organization**

Reason	Frequency ( <i>f</i> )	Percentage (%)
No Vacancy	24	17.6
Unqualified candidates	40	29.4
Concerns related to the cost of providing facilities for employees with disabilities	24	17.6
Discomfort to other employees due to the presence of PWD	25	18.4
Others	23	16.9

### *Employers' Readiness for PWD Recruitment*

Table 4 describes items related to the employer's readiness to recruit employees among PWD. Based on the total mean of 4.10 with a standard deviation of 0.69, the majority of the respondents are ready to hire PWD to work in their organization. The highest mean was set at 4.52 with the item "[m]y organization exercises freedom of speech and opportunity to voice out issues and problems related to PWD employment". The least of readiness items fall into two statements with the same mean value of 3.72 are "[m]y organization aware on policy and guideline in hiring PWDs for employment" and "[m]y organization provides necessary facilities for PWD such as spacious parking lot and PWD-friendly workstation".

**Table 4. Descriptive analysis of employers' readiness on hiring PWD for employment.**

No	Item	M	SD	Scale
1.	My organization is willing to hire PWD for employment at any time.	3.76	1.16	High
2.	My organization will enjoy tax relief if the hiring process of PWD is successful.	4.35	0.75	High
3.	My organization is aware of policy and guidelines in hiring PWDs for employment.	3.72	1.05	High
4.	My organization provides necessary facilities for PWD such as a spacious parking lot and PWD-friendly workstation.	3.72	1.29	High
5.	My organization can provide job training for an employee with disabilities.	4.40	0.69	High
6.	My organization celebrates diversity and inclusion policy for PWD employment.	4.17	0.98	High
7.	My organization provides mentoring initiatives to assist PWD in fulfilling the job responsibility.	3.94	1.30	High
8.	My organization has zero-tolerance for rudeness and disrespect among employees towards PWD.	4.29	1.01	High
9.	My organization exercises freedom of speech and the opportunity to voice out issues and problems related to PWD employment.	4.52	0.77	High
10.	My organization is ready to provide affordable and accessible transportation services for PWD	4.17	0.85	High
<b>Overall Average</b>		4.10	0.69	High

### *Employer's Commitment for PWDs Recruitment*

Table 5 reveals employers' commitment to hiring PWD. Even though the total of the mean values depicts high with 4.07, several items show the important fact of less commitment of hiring PWD. It is quite revealing that yet some employers are still refusing to hire PWD. The item "my organization hesitant on having PWD working in the company employers' implicates a minority group of employers' decisions on the hiring process. Of 10 items, "my organization creates a positive working environment by integrating employees with or without disability" scores the highest mean value with 4.41 with a standard deviation of 0.69.

**Table 5. Descriptive analysis of employers' commitment to hiring PWD for employment.**

No	Statement	M	SD	Scale
1.	My organization ensures knowledge management is fair to all employees with or without disability.	4.35	0.76	High
2.	My organization hesitant about having PWD working in the company	3.47	1.38	Medium
3.	My organization places a lack of effort in hiring PWD.	3.70	1.07	High
4.	It has become a practice in my organization to form a support group for PWD.	3.82	1.10	High
5.	My organization ensures fair and equal opportunity to PWD	4.17	0.70	High
6.	My organization is committed to ensuring a safe and inclusive working environment to uphold the welfare of disabled people.	4.01	0.95	High
7.	My organization shares the company goals and mission to employ PWD.	4.12	0.88	High
8.	The employees exercise positive values and attitude to PWD	4.35	0.68	High
9.	The employees in my organization celebrate the differences of PWD	4.35	0.68	Medium
10.	My organization creates a positive working environment by integrating employee with or without disability	4.41	0.69	Medium
<b>Overall Average</b>		4.07	0.58	High

***Employer's Disposition on Hiring PWD***

Table 6 indicates the value of the mean and standard deviation of items related to employers' disposition on hiring PWD. It is apparent from this table that several negative items contribute to the lowest mean for example "hiring employee with disabilities will become a burden to other employees," (M= 2.77, SD=1.32) and "I have less confidence in giving job responsibility to PWD (M= 2.58, SD= 1.17 ). Although the mean values represent the small group of respondents, yet it contributes to the total mean which is set at 3.55. This result exhibits the disposition of employers on hiring PWD places at medium level. Nevertheless, the highest mean on item 2 shows that "PWD has the right to request for employment in my organization" with (M= 4.47, SD=0.50).

**Table 6. Descriptive analysis of employers' disposition on hiring PWD for employment.**

No.	Item	M	SD	Scale
1.	My organization will hire PWD for employment	4.35	0.68	High
2.	PWD has the right to request employment in my organization	4.47	0.50	High
3.	Employees with disabilities should obtain certain privileges in the workplace such as special parking spots and pathways to the workstation.	4.41	0.69	High
4.	I have less confidence in giving job responsibility to PWD	2.58	1.17	Medium
5.	I am ready to renovate and remodel the workplace to accommodate the needs of PWD.	4.13	0.76	High

6.	The work performance of PWD is similar to other employees	3.94	1.00	High
7.	An employee with some form of disabilities should be paid less compared to other employees	2.62	1.34	Medium
8.	Hiring employees with disabilities will become a burden to other employees.	2.46	1.32	Medium
9.	I am responsible to hire and supervise PWD in my organization	3.76	1.11	High
10.	My organization discriminates against PWD involvement in employment	2.77	1.43	Medium
<b>Overall Average</b>		<b>3.55</b>	<b>0.47</b>	<b>Medium</b>

### ***Factors on Hiring PWD***

It appears from table 7 that the overall mean for factors on hiring PWDS is 3.69 with a standard deviation of 0.58. Employers would appreciate those PWD who are capable of fulfilling specific tasks, indicating the highest mean of 4.24 with a standard deviation of 0.88. The last factor is by hiring PWD will produce discomfort among customer and client with (M= 2.48, SD= 1.27)

**Table 7. Descriptive analysis of factors towards hiring PWD for employment**

No	Statement	M	SD	Scale
1.	Double tax deduction for investment spent on PWD workforce training.	4.11	1.01	High
2.	Tax relief for successful employment among PWD	4.11	1.07	High
3.	The training cost for PWD is funded by the government and interested agencies.	4.04	1.11	High
4.	Hiring PWD will portray a positive image of your organization in terms of social responsibility	4.16	1.05	High
5.	PWD are hiring due to their capability and capacity to fulfilling job responsibilities	4.24	0.88	High
6.	The working environment in my organization does not accommodate the needs of PWD	2.79	1.36	Medium
7.	Hiring PWDs will produce discomfort to customers and clients.	2.48	1.27	Medium
8.	My organization has a significant partnership with government and non-government agencies in empowering PWD employment.	3.26	1.25	Medium
9.	My organization takes less effort to hire PWD for employment.	3.47	1.14	Medium
10.	My organization will receive a discount on tax for any renovation and remodeling cost to accommodate the needs of the employee with a disability.	4.23	0.87	High
Overall Mean		3.69	0.58	High

### ***Correlation Analysis Between Readiness, Commitment, Disposition of Employers, and PWD Hiring Factors***

Table 8 shows the results of Pearson Correlation Analysis to determine the relationship between employer readiness, commitment, and disposition on employer hiring factors. The correlations between readiness, commitment and hiring factors were found to be weakly positively correlated,  $r(134) = .25, p = .03$  and  $r(134) = .37, p = .00$  respectively. The

correlation between disposition and hiring factors were found to be moderately positively correlated,  $r(134) = .68, p = .00$ .

**Table 8. Readiness, commitment, and disposition of employers' hiring factors**

Variable	PWD Hiring Factors		Strength of correlation
	Correlation coefficient ( $r$ )	$p$	
Employer's readiness	.25	0.03	Weak
Employer's commitment	.37	0.00	Weak
Employer's disposition	.68	0.00	Moderate

Note. N=136, correlation is significant at a 0.01 (2 tailed)

***ANOVA Analysis Between Types of Industry and Employers' Readiness, Commitment, Disposition on Hiring PWD***

One-way analysis of variance between-subjects ANOVA was conducted to compare the effect of types of industry on employers' readiness, commitment, and disposition. There was a significant relationship between types of industry  $p < .05$  level for readiness and commitment with ( $F_{4,131} = 8.724; p > .05$ ) and ( $F_{4,131} = 7.547; p > .05$ ) respectively. However, the ANOVA analysis between types of industry and employer's disposition did not significantly differ from both variables ( $F_{4,131} = 1.071; p > .05$ ). Taken together, these results suggest that types of industry play a significant effect on employers' readiness and commitment to hiring PWD. The relationship between types of industry and employers' dispositions, on the other hand, describes vice versa.

**Table 9. ANOVA Test Analysis on employer readiness, commitment, and readiness by types of industry**

Predictor		Sum of Squares	Degrees of Freedom (df)	Mean Squared	The value of F	Significant
Readiness	Between Groups	13.828	4	3.457	8.724	.000
	In Group	51.910	131	.396		
Commitment	Between Groups	8.636	4	2.159	7.547	.000
	In Group	37.472	131	.286		
Disposition	Between Groups	.966	4	.242	1.071	.374
	In Group	29.552	131	.226		

**Discussion**

The objective of the present work is to distinguish employers' perspectives on hiring people with disabilities from three factors: readiness, commitment, and disposition. These three factors are the determinant factors for this study to extant the works from scholarly researchers who worked within a similar research context. PWD are the groups who suffered injustice and struggles for many years. Due to their impairment and disability, many of them struggle to enjoy the wealth of the country, especially earning income from their involvement in the workforce. The results spelled out the role of employers in selecting and hiring employees among PWDs. Cohen et al. (2019) indicated that employers value work performance from the efforts of their employees, on the contrary, it becomes a barrier for PWDS entering the labor market. For the reason that employers value rapid and mass production to maximize profits for the organization, hiring PWDs may delay the objective and the mission of the company



objectifying mass output for the company. Notably, this ecosystem becomes an obstacle for employers who have PWD in their organizations to continue the business.

The findings of the study, however, reveals significant findings on employers' intention on hiring PWD. The study also reports that a few of the employers refuse to hire PWD due to some reason. Selected factors such as less confidence in PWD and fear of PWD existent will contribute to burden to others are those reasons that trigger PWD exclusion in the employment market. Many researchers found similar results as the hindrance factors towards hiring PWD. Research findings by Nurul (2017) showed that the level of acceptance of the hospitality industry towards workers with special needs (hearing impairment) is at a moderate level. This explains that people with disabilities still have less of a place in employment organizations. The willingness of employers in ensuring job placement for PWD is still undoubtedly posing a question. Although numerous researchers have pointed out the importance of having a job for PWD, there has been limited practical implication towards solving the issue.

An effort is precipitated by the negative connotation of such individuals who portray a negative perception of PWD. Hence, industrial players should be open and more receptive to giving an opportunity to PWD to venture employment (Yusof, Ali, & Salleh, 2015) Employers are a pillar of organizational change and this allows employers to be prepared in selecting and PWD in their organizations. In addition, employers can change organizational policies to accommodate the needs of PWD. Diab, Safan, and Bakeer (2018) suggest organizations need to have a readiness for change to support the process by having the right resources and conditions as well as goals for change. As an employer, the use of existing resources can assist employers in selecting employees from among people with disabilities and change the goals of the organization by making people with disabilities as employees in the organization.

In addition, employers need to be prepared to open quotas to people with disabilities in the organization as well as make changes by providing opportunities for people with disabilities to stand out in discussions and listen to their opinions in improving work and organizational performance. According to Richard and Hennekam (2020), individuals can be strategists with a quota system. As people with disabilities, their views should also be heard in the organization and this can help the organization empower employees among people with disabilities. Leadership practices and organizational climate change increase organizational readiness for change (von Treuer et al., 2018). Employers who are willing to make changes in leadership and organizational climate to take people with disabilities to work are employers with a high willingness to change.

However, a study by Oware and Mallikarjunappa (2019) shows that significant arguments do exist, albeit findings are somewhat contradictory from numerous studies. They claimed that employees with disabilities help improve a firm's financial performance due to the presence of innovation in technology. With the help of technology and optimizing loads of PWDs by placing responsibilities that ensemble their categories of disability, PWDs can be given a job that helps them gain income. On that account, employers need to integrate technology to help employees with disabilities improve job and organizational performance. Supports shall be made continuously by respective stakeholders especially the public and private sector to enforce this effort.

Encouragement factors from the government are also among the factors in the selection of employees among the disabled. The study of Tahir et al. (2020) found that laws enacted by the government can help people with disabilities in employment. Some policies to ensure people with disabilities also encourage employers to hire employees among people with disabilities. Various programs can be carried out between employers in collaboration with associations of people with disabilities so that knowledge sharing in the employment industry



can help improve the skills of people with disabilities. In addition, employers can employ people with disabilities as a result of this cooperation program.

Employers' commitment to understanding the capabilities and capabilities of employees with disabilities by providing convenient access to employees with disabilities. Koerber and Jennings (2020), found that these telephone facilities provide access to hearing-impaired employees and potentially benefit employees and employers. Ramachandra et al. (2017), showed employers are committed to hiring people with disabilities and they are diligent in being facilitators to people with disabilities. Employers are the pillars of an organization and the diligence and commitment of employers in helping employees with disabilities in this work provide opportunities for people with disabilities to improve their skills in a field. In short, employers' commitment to selecting and employing people with disabilities is a motivator for people with disabilities to work hard within the organization and be competitive with other colleagues. Employer commitment is an important aspect in selecting employees from among people with disabilities.

Employer attitudes play a role in selecting and employing employees among people with disabilities. This discriminatory and prejudicial attitude of employers about people with disabilities makes it difficult for people with disabilities to get a job (Anwar et al., 2020). This discriminatory attitude needs to be corrected to suit the times and this attitude makes it difficult for people with disabilities to get employment opportunities, especially in rural areas. According to Thanapalan, Murad, and Natar (2016), stigma against individuals with mental illness is less when compared to stereotypes, limitations, and virtues. Employers' stereotypical attitudes are high because of the culture and beliefs in their environment. The stereotypes that exist in the culture of this society need to be corrected in ensuring that people with disabilities are not oppressed in employment. In short, the attitude of the employer to play an important role in the organization and also the negative attitude shown by the employer towards the disabled should be removed and the employer should be supportive in empowering the disabled in employment.

## **Conclusion**

This research set out to determine the relationship between employers' readiness, commitment, and disposition, and hiring factors of PWD in the workforce. The primary goal is to determine employers' perspectives on perceiving PWD as part of their organizational employees which sequentially empowers PWD for employment. The study has found that generally, employers are supporting in hiring PWD into their company. Although support in the form of extrinsic values such as tax relief and training funds has subjugated the company's decision on hiring PWD, the government policy also brought into the improvement of PWD employment in the nation. There are cynical and skeptical views on the ability of the disabled to perform certain duties and responsibilities. Some consider the disabled to be a burden and unproductive. As a result, they continue to be marginalized from obtaining better employment opportunities. Often the potential and talents of the disabled are not highlighted to the proper level. This problem will contribute to unemployment among the disabled, especially in rural areas. The lack of indifference among the community towards the disabled causes them to continue to drift with problems that can be overcome and addressed at an early stage. Stakeholders need to refine and formulate strategies to strengthen the contribution of PWDs in various fields that have the potential for them to venture into. Thus, future research on PWD skill and training empowerment shall be addressed to mitigate the employment needs. Reskilling and upskilling shall be mandated to PWD; hence talent and skill development can be prospered then eventually will flourish the life of PWD holistically.



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3<sup>rd</sup> IRCMST 2021

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# BUILDING CORPORATE REPUTATION: THE ROLE OF CSR COMMUNICATION

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**Abstract:** *This conceptual paper discuss about the role of CSR communication in building corporate reputation. The author reviewed existing literatures that focus on CSR communication and corporate reputation. The review includes findings on customers' perceptions and evaluations of CSR communication initiated by a corporation to disclose about their Corporate Social Responsibilities (CSR) activities. A number of earlier studies argue that for CSR to be impactful on the publics, they have to be aware of corporations' good deeds. Thus, CSR communication is found to play a role in creating awareness of the corporation's CSR contributions and managing customers' perceptions. Hence, it is expected to also influence customers' evaluations of corporate reputation. Nevertheless, future studies may want to further investigate on how different new media being used to communicate about CSR influence the relationship between customers and corporation.*

**Keywords:** *(Corporate Social Responsibility (CSR), CSR Communication, Corporate Reputation)*

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## Introduction

Corporate reputation is commonly regard as intangible asset (Rashid & Mustafa, 2020) and is perceived to have influence on profitability and sustainability of a corporation (Chen, 2016). Corporations have begun to realize that the survival of their businesses also rely evaluations of multi-faceted stakeholders on its reputation. Strong and positive reputation leads to better financial performance (Gangi et al., 2018; Cormier & Magnan, 2014) which also contribute to organizational overall performance. Hence, effective reputation management is crucial for a corporation's sustainability.

It is important to recognize the factors that can help organizations in managing its corporate reputation. Corporate reputation is a perceptual representation of a company's actions in the past and future which portray its appeal to all key stakeholders (Fombrun, 1996). Considering that corporate reputation is the interpretation of organizations' actions by stakeholders, positive perception can be resulted from ethical behaviors (Javed et al., 2019; Yadav et al., 2018). Modern organizations are required to display socially and ethically responsible behaviors in the environment they are operating. This behavior is well known as corporate social responsibility (CSR).

CSR has become visible as a mechanism to protect, maintain and grow a business (Lee, Herold & Yu, 2015) as well as building reputation among global companies (Fombrun, 2005). CSR is growing to be an important public relations strategy that defines business organization besides than attracting customers (Aksak et al., 2016). In summary, CSR can be a strategic tool in managing relationship with stakeholders, their perceptions and corporate reputation. But, CSR can only produce positive evaluations when stakeholders are aware of corporations' CSR contributions (Ayaji & Mmutle, 2020). Being consistently transparent about its CSR contributions help to differentiate a corporation from its competitors (Tangngisalu et al., 2020). CSR communication is beneficial to corporations in building reputation and managing relationships with stakeholders (Almeida & Coelho, 2018; Kim, 2019).

However, CSR communication is said to also leads to scepticism among stakeholders which makes us curious about the extent organizations should communicate their CSR information (Ayaji & Mmutle, 2020). Publics are quick to criticize CSR efforts and have negative attitudes toward explicit CSR communication. When CSR communication is perceived as a mean to promote a corporation's good deeds, their CSR efforts will only invite critics and negative attitudes among stakeholders (Coombs & Holladay, 2012). Furthermore, publics' responses can be negative when CSR activities appear to be a corporation's agenda to coat their inefficiency or misbehavior (Morsing et al., 2008).

This conceptual paper, however, is meant to collect relevant literature that explains the role of CSR communication in building corporate reputation. It will also pay attention on communication tools and channels used by corporations to disclose about their CSR initiatives. The article is organized as follows: literature review on corporate reputation, CSR communication, the relationship between the two variables, the recommendations of effective CSR communication and conclusion.

## Literature Review

### *Corporate Reputation*

Corporate reputation is a collective assessments of an organization's capability to create value based on its characteristics and qualities (Lai et al., 2010; Mishina et al., 2012). It is a collective judgments of a corporation made by stakeholders based on several attributes which has a significant influence on their attitudes and behaviours which in turn determine the success of a corporation. In other words, corporations will be under all stakeholders' scrutiny which makes it crucial for a corporation to display ethical behavior in order to develop favourable perception among its stakeholders. Fombrun and Van Riel (2004) defined corporate reputation as an emotional capital which represents stakeholders' perceptions towards a corporation's past and future actions.

Stakeholders, generally, can be divided into primary stakeholders and secondary stakeholders. The former refers to those whose interest are directly affected by corporations' business operations while the latter are those with intermediary role. Based on literature review, stakeholders can be viewed as the main aspect of corporate reputation for their opinions are counted in determining a corporation's position in the industry. Therefore, reputation building is about keeping stakeholders' needs and interest in balance (Capozzi, 2005).

Among the factors that can influence reputation are type of industry, business strategy, media reports, adherence to regulations and laws, past and current performance, management team and organizational culture. However, the factors that influence corporate reputation can be different from one corporation to other corporation (Zabala et al., 2005). Thus, the measurement of reputation also vary from one research to another. According to Hannington (2004), more models have been developed by researchers to measure reputation since there is no single set of criteria of reputation measurement can be agreed upon different concept of reputation established by researchers in their studies.

In the context of hospitality industry, brand reputation is understood as the consequences of customer's perception and attitudes (Han et al., 2015). The literature also suggests that corporate social responsibility, corporate ability, customer satisfaction and customer trust are among antecedents of corporate reputation (Kim & Kim, 2017). Earlier studies have been focusing on the antecedents of corporate reputation to understand the end result of customers' accumulation of perceptions in terms of their demands and expectations (Walker, 2010).

In public relations field, reputation management is one crucial function. According to Brammer and Millington (2005), stakeholders evaluate corporation reputation based on the

signals they receive from the corporation and that signal refers to CSR initiatives. CSR activities developed by a corporation also can be used in response to bad publicity and to repair the damage on reputation (Benn et al., 2010). Zinkhan and colleagues (2001), on the other hand, mentioned identity as an essential feature that differentiate one corporation from its rivals. Corporate identity is about how a corporation wants to be seen by stakeholders and to be described (Simoes et al., 2005). This identity will then create stakeholders' impression towards a corporation or better explain as corporate image. Stakeholders' evaluations of corporate identity and corporate image reflects the corporate reputation.

### ***CSR Communication***

As CSR has growing to be prominence to the management of a corporation, the attention also has been centred on CSR communication. CSR communication is a process of engaging with stakeholders to educate them with corporation's CSR policy concerning economy, social and environmental issues using various communication tools (Podnar, 2008). To simplify, CSR communication is about being transparent in exchanging information between a corporation and its stakeholders concerning its social and environmental responsibilities.

Numbers of scholars agreed that CSR communication plays a significant role in improving stakeholders' CSR knowledge, CSR awareness, trust, engagement and their perceptions of corporate reputation (Morsing & Schultz, 2006; Kim & Ferguson, 2016; Pomeroy & Dolnicar, 2009). This view is supported by Siddiq and Javed's (2014) investigation that found firms' ignorance on transparency and CSR disclosure has led to negative relationship between corporate social practices at some firms in Pakistan and their corporate financial performance. Stakeholders' demands for transparency and the changes in communication practices become a challenge to communication practitioner. Furthermore, the changes in information-consumption among stakeholders has been surfaced (Golob et al., 2017).

### ***CSR Communication Tools and Channels***

Communication tools as proposed by Seele and Hock (2014) can be categorized into four and they are; 1) Instrumental published communication tool is a one-way communication aiming at external stakeholders such as CSR report or brochures. 2) Instrumental unpublished communication tool refers to internal documents containing corporation's strategic perspective. 3) Deliberative published communication tools allow open dialogue with larger audience such as corporate blogs or social media and 4) deliberative unpublished communication tools includes internal materials that also facilitate open dialogues like town hall meetings for internal staffs or investor day for investors.

CSR report has been recognized as an important weapon produced by large corporations (Hetze, 2016; Perez, 2015) used to channel information about corporations being socially and environmentally responsible (Golob & Bartlett, 2007). CSR reporting also acts as a strategy to legitimize business activities and at the same time engaging with various stakeholders (Hooghiemstra, 2000) and contributes in enhancing image, meeting social and regulatory standards (Bartlett, 2011). Online CSR reporting allows corporations to respond to their stakeholders in real time besides than saving cost (Capriotti, 2011). However, CSR reporting using online platforms has not yet been standardized which allows every corporation to decide on the appropriate approach (Godelnik, 2012). International standards and guidelines is not only essential to avoid corporations from being selective in presenting data but to guarantee a credible CSR report can be produced (Habek, 2017).

On the other hand, news release is found to remain as credible source since corporations have no control on the presentation of that published news (Vogler & Eisenegger, 2020). It is

also argued that news release may indirectly reach the stakeholders but it is one of the significant tools used by public relations practitioners for information sharing purpose while online platform has been recognized to be the most common medium used by business corporations for the same purpose (Vogler & Eisenegger, 2020). It enables corporations to efficiently reach larger audience and allow them to access corporations' information at their convenience. Furthermore, other than corporate website, news release has been found to be the most used channels used by reputable organizations in communicating their CSR messages (Ajayi and Mmutle, 2020).

Digital channels is vital to be considered in planning and strategizing CSR communication due to the fact that it translates the digital corporation's values to the stakeholders (Castello & Ros, 2012). Social media has emerged as one of channel used to communicate corporate brand (Vernuccio, 2014) and at the same time serving as a platform for social interaction (Dutot, 2013). Through online platforms, both stakeholders and corporations can maintain their presence and exchange information. Facebook, Twitter, Google, Youtube, Instagram, Pinterest, LinkedIn, Dailymotion and corporate blogs are the most important to connect users with corporations (Dutot et al, 2016). Hence, corporations are recommended to utilize these platforms in order to develop e-reputation.

The internet has become relevant in organization-stakeholders relationship management (Waters et al., 2009) and also an essential tool for reputational management. CSR-related information which communicated through media will be associated with corporations' commitment and will influence their e-reputation (Kioussis et al., 2007). From marketing perspective, online interaction with customers is now the main ingredient strategic brand communication (Castello & Ros, 2012). Unlike traditional media, social media allows two-way communication. However while scholars (Capriotti, 2011; Cortado & Chamelta, 2016;) suggest that CSR should be a two-way communication, 7 out of 10 organizations use the informing strategy instead of interacting strategy (Ajayi & Mmutle, 2020). Possibly, the organizations are avoiding unnecessary criticisms which may occur. The trend of using various social media has increased the number of sources available and led to a high level of scrutiny on corporations' CSR activities (Lyon & Montgomery, 2013). That is the reason why social media is not being utilized as a platform to interact about CSR information with the publics despite its interactive nature (Gomez & Chamelta, 2013).

Yet, the credibility of CSR communication is said to be depending on the control that organizations have towards its content. Morsing (2006) argued CSR information that is directly communicated to the publics is not effective compared to CSR communication endorsed by third party. The publics perceived CSR communication via third party as more credible which reduce public skepticism (Du et al, 2010) but reputable organizations are mostly found to prefer controlled channels such as websites, press release and reports. Despite the low visibility of its information, corporate website is found to be the primary channel for corporations to communicate about their CSR activities (Ajayi & Mmutle, 2020).

### ***CSR Communication and Corporate Reputation***

Earlier CSR communication studies were also influenced by the emerging topics such as reputation and stakeholder management (Freeman, 1984) and the dynamic of the mass media market due to the emergence of online landscape. Based on stakeholder theory, CSR engagement with stakeholders helps in managing public perceptions towards corporations while the signaling theory explained that the act of revealing positive messages related to CSR initiatives to all stakeholders will decrease inconsistency in information and builds favourable image of the corporation (Walker, 2010).

Keeping stakeholders updated about corporations' CSR initiatives is a gold gesture that keeps stakeholders for a longer period (Castello & Ros, 2012). Corporations' disclosure of their CSR efforts through annual reports are associated with good corporate practice and other good values (Othman et al., 2011). Even corporations with bad reputation seems to value the importance of good reputation by conducting CSR (Yoon et al., 2006) since it is proven that ethical and responsible corporations remain favourable in the eyes of publics (Mitra, 2011). Those CSR activities that are less reported may leads to a loss of reputation to corporations (Sotorrio & Sanchez, 2008). For a corporation to attract best talents, raise its revenue, or to create loyal customer base, its CSR information must be able to influence stakeholders' evaluations of its reputation (Clark, 2000). Stakeholders will continue to support corporations which they know and believe have done well to the society they are operating in.

Reputation can be strengthened by engaging in CSR activities which align with stakeholders' expectations and at the same time disclosing about it (Caroll & Shabana, 2010). In other words, to initiate CRS activities that meet stakeholders' expectations and to communicate about it is equally important. Periodic and regular disclosure of CSR activities influence corporate reputation since stakeholders will perceive a corporation's CSR initiatives as reliable (Esen, 2013). Stakeholders' perception and evaluations of CSR communication influences their perception and evaluations of corporate behaviour that determines positive reputation (Hetze, 2016). Hence, appropriate CSR communication is the key (Eisenegger & Schranz, 2011) to enable stakeholders obtain information about CSR initiatives which influence stakeholders' attitudes when they evaluate corporate reputation.

#### ***Recommendations: Effective CSR Communication***

In order to attain desired corporate reputation, corporations have to ensure that they have gained stakeholders' awareness and trust of their CSR contributions through effective communication (Coombs & Holladay, 2013). The awareness and comprehension of CSR which directly or indirectly obtained by an individual through their experience with a corporation can be described as CSR knowledge (Kim, 2019). CSR knowledge is important to secure the reputational benefits as an outcome of a corporation's CSR and CSR communication. For CSR to be effective, it must be expressed to inform and to influence the corporation's key stakeholders (Miles et al., 2006; Neville et al., 2005).

The current knowledge of CSR communications developed by scholars has recognized important aspects of CSR communication. Du et al. (2010) found that sharing basic information such as corporations' CSR initiatives, previous CSR results and their CSR drives is important to improve corporate reputation. They also recommend that the effectiveness of CSR communication lies in its content, medium and industry- or stakeholders-specific factors. Besides these, several other factors have been identified to be important in determining how CSR information should be communicated. They include adopting third-party endorsement (Morsing et al., 2008), the relevance of CSR message to or involve stakeholders (Morsing & Schultz, 2006), message tone (Schlegelmilch & Pollach, 2005) and appropriate communication intensity (Morshing & Schultz, 2006).

In addition, acknowledging both self-serving and society-serving motive is a strategic approach to influence evaluations of CSR among stakeholders and diminish their scepticism (Ajayi & Mmutle, 2020). CSR communication should be a two-way communication (Cortado & Chalmeta, 2016; Morsing & Schultz, 2006) but corporations still use the informing strategy rather than interactive strategy on their social media. Informing strategy is recommended to abate unnecessary criticisms which could damage the reputation of a corporation (Ajayi & Mmutle, 2020). Corporations are also suggested to practice transparency in CSR

communication if they intended to reduce scepticism as they will be perceived being open and fair in information sharing activities (Kim & Kim, 2017)

### Conclusion

Despite the fact that all stakeholders may also obtain the information from other sources, the positive relationship between CSR communication and reputation has been confirmed by various researchers. CSR communication develops CSR knowledge which in turn will have a positive impact on the evaluations of corporate reputation (Kim, 2019).

However, CSR communication is also found to have influence on stakeholders' scepticism of CSR. Stakeholders also perceived CSR reporting as a tool for 'greenwashing' when corporations attempted to hide their unethical practices (Chen & Chang, 2013). Stakeholders, on the other hand, aware of this agenda among corporations. So when corporations communicate about their CSR efforts, they are also expose themselves for public's condemnations about their CSR is merely for 'greenwashing' purpose (Bartlett, 2011). In addition, the use of controlled channel is more credible since uncontrolled channel is usually a paid channel, it will be perceived as corporation's attempt to advertise itself (Ajayi & Mmutle, 2020). There is also a need to look at the frequency of CSR communication. The credibility of a corporation's good deeds will be questioned if it had been communicated too much.

Hence, corporations must plan its CSR communication strategies to communicate effectively with its stakeholders and build a favourable corporate reputation. It is crucial to understand how every elements of communication influence stakeholders' evaluations of their CSR communication as well as their reputation. The tools or channels corporations used to communicate, the CSR information they shared and the frequency of message being exposed to the publics are among the factors that influence stakeholders' evaluations.

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