



**The influence of Gendered Communication and Trust in Management on
Knowledge-Sharing Behaviour among Health Practitioners in the UAE: The
mediating and moderating Role of Organizational Citizenship Behaviour and
Gender**

Presented to

The Academic Faculty

By

Mouza Ibrahim Al Nuaimi

1047124

In partial fulfillment
of the requirements for the degree of
Doctor of Business Administration
College of Business

Abu Dhabi University

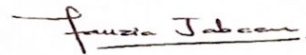
2021

**The influence of Gendered Communication and Trust in Management on
Knowledge-Sharing Behaviour among Health Practitioners in the UAE: The
mediating and moderating Role of Organizational Citizenship Behaviour and
Gender**



Mouza Ebrahim AlNuaimi

Approved:



Fauzia Jabeen, PhD
Professor, College of Business
Abu Dhabi University
Committee Chair



Matloub Hussain, PhD
Professor, College of Business
Abu Dhabi University
Committee Member



Prof. Barry O'Mahony
Dean, College of Business
Abu Dhabi University

COPYRIGHT INFORMATION

I hereby give the Library permission to store, preserve, and make accessible a digital copy of my dissertation within the context of an institutional repository. I further give permission for the library to catalog and to make available to researchers the images of my dissertation, without restriction. I also give permission to the Library to make copies of this dissertation for preservation purposes.

Permission Granted by:

Name: Mouza Ebrahim Al Nauimi

Signature:



Date: 18th May 2021

Email: mouzaalnauimi2017@gmail.com

ABSTRACT

The purpose of this dissertation is to investigate the influence of gendered communication (GCO) and trust in management (TIM) on knowledge-sharing behaviour (KSB) of healthcare practitioners. It also examined the mediating role of organizational citizenship behaviour (OCB) and the moderating role of gender on KSB. Theory of reasoned action, social exchange theory, and self-determination theory, were used to construct and support the hypotheses relating to the relationship between the study's variables such as GCO, TIM, KSB, and OCB.

The data (n=457) was collected from the health practitioners in the UAE through a quantitative survey. By using SEM approach, the study found GCO and TIM has a significant relationship with KSB, while their relation to OCB were not significant. OCB was however revealed as partially mediating factor linking GCO and KSB. However, gender has no moderating effect on the association between OCB and KSB.

This study has made several significant contributions to the existing literature. Particularly, the study filled the existing gap as to the knowledge regarding the associations between gendered communication, trust in management, organisational citizenship behaviour, and knowledge sharing in the health sector.

It was therefore expected to be one of the first studies that incorporated all the above variables in a single study in the contexts of the health industries across the Middle East. The study further provided the practical implications to the UAE's healthcare managers to promote the knowledge-sharing behaviour and organisational citizenship behaviour among healthcare practitioners.

List of Abbreviations

KSB- Knowledge Sharing Behaviour

GCO- Gendered Communication

TIM- Trust in Management

OCB- Organization Citizenship Behaviour

TRA- Theory of Reasoned Action

SDT- Self- Determination Theory

SET- Social Exchange Theory

CFA- Confirmatory Factor Analysis

EFA- Exploratory Factor Analysis

KMO- Kaiser-Meyer-Olkin test

RMSEA- Root Mean Square Error of Approximation

MGA- Multi Group Analysis

SEM- Structural Equation Modeling

UAE- United Arab Emirates

DECLARATION

This dissertation is dedicated to the spirits of my father and my mother (May their spirits rest in peace). And I dedicate this dissertation to my husband (Yousef) and my four children, Ahmed, Ali, Abdullah, and Ebrahim. I am grateful for your patience as this journey in my life has consumed much of the time that I could have spent with you. Your encouragement and prayers have been greatly appreciated. If not for your loving encouragement over the past four years, I would have given up a long time ago. I also wish to thank my brothers, sisters and my friends for their inspiration and support throughout my studying journey.

ACKNOWLEDGEMENTS

In the name of ALLAH, the most Gracious, the most Merciful, say: "truly my prayer and my service of sacrifice, my life and my death are all for Allah, the cherisher of the worlds"(Holly Quran, Surat Alanaam, verse 162).

Initially all the deep thanks and praise are due to the almighty Allah who helped, directed, and guided me through the challenges of my study. Glory is to Allah who has given me the strength, courage, patience, and knowledge to continue my DBA Journey. This dissertation would never have come true without the support of my husband, all family members, and my dear friends, who after the full support of Allah, were the strong motivators who pushed me, strongly support and endless pray to complete this degree of academic certification.

These are the things that I will never be able to repay, I would like to express my deep appreciation and thanks to my dissertation committee chair, Prof. Fauzia Jabeen and committee member, Prof. Matloub Hussain for their continuous guidance, intellectual advice, time, efforts, and patience through the research journey. My humble thanks and appreciation to Prof. Syed Zamberi Bin Ahmad who have been very strong support especially at the first two academic years. I am grateful to all health practitioners in UAE the health care organizations who participated in completing the questionnaires with high level of credibility.

Finally, I would like to present this achievement to the spirits of my beloved deceased parents whom I was wishing they could be with me at these great moments. But cannot say anything in front of the fate of Almighty Allah, more than may your souls rest in peace my beloved parents.

PUBLICATIONS

The following publication resulted from the works on the dissertation and as part of the fulfillment of DBA degree requirement:

Publication:

Nuaimi, M. A., & Jabeen, F. (2020). A study of factors influencing knowledge transfer in organisations in the United Arab Emirates. *International Journal of Knowledge Management Studies*, 11(2), 170-189

Table of Contents

ABSTRACT.....	iv
List of Abbreviations	vi
DECLARATION.....	vii
ACKNOWLEDGEMENTS	viii
List of Tables	xiv
List of Figures.....	xiv
CHAPTER 1: INTRODUCTION.....	1
1.1 Introduction	
1.2 General Background.....	
1.3 Healthcare Sector in the UAE	
1.4 Problem Statement and Research Gap	
1.5 Research Objectives and Research Questions.....	
1.7 Thesis structure	
1.8 Chapter Summary.....	
CHAPTER 2: LITERATURE REVIEW.....	22
2.1 Introduction	
2.2 Knowledge Sharing Behaviour	
2.3 Organizational Citizenship Behaviour	
2.4 Gendered Communication, Knowledge Sharing Behaviour and Organizational Citizenship Behaviour	
2.5 Trust in Management and Organizations Citizenship Behaviours.....	
2.6 Organizational Citizenship Behaviour and Knowledge Sharing Behaviour	
2.7 Gender, OCBs, and KSBs	
2.8 Theoretical Foundation	
2.8.1 The Theory Reasoned Action	
2.8.2 The self-determination theory	
2.8.3 Social exchange theory	
2.9 Chapter Summary.....	
CHAPTER 3: RESEARCH METHODOLOGY	72
3.1 Introduction	
3.2 Research Paradigm.....	
3.3 Research Approach	
3.4 Research Strategy.....	
3.5 Research Choices	
3.6 Time Horizons.....	
3.7 Sampling methods.....	
3.7.1 Population.....	
3.7.2 Sampling Frame.....	
3.7.3 Sample size	

3.7.4 Sampling Technique	
3.8 Data Collection Process	
3.8.1 Questionnaire scale (Measures).....	
3.9 Data analysis procedure	
3.9.1 Structural Equation Modeling	
3.8 Chapter Summary.....	
CHAPTER 4: DATA ANALYSIS AND RESULTS	89
4.1 Introduction	
4.2 Demographic Characteristics of the Respondents.....	
4.3 Preliminary Data Analyses.....	
4.3.1 Missing Value Analysis and Unengaged Responses.....	
4.3.2 Multivariate outliers	
4.3.3 Multivariate Normality	
4.3.4 Common Method Bias.....	
4.4 Exploratory Factor Analysis.....	
4.5 Confirmatory Factor Analysis	
4.5.1 Reliability	
4.5.2 Convergent validity	
4.5.3 Discriminant validity	
4.6 Structural Model and Hypothesis testing	
4.7 Mediation Analysis	
4.8 Multi Group Analysis.....	
4.9 Chapter Summary.....	
CHAPTER 5: DISCUSSION	119
5.1 Introduction	
5.2 Gendered Communication and Organizational Citizenship Behaviour	
5.3 Trust in Management and Organizational Citizenship Behaviour	
5.4 Organizational Citizenship Behaviour and Knowledge Sharing Behaviour	
5.5 Gendered Communication and Knowledge Sharing Behaviour	
5.6 Trust in Management and Knowledge Sharing Behaviour	
5.7 Mediating effect of OCB on GCO and KSB.....	
5.8 Mediation effect of OCB on TIM and KSB.....	
5.9 Moderating effect of gender on OCB and KSB	
5.10 Chapter Summary.....	
CHAPTER 6: CONCLUSION, IMPLICATIONS, LIMITATIONS, AND FUTURE RESEARCH DIRECTIONS	132
6.1 Introduction	
6.2 Theoretical Implications.....	
6.3 Practical Implications.....	
6.4 Limitations and Future Research Direction	

6.5 Conclusion.....	141
REFERENCES.....	141
Appendix I: Questionnaire.....	173
Appendix II-A: Missing data and Multivariate Outliers	191
APPENDIX II-B. Replacing missing value by using series mean value	194
Appendix II-C: Outlier analysis	197
Appendix III: Multivariate Normality Test	201
Appendix IV: Common method bias: Harman’s one factor method.....	204
Appendix V: Total variance explained by the EFA.....	206
Appendix VI: Squared Multiple Correlations	208

List of Tables

Table 0-1 Research Objectives, Research Questions, and Hypotheses	16
Table 2-1 Literature Synthesis of KSB	28
Table 0-2 Literature Synthesis of OCB	35
Table 0-3 Literature Synthesis of GCO studies	43
Table 0-4 Literature Synthesis of TIM and OCB	51
Table 0-5 Literature Synthesis of OCB and KSB studies	57
Table 02-6 Literature Synthesis of Gender, OCB, and KSB	65
Table 2-7 A summary of the key theories in the study	70
Table 4-1 The analysis of demographic characteristics	91
Table 4-2 The results of the exploratory factor analysis (EFA)	96
Table 4-3 Variables eliminated from the EFA Analysis	102
Table 4-4 Convergent validity criteria and conclusions	106
Table 4-5 Correlations, Composite Reliability, Convergent Validity, and Discriminant Validity	106
Table 4-6 Model Fitness Indices	108
Table 4-7 Standardised Regression weights	111
Table 4-8 Mediating effect of OCB on the relationship between GCO and KSB	114
Table 4-9 Mediating effect of OCB on the relationship between TIM and KSB	114
Table 4-10 Moderating effect of gender on the relationship between OCB and KSB	115
Table 4-11 Summary of hypothesis testing	118

List of Figures

Figure 2.1: Research Framework	66
Figure 4.1: CFA Measurement Models	104
Figure 4.2: Standardised Structural Model	110
Figure 4.3: Moderating effect of gender on OCB-KSB relationship	116

CHAPTER 1: INTRODUCTION

1.1 Introduction

This chapter sets out the context of the study by providing an in-depth analysis of the healthcare sector in the United Arab Emirates (UAE), along with an overview of knowledge-sharing behaviour (KSB) and its determinants. First, a general background to the study is provided, followed by a discussion of the UAE healthcare sector. The next three sections, respectively, discuss the research problem and gap, research objectives, and the research questions. The chapter then concludes with an explanation of the significance of this study and its structure, followed by a summary.

1.2 General Background

In the current dynamic global working environment, organisational competitiveness depends on the ability to disseminate and deploy new knowledge solutions (Bloodgood, 2019; Jacks et al., 2011). This requires effective communication through the dissemination of ideas, clear communication structures, and an ability to solve problems (Erogluer, 2011; Arbuckle, 2009). Researchers, therefore, seek to identify and address gaps in the process of developing quality KSBs, structures, and policies. Particularly, there is a growing interest among healthcare institutions and practitioners in knowledge as an imperative asset (Anca, 2008). Studies on this issue in the healthcare sector have been at the individual, technological and organisational levels.

Knowledge sharing is generally defined as the transfer of knowledge among individuals, teams, groups, divisions, and organisations (Razmerita, Kirchner & Nielsen, 2016). Within healthcare organisations, it can be characterised as the dissemination and clarification of updated health-related information to staff, other health practitioners, and decision makers through interactive communication media (Veronique, 2010). Effective KSB keeps health practitioners well informed to provide quality healthcare services. Cummings, (2004), Li-Ying, Paunova & Egerod (2016) and Zhang, Faerman & Cresswell (2006), Denoted developing knowledge sharing habits within a health institution is crucial for the success of the organisation and its customers as well other stakeholders, as it increases intellectual capital and individual innovative performance, reduces costs, and raises the competitiveness of the organisation in its industry.

Agrawal (2017) affirmed that a firm's actions could raise employees' confidence in its leadership. Perceptions relating to management decisions and actions lead to varying degrees of employee trust. Trust in management (TIM) engenders knowledge sharing in an organisation since it reduces the fear of loss of unique value and enhances the readiness to document knowledge (Ipe, 2003). Several studies have shown that trust amongst people is among the critical factors for successful KSB (Ibrahim & Heng, 2015; Gillani et al., 2018). On the other hand, communication is also a critical determinant of effective KSB (Al- Alawi, Al-Marzooqi & Mohammed, 2007). However, gender differences may lead to inconsistent conclusions about the effectiveness of communication within an

organisation. For example, a study by Shafiee et al., (2013), conducted in Iran, found that women were more effective in communicating and, therefore, adopted more organisational citizenship behaviours (OCBs) than men. OCB is defined as the beneficial activities and practices that employees choose to engage in that are not required from them. Teh and sun, (2012) showed a positive relationship between KSB and this gender aspect of organisational citizenship. Thus, it is obvious that gendered communication (GCO) can have different impacts on KSB, based on TIM and OCB.

Accordingly, this study attempts to contribute to the existing literature by investigating factors whose influence motivates healthcare employees to improve KSB through the mediating role of OCB in the context of the UAE. The information from this study is relevant to solving various problems associated with KSB within the healthcare sector in the UAE, including the high turnover of doctors and health practitioners as a result of ineffective KSB. The study recommends various solutions and motivational factors to increase organisational citizenship and knowledge sharing in the sector.

1.3 Healthcare Sector in the UAE

The UAE, founded in 1971, is one of the most rapidly developing countries in the Gulf region, Middle East, and North Africa (MENA) (Suliman & Al Kathairi, 2013). It is one of the richest countries in the world, with a gross domestic product (GDP) per capita of US\$375 billion, according to 2020 statistics (Johnson

& Babu, 2020). It is a federation of seven emirates (Abu Dhabi is the federal capital, and the largest emirate), which include Dubai, Sharjah, Ajman, Ras Al Khaimah, Umm Al Quwain, and Fujairah, varying in wealth distribution and population. The UAE government has emphasised the important role of healthcare services for both its citizens and the residents in general, which accounted for nearly 51% of the country's GP in 2007 (Suliman & Al Kathairi, 2013, p. 99). The UAE is ranked 41st on the United Nations human development index, while its investment in healthcare has increased significantly (Umar et al., 2020). The UAE has long been considered a centre for medical matters among Arab countries. Over time, increasingly more people have required specialised medical services (Abdulrahman, 2015). Thus, healthcare is a major concern in the UAE, where the government is considered the main provider of healthcare services (Koornneef et al., 2012, p. 115). This has been a concern since the beginning of the federation, when the late founder and president of the UAE, His Highness Sheikh Zayed bin Sultan Al Nahyan, stated his vision of accessible and high-quality healthcare for the entire community.

Healthcare in the UAE comprises both public and private sectors. This study chooses the public healthcare sector for several reasons. First, there is limited research on the reduction of employee turnover in the public healthcare sector (Nowak, Holmes & Murrow, 2010; Willis-Shattuck et al., 2008). Second, the UAE government has allocated billions of dollars to social services, including healthcare. Indeed, 47% of the 2012 budget was allocated to social services

(Khan, 2012). In 2004, the total investment in healthcare amounted to 1724.4 Dirham (\$470 million) (Younies et al., 2008). Third, most healthcare employees in the UAE are in the public sector hospitals (Younies et al., 2008). According to HAAD (2016), there were 8,460 physicians, 1,561 dentists, 6,982 allied health professionals, 21,733 nurses, and 3,100 pharmacists in the UAE in 2016. Fourth, the quality of the public healthcare system has surpassed that of the private healthcare sector; therefore, it is important to focus on public healthcare to examine the factors in employee attitudes and behaviour that may impact the quality of healthcare services (Jabeen, Friesen & Ghoudi, 2018). Fifth, 79% of the local Emiratis work in public organisations, many of which are served by the public healthcare sector.

Healthcare services are administered by different regulatory authorities in the UAE. They are regulated on two levels, the federal and the emirate levels, where public healthcare services are controlled and regulated by four main authorities (Koornneef, Robben & Blair 2017). The first authority is the Ministry of Health, established in 1972, which manages the Northern Emirates healthcare system (including public healthcare in the Emirates of Ajman, Sharjah, Ras Al Khaimah, Umm Al Quwain, and Fujairah). The second authority is the Health Authority of Abu Dhabi (HAAD), which controls the public healthcare within the Abu Dhabi Emirate. The Dubai Health Authority (DHA) regulates all the facilities in Dubai, while the Emirates Health Authority (EHA) is based in the Northern Emirate of Sharjah.

Concerning Abu Dhabi, the capital, the government established the General Authority of Health Services (GAHS) to control all public healthcare institutions within the Abu Dhabi Emirate. Although the Abu Dhabi government's economic vision for 2030 is to be an economic growth engine, it is aware that such a vision would be difficult to achieve without an adequate number of qualified doctors, medical researchers, and talented employees. A 2010 HAAD report noted that doctors' turnover rate was extremely high, at around 18 percent. Such a high turnover rate indicates either that the doctors are discontented with the work environment or widespread incompetence among the medical professionals (Al Shehhi et al., 2016). Moreover, the report noted that a high proportion (15 percent) of nurses in hospitals intended to leave. The report showed a gap in the motivation of health professionals to continue working in their current organisations.

The UAE has managed to establish an extraordinarily robust learning process in healthcare sector; however, the knowledge-sharing processes and structures in this sector proven inefficient, while some do not work at all (Al Hussain, 2011). The main challenge to KSB is the difficulty faced by practitioners to obtain, store, and share knowledge with others to improve performance and increase specialisation (Al Hussain, 2011). The government continues to integrate policies and systems that encourage information-sharing within the medical sector and other government services. It has also established partnerships with several international medical bodies to improve local practice through education and

training (Abdulrahman, 2015). Hence, the need for an empirical examination of KBS and its factors in healthcare provision in the UAE. Therefore, the current study seeks to find solutions to improve the KSB and OCBs in the UAE's health sector, which are vital for the performance of its employees and organisations.

1.4 Problem Statement and Research Gap

There are several studies on KSB in various national contexts. In the context of international studies, one study (Cheung et al., 2013) examined the mediating role of behavioural intention in relationships between variables including attitude, subjective norm, perceived behavioural control, and KSB in two hospitals in Uganda. The study found positive and significant relationships between attitudes, subjective norms, perceived behavioural control, and behavioural intention. Effective knowledge sharing has proven vital to the development of treatment methods and control of terminal diseases, such as cancer, as noted by Connelly & Zweig (2015). It allows medical professionals to share ideas, which leads to better and bug-free methods of treatment and health service delivery. In a study evaluating the effects of information sharing in the health profession, and on cancer treatment programmes, specifically, Connelly & Zweig (2016) found that cancer patients thrived more in an environment in which health professionals shared knowledge. The patients' welfare was causally related to the level of information sharing within the organisation.

Hoffman and Sergio (2020) explored, across different organisations in Spanish communities, the relationship between authentic leadership and employee KSB and found that it was positive. Gold Malhotra, and Segars (2001) investigated the relationship between high-commitment human resource management and individual KSB across registered practitioners in the executive MBA programmes of a university in northern Taiwan and found that they were positively related.

Sekaran (2005) found that employees felt that trust, recruitment and selection, and performance appraisals were positively related to KSB; however, neither training and development nor incentives had an impact. Podsakoff, Ahearne & MacKenzie, (1997), in another study in Greece, aimed to develop an understanding of the factors in KSB. Their findings revealed that employees' attitudes and subjective norms were positively related to KSB.

Another study in the healthcare sector (Singh, 2018) considered 175 nurses from four hospitals in India, and examined the relationships between human resource management practices, KSB, and innovation capability. Out of five areas of human resource management, the significant predictors of KSB were found to be recruitment and selection, compensation and reward, and performance appraisal. These factors dictated the health professionals' motivation for knowledge sharing and their ability to associate with one another and grow their ideas.

A study conducted in Pakistan (Ahmad & Zafar, 2018) concluded that employees who developed OCB were likely to exceed their contracts' requirements when

offering services to the organisation, thus promoting effective KSB. Some OCBs include persistence, enthusiasm, and extra effort, to enable employees to discharge their obligations effectively and successfully in their workplace (Organ, 2018). In other words, OCB involves voluntary activity by employees, including cooperating and assisting others to perform tasks that are not officially assigned to them by management (He, Zhang & Morrison, 2018). It is therefore valid to suggest that organisational citizenship plays an important role in influencing the internal working environment and conditions in an organisation, thus promoting organisational effectiveness.

Teh and Sun (2012) studied KSB among IT personnel at Malaysian universities. They found a relationship between some aspects of OCB and knowledge-sharing, and suggested that further study in other areas of the public sector was necessary. Islam, Khan & Bukhari, (2016) studied the mediating functions of OCBs in the relationships between organisational learning cultures and strategies and found that the mediating effect was particularly strong among females. Both studies recommended further researches on OCBs and gender, including the use of cross-cultural surveys, and in different fields.

Modelling can show interactions between variables. Deluga (1994) studied the relationship between TIM and influences on the development of OCBs. TIM has been linked to several other behaviours. Lin (2008) studied the role of gender in the modelling of OCBs and found several factors in the relationships with other

variables that varied between men and women. The authors noted that, because their study was based in Taiwan, a change of location could result in different gender roles and efficiency in communication. Shafiee Khorasani & Rashidi Ashjerdi, (2013) studied GCO in Iranian university classrooms, and the characteristics and perceptions of the population by gender. Characteristics such as politeness were found more often in females; they concluded that females, therefore, tended to adopt more OCBs than men, suggesting that GCO could play a significant role in enhancing OCB.

Also several studies on knowledge-sharing in other Gulf countries. For example, Song et al., (2014) found that demographic factors might not be significant for knowledge management in the Kingdom of Saudi Arabia, but that culture was an important issue. Another study in Kuwait (Al-Kurdi, El-Haddadeh & Eldabi, 2020) found that some aspects of emotional and social intelligence had a significant relationship with KSB. Al- Alawi, Al- Marzooqi & Mohammed, (2007) found that demographic characteristics had variable impacts on the culture of knowledge-sharing. Studies in public and private sectors in Bahrain, have denoted that there was a positive relationship between trust, communication, information systems, rewards, and organisational structure on the one hand, and knowledge-sharing on the other. Younies, Barhem & Younis (2008) found, based on a sample of 230 companies operating in five industries in an emerging economy in the Gulf area, that there was a moderate relationship between, on the

one hand, KSB, and on the other, openness and trust, top management support, and the reward system.

Several studies have been conducted on OCBs in Arab countries. For example, a study (Bashir, 2012) in a private Iranian bank found that four dimensions of organisational justice and perceived organisational support (POS) had significant positive relationships with five dimensions of OCB. Another study in the Iranian banking sector (Saunders, Lewis and Thornhill, 2016) found a positive relationship between transformational leadership and commitment and OCBs. In Sudan's banking sector, Ahmed (2016) examined the relations between various human resource management practices and OCBs and found a significant relationship between performance appraisal systems and recruitment and selection practices, on the one hand, and OCBs, on the other. In the UAE banking sector, another study (Suliman & Al Kathairi, 2013) found that transformational and transactional leadership styles tended to play a significant role in employees' OCBs.

In the last decade, several researchers have studied knowledge management and knowledge sharing in the UAE. However, none has examined KSB in the health sector or, specifically, among practitioners. Ahmad and Daghfous, (2010) reported that knowledge management was still not a priority in the region. Most organisations are concerned about confidentiality; however, some studies provide evidence of an association between KSBs and some factors that are likely to determine such behaviours within other sectors in the UAE.

For example, Ibrahim and Heng, (2015) studied the Dubai police force and reported that there was a significant relationship between attitude, trust, leadership, information technology, and organisational structure, on the one hand, and the intention to share knowledge, on the other. Another study examined various units of a law enforcement organisation in the UAE (Kharouf & Lund et al., 2018) and found that leadership inspiration was effective in enhancing the contribution of knowledge sharing. Aboelmaged (2018) suggested that using an enterprise social network to share internal and external knowledge had a positive and significant impact on employee productivity. Hussein, Singh & Farouq, (2016) found that knowledge self-efficacy and top management support had a positive impact on knowledge donating and collecting. Awang (2012) reported that organisational leadership was the single most important factor in knowledge sharing in technology-intensive organisations that provided services. Another study (Kaplan & Depaoli, 2012), in the same field, reported that organisational culture and management perceptions based on individual perceptions and managerial style had a negative relationship with the perceived benefits of knowledge. In yet another study, which focused on KSBs in the education sector in the UAE (Skaik and Othman, 2014), it was found that it was important to formulate strategies to encourage high quality KSBs.

Other studies in the same sector (Ahmed, 2016) looked at different variables, such as organisational support and justice, engagement, commitment, transformational leadership, and knowledge sharing. These studies were, however, limited to

locations, branches, and variables. Another study in the corporate sector in Oman (Muthuraman & Al-Hazi, 2017) found a relationship between OCBs and five separate factors: altruism, conscientiousness, civic virtue, sportsmanship, and courtesy. The sample employees showed OCBs and were also highly effective and efficient in terms of commitment, productivity, and performance. A study in Saudi Arabia explored the perceptions of managers about OCBs and organisational justice (Elamin & Tlaiss, 2015) and found a positive relationship between the two. The authors suggested that future researchers should examine other organisational issues, such as trust, job satisfaction, and job commitment.

In the healthcare sector, and specifically in hospitals, there have been several studies (Carpenter, Berry & Houston 2014). These studies focused on important elements, such as commitment, job satisfaction, passive leadership, perceived support, perceived co-worker support, perceived physician support, turnover intention, and trust in the organisation and the supervisor. Most of these studies, however, involved nurses, and few examined physician perspectives on OCB factors. Mohammad et al., (2016) examined the demographic determinants of OCB in a hospital setting and concluded that gender and profession were associated with employees' OCB. This suggests that individual differences can influence employees' OCB, which, in turn, will affect organisational outcomes and performance. Another study (Aslan & Yildirim, 2017) found that contextual performance (such as sharing experiences and helping new colleagues) was affected by job satisfaction and personality characteristics.

From the review of the above-mentioned studies in different countries, including the UAE, it is noted that KSB and its critical dimensions of TIM and GCO have been ignored in both international and local contexts.

Although the importance of KSBs is mentioned by various studies (Al Shamsi & Ajmal, 2018; Rumanti et al., 2018; Ibrahim & Heng 2015; Nuaimi & Jabeen, 2020), the studies are silent on the determinants of such practices, particularly in the context of rapidly developing countries with expanding healthcare facilities, such as the UAE.

Additionally, an empirical investigation into the possible moderating effect of OCB between KSB and its determinants is required in both developed and developing countries. Limited research has examined the influence of GCO and TIM on KSB (Skaik & Othman, 2014). This study, therefore, attempts to fill this gap by investigating the relationship between GCO and TIM, on the one hand, and KSB, on the other, and their link to OCB, by employing structural equation modelling (SEM).

1.5 Research Objectives and Research Questions

The purpose of this research is to study the influence of GCO and TIM on the KSB of UAE healthcare practitioners. The research examines the mediating role of OCB and the moderating role of gender in the KSB of health practitioners. The study is expected to assist in identifying practical solutions to encourage KSB

among healthcare practitioners in the UAE. The main objectives and questions of this research, along with the hypotheses, are provided in Table 1.1.

Table 0-1 Research Objectives, Research Questions, and Hypotheses

Research Objectives	Research Questions	Hypotheses
1. To investigate the influence of GCO and TIM on KSB 2. To examine the mediating role of OCBs in the relationship between GCOs, TIM, and KSB in healthcare practitioners 3. To examine the moderating role of gender in the relationship between OCBs and KSB in healthcare practitioners	1. What role do GCO and TIM play in the KSB of healthcare practitioners in the UAE? 2. Do organisational citizenship behaviours play a mediating role in the relationships between GCO, TIM, and KSB? 3. Does gender play a moderating role between OCBs and KSBs in UAE healthcare practitioners?	H1 GCO has a positive relationship with OCB H2 TIM has a positive relationship with KSB in the UAE's healthcare sector H3 OCB positively influences KSB H4 GCO has a positive relationship with KSB H5 TIM has a positive relationship with KSB H6 OCB mediates the relationship between GCO and KSB H7 OCB mediates the relationship between TIM and KSB H8 Gender moderates the effect of OCB on KSB

1.6 Contribution to Knowledge

The study attempts to fill a gap in the literature by investigating the different factors, such as GCO, TIM, and OCB in the motivation of healthcare practitioners to increase their KSB. It is therefore expected to be among the first studies of its kind in this sector and region. The study contributes to the existing literature in various ways.

This research identifies aspects that affect KSBs among the healthcare practitioners in the UAE and recommends ways of improving them. The issues of GCO and TIM, and their relationships with OCBs have not been explored together before to identify how they can be used to achieve better KSB.

Knowledge obtained through medical training is substantial and helps to provide excellent services; however, the limiting factor is human capital. Human capital is a product of effective KSB. This means that KSB is both especially important and a major challenge; it is important to investigate the factors that promote it and to develop suitable strategies to use these factors to improve practice in the region. This research, therefore, focuses on the development of KSBs by examining the role of GCO and TIM, and how these affect KSB by mediating the effect of OCBs

The factors form a platform of measures that can be used to enhance KSBs and improve healthcare strategy. The values and behaviours are influential in achieving appropriate organisational processes that encourage knowledge management. Coordination of management and practitioners promotes

knowledge-sharing. Validating a conceptual model will add value to the existing literature and help future researchers, as well as enable practitioners to support quality decision making, training, and the improvement of the healthcare sector in the UAE.

Additionally, this study helps both private and public healthcare sector service providers in the UAE to focus on the variables that promote beneficial KSB among healthcare practitioners in the region. Hence, the findings of the study provide insights for policy makers in the UAE healthcare sector in formulating effective policies and support programmes to develop better KSB. Furthermore, the findings alert policy makers to the importance of OCBs in improving knowledge sharing. As a result of rapid development and globalisation, the study may also find relevance beyond the private and public hospitals in Abu Dhabi and Dubai. The selected variables have not been considered together previously, either in the Arab world or, specifically, in the UAE. In addition, the study combines public and private hospitals in two of the major cities in the UAE, all of which provide high quality healthcare services. Their main strategic focus has been on improving safety standards, patient experience, attracting and retaining talented employees.

1.7 Thesis structure

The study comprises six chapters. The sequence and structure of these chapters are as follows:

Chapter 1: Introduction

This chapter includes an introduction, general background of the problem, a definition of the research setting, a discussion of the problem statement, the purpose of the research, research questions, research hypotheses, the significance of the study, structure of thesis and conclusion.

Chapter 2: Literature Review and Theoretical Background

This chapter describes the purpose of the literature review and its methodology (literature search). This is followed by a discussion of the development of the major theories of social exchange (SET), reasoned action (TRA), and self-determination (SDT). The chapter provides a review of the literature that supports this study. At the end of the chapter, the gaps in the KSB field, which are central to this study, are highlighted, and three research questions are developed for subsequent investigation.

Chapter 3: Research Methodology

This chapter focuses on the research methodology adopted, the research design chosen, the data collection method and sample, ethical considerations, measures, and analytical strategies, such as descriptive statistics, factor analysis, and correlation and regression analyses.

Chapter 4: Data Analysis and Results

This chapter describes the findings from the analysis of the quantitative data collected through the survey instrument. It includes the results of reliability and validity testing, and analysis of the relationship between dependent and independent variables, including both direct and indirect relationships.

Chapter 5: Discussion of Results

This chapter provides a discussion of the findings in the context of previous research. It also discusses the theoretical and practical implication of the findings. In addition, the chapter explains the acceptance or rejection of the various hypotheses in the study, by reference to the statistical significance (or otherwise) of the factors investigated.

Chapter 6: Implications, Limitations, Suggestions for Future Research, and Conclusion

This chapter discusses the implications of the study's findings for both theoretical and practical application. Additionally, it presents the limitations of the current research and provides some recommendations for future research. The chapter, furthermore, provides a summary of the current research and discusses lessons that may be useful to managers in the health care sector in retaining their employees and reducing the turnover.

1.8 Chapter Summary

This chapter mainly discusses the background of the study, the research gaps, the research objectives, questions, and the significance of the study. An analysis of the UAE healthcare sector shows the importance of understanding the significant factors that improve KSB, given the very few relevant empirical studies. The chapter further elaborates on the gaps in the literature relating to the association between the factors of KSB and OCB, and their importance to the UAE healthcare sector.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter provides a background to the research related to KSB, OCB, GCO, and TIM. The chapter starts with an overview of KSB, followed by that of OCB. Furthermore, this chapter elaborates on how TIM and the behaviour of males and females in the work environment are expected to contribute to OCB in the sharing of knowledge. Finally, the chapter provides an overview of the theories that have shaped the objectives of the study.

2.2 Knowledge Sharing Behaviour

Knowledge management strategies provide measures, outcomes, and, therefore, a competitive advantage (Wong et al., 2015). Delivering the right knowledge to the right people at the right time requires well-developed and delivered strategies (Heisig et al., 2016). These strategies need to focus on sustaining and improving knowledge-sharing abilities (Singh, 2018). Knowledge management reflects how people solve problems using information and experience (Ibragimova, 2006; Aktharsha, Ali & Anisa 2012). The significance of knowledge is not limited to individuals; it includes improving the daily operation of a business, the prediction of future events, and understanding why and how certain events happen.

Organisations are knowledge ‘warehouses’ where hundreds or thousands of employees integrate their knowledge to develop processes to produce products or services (Grant, 1996; Kogut & Zander, 1992). Technologies play a critical role in shaping knowledge management systems, leading to the transfer of the knowledge embedded or stored within people (Gold, Malhotra, and Segars 2001; Estiri et al., 2018). Knowledge is an essential aspect in the healthcare industry. In healthcare, knowledge management is essential for the provision of quality services. Organisations require knowledge management strategies and knowledge-sharing enablers to thrive.

Furthermore, knowledge-sharing enablers supplement and facilitate effective KSBs. They include trust (Ding, Choi & Aoyama, 2018), culture, technology, and leadership strategies (Ho, 2009). KSB contributes to the creation and utilisation of knowledge, which is regarded as the most important resource in an organisation (Grant, 1996; Elamin & Tlaiss, 2015). KSBs allow the integration of knowledge to make it more effective. When KSBs do not provide optimal conditions for knowledge management, there is likely to be miscommunication, unused knowledge, or a lack of coordination to provide systematic, good performance (Singh, 2018), with a negative impact on individual performance, which may result in underperformance and a lack of motivation for, or redundancy in knowledge acquisition, innovation, and productivity.

Knowledge sharing within the healthcare industry may be attributed to a set of behaviours (Mura et al., 2016). Most individuals do not simply share knowledge because they presume that it is insignificant. Moreover, people do not share knowledge because they most likely lack a platform to engage others. The only process through which the dissemination of knowledge can be achieved is through a change of behaviour (Boer, Berends & Van Baalen, 2011). Enhancing behaviour for the initiation of quality KSB is a challenge to many private and public organisations (Ruggles, 1998). Many researchers have focused on KSB, including its importance in the process of knowledge management (Rusly, Corner & Sun 2012). Progressive development of KSBs requires measures to provide psychometric properties to improve their application in every sector of the economy (Al-Neyadi, Abdallah & Malik, 2018). Yi (2009) developed a scale to establish the relationships between several aspects of KSB, which can be used at multiple levels, from team to organisational levels.

Multidisciplinary studies have shown a gap in the knowledge sharing between individuals from different cultures working in the Arab region. Arab culture bonds Arab employees together. The factors that lead to trust among individuals vary; frequently, Arabs do not bond well with foreigners. KSB therefore varies depending on whether knowledge is shared with people from the same culture.

The healthcare process is focused on connecting people, equipment, and solutions to advance healthcare to the next stage, which requires KSBs. UAE

healthcare organisations, however, often show reluctance in measuring KSB. The behaviours expected from healthcare workers positively contribute to the process of receiving, storing, and disseminating knowledge among individuals. KSB, in turn, contributes to individual and organisational learning (Pangil & Aktar, 2018; Gadot, 2007)). Whereas education initiates individual learning, KSBs allow individual knowledge to become organisational knowledge. By sharing information, doctors can integrate their activities with each other and generate a collaborative work environment (Ryu, Ho & Han, 2003). Thus, KSB allows practitioners to share information and improve the quality of operations.

Knowledge sharing also limits knowledge redundancy. Knowledge varies between doctors, depending on their specialties; without effective KSBs, doctors can retain their knowledge without further development (Wang, Yen & Tseng, 2015). Efficient KSB enhances the diffusion of knowledge among doctors, which increases their capability to support patients (Ryu, Ho & Han, 2003). The availability of knowledge to many individuals makes treatment processes smooth and more efficient.

Practitioners need to gauge the outcome of knowledge management strategies and KSBs. These behaviours foster good knowledge management practice (Heisig et al. 2016; Gelfand, et al., 2017; Wong et al., 2015). The design of KSBs should focus on the desired outcomes, including those in healthcare, to provide

suitable measures to assess the progress towards good knowledge-sharing practices.

The beauty of knowledge sharing is that it enriches available knowledge. When useful knowledge is not disseminated, it loses value over time. The sharing of knowledge encourages the use, modification, and introduction of new techniques (Pangil & Aktar, 2018). The growth of any healthcare community is largely based on the spreading of knowledge, particularly but not exclusively to new practitioners to develop their skills and knowledge base thus ensuring a flow of knowledge across generations of doctors.

Practitioners' performance is mainly based on their knowledge in the healthcare industry (Ho, 2009). A de-construction of KSB results in knowledge contribution and knowledge acquisition and explains the active role of the distribution and reception of the knowledge. In this case, the distributors and recipients are the doctors. The set behaviours in a given environment, therefore, contribute to the dissemination of knowledge between individuals. Improper control of knowledge results in role conflict, role ambiguity, and loss of control (Wang, Yen & Tseng, 2015). Studies on Korean practitioners have used the theory of planned behaviours (TPBs) and the theory of reasoned actions (TRAs) to explain the attitude and intentions in the knowledge-sharing practices (Ryu, Ho & Han, 2003; Lee, Khang & Lee, 2004). Based on the TPB, the ethics and policies of a practitioner form a foundation for the best KSB within a medical

setup (Carter et al., 2014). In addition, subjective norms form a temporary KSB, which may be changed with time or as governmental policies change (Ho, 2009). Ryu, Ho & Han (2003) explained operational KSB in a healthcare centre include personal innovativeness, perceived voluntariness, and cultural values in the organisation.

Although some practitioners are aware of the importance of knowledge-sharing practices, they do not implement them. Planned KSB aids in reducing the ignorance of established practices (Chang et al., 2012). A study on the Ethiopian Health Care Bureau showed that most of the challenges in achieving good KSBs arose from unsupportive leadership, lack of motivation, and lack of medical practitioners' awareness of knowledge sharing and working experience (Lin & Lee, 2004; Mura et al., 2016). The UAE government intends to invest in human capital. Some of the initiatives have been realised in the academic sector, such as the government's initiative to appoint foreigners to train local content.

Public health focuses on knowledge application and accumulation; however, the challenge lies in ensuring that the personnel integrate these factors. KSB becomes a platform to ensure that information is integrated and disseminated to a large population with precision and integrity. According to Mura et al. (2016), KSB, therefore, serves as a platform for information knowledge sharing.

Evidently, knowledge sharing is the main means of improving personnel capacities. Good KSBs provide a platform for distributing knowledge (Boer,

Berends & Van Baalen 2011). However, KSB, on its own, does not fulfil the role of knowledge sharing, but depends on other variables (Chang et al., 2012), such as OCB, TIM, gender, and GCOM (Mura et al., 2016). These variables are discussed in the following subsections, along with the related hypotheses.

Table 2.1 below provides an overview of the various studies that have been conducted on OCB and KSB in various national settings.

Table 2-1 Literature Synthesis of KSB

Authors	Aim	Characteristics		
		Study Design	Region	Participants
Wong et al., 2015	To chronologically demonstrate historical changes in the KSB measurement and performance. TO define new approaches to knowledge management performance measurement	Exploratory data analysis	Malaysia	10 qualitative research articles on KSB and management measurement
Heisig et al., 2016	To identify key future research themes on knowledge management. TO assess the scope of Business and Knowledge management and sharing.	Online questionnaire data collection	Europe	222 informants from 38 countries
Singh (2018)	To assess influence of knowledge management on KSB and knowledge	Online questionnaire/survey	Sri Sri University, Cuttack	350 Employees in IT industry

	performance		, India	
Aktharsha, Ali & Anisa 2012	TO assess factors influencing knowledge sharing behaviour among nurses	Survey based interviews	Tiruchi rappalli district	152 nurses
Ibragimova (2006)	Determine the influence of distributional, procedural, and interactional justice on knowledge sharing processes	Field Survey of IT managers	Texas, U.S	116 IT managers
Gold, Malhotra, and Segars, 2001	To assess institutional knowledge management from the perspective of organizational capabilities	Online survey questionnaire	U.S, North Carolina	300 senior executives
Mura et al., 2016	To denote how KSB are promoted by innovation, and diverse types of knowledge assets	Questionnaire data collection method	Italy	195 participant employees from 3 hospice and palliative care organizations
Ruggles (1998)	To assess influence of knowledge management practices on the KSB	Survey interviews	U.S, California	431 U.S and European organizations
Aboelmaged (2018)	To predict utilitarian and hedonic motivation using ESN on KSB and employee productivity	Survey questionnaire	U.K	115 ESN system users
Ahmad & Daghfous (2010)	To assess UAE business sector on the basis of their involvement in knowledge sharing activities	Exploratory investigation and interviews	UAE	5 local and 8 multinational Companies

Al-Kurdi, El-Haddadeh, & Eldabi 2020	To determine the role of organizational climate operationalized by organizational leadership and trust in academics' Knowledge sharing in HEIs.	Online surveys	U.K and Qatar Universities	257 participants from HEI
AlShamsi & Ajmal, 2018	TO define factors impacting KSB in technology intensive service industry	an analytical hierarchical process	UAE	9 primary criteria and 34 sub-criteria relevant to KS in technology-intensive organizations

2.3 Organizational Citizenship Behaviour

Employees understand that they are expected to perform their designated roles. They are aware that certain practices must be followed, and certain expectations met. OCBs are defined as the beneficial activities and practices that employees choose to do that are not required of them. These activities and behaviours offer an advantage to the group or employer and tend to lead to increased productivity. OCBs can be affected by several aspects, including job satisfaction, organisational justice, and effective communication; they are extremely important in healthcare because of their effect on individual and organisational performance. Healthcare employees who show OCBs tend to treat patients with respect (Haad, 2016). They are motivated by more than remuneration, and strive to operate their workplace smoothly, regardless of their formal job requirements. OCBs are viewed positively by supervisors and managers. One study found a

connection between the age of an organisation and three essential standards: benevolence, politeness, and good faith. OCBs include actions that encourage organisational efficiency (Ruiz-Palomino & Martínez-Cañas, 2014). These behaviours are predominantly individual attributes; additionally, they are often linked to particular social and psychological contexts that maintain and enhance task performance. For example, a study in the Abu Dhabi healthcare sector found that OCBs among practitioners improved relationships that, in turn, improved overall sector performance.

Previous studies have identified several dimensions of OCB (Khan, 2012). Podsakoff et al., (2009) showed that the separate dimensions were usually closely related, and that they also bore the same relationships to factors such as communication in the workplace, trust in top management, gender, and knowledge-sharing practices. It takes more than a salary and a good environment for a health worker to deliver what is expected of them. OCB has been described as a health worker's behaviour that cannot be stated in a job description (Sekaran, 2005). Organ (1997) demonstrated that a health worker had a choice to show these traits without risk of punishment for failure.

Altruism, courtesy, sportsmanship, conscientiousness, and civil virtue come voluntarily in an organised and informed group of people (Carpenter, Berry & Houston, 2014). Some studies have suggested that civic virtue, altruism, and conscientiousness bear a direct relationship to OCB (Bass, 1999; Ehrhart, 2004),

although others have found that the relationship is between OCB and civic virtue, altruism, and courtesy. A study in some major hospitals found that doctors showed high levels of OCBs, particularly courtesy and civic virtue. Ullah et al., (2016) concluded, in a review mainly focusing on research carried out in the western world, that there were significant relationships between altruism, civic virtue, and OCBs. Other studies have suggested that top management should consider citizenship behaviours.

Civic virtue and helpful behaviour are related to job involvement (Urbach and Ahlemann, 2010). Helpfulness has a positive effect on commitment to an organisation by the employees, management, employers, suppliers, consumers, and society. In addition, helpfulness and a political nature usually influence collectivism. Another study (Zhang, Faerman, Cresswell 2006) found that kindness had a strong and positive relationship with a democratic management style. Todd and Kent, (2006) found that OCBs tended to be indirectly related to each other, with mixed support for a relationship between task support and the dimensions of OCB. Across all the task variables in different studies, helpfulness emerged most strongly, with the greatest impact.

OCBs may be viewed as the personal and voluntary actions of employees that benefit an organisation. To some degree, they may be considered as resulting from individual intrinsic motivation, whereby employees view the job as more than merely remuneration or responsibility (Lam et al., 2015). Lam et al., (2015)

also concluded that OCB affected organisational operations by providing a form of positive energy within an organisation. In a working group whose employees have good OCB virtues, there is an extremely high likelihood of attaining organisational effectiveness; this is because it becomes easier to manage the interdependencies among members who work as a single unit. It is then possible for a healthcare facility to achieve improved collective outcomes under the maximum utility of its scarce resources (Mayer and Davis, 1999). This enables the organisation to help its employees grow by gaining and sharing skills and by saving the considerable time that they, otherwise, would have required working as individuals (Yeo et al., 2010).

Employees will be more committed if they are intrinsically motivated and not merely doing what is required (Dekas et al., 2013). Therefore, OCB increases effectiveness within the workplace (Shanker, 2018; Takeuchi et al., 2015). One study collected data from 761 executives in Indian service organisations and manufacturing companies and found that OCBs contributed to improved company performance (Jena and Pradhan, 2018). The study empirically evaluated workplace spirituality and how it influences employee commitment using OCBs and emotional intelligence as variables. OCBs seemed to improve the workers' motivation and commitment (Jena and Pradhan, 2018), whereas emotional intelligence created self-awareness among the organisational leaders, which improved decision making.

OCBs are known to improve organisational efficiency and commitment to the work process (Chang et al., 2012). Several research studies have evaluated the impact of OCB in the workplace; all agree that it has a positive impact and is causally related to improved work performance. For example, a study in India (Shanker, 2018) found that employees showing high levels of OCBs were more likely to stay longer in organisations.

The healthcare system can be improved by encouraging and motivating the practitioners to initiate values to improve the communication process (Podsakoff et al., 2009). One such value is the motivation for quality information flow. Information flow is an agent for organisational improvement and change (Organ, 1997). Change is inevitable in a place where there is diversity, and medical practitioners have specialties and ever-growing knowledge. Diversification ensures that hospitals and other healthcare stations can deliver effectively on a wide range of services. OCB ensures that practitioners can coordinate well. Teh and Sun (2012) asserted that there was a deeper relationship between OCBs and the corporate image of a hospital; the relationship was tied to the performance of the practitioners. OCBs provide a platform for the continuous improvement of available structures through personal initiatives and innovations. In each organisation, attitude is key to optimum performance. Considering the environment that promotes the best OCBs, medical practitioners' quality values for positive practitioner-patient engagements have proven to be a mediator for other variables in the setup of a

hospital. OCBs work not only in a hospital setting, but also in the UAE petroleum industry. Ansari, Jedidi and Dube (2002) asserted that OCBs mediated work engagement and authentic leadership. From their research, the factors mentioned in the petroleum industry also applied to the health and safety environment setting. Medical practitioners have common standards of operation, which normally represent minimum behavioural standards to ensure that all medical practitioners can provide quality services to enhance performance and optimise outputs.

Table 2.2 below provides an overview of the various studies that have been conducted on OCB

Table 0-2 Literature Synthesis of OCB

Authors	Aim	Characteristics		
		Study Design	Region	Participants
Pingping & Huang, 2019	To analyse the association among the distributed leadership of private college presidents, teachers' organisational commitment, and teachers' OCB	Questionnaire (survey)	Shandong Province, China	1,147 questionnaires 6 private colleges and 1358 questionnaires were collected

Winarsih & Riyanto (2019)	To explore the influence of teachers' organisational justice perceptive on job satisfaction, then verify the indirect effect of job satisfaction between the organisational justice perceptive and OCB	Questionnaire (survey)	Different province or cities of mainland China	70 teachers from 10 private universities
Akturan & Şevik, (2016)	To explore reputation of a corporate effects on the OCBs in terms of creative behaviours	Quantitative (face-to-face survey)	Turkey	458 participants from Kocaeli University students
Ahn, Hyun, & Kim, (2016)	A case study based assessment of city residents perception of the MICE city brand orientation and the brand citizenship behaviour	Self-administered Quantitative (questionnaire and structural equation modelling)	South Korea	240 participants residents from Busan Exhibition and Convention Center
Dekas et al., 2013	To provide an understanding of a new generation of	Quantitative (online)	New York, USA.	1,200 Workers at Google

	OCBs as expressed at Google.			
Farrell and Finkelstein, 2007	To examine how the composition of demographics can influence helping Behaviour among work groups	Quantitative (questionnaire)	North America	216 university students
Altuntas and Baykal, 2010	To investigate nurse levels of organisational trust and OCBs. Investigate relationships between the levels of organizational trust and OCB	Quantitative (survey)	London, UK	Response from 482 nurses
Bergeron et al., 2014	To investigate OCB in comparison to both short-term and long-term outcomes in the context of an outward-based reward system.	Quantitative (survey)	Midwestern USA	622 faculty members from public and private research universities

2.4 Gendered Communication, Knowledge Sharing Behaviour and Organizational Citizenship Behaviour

Gendered Communication styles are a major focus for current researchers. Gendered Communication is a situation in which male and female health workers feel open to share ideas without the fear and perception that they may be turned down or criticised based on their gender. When everyone's work is appreciated, all workers are highly motivated to continue providing solutions and sharing knowledge to generate new ideas. Females and males use different communication and management styles. Successful communication can be defined using a structural and organisational framework (Carter et al., 2014). Companies with set standards show more success than those without gender standards on communication. Setting standards promotes the development of Organizational Citizenship Behaviour.

Given the diversity in the workplace, communication strategies in a hospital environment vary according to the population. Lin (2008) illustrated a six-dimensional model that was integrated to form the best Organizational Citizenship Behaviour in the structures of an organisation. The model involved righteousness, identification with the organisation, discipline, harmonious coexistence, and the ability to assist colleagues. Male personnel exhibit different dimensions for a given reward compared to their female counterparts. The female population mostly exhibits properties that promote the development of OCBs under a non-reward system. The roles of females in a community are

reflected in the workplace (Casimir, Lee & Loon, 2012). Women tend to care for the personal attributes and reputation of a workplace. In a hospital setup, women are ready to own up to the responsibilities and perform beyond the designated assignments. OCBs were associated with the female population.

According to Teh and Sun (2012), OCBs are more prevalent in an environment in which a hospital motivates its practitioners. Counterproductive behaviours are directly related to OCBs (Teh and Sun, 2012). The research further founded that OCBs contributed to the best performance among individuals with different backgrounds. Encouraging both genders to adopt OCBs enhances professionalism and communication flow.

Kark & Waismel-Manor, (2005) found a positive relationship between communication, gender, and OCBs. Additionally, the OCBs were positively related to agreeableness, openness, and experience. The individuals of both genders seemed comfortable with communication. Increased communication across genders has been found to lead to increased OCB (Nafei, Khanfar & Kaifi, 2012). The willingness to engage in sound communication by both genders builds OCB (Murphy, Athanasou & King 2002), with health benefits (Van Scotter, Motowidlo & Cross, 2000). Communication is a major contributor to strong OCBs in the healthcare sector in the UAE.

Gender differences in communication may be verbal or nonverbal. Negative or ineffective verbal or nonverbal communication tends to cause negative

behaviours, particularly in the process of knowledge sharing (Ullah et al., 2016). OCBs may be affected by gender differences in communication. Control systems contribute to the success of any communication, especially among different groups, such as gender groups or management levels (Efferin, Frisko & Hartanto, 2016). Some studies have found that females exhibit politeness and silence in the process of interaction and communication. This aspect can be quantified and related to the ability to listen and perform (Shafiee Nahrkhalaji, Khorasani & Rashidi Ashjerdi, 2013). Additionally, females tend to show more OCBs because of gender norms. However, female behaviour can also be viewed more negatively as a result of fear of embarrassment or an attempt to avoid criticism. Patterns such as politeness and silence may be influenced by power.

The integration of different groups of people in a workplace requires everyone to communicate effectively, irrespective of job description, roles and responsibilities, or company guidelines. It can sometimes seem as if males and females belong to two different subcultures, characterised by rules, behavioural expectations, and verbal and nonverbal communication patterns. This can lead to distinctive communication styles developing along gender lines (Sheerin, Hughes & Garavan, 2020). OCBs help to enhance contextual performance through the creation of a universal environment that does not particularly favour either gender.

Career advancement and development rely on an understanding of gendered communication because females and males may develop differently in different organisational cultures. Understanding gender differences encourages staff to develop effective communication strategies that work for everyone (Boer, Berends & Van Baalen, 2011). An organisation may provide training to help staff develop a coordinated work environment. Organisational performance also depends on both gender and work balance. A refined approach to gender defines career outcomes, while an environment that considers the needs of both male and female staff tends to promote cohesion and motivate individuals.

In addition, one of the contributing factors in the development of OCBs is organisational justice in terms of gender. The variety of hospital practitioner's demands equality and justice. The factor is intertwined with management ethics. Since most hospital managers are male, there is a need to establish strategies, based on the distribution of power, that involve females in the process of decision-making. Involvement in decision-making ensures that both genders appreciate the steps undertaken in the hospital environment (Rowland-Jones, 2012). The process of achieving the integration of OCBs and balancing it between the genders depends on the role-play between the genders in formulation and implementation. AlShamsi & Ajmal, (2018) noted that, through the social network system, enterprises played an influential role in the promotion of OCB.

Furthermore, different cultures have different perspectives on how to treat the different genders. In a hospital setting, there are different practitioners with diverse backgrounds, given the variables, standardisation enhances the balance in the roles and gender relationships. OCBs help develop a hospital setting that is important in offsetting the challenges. The management team must produce an environment that promotes a positive cross-cultural relationship. Teh and Sun (2012) attempted to establish hospital structures that promoted communication and coordination in a cross-cultural environment. Significantly, the role of gender reflected the attraction of OCBs. The interactive role of organisational leaders significantly influences OCB and, therefore, KSBs (Al Dari, Jabeen & Papastathopoulos, 2018). In most of the identified cultures, females are known to show more concern and care than the male population.

Leadership styles and the organisation of hospitals contribute to gender performance. The relationships between practitioners encourage the development of the best structures for quality patient treatment. In the case of hospitals, performance is measured by patient satisfaction (Shin et al., 2015). The qualities adopted from OCBs promote positive reception of treatment. Additionally, OCBs contribute substantially towards convenience and appropriateness in relationships (El Amouri, 2010). El Amouri (2010) further observed that a hospital's setting and environment contributed to the development of quality treatment.

Kappagoda & Kulathunga (2013) found a positive relationship between communication, gender, and OCBs. Ineffective verbal or nonverbal communication is likely to cause negative behaviours, especially in the process of knowledge sharing (Ullah et al., 2016). Increased communication across genders has been found to lead to increased OCB (Nafei, Khanfar & Kaifi, 2012). Organisational justice in terms of gender contributes to the development of OCBs. The willingness to engage in sound communication by both genders builds OCB (Mayer & Davis, 1999), with health benefits (Van Scotter, Motowidlo & Cross, 2000). Therefore, based on the discussed literature the following hypotheses are proposed:

H1 – GCO has a positive relationship with KBS.

H2 – GCO has a positive relationship with OCB.

Table 0-3 Literature Synthesis of GCO studies

Authors	Aim	Characteristics		
		Methodology	Region	Participation
Weinberg, Treviño & Cleveland, (2019)	To introduce and test a measure that captures GCO style, a multi-dimensional construct with masculine and feminine facets	Quantitative (Correlation and factor analysis)	United States	153 undergraduate business students from a private southern university

Tenenboim-Weinblatt & Baden, (2021)	To examine the role of gender in structuring conflict news discourse, focusing on a comparison between the texts produced by foreign and domestic female and male journalists in their coverage of the Israeli-Palestinian conflict and the conflict in the Democratic Republic of the Congo.	Exploratory text analysis; Case study	Israel, Palestine and DRC	recurrent semantic patterns from over 80,000 texts
Whiting, Podsakoff, Podsakoff, Blume, (2009)	To offer a meta-analytic assessment on the relationship between OCB on individual and organizational	Quantitative study	University of Michigan	168 independent employees in different organizations

	level outcomes			
Rowland-Jones (2012)	To investigate the EFQM concepts of excellence approach to management development in the UAE healthcare industry.	Quantitative (survey)	U.S	6 hospitals, 94 pharmacies.
Teh & Sun, (2012)	To study the effects of job involvement, satisfaction, commitment of the organisation, and OCB on knowledge sharing by employees	Quantitative (survey)	Malaysia	116 information systems personnel
Lin & Hsiao, (2014)	To test the relationships between transformational leadership, knowledge sharing, trust,	Quantitative (online survey)	Taiwan	710 nurses

	and OCB			
Carter, et al. (2014)	To examine the mediating influence brought by interactional justice on relationships between transformational leadership and OCB	Quantitative (survey)	Washington DC.	230 supervisor subordinates

2.5 Trust in Management and Organizations Citizenship Behaviours

According to Ababneh and Hackett, (2019), in a study conducted in the UAE, there is a strong correlation between trust in top management and OCBs. However, managers must work to gain the trust of employees. Other studies have shown that trust can be attributed to good communication styles in a company. Trust also directly affects employee motivation (Foote & Li-Ping Tang, 2008; Hussein, Singh & Farouq, 2016), and leads to improved productivity and job satisfaction. Highly motivated doctors and nurses often report high levels of trust in their jobs and top management. Healthcare organisations that promote trust among their employees can reach higher levels of productivity (Organ, 2018). Trust also improves personal factors among employees, such as self-concept, self-

consciousness, and self-motivation (Noudoostbeni, Kaur & Jenatabadi, 2018). Organ & Ryan, (1995) denoted the factors increase motivation and therefore productivity, and are also among the best predictors of OCBs.

Based on the ideas of social capital theory, human interactions rely on trust. Social capital resides in interactive exchanges at both the individual and community levels to support productive activities. Suliman & Al Kathairi, (2013) explain that social capital highlights the principle that trust is helpful. Social capital theory relates to TIM because it describes the role of effective structural relations on knowledge sharing. Trust is essential in management since it builds the employer-employee associations that influence personal relationships and assist in knowledge sharing (Razmerita, Kirchner & Nielsen, 2016). For that reason, TIM supports the exchange of knowledge and facilitates collective interactions for mutual benefits. In the argument presented by Razmerita, Kirchner & Nielsen, (2016) belief in management assists in the acquisition and sharing of knowledge. Trust in an organisation improves information distribution as collaborating employees can interact and learn from one another. All these arguments propose that trust must exist in an organisation to facilitate information exchange. TIM supports the transfer of implicit knowledge as it involves relational-based social exchange.

Furthermore, Organ and Ryan, (1995) also noted that self-regulation and empathy were not key to developing citizenship behaviour. A study by Mayer & Gavin, (2005) found that trust in the top management was linked to employee engagement across four dimensions: task identity, task variety, task autonomy, and task significance. All these had a significant effect on employees' citizenship behaviour (Organ, 1997). However, there was no relationship between employee commitment and OCBs. Ahmed et al., (2016) found that perceived fairness and proper use of appraisal practices improved employee trust in a company. Trust is also a source of motivation because employees know that they will receive appropriate wages and recognition for career development (Podsakoff et al., 2009). If there were no trust and employees simply worked with a moderate level of motivation, there would be very little OCB.

Trust can be built through ethical leadership. In such a case, managers act as icons and models to employees. Subordinates behave in line with the principles and conduct of their managers (Carter et al., 2014). Managers can therefore induce positive and discretionary behaviour, which is valuable to any organisation. Organisational performance depends on the values and attitudes developed among staff and managers (Lin & Hsiao, 2014). Several studies on communication have established that there are three major factors that ensure that communication is effective and trustworthy: accuracy of information, openness, and explanation of management decisions (Carter et al., 2014). Trust, therefore, is a cognitive tool that results in corresponding behaviour from staff and managers (Lin & Hsiao,

2014). Staff will develop a positive attitude and tend to be motivated to exhibit OCBs.

Trust also depends on procedural justice and organisational support (Andrews, Kacmar, & Kacmar, 2015). Procedural justice measures fairness in social exchange (Andrews, Kacmar & Kacmar, 2015; Renzl, 2008). Employees develop confidence in organisational procedures and decision-making processes based on their observations. In other words, they judge procedures by whether they are detrimental or meaningful. When employees believe that procedures are fair, they develop a positive attitude towards them and the organisation (Rahman et al., 2016). This, in turn, plays an important role in influencing individual behaviour towards the company (Van Knippenberg, Van Prooijen & Sleebos, 2014). High levels of trust tend to be associated with high levels of discretionary behaviours, including responsibility, the use of initiative, and innovation. Trust therefore enhances and increases OCBs or performance beyond the job description (Farrell & Finkelstein, 2007).

Trust affects employees' motivation directly (Fattah et al., 2016). It is associated with good behaviour, which involves responsibility, the use of initiative, as well as innovation in organisations. Organisational performance depends on the values and attitudes developed among staff and managers (Lin & Hsiao, 2014). When employees see fairness in an organisation's procedures, they develop a positive attitude towards the procedures and the entire company (Rahman et al.,

2016). A positive attitude helps in changing employees' behaviour towards the organisation (Van Knippenberg, Van Prooijen & Sleebos, 2014). Therefore, based on the discussed literature the following hypotheses are proposed:

H3– TIM is positively related to KSB.

H4 – TIM is positively related to OCB.

Table 2.4 below provides an overview of the various studies done on TIM and OCB in various national settings.

Table 0-4 Literature Synthesis of TIM and OCB

Authors	Aim	Characteristics		
		Methodology	Region	Participants
Ababneh & Hackett, (2019)	To extend the knowledge on the underlying relation between trust, knowledge sharing (KS) and organisational commitment (OC) in small- and medium-sized enterprises (SMEs), by testing the mediating role of KS between trust and OC dimensions.	Survey and path analysis	UAE	249 participants at 26 UAE universities.
Connelly & Zweig, (2015)	To assess influence of perpetrators and targets on knowledge hiding behaviours in an organization	Quantitative (survey and structural equation modelling)	North America	194 employees from a voluntary online panel of English-speaking adults
Farrell, & Finkelstein, (2007)	To examine how the composition of demographics can influence helping behaviour among work groups.	Quantitative (questionnaire)	North America	216 university students
Ruiz-Palomino, & Martínez-Cañas(2014)	To examine the ethical culture relationship of person to organisation (PO) through a multidimensional measure of ethical culture (EC).	Quantitative (survey)	Spain	525 employees
Altuntas Baykal	To investigate levels of organisational trust	Quantitative	Europe	Response from 482

(2010)	and their OCBs	(survey)	district of Istanbul	nurses
Lin & Hsiao, (2014)	To test the relationships between transformational leadership, KS, trust, and OCB	Quantitative (online survey)	Taiwan	710 nurses

2.6 Organizational Citizenship Behaviour and Knowledge Sharing Behaviour

There is a tight bond between knowledge sharing and OCBs. Sharing can be hindered when poor OCB techniques are dominant (Weinberg, Trevino & Cleveland, 2013). A thorough analysis of the culture of a corporate and its OCB is required because the culture of a corporate is more likely to encourage employees, and therefore promote good knowledge sharing among them. It is therefore important to investigate ongoing OCBs and regular interaction between staff in an organisation. Managers may need to reconsider their corporate cultures to evaluate the relationship between the two variables (Fattah, 2016). An organisational culture of cooperation tends to encourage employee participation in activities that influence KSB because it tends to emphasise voluntary participation; it should therefore be encouraged.

Knowledge sharing is initiated through communication (Boer, Berends & Van Baalen 2011). The success of any communication depends on the level of confidence and the disseminator's positive image. The self-sacrificial characteristics, OCBs, prompt an individual to integrate information into the

work process. The ability to respect and admit information is, therefore, a concept that benefits quality KSBs (Lin & Hsiao, 2014). KSBs are a pivot towards knowledge management in any hospital (Chang et al., 2012). There is a positive relationship between KSBs and OCBs.

OCBs provide a platform for KSB because most of the components of OCBs have a positive influence on knowledge sharing (Jordan & Troth, 2020). People share knowledge constantly with an intent, and OCBs influence the intentions. According to Assaf, Tsionas & Oh (2018), organisational justice has an influence on the internal process perspective, which, in turn, determines how personnel relate to the decision-making and work processes. In the argument, knowledge varies from one employee to another; therefore, there are variable perspectives on any process. If practitioners are positive and receptive to instructions, communication flows smoothly (Lin & Hsiao, 2014). With an effective and efficient flow of communication, the practitioners become knowledgeable about the new practices. The reception of the practices becomes a culture that shapes the knowledge-sharing practices. However, managers may also have to compromise in developing a corporate culture that encourages OCBs (Weixu, Choi, Aoyama, 2018). Employees who work in proximity to one another are more likely to practice KSB, which, in turn, improves performance and encourages employees to explore their abilities.

OCB is voluntary; therefore, people within organisations that generally show good OCBs are expected to demonstrate KSBs as well (Murugesan & Natarajan, 2011). This means that the relationships within the organisations, as well as the KSB, are good. KSB often occurs in these organisations because individuals want to explore what they know and learn from others (Al-Zu'bi, 2011). KSB and OCB are therefore positively related.

Altruism, courtesy, sportsmanship, conscientiousness, and civil virtue, the main building blocks of OCBs, have a direct influence on information sharing. Knowledge is important in building an organisation through ideas and suggestions. Altruism encourages employees to work hard towards organisational goals (Ullah et al., 2016). These individuals tend to work in teams and improve performance. They seek and give knowledge to ensure that they can work effectively together. Courtesy is how individuals behave towards one another; it encourages cooperation and working in harmony (Lin & Hsiao, 2014). Its most important characteristic is how an individual creates a fair and harmonious background for information (Tharp, 2018). Conscientiousness includes making suggestions or proposals to support decision making and problem resolution, while sportsmanship involves active participation in organisational activities, procedures, and decision making. Finally, civil virtues are behaviours that protect company values and benefits.

Therefore, OCBs should naturally result in information sharing. Without a proper flow of information in an organisation, individuals cannot learn how to perform (Farrell & Finkelstein, 2007). For example, in the case of conscientiousness, individuals need full information about a problem before offering a suggestion or a possible solution that facilitates information sharing (Ullah et al., 2016). Rapport, reception, and acceptance allow individuals to learn or receive advice without feeling as if they are being rebuked. Therefore, building OCBs initiates responsible and wise responsiveness to information.

Job satisfaction, job involvement, and organisational commitments correspond to the positive OCBs in a hospital (Chang et al., 2011). The values serve to motivate practitioners concurrently; the same values enhance knowledge sharing with respect to innovation and process initiations (Mura et al., 2016). A knowledgeable population has the tendency to incorporate involuntary behaviours that enhance performance and expand capacities.

According to Lin and Lee, (2004), doctor centeredness involves doctor-to-doctor consultations. Through such consultations, doctors can obtain highly relevant information to tackle patients, as opposed to the self-centred case. The consultations require doctors to interact positively and to exhibit OCBs to ease the process of information sharing. Through the consultations, the doctors acquire knowledge. The scenario investigation in UAE hospitals resolves cases involving patient dissatisfaction.

Moreover, Muthuraman & Al-Hazi, (2017) pinpointed some of the measures towards patient satisfaction in UAE public and private hospitals. The major dimensions of concern included patients' sensitivity to tangibles, reliability, responsiveness, assurance, and empathy. For practitioners to exhibit the values, they must be sufficiently informed and flexible to understand a patient's psychology. According to Teh and Sun, (2012), basic OCBs are required to build the characters and develop a sufficiently wide scope of capabilities to handle emerging characters.

Communication initiates knowledge sharing (Boer, Berends & Van Baalen, 2011). Most components of OCBs influence knowledge sharing positively (Ong, & Puteh, 2017). Sharing of information in an organisation is vital. While OCB leads to information sharing among members of staff in an organisation, lack of proper information flow hinders individuals' ability to learn to perform (Farrell & Finkelstein, 2007). A knowledgeable population has a tendency to incorporate involuntary behaviours that enhance performance and expand capacities. Therefore, based on the discussed literature the following hypotheses are proposed:

H5 – OCB influences KSB positively.

H6 – OCB mediates the relationship between GCO and KSB.

H7 – OCB mediates the relationship between TIM and KSB.

Table 2.5 below provides an overview of the various studies that have been conducted on OCB and KSB in various national settings.

Table 0-5 Literature Synthesis of OCB and KSB studies

Authors	Aim	Characteristics		
		Methodology	Region	Participation
Singh (2018)	To study the effects of perceived organisational support (POS) on employees' knowledge sharing intention (KSI). More specifically, this study examined whether these effects are moderated by job characteristics (JCs) and mediated by OCB.	Quantitative (survey)	India, Sri Sri University	350 employees from IT service provider organization
Sulistyo (2017)	To examine some factors of OCB, such as work satisfaction, knowledge sharing, and Islamic work ethic.	Quantitative (survey)	Indonesia	100 employees in a government bureaucracy related to public service in Semarang
Lin and Hsiao, (2014)	To test the relationships between transformational leadership, knowledge sharing, trust, and OCB.	Quantitative (online survey)	Taiwan	710 nurses
Teh and Sun, (2012)	To assess the effects of job involvement, satisfaction, organisational commitment, and OCB on knowledge sharing by employees	Quantitative (survey)	Malaysia	116 information systems personnel

Lievens, and Anseel, (2004)	To investigate the dimensionality of a specific OCB measure in a Dutch Speaking context and its invariance by measure.	Quantitative (survey)	Flemish part of Belgium .	259 subordinate and 215 peer rating of employees
Lam et al., (2015)	To investigate the curvilinear relationship between OCB and job insecurity.	Quantitative (survey)	Maryland, USA.	244 Chinese employees
Podsakoff, Ahearne, McKenzie, (1997)	How to improve the effectiveness of work groups and organisations	Quantitative (survey)	Indiana University	218 people working in 40 machine crew paper mill

2.7 Gender, OCBs, and KSBs

One study found that gender did not affect OCBs (Khaleej Times, 2017). The authors showed that factors such as agreeableness, openness, extraversion, neuroticism, and conscientiousness had a high impact on OCB, and that they were also directly related to knowledge-sharing practices. This was probably because these factors ensured that the employees could share information (Bass, 1999). It seems likely, however, that gender may influence the OCBs in which culture dictates gender roles in society. Gender roles may help or hinder individuals or groups (Eagly & Crowley, 1986). In fulfilling their roles in society, individuals display voluntary responsibility (Kark & Waismel-Manor, 2005). This may encourage them to work beyond expectations. Gender should therefore influence the development of OCBs, including altruism, courtesy, sportsmanship, conscientiousness, and civil virtue. Females and males have different points of view on the role of OCBs females may perform better on

some aspects and vice versa. The use of OCBs relies on their practical application in everyday life (Kark & Waismel-Manor, 2005). Females are often seen as more cautious and focused on other peoples' feelings, including in business settings. They may be more convincing and understanding, and show more courtesy (Lim, Han & Joo, 2018). Females may, therefore, show more OCBs than males, who tend to focus more on rules.

Gendered Communication is the likelihood of sharing ideas, knowledge, and other issues across the gender divide. The freedom of mingling is a key determinant in estimating the level of GCO in an organisation or a nation. GCO can be singled out as a factor in knowledge sharing in a population (categorically, UAE health practitioners). Knowledge Sharing Behaviour influences the success of service delivery in various sectors of human life. Successful service delivery, in turn, enhances coordination and builds trust among professionals (Boer, Berends & Van Baalen, 2011). Good GCO builds a friendly OCB, which is of immense importance in the UAE health sector (Ahmad & Daghfous, 2010). Organizational Citizenship Behaviour refers to non-contractual behaviour, which has little to do with personal contracts in an organisation but is critical for a better working environment and successful service delivery. OCB is affected by factors such as job satisfaction, organisational support, justice in the organisational undertakings, and transformational leadership.

According to Hannawi and Salmi, (2014), gender is a sensitive issue in Islam-dominated UAE. Gender separation is a common issue that is founded on the social-cultural norms of the UAE's Islamic religious beliefs. These religious beliefs hold that female nurses cannot work closely with their male counterparts, which constitutes a barrier in the health sector. Besides, Heilman, & Chen, (2005) noted that females were not always allowed to be outside the house at night. This means that female nurses cannot work during night shifts. Night shift nurses are therefore considered to be cultural outcasts, according to Islamic beliefs and cultures. On the other hand, in some cases, male health practitioners in the UAE view their female counterparts as their subordinates, regardless of their professional rank or seniority: 'Nurses are considered to be maids for physicians...' (Hoffman & Sergio, 2020). Male health practitioners hold the cultural notion that females should always be subordinate to males; gender alienation, therefore, affects service delivery in the UAE health sector. A female health practitioner in the UAE system is not likely to communicate freely to a male counterpart because she is viewed as a subordinate; this affects knowledge sharing adversely and undermines trust in the UAE health sector (Ahmad & Daghfous, 2010).

OCB plays a vital role in organisational operations. Good OCB in the UAE is vital to ensuring quality health service delivery. The quality health services depend on how employees in the UAE health sector communicate with one another to ensure that important information is shared among the healthcare

professionals. Notably, the UAE has good OCB in some organisations that have embraced the western culture. Organisations that practise Islamic culture often have broken OCB, as evidenced in the cases in which both male and female employees view the female gender as subordinate to the male (Ahmad & Daghfous, 2010). GCO and trust influence knowledge sharing, not only in the UAE healthcare structures, but also in any sector that requires professional behaviour.

Knowledge sharing is the wilful sharing of one's experience, expertise, skills information, and any other form of professional know-how with a colleague of less experience or even the same work rank (Ahmad & Daghfous, 2010). Knowledge sharing has proven to be one of the most vital skills employed in the most successful organisations to ensure that all operations are performed under provable working procedures inherited from the most experienced in the organisations. Under the concept of knowledge sharing, employees do not rely on their own understanding to perform operations—the entire task force shares ideas on how some operations are suitably performed. Knowledge sharing is influenced by certain factors, such as good communication and trust in the organisation in question (Ahmad & Daghfous, 2010). A lack of OCB hinders good knowledge sharing among employees.

The UAE health sector has comparatively poor knowledge sharing compared to the western world. The knowledge-sharing situation in the UAE health sector is

affected by the religious and cultural beliefs upheld in the country. Evidently, the male health practitioners in the health sector do not accept their female counterparts as equals; this hinders knowledge sharing in the task force. Poor GCO is adversely affected by religious beliefs that tend to side-line women in some activities. The unwillingness of the male and female practitioners in the UAE to mingle freely hinders the mobilisation and assimilation of knowledge among the employees of the UAE health sector (Khaleej Times, 2017). Most public sectors in the UAE, including the health sector, have a bureaucratic belief in knowledge sharing, which is that management is responsible for good KSB. The phenomenon makes it difficult for an employee or a department to share knowledge with another employee or department without some form of compulsion.

The different elements of OCBs in any business setting may therefore vary by gender (Lev & Koslowsky, 2012). There are rules and regulations that govern the division of labour and gender to avoid inequalities (Carter et al., 2014). Organisational work structures should, however, motivate both men and women to develop OCBs (Lev & Koslowsky, 2012). Such structures ensure equality by providing minimum standards that are expected of every individual.

The views and expectations of KSB held by both males and females influence an individual's ability to absorb knowledge and improve performance. Gender can also influence communication style (Allen, 2006) which, in turn, influences how

knowledge is shared. Characteristics that have been found to vary with gender include humility, self-satisfaction, enjoyment of helping others, importance of reputation, self-efficacy, interpersonal trust, humility, and religiosity (Altuntas & Baykal, 2010). Males and females may also differ on how they approach issues. Therefore, the process of information sharing varies with the subject and those involved. Social ties among individuals also affect the reception of knowledge.

How organisations incorporate gender into company performance determines group performance and relationships. Attitudes can also lead to knowledge rejection or acceptance. In an environment with a good gender mixture, bias must be avoided to lessen the development of negative attitudes (Rahman et al., 2016). KSB across gender serves to define the balance of performance in a work environment. Females normally have strong interpersonal relationships (Lim, Han & Joo, 2018). However, avoidance of stereotypes must be considered in every aspect of the promotion, position, placement, and delivery of services. It is important to understand how males and females behave in the work environment to facilitate the creation of policies, communication, and considerations to guide the interactions and the approach to issues.

Interdependence tends to result in commitment and unity and, as a broad rule, females tend to approach interdependence positively. They are therefore more likely to share information than males. Males prefer to maintain their independence, which influences how they share knowledge (Lin, 2008).

Companies need to train both genders to appreciate knowledge and define measures for knowledge sharing.

The organisational citizenship culture in the UAE health sector is comparatively poor, influenced by the fact that the execution of the various mandates is affected by cultural and religious stances. A female employee in the health sector is unwilling to freely share what she knows with a male colleague because she considers herself to be junior to her male counterpart of the same rank. The GCO in the UAE health sector has been the main hindrance to knowledge sharing in that sector (Ahmad & Daghfous, 2010). In addition, poor GCO affects organisational cultural behaviour negatively, since good organisational cultural behaviour requires an environment in which every employee is free to talk and advise others. Trust, an element of organisational cultural behaviour, is also key to enhancing knowledge sharing because it is illogical for a practitioner to assimilate advice from a person who is not trusted. Leadership in the UAE health sector has not showed good GCO; thus, a weaker OCB further weakens knowledge sharing in the sector.

GCO does not affect OCB (Kim, 2014). However, factors such as agreeableness, openness, extraversion, neuroticism, and conscientiousness have a high impact on OCB; they are related to knowledge-sharing practices since they ensure that employees can share information (Bass, 1999). Knowledge sharing is mainly affected by factors such as GCO and trust among employees in a company

(Ahmad & Daghfous, 2010). Lev & Koslowsky, (2012) maintain that organisations should motivate both genders to develop OCBs. Table 2.6 below provides an overview of the various studies that have been conducted on Gender, OCB and KSB in various national settings.

Table 02-6 Literature Synthesis of Gender, OCB, and KSB

Authors	Aim	Characteristics		
		Methodology	Region	Participants
Ahmad, and Daghfous, (2010).	To analyse the UAE's involvement in knowledge sharing with external sources, business internal innovations and knowledge network benefits	On-site interviews	UAE	15 companies
Al Zu'bi (2011)	Explore the relationships among knowledge sharing (KS), organisational commitments, and OCB	Face to face interviews	Jordan	189 employees in pharmaceutical co.
Altuntas, and Baykal, (2010)	To investigate levels of organisational trust and OCBs	Quantitative (survey)	European district of Istanbul	482 nurses
Bergeron et al., (2014)	To investigate OCB relative to both short- and long-term outcomes in the context of an outward-based reward system.	Quantitative (Survey)	Midwestern USA	622 faculty members from public and private research universities

H8 – Gender moderates the effect of OCB on KSB.

Based on the literature analysis, the following research framework (Figure 1) can be developed.

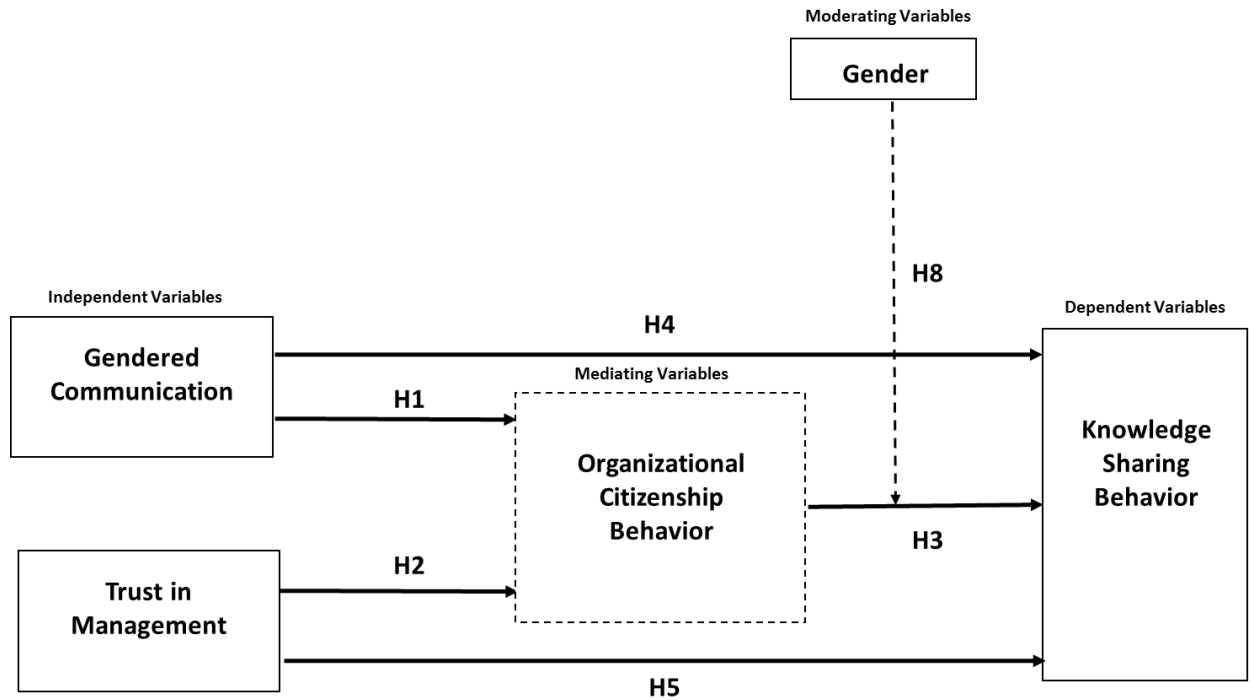


Figure 2.1: Research Framework

2.8 Theoretical Foundation

Theories provide researchers with specific direction to support the development of research questions. Theories have been proven and revised such that they are likely to provide highly precise results to the researcher. The theories employed in this study include the TRA (Gillani et al., 2018), the SDT, and the SET, as explained in Table 2.1.

2.8.1 The Theory Reasoned Action

The TRA is used to help predict a wide range of health workers' personal behaviours under their respective working environments, and how these behaviours affect knowledge sharing across the gender divide. The theory posits that someone's behaviour is usually determined by their intention. When this theory is used for analysis from a medical professional perspective, it helps establish the authenticity of medics' beliefs, which manifests in their OCB traits, with a concomitant positive impact on and change in the health sector.

Bolino et al., (2015) have investigated the TRA model and suggested its applicability in the area of knowledge sharing in public organisations. However, there is a need for further studies to provide an accurate explanation of the KSB of individual professional groups; thus, we study the belief-based factors in physicians' KSB. The TRA helps researchers predict the behaviour of their target sample, based on the fact that a person's behaviour can be deliberative (Brown, 2015). This means that there must be an intention to do something repeatedly. A person's behaviour can also be planned. The TRA is used to predict health workers' intentions and willingness to be positive while working with the main objective of helping rather than of gaining.

2.8.2 The self-determination theory

The SDT helps to explain health workers' motivations to deliver to expected standards of professionalism (Ryan & Deci, 2000); additionally, it helps

researchers to understand healthcare employees' natural tendencies to behave in a natural and intrinsic way. The theory explains individuals' motivations to be voluntarily productive. The SDT is used in this study to illustrate how self-determination is more of a personal and psychological issue. It allows an analysis of medics' ideology in work-related choices that control their daily drive to deliver services. The SDT can be broken down into intrinsic and extrinsic components. It is extrinsic when the drive to behave in a specific manner is due to factors such as work standards, employee evaluations, and grading systems (Ryan & Deci, 2000) Through the intrinsic component, the drive to do something comes from within, guided by core values, interests, and moral values, such as mutual trust. Using this theory, it is easy to determine what drives health workers to deliver what is expected of them and share their knowledge to promote teamwork and equal gender roles.

2.8.3 Social exchange theory

Social Exchange Theory proposes that a social behaviour results from an exchange process (Wang, Yen & Tseng, 2015) in which all the potential benefits from a relationship are assessed. There must be maximum gains from minimum input once the relationship has been established. The result is a cost-benefit analysis, on which most relationships are built. Healthcare workers are expected to add value to one another by knowledge sharing (Yasir & Majid, 2017). The metrics of this theory are not only based on money, but also on virtual factors such as knowledge.

The SET is a perfect tool for use in the analysis of human behaviour and relationships. As such, business and organisational performance are based on strategic planning and the development of a culture that encourages knowledge sharing at both the individual and the organisational levels (Lin & Hsiao, 2014). Organisations bring together a wide range of people, and knowledge sharing may be more difficult with increased diversity. In this study, KSB is viewed as the degree to which physicians share their knowledge with their colleagues for professional tasks. Factors that help in the exchange knowledge include improving GCO and devising the best systems to improve TIM (Lin, 2008). OCBs also facilitate effective integration of knowledge-sharing systems (Allen, 2006) and may be encouraged using rewards.

OCBs contribute to organisational effectiveness; however, they are important primarily because they shape the organisational social and psychological contexts that serve as a catalyst for the exchange of tasks, activities, and processes (Willis-Shattuck et al., 2008) OCB is a key promoter of the effective operation of an organisation and the exchanging of knowledge sharing (Marcus & Schuler, 2004; Wilkins, 2005). According to Podsakoff, Ahearne, and Mackenzie, (1997), OCB fuels the organisational and social machinery that is extremely useful in an organisation and leads to constructive and productive KSBs amongst people (Takeuchi, 2020; Werner, 1994). Healthcare organisations need employees to do more than what is required to succeed (Becton et al., 2017). These individuals perform better than expected because they often work

faster and harder. In the healthcare sector, OCB is therefore crucial and requires a high level of organisational commitment, TIM, and effective communication (Derue et al., 2011). Employees involved in decision making usually receive some support from their managers/supervisors and reciprocate by showing OCB that is often shown by employees who have trusting relationships with their employers (Bolino et al., 2015). This requires management to build long-term, committed, and trustworthy relationships, as well as effective communication with their employees. Studies affirm that GCO and TIM can lead to an exchange of rewards that results in OCB (Creswell, 2009; Ipe, 2003; Tashakkori, & Teddlie, 2003). Hence, to further understand the mechanism that links OCB with KSB, this study posits that TIM and GCO fuel OCB, and thereby KSB.

Table 2-7 A summary of the key theories in the study

Theory	Authors /Researchers	Key Tenets of the Theory
The theory of reasoned action, (TRA)	(Brock & Kim, 2002; Ajzen, 1967; Sheppard & Hartwick, and Warshaw, 1988)	▪ The TRA is used to predict health worker's intentions and willingness to be positive while working with the main objective of helping rather than gaining ▪ The TRA is used to help predict a wide range of health workers' personal behaviours in their respective working environments and how the behaviours affect knowledge sharing across the gender divide ▪ It posits that someone's behaviour is usually determined by their intention to share knowledge
The self-determination theory (SDT)	(Ryan & Deci, 2010; Coxen, Van der Vaart & Stander, 2016;	▪ Explains health workers' motivations to deliver to expected standards of professionalism ▪ Explains healthcare employees' natural

	Ryan, Connell, and Deci, 1989)	tendencies to behave in a natural and intrinsic way ▪ What drives individuals to become productive (intrinsic and extrinsic) ▪ Focuses on the quality of an individual's motivation in a given context and the environmental factors in the contextual motivation
Social exchange theory (SET)	(George, 1961; Wang & Yen, 2015)	▪ An exchange of activity, tangible or intangible, rewarding, or costly ▪ Most relationships are built on a cost-benefit analysis. ▪ Health workers are expected to add value to one another by OCB and knowledge sharing.

2.9 Chapter Summary

This chapter reviews the relevant literature in the subject areas of knowledge sharing, TIM, GCO, and OCB. Additionally, it discusses and applies three theories: the TRA, the SDT, and the SET. Having reviewed the relevant literature, the various relationships between the studies' constructs are described: the association between GCO and TIM, the relationships of GCO and TIM with OCBs, the relationships of GCO and TIM with knowledge sharing, and the association between knowledge sharing and OCB.

The next chapter, research methodology, discusses how the required data were collected and analysed to address the research objectives and test the hypotheses developed in this chapter. Accordingly, the research paradigm, research approach, research design and strategy, data collection methods, sampling, and data analysis techniques employed in this study are elaborated on, with relevant justifications.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter elaborates on the methodology used to examine the relationships between the research constructs of this study, namely, KSB, GCO, and TIM, on the one hand, and OCB on the other. Hence, this chapter discusses the research paradigm, approach, strategy, choices, population, sampling methods, sample size, data collection, questionnaire scales, and data analysis methods, including SEM.

3.2 Research Paradigm

A research paradigm is defined as ‘a perspective about research held by a community of researchers that is based on a set of shared assumptions, concepts, values, and practices’ (Johnson, & Babu, 2020 p. 31). A research paradigm directs researchers to identify the most suitable research methodology for their research study. It further enables researchers to reflect their assumptions regarding the world, as well as knowledge formation, according to Saunders, Lewis and Thornhill, (2016). Generally, researchers are guided by three types of research paradigms: the positivism, interpretivist, and constructivism philosophies.

A positivist research paradigm is typically linked with a quantitative research approach that assumes that there is one true reality discoverable through the means of strong empirical study, according to Creswell (2009). The positivist paradigm is associated with objectivism and enables hypothesis testing (Bryman

& Bell, 2015). A constructivist paradigm (anti-positivism), on the other hand, is based on assessing subjective meanings from individuals' experiences; this research philosophy is often linked with a qualitative research approach (Creswell, 2009). Thus, this philosophy is directly associated with a theory building approach. Lastly, the interpretivist paradigm assumes that reality has the characteristics of both constructivism and positivism (Saunders, Lewis and Thornhill, 2016); it often uses qualitative methods for data collection. As noted for constructivists, interpretivist also focus on theory building.

Based on the above reviews, the positivist paradigm was the most suitable for this study. This study presumes the nature of reality and objective knowledge to be based on verified hypotheses, thus advocating a positivist research approach. This study involves developing and testing hypotheses regarding a possible association between KSB, GCO, TIM, and OCB, thus reflecting the necessity for deploying a positivist paradigm. Additionally, the need for a separation of researcher and reality (objectivity) and generalisability of true reality justify the adoption of this paradigm.

3.3 Research Approach

It is essential to have an appropriate research approach to answer the research questions completely and precisely. The research plan is therefore based on choosing the right methodology to achieve the research objectives. Saunders et al., (2009) explain that a research approach can be either inductive or deductive. In an inductive approach, a researcher collects data and develops a theory based

on an analysis of the data (Stylidis, 2012), whereas a deductive approach tests existing theory or hypotheses. This study employs a deductive approach, in which the researcher uses existing theories and the literature relating to the variables GCO, TIM, KSB, and OCB to develop the hypotheses presented in Chapter 2 and to test them through data analysis. Hence, this study follows the stages of the deductive research process described. Deducing the hypotheses, in which a proposition with two or more variables is tested, using existing theories,

1. expressing the hypotheses in operational terms, by indicating how the variables are measured,
2. testing the hypotheses,
3. examining whether the results support the theory or the theory needs modifying, and, if necessary,
4. Modifying the theory in the light of the findings.

Based on the deductive research approach, this study aims to use a quantitative research design to investigate the influence of GCO and TIM, as mediator variables, on KSB and OCB among healthcare practitioners in the UAE. The adoption of the quantitative approach is supported by the positivist paradigm and deductive approach, drawing attention towards quantitative data collection and analysis (statistical procedures) and testing theory (hypothesis testing) (Bryman & Bell, 2015). A quantitative research design is chosen because it helps researchers to examine big samples of respondents and opinions about a phenomenon. The

researchers can, therefore, study aspects of human behaviour. Nunnally and Bernstein, (1994) noted that the purpose of quantitative research was to test cause-and-effect relationships; however, it could also test the generalisability of results, which was in line with the deductive approach.

A quantitative research design is used because it helps a researcher to thoroughly examine a large sample of respondents' opinions about a suggested phenomenon; consequently, the researcher can formulate a specific perspective of human behaviour (Loney et al., 2013). Organ (1988) points out that the objective of quantitative research is to test cause-and-effect relationships. It can, additionally, test the generalisability of such results. Lovric (2014) and Ramasamy & Thamaraiselvan, (2011) emphasise various advantages of using quantitative research, as presented below:

- Providing estimates of large populations
- Providing results that can be condensed into statistics
- Indicating the extent of people's attitudes
- Allowing for a statistical comparison between various groups
- Measuring the level of occurrence, actions, trends, etc.
- Precision is definitive and standardised
- It makes observations more explicit through the support of numbers

- Answering questions such as ‘How many?’ and ‘How often?’
- It makes it easy to compare, aggregate, analyse, and summarise data

As stated by Creswell (2009), there are two commonly adopted research methodologies in quantitative research: survey research and experimental research. A survey research methodology is adopted by this study, as it assists in providing standardised information flexibly to describe variables or in studying relationships among variables (Saunders, Lewis and Thornhill, 2016). The survey design is suitable for obtaining beliefs, facts, and attitudes concerning the hypothesised relationships outlined in Chapter 2. Therefore, this is an empirical study that uses a survey-based questionnaire to collect primary data.

Accordingly, a quantitative survey was conducted through online distribution of a questionnaire (Google Form) to collect data on the relationships between KSB, GCO, TIM, and OCB within the UAE’s healthcare sector.

3.4 Research Strategy

The choice of a research strategy is shaped by the nature of the study being conducted: whether it is exploratory, descriptive, or explanatory. The strategy may vary from experiments, surveys, case study, action research, grounded theory, ethnography, to archival research (Saunders, Lewis and Thornhill, 2016). The choice of strategy is driven by the objectives as well as the questions of a study, the extent of knowledge about the topic, the availability of time and resources, and the researcher’s philosophical stance. When selecting a research

strategy, there may not be clearly superior or inferior choices (Saunders, Lewis and Thornhill, 2016). Yin (2003) acknowledges three conditions for each strategy:

- the type of research question asked,
- the extent of control the researcher has over behaviours, and
- the degree of focus on contemporary or historical events.

This study employs a survey under a deductive approach, which is one of the most common research designs in the context of social science research (Saunders, Lewis and Thornhill, 2016). The survey was designed under this approach allows the researchers to collect quantitative data by reaching a larger population in a shorter time frame more economically.

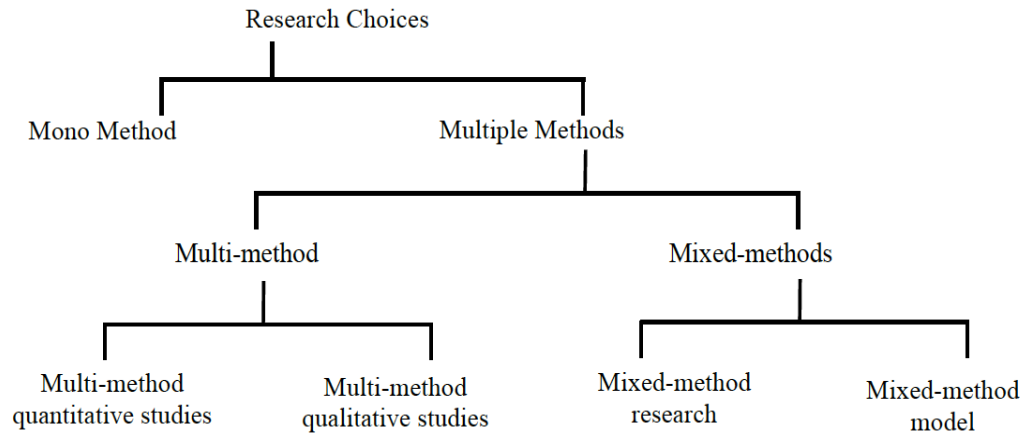
The quantitative data collected through the survey questionnaire were analysed using descriptive and inferential statistics (Saunders, Lewis and Thornhill, 2016). However, Styliadis (2012) raises three concerns about the survey method. First, it only allows a limited number of predetermined questions. Second, the physical presence of the researcher has a cost. Third, there is a possibility of bias caused by the presence of the interviewer. This study used self-administered questionnaires, with a cover letter about the purpose of the study and a contact for any queries.

3.5 Research Choices

There are three types of research methodologies: qualitative, quantitative, and mixed-method research. Saunders, Lewis and Thornhill, (2016) provide

guidelines for the precise combination of qualitative and quantitative techniques as the research choice. Researchers can choose either a single data collection technique, with corresponding analysis procedures, termed a mono-method approach, or more than one data collection technique and analysis procedure, known as a multiple-methods approach. The possible research choices are shown in Figure 3.1.

Figure 3.1: Possible Research Choices



Source: Saunders, Lewis and Thornhill, (2016).

Furthermore, there are four types of multiple-methods approach: multi-method quantitative, multi-method qualitative, mixed-method, and mixed-model studies. Multi-method studies involve different combinations of data collection techniques, used with associated analysis techniques, restricted within either a quantitative or qualitative world view (Tashakkori & Teddlie, 2003). A multi-method quantitative study involves the use of multiple quantitative methods of data collection, such as the use of both questionnaires and structured observation. A multi-method qualitative study involves the collection of qualitative data using several methods, such as in-depth interviews and diary accounts, and analysing them using qualitative procedures (Saunders, Lewis and Thornhill, 2016). The use of both quantitative and qualitative data collection techniques and analysis

procedures in a single piece of research is known as the mixed method (Tashakkori & Teddlie, 2003).

Since this study uses a single method for data collection (Survey) and data analysis (quantitative analysis), it adopts the mono-method approach, guided by a quantitative approach for data collection and analysis, as explained in Subsection 3.3. This approach is commonly used in KSB studies (Ding Choi & Aoyama, 2018; Mayer & Gavin, 2005; Teh and Sun, 2012), GCO studies, TIM studies (Buttner & Lowe, 2015), and OCB studies (Pingping & Huang, 2019).

3.6 Time Horizons

According to Saunders et al. (2009), the most important question for researchers is whether their results should show a snapshot (cross-sectional) or describe events over a given period (longitudinal). Time horizons are independent of the research strategy and choice of method. The current study is cross-sectional, and examines phenomena at a time (during 2019–2020) using a survey strategy (Easterby-Smith et al., 2008) because it is considered the most appropriate method for meeting the objectives. Many previous studies relating to GCO, TIM, KSB and OCBs also adopted a cross-sectional time horizon (Akturan & Şevik, 2016; Ding, Choi & Aoyama 2018; Pingping & Huang 2019).

3.7 Sampling methods

This section discusses the study's population, sampling frame, sample size, and sampling techniques, as follows:

3.7.1 Population

The population for this study consists of medical practitioners or physicians (who are the unit of analysis of the study) working in selected private and public hospitals in both Abu Dhabi and Dubai. The selection included two large government public hospitals (Sheik Khalifa hospital and Mafreq hospital) and other private hospitals in Abu Dhabi and Dubai. All the hospitals were selected for their quality, had branches in other cities, and had gained at least one of either the Sheikh Khalifa Excellence Award (SKEA) or the Dubai Government Excellence Programme (DGEP) award in the previous three years.

The SKEA programme was the first in Abu Dhabi to be fully aligned with international best practice and to adopt the EFQM Excellence model, a move that was followed by all other local awards in Dubai. The goal of the DGEP is to go beyond excellence and achieve performance leadership, as well as to transform into a leading, innovative, and smart government entity or agency. The hospitals were therefore selected based on different criteria to assess their performance and contribution to the UAE healthcare sector; these criteria included providing a high-quality service and making high quality contributions to healthcare through education, training, research, leadership, and creativity.

3.7.2 Sampling Frame

As stated by Denscombe (2010), a sampling frame contains information about the research population. It contains a complete list of all the cases in the population

from which the sample will be drawn (Saunders et al., 2009). A good sampling frame should be relevant (i.e. contain things directly linked to the research topic), complete (i.e. cover all relevant items), precise (i.e. exclude all irrelevant items), and up to date (i.e. incorporate recent additions and changes, with no redundant items) (Denscombe, 2010). A sampling frame should be complete to ensure that the sample is representative of the total population. It is important to ensure that a sampling frame is reliable and valid (Saunders et al., 2009). In this study, the sampling frame comprised male and female physicians from the government and private hospitals in the emirates of Abu Dhabi and Dubai.

3.7.3 Sample size

When determining the size of a sample, it is imperative for a researcher to be aware of a few considerations, such as the statistical analyses to be used, the required degree of confidence levels, and the margin for errors (Bryman & Bell, 2015). The minimum requirement for sample size may vary depending on the statistical techniques employed. The minimum sample size requirements in accordance with the statistical techniques employed are presented in Table 3.1.

Based on the degree of confidence level and margin for error, a minimum sample size of 348 was suggested, at a 95% confidence level and a 5% margin of error, as presented in Table 3.2. The sample size was deemed adequate in terms of the minimum sample size required for SEM (Table 3.1).

Table 3.1: Statistical Techniques with Minimum Sample Size Requirements

Statistical Analysis Employed	Minimum Sample Size
Structure Equation Model (SEM)	Sample size as small as 50 provides valid results (Hair et al., 2013). Recommended minimum sample sizes of 100–150 to ensure a stable maximum likelihood estimation (MLE) solution (Hair et al., 2013). Sample size in the range 150–400 is recommended (Hair et al., 2013).

Source: Hair et al. (2013)

Table 3.2: Determining Sample Size Based on Confidence Level and Margin of Error (Accuracy)

Accuracy of Margin Error (%)	Confidence Level		
	90%	95%	99%
±10	68	96	165
±09	84	118	204
±08	106	150	258
±07	139	196	3,32
±06	189	267	4,59
±05	272	384	6,60
±04	452	600	1,032
±03	756	1,068	1,835
±02	1,072	2,401	4,128
±01	6,808	9,604	16,512

Source: Van De Schoot, et al., (2017: p. 241)

3.7.4 Sampling Technique

There are two types of sampling techniques: probability or representative sampling and non-probability or judgmental sampling. For probability samples, the probability of each case being selected from the population is known and is usually equal. For non-probability samples, the probability of each case being selected from the total population is not known; this can make it difficult to answer research questions (Saunders, Lewis and Thornhill, 2016). Probability sampling is mostly associated with survey-based research strategies. The probability sampling process includes identifying a suitable sampling frame based on the research questions, deciding on a suitable sample size, selecting appropriate sampling techniques and an appropriate sample, and checking the representativeness of the sample (Saunders, Lewis and Thornhill, 2016). There are five techniques for probability sampling: simple random, systematic, stratified random, cluster, and multi-stage (Saunders, Lewis and Thornhill, 2016). This study used stratified random probability sampling. The respondents, i.e. the physicians, were chosen randomly across the selected hospitals in Abu Dhabi and Dubai. Samples can be stratified using more than one characteristic to ensure correct representation within the sample (Saunders, Lewis and Thornhill, 2016). In this study, the stratification characteristics were gender, years of experience (5 years of experience in healthcare), the profession (physicians), and experience to understand human resource practices.

3.8 Data Collection Process

A quantitative survey was conducted through online distribution of a questionnaire (Survey Monkey) to collect data on the relationships between KSB, GCO, TIM, and OCB within the UAE's healthcare sector. Survey Monkey is an online-based survey platform, was utilised to develop the survey, thus making it easier to email questionnaires to targeted respondents.

The ability to present a questionnaire attractively and ease of data entry and analysis were the key advantages of using the online survey (Bryman & Bell, 2015). However, it was vital to understand the associated issues, such as confidentiality, potential multiple replies, and unclear answering, so that improved ways of administering the survey could be found.

Accordingly, a questionnaire was developed and disseminated online to reach the participants of the study—the health practitioners in the UAE. As mentioned, this was a cross-sectional study, due to time limitation; the online survey was conducted during the period Feb–May 2020, the time horizon of the study.

3.8.1 Questionnaire scale (Measures)

A survey instrument was developed to include all the study variables: KSB, GCO, trust in top management, OCB, and gender. The cover page of the survey included information on the survey, the purpose of the study, an estimate of the length of time required to answer the survey, and the researchers' contact information. The first section of the questionnaire covered seven demographic questions on age,

gender, education, firm size, years of experience, and job title. The sections that followed covered 56 constructs about KSB, GCO, TIM, and OCB. All the measures used were based on previous studies. The study has one dependent variable (KSB), one mediator variable (OCB), one moderator variable (gender), and two independent variables (GCO and TIM). There were 56 questions in total, under four variables. The participants rated their responses using a seven-point Likert-type scale (1 = strongly disagree, 5 = strongly agree).

KSB: This used a two-dimensional measure of KSB, covering knowledge donation and knowledge collection. Knowledge donation is the voluntary delivery of useful information to others who need that information. Knowledge collection is the process of requesting useful information from another person. Hox et al., (2014) considered knowledge donation and knowledge collection to be one construct; however, Hox et al., (2014) maintained that they were separate. These factors were measured using an instrument developed by Lin (2007) and Yasir & Majid, (2017) modified to suit the behaviours of hospital employees.

TIM: This was measured using 4 scale items measuring elements of trustworthiness (Mayer & Davis, 1999).

GCO: This was measured using 23 scale items developed by The World Economic Forum, (2020). Gender-related performance is specific to context (Dehghani et al., 2015), while our focus is on workplace communication. GCO is an enacted tendency; therefore, the language of the questionnaire was checked to

ensure that it would only assess behavioural intention, rather than affective responses (Han et al., 2019).

OCB: This was measured using a scale developed by Podsakoff, Ahearne & MacKenzie, (1997). The scale comprised 24 items measuring different dimensions of OCB: altruism, conscientiousness, courtesy, sportsmanship, and civic virtue.

3.9 Data analysis procedure

The procedure for data analysis involved various steps, including coding the responses, screening the data, and choosing the appropriate data analysis methods (Sekaran, 2005; ICLG, 2018). Data screening was conducted to identify data entry errors and to scrutinise how suitably the data met the statistical analytical assumptions by using several tests, including missing data analysis, normality test, assessment of outliers, and common method bias, as presented in Chapter 4. Several statistical tools, such as IBM SPSS software, version 26, and Microsoft Excel, were used to perform these tests. Last, SEM was conducted by using the analysis of moment structures (AMOS) software, version 26.

3.9.1 Structural Equation Modeling

SEM can be described as a group of statistical approaches for modelling multivariant relations of different variables. SEM is also known as covariance structure analysis, and is related to the integration of regression factor analysis (Thomsen, Karsten & Oort, 2016). Another synonym for SEM is simultaneous

equation modelling. SEM is a quantitative research methodology that also involves qualitative data. The SEM technique is applied in research that was developed to confirm a case rather than to explore or explain an outcome.

There are several reasons for selecting SEM as the data analysis method in this research study. First, the SEM analysis techniques allowed the researcher to analyse various factors or variables. Second, it was deemed suitable when the questionnaire was constructed, to enable interval scales (Hair et al., 2006). Third, SEM is highly recommended for measuring and evaluating hypothetical and conceptual relationships between variables.

3.8 Chapter Summary

The chapter discussed the overall research methodology applied in this study. First, the research philosophy of the positivist paradigm, as adopted by the study, was discussed. To achieve the objectives of the present study, it was necessary to choose a deductive approach under the mono research choice, which was based on a quantitative approach. Thus, the quantitative survey was the research design of the present study. Focusing on government and private hospitals in Abu Dhabi and Dubai, UAE, their physicians were chosen as the sampling frame of the study. Additionally, the chapter covered the data collection technique used, the measurement instrument, and the analytical tools used in the study. The results of these analyses are set out in the next chapter.

CHAPTER 4: DATA ANALYSIS AND RESULTS

4.1 Introduction

This chapter presents the key empirical findings from the analysis of the survey data. The data analyses were performed using statistical analytical techniques, including exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural model analysis. First, the data were scrutinised for missing values, multivariate outliers, normality assumption, common method bias etc. Second, having screened the data through the preliminary data analysis, EFA was then conducted to examine the structure of the factors and their respective loadings with respect to GCO, TIM, KSB, and OCB. Third, the reliability and construct validity of the measurement models were evaluated, followed by an analysis of the structural models and hypothesis testing. Finally, the results relating to the mediation testing and multi-group analysis (MGA) were obtained.

4.2 Demographic Characteristics of the Respondents

This section analyses the demographic characteristics of the survey respondents of the experienced health practitioners and physicians in the health sectors either within or outside the UAE. It was conducted in two large government public hospitals (Sheik Khalifa hospital and Mafraq hospitals) and two private hospitals in Abu Dhabi, who have gained at least one of either the Sheikh Khalifa Excellence Award (SKEA) or the Dubai Government Excellence Programme (DGEP) in the previous 3 years.

Table 5.1 shows a summary of the demographic profiles of the health practitioners and physicians who participated in the main survey (n = 457). Six demographic characteristics were observed: age, gender, education, health sector, firm size, and years of work experience. The demographic distribution of the respondents showed that most participants were male (62.6%), while 37.4% were female. Most respondents were from the age group of 35–44 years (41.1%), followed by the age groups of 45–54 and 25–34 years, which were represented by 25.8% and 24.3% of the respondents, respectively. Most respondents were from private hospitals (53.6%), while 34.6% and 11.8% of them had, respectively, been working in government and semi-government hospitals located in the UAE. Some 54.0% of the hospitals were small and medium size firms, with less than 500 employees, while the rest of the hospitals were large firms (45.9%). The years of work experience of the participants were 11-20 years (39.8%), 5-10 years (26.3%), and 21 years and above (21.9%). The designations of most of the physicians were specialist practitioner (35.2%), consultant practitioner (17.7%), and general practitioner (17.3%), while 23.4% were other health practitioners, such as physiotherapists, medical directors and consultants, and allied health professionals, etc.

Table 4-1 The analysis of demographic characteristics

The Demographic Characteristic	Frequency (n=457)	Percent (%)
Gender		
Female	171	37.4
Male	286	62.6
Age		
25-34	111	24.3
35-44	188	41.1
45-54	118	25.8
55-64	35	7.7
65+	5	1.1
Sector		
Government Hospital	158	34.6
Private Hospital	245	53.6
Semi-Government Hospital	54	11.8
Firm Size		
100–250 employees	162	35.4
251–500 employees	85	18.6
501–1000 employees	70	15.3
1001 employees and above	140	30.6
Experience		
Below 5 years	55	12
5–10 years	120	26.3
11–20 years	182	39.8
21 years and above	100	21.9
Designation		
Consultant Practitioner	81	17.7
General Practitioner	79	17.3
Specialist Practitioner	161	35.2
Surgeon Practitioner	19	4.2
Junior Practitioner	10	2.2
Other (please specify)	107	23.4

4.3 Preliminary Data Analyses

4.3.1 Missing Value Analysis and Unengaged Responses

Multivariate analysis involves analysing more than one statistical outcome variable at a time; thus, typically, valid values that relate to one or more variables are not available (Lewis, 2015). The general effect of missing data in multivariate analysis is a decrease in sample size, and bias in the statistical results if the missing values lead to inaccurate results (Byrne, 2010). Additionally, missing data in SEM using AMOS will create problems in computing some measures of fit (modification index) that are required for fitting the models (Ong & Puteh, 2017). Consequently, missing value analysis was conducted on the collected dataset (N=567, Appendix II-A). There were many missing values for the indicators, except for the indicators of the KSB construct (KSB1, KSB2, KSB3, and KSB4). Concerning GCO, 72 missing values were found, while TIM reflected 85 missing values. Missing values ranged between 99 and 116 for the OCB indicators. For the missing values (Hair et al., 2013; Arbuckle, 2009), the respective series mean values were substituted (Appendix II-B).

There were no unengaged responses observed as the standard deviation of the observations was non-zero (Appendix II-A), implying reasonable engagement by the respondents with the survey. This was supported by the analysis characteristics of the respondents, as presented in Table 4.1, suggesting that the researcher's sample selection was appropriate (the sample comprised educated

and professional employees, such as physicians, working in the UAE's private and government hospitals).

4.3.2 Multivariate outliers

Following missing value analysis, the next step was multivariate outlier analysis. A multivariate outlier refers to a data value that is distinctly different from the centre in relation to the fundamental covariance structure of the dataset (Ong & Puteh, 2017). Therefore, detected multivariate outliers should be eliminated to prevent severe distortion of statistical tests (Byrne, 2010). Through SPSS, the Mahalanobis (D2) measure was used to detect multivariate outliers. It is the most commonly used technique for detecting multivariate outliers, and measures each observation's multidimensional position in a set of variables relative to the centre of all the observations (Hair et al., 2013). According to Tabachnick, Fidell & Ullman, (2007), if the probability value for an observation's D2 is less than 0.001, it is identified as a multivariate outlier. Based hereon, 110 multivariate outliers were observed in this study (Appendix III-C); they were therefore deleted from the data to enhance reliability, resulting in N=457 observations.

4.3.3 Multivariate Normality

Multivariate normality, a fundamental assumption of multivariate analysis, requires a dataset to be normally distributed (Takeuchi, 2020). The covariance-based SEM analysis produced by AMOS relies on the normality of data (Ong & Puteh, 2017). Byrne (2010) argues that, if the skewness value is between -2 and +2 and the kurtosis value is between -7 and +7, multivariate normality of the data

may be assumed. In this study, the skewness value for each variable was between +0.440 and +0.948, while the kurtosis value was between -0.615 and +5.410 (Appendix III), thus satisfying the multivariate normality assumption.

4.3.4 Common Method Bias

Common method bias refers to the false variance attributable to the measurement method of the questionnaire rather than to the constructs that the measures implicitly represent (Jordan & Troth, 2020). Common method bias may indicate false internal consistency among the constructs. In this study, Harman's single-factor method was employed to test whether the measurement instrument was biased. When one factor characterises most of the variance, it is assumed that common method bias exists (Tharp et al., 2020). In this study, Harman's single-factor test showed that one factor solution reported 16.03% of the total variation (Appendix IV), indicating an absence of common method bias in the questionnaire.

4.4 Exploratory Factor Analysis

EFA was initially performed to produce the collected data factor structure reflecting the variables GCO, TIM, KSB, and OCB, and their sub constructs. It was performed using principal component analysis (PCA) with the Promax rotation method to generate the factor structure. With 56 questionnaire items, 9-factor solutions were forced using SPSS, v.26. Consequently, 55.89% of the total variance was explained by the 9-factor model (Appendix V). Table 4.2 shows the

structural results of the EFA, factor loadings, communalities, as well as construct reliability.

The Kaiser-Meyer-Olkin test (KMO) and Bartlett's test of sphericity were performed to test the suitability of the collected data for the EFA (Table 4.2). In this case, the KMO was 0.857, which indicated that the data obtained were suitable for factor analysis concerning the scales used by this study (Casimir, Lee & Loon, 2012; Child, 2006). With respect to Bartlett's test of sphericity, its significance level ($\chi^2=8004.72$; $p<0.05$) indicates that the correlation between the items has an identity matrix for the purpose of conducting factor analysis on the proposed constructs (Ong & Puteh, 2017).

Table 4-2 The results of the exploratory factor analysis (EFA)

<i>KMO = 0.857; Bartlett's Test of Sphericity: $\chi^2 = 8004.720$, $df = 1035$, $p = 0.00$; total variance explained = 55.89%</i>						
Constructs/ Measurement items		Fact or loadi ng	Commun alities	SM C (R ²)	Cronba ch's alpha (α)	Refere nce
Knowledge Sharing Behaviour (KSB)					0.805	Zhang Faerm an, and Cressw ell, (2006)
1	KSB	I share knowledge actively on formal occasions	0.594	0.399	0.240	
2	KSB	I use my company's information system or database to store knowledge	0.676	0.481	0.277	
3	KSB	I share knowledge through written communication	0.609	0.452	0.313	
4	KSB	My co-workers share knowledge actively on informal occasions	0.694	0.539	0.293	
Trust in Management (TIM)					0.803	
1	TIM	If I had my way, I would not let top management have any influence over issues that are important to me	0.679	0.498	0.324	
3	TIM	I really wish I had a good way to keep an eye on top management	0.695	0.574	0.392	Mayer and Davis (1999)
4	TIM	I would be comfortable giving top management a task or problem which was critical to me, even if I could not monitor their	0.713	0.543	0.300	

actions

Gendered Communication (GCO)	Gendered Communication Masculine (GCO_M)		0.801			Weinberg Trevino & Cleveland, (2019)
	GCO 1_M	When I communicate with others at work, I tend to assert and defend my own thoughts and beliefs	0.564	0.570	0.106	
	GCO 2_M	I often use communication as a way to draw attention to myself and my ideas at work	0.681	0.582	0.318	
	GCO 4_M	I tend to communicate in a direct and assertive way at work	0.498	0.393	0.237	
	GCO 5_M	I often use communication as a way to establish and enhance my own status at work	0.737	0.636	0.449	
	GCO 6_M	When I communicate with others at work, I often find myself interrupting them to gain command of the conversation	0.514	0.534	0.302	
	GCO 8_M	I often use communication as a way to assert my authority at work	0.651	0.449	0.357	
	Gendered Communication Feminine (GCO_F)		0.798			
	GCO 7_F	I employ a collaborative communication style at work	0.591	0.556	0.223	
	GCO 9_F	When I communicate with others at work, I tend	0.454	0.322	0.222	

		to be sensitive to their needs			
GCO 10_F		When I communicate with others at work, I strive to establish equality between all participants	0.639	0.559	0.2 36
GCO 11_F		When I communicate with others at work, I tend to be understanding of their perspectives	0.749	0.611	0.3 50
GCO 12_F		I tend to communicate in a compassionate way at work	0.720	0.574	0.3 45
GCO 13_F		I tend to communicate my support for others at work	0.772	0.628	0.4 44
GCO 14_F		I tend to communicate in a responsive way at work (e.g. by smiling, or by nodding)	0.644	0.456	0.3 06
GCO 16_F		During communications with others at work, I often invite them to participate and encourage them to elaborate on their thoughts	0.580	0.483	0.4 44
GCO 18_F		I use communication as a primary way to establish and maintain relationships at work	0.488	0.422	0.5 59
GCO 23_F		I regard communication at work as a way to build rapport	0.435	0.335	0.5 14

		(harmonious connections) with others					
		Sportsmanship (OCB_S)				0.807	
	OCB	I am the classic 'squeaky wheel' that always needs greasing	0.660	0.528		0.441	
	1_S						
	OCB	I consume a lot of time complaining about trivial matters	0.743	0.612		0.306	
	2_S						
	OCB	I tend to make 'mountains out of molehills'	0.662	0.530		0.390	
	3_S						
	OCB	I always focus on what is wrong, rather than the positive side	0.671	0.577		0.466	
	4_S						
Organizational citizenship behavior (OCB)	OCB	I always find fault with what the organisation is doing	0.659	0.569		0.525	
	5_S						
		Altruism (OCB_A)				0.796	
	OCB	I help others who have heavy workloads	0.785	0.682			
	6_A						
	OCB	I am always ready to lend a helping hand to those around me	0.826	0.767			
	7_A						
	OCB	I help others who have been absent	0.780	0.621			
	8_A						
	OCB	I am willing to help others who have work-related problems	0.853	0.798			
	9_A						
	OCB	I help orient new people even though it is not required	0.750	0.667			
	10_A						

Podsakoff, Ahearne, & MacKenzie, (1990)

Courtesy (OCB_C)				0.795
OCB 11_C	I try to avoid creating problems for co-workers	0.702	0.648	0.601
OCB 12_C	I consider the impact of my actions on co-workers	0.713	0.636	0.560
OCB 13_C	I do not abuse the rights of others	0.675	0.603	0.562
OCB 14_C	I take steps to try to prevent problems with other workers	0.764	0.752	0.450
OCB 15_C	I am mindful of how my behaviour affects other people's jobs	0.668	0.653	0.711
Civic virtue (OCB_CV)				0.799
OCB 17_CV	I attend meetings that are not mandatory but are considered important	0.683	0.563	0.611
OCB 18_CV	I attend functions that are not required but help the company image	0.771	0.633	0.437
OCB 19_CV	I read and keep up with organisation announcements, memos, and so on	0.624	0.581	0.606
Conscientiousness (OCB_CS)				0.801
OCB 20_CS	I am one of the most conscientious employees	0.454	0.467	0.263
OCB 21_CS	I believe in giving an honest day's work for an honest day's pay	0.580	0.541	0.414

OCB 22_CS	My attendance at work is above the norm	0.792	0.682	0.4 67
OCB 23_CS	I do not take extra breaks	0.647	0.539	0.4 18
OCB 24_CS	I obey company rules and regulations even when no one is watching	0.465	0.462	0.4 67

**Extraction Method: Principal Component Analysis. Rotation Method:
Varimax with Kaiser Normalisation.
a. Rotation converged in 8 iterations.**

Note:	SMC	=	Squared	Multiple	Correlation
-------	-----	---	---------	----------	-------------

When conducting the EFA, 9 items, namely, TIM2, GCO3_F, GCO15_M, GCO17_M, GCO19_M, GCO20_F, GCO21_M, GCO22_M, and OCB16_CV, were deleted from the factor structure as they were not clean and strong in loading onto the relevant factors (Table 4.3). According to Nunnally and Bernstein, (1994), if factor loading relating to an item is lower than 0.4, while the absolute difference amongst its cross loadings is below 20%, it is considered as one having poor and unclear loadings.

Table 4-3 Variables eliminated from the EFA Analysis

Construct	Items
Gendered communication (GCO)	GCO3_F: I often communicate in a way that expresses empathy or sympathy toward others at work GCO15_M: When I communicate with others at work, I tend to dominate the conversation GCO17_M: When I communicate with others at work, I tend to avoid disclosing personal information that might suggest weakness or vulnerability GCO19_M: My communication style at work tends to be somewhat dominant, forceful, or aggressive GCO20_F: When I communicate with others at work, I tend to use a more concrete style in which I provide details, disclose personal information, and use concrete reasoning GCO21_M: When I communicate with others at work, I tend to use a more abstract style, speaking in general terms that are removed from concrete experiences GCO22_M: I tend to communicate in an instrumental way at work, that is, as a means to accomplish goals
Trust in Management (TIM)	TIM2: I would be willing to let top management have complete control over my future in the company
Organisational citizenship behaviour (OCB)	OCB16_CV: I keep myself abreast of changes in the organisation

4.5 Confirmatory Factor Analysis

In the SEM process, there are two phases: the measurement model (CFA) and the structural/path model analysis. The CFA was first used to statistically test the proposed measurement models of the study. A measurement model is a combination of several indicators/items for a construct (Hair, Rich & Rich, 2018). Therefore, the CFA was executed to verify the basic indicators/items of the 9 constructs/factors that were produced by the EFA, and to validate the relations between the measurement models of the study. In this study, there were 9 measurement models: KSB, TIM, GCO Masculine (GCO_M), GCO Feminine (GCO_F), Sportsmanship (OCB_S), Altruism (OCB_A), Courtesy (OCB_C), Civic virtue (OCB_CV), and Conscientiousness (OCB_CS).

Figure 4.1 shows the CFA for the measurement models. The model fit indices relating to the CFA revealed that the proposed measurement models fit the dataset (Hair, Rich & Rich, 2018).

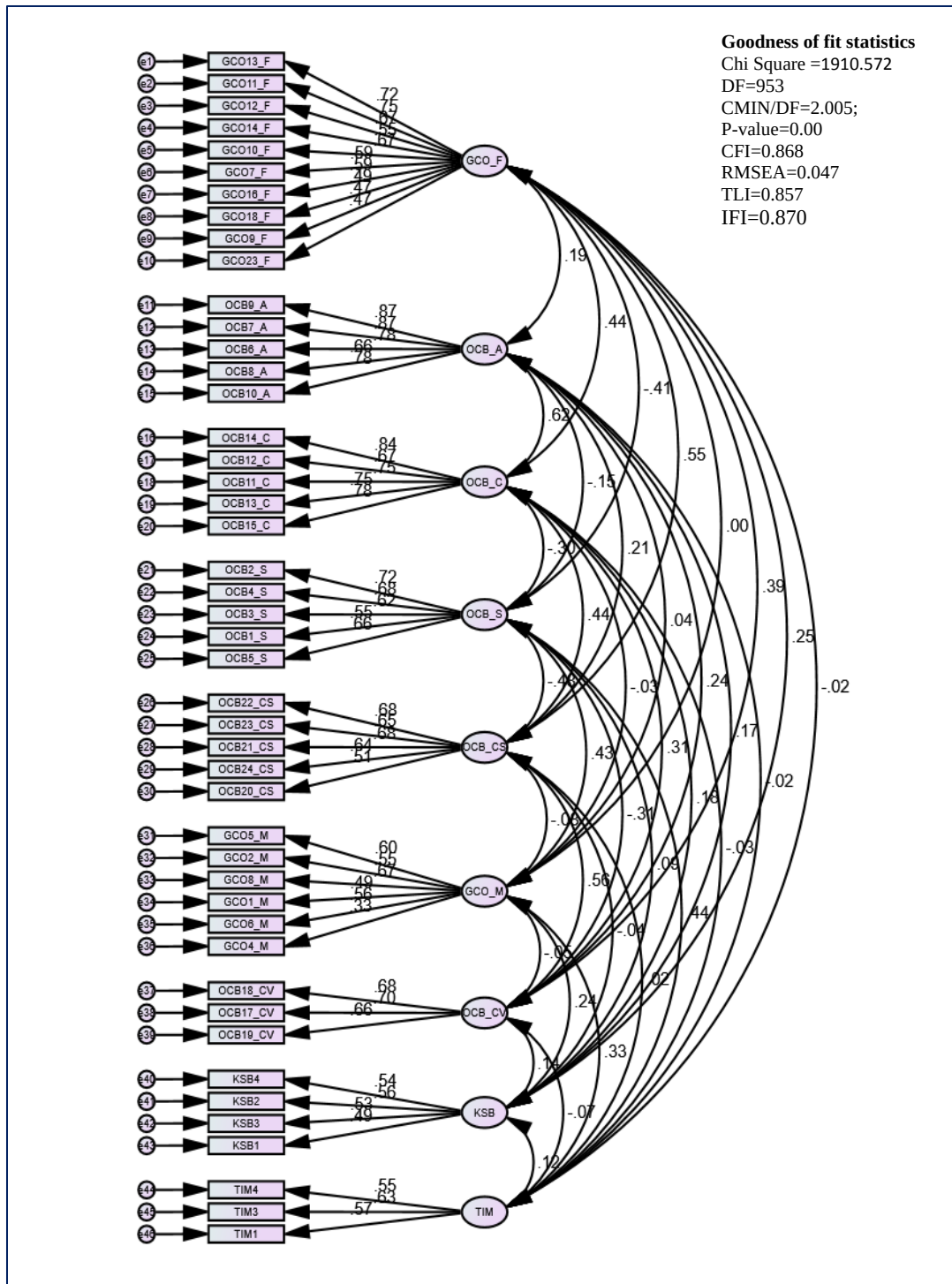


Figure 4.1: CFA Measurement Models

The reliability, convergent validity, and discriminant validity of the above measurement models were also tested to confirm the CFA measurement models.

4.5.1 Reliability

Reliability refers to the internal consistency of the scales, which can be determined through Cronbach's alpha. If Cronbach's alpha has a value of 0.7 or more, the measure is said to be statistically reliable (Hair et al., 2013). In the case of this study, all the variables of the model attained a Cronbach's alpha of 0.7 or more (Table 4.2).

4.5.2 Convergent validity

Convergent validity is the '...extent to which indicators of a specific construct converge or share a high proportion of variance in common' (Hair et al., 2013). The convergent validity in this study was evaluated through three criteria (Table 4.4):

- (1) standardised factor loading,
- (2) Average variance extracted (AVE), and
- (2) Composite reliability (CR).

Table 4-4 Convergent validity criteria and conclusions

Criteria	Accepted value	Actual value
Standardised factor loading	Standardised factor loading should exceed 0.5 (Hair et al., 2013)	Standardised factor loading is higher than 0.5 for all items, excluding GCO4_M, GCO9_F, GCO18_F, GCO23_F, OCB20_CS, and OCB24_CS
Average variance extracted (AVE)	AVE of constructs should exceed 0.5 (Hair et al., 2013)	AVE value for all constructs is less than 0.5, except for the constructs OCB_C and OCB_A (Table 4.5)
Composite reliability (CR)	CR of construct should exceed 0.6 (Fornell & Larcker, 1981)	CR value for all the constructs exceeded 0.6.

Table 4-5 Correlations, Composite Reliability, Convergent Validity, and Discriminant Validity

	TIM	GCOF	OCBS	OCBA	OCBC	GCOM	OCBCV	OCBCS	KSB	CR	AVE
TIM	0.582									0.605	0.339
-											
GCO_F	0.018	0.604								0.848	0.364
OCB_S	0.436	-0.408	0.653							0.786	0.426
-											
OCB_A	0.015	0.187	-0.147	0.797						0.896	0.635
-											
OCB_C	0.031	0.439	-0.304	0.624	0.760					0.872	0.577
GCO_M	0.331	-0.006	0.433	0.044	-0.027	0.543				0.707	0.295
-											
OCB_CV	0.064	0.381	-0.307	0.236	0.307	-0.051	0.683			0.724	0.467
OCB_CS	0.048	0.519	-0.433	0.195	0.402	-0.029	0.521	0.648		0.741	0.420
KSB	0.114	0.254	0.092	0.173	0.183	0.245	0.138	-0.042	0.530	0.609	0.281

NOTE: The diagonal values represent the square root of the AVE

CR = composite reliability; AVE = average variance extracted; KSB =

Knowledge sharing behaviour; GCO_F = Gendered communication_ Feminine;

GCO_M = Gendered communication_ Masculine; OCB_S = Organisational

citizenship behaviour Sportsmanship; OCB_C = Organisational citizenship behaviour Courtesy; OCB_A = Organisational citizenship behaviour Altruism; OCB_CV = Organisational citizenship behaviour Civic virtue; OCB_C = Organisational citizenship behaviour Conscientiousness; TIM = Trust in management

Table 4.2 shows that the standardised factor loadings for the items exceeded 0.6, except for GCO4_M, GCO9_F, GCO18_F, GCO23_F, OCB20_CS, and OCB24_CS. Additionally, Table 4.5 shows that the AVE values for all the constructs, except for the constructs OCB_A and OCB_C, are greater than 0.5. However, the CR tests confirmed that all the constructs showed convergent validity since their CR values were higher than 0.6 (Table 4.5). According to Fornell and Larcker, (1981), the convergent validity of a construct is still acceptable when its CR is greater than 0.6, even if its AVE value and standardised factor loadings are below 0.5.

4.5.3 Discriminant validity

Fornell and Larcker's, (1981) criterion is used to test discriminant validity. Fornell and Larcker's, (1981) argued that a latent variable should have an AVE that exceeds the squared correlations between the latent variable and the other constructs. Thus, the square root of the AVE of the construct should be bigger than its squared correlation with the other constructs. The values written in bold denote the square root of the AVE of each variable in Table 4.5. In this study, all the constructs showed sufficient discriminant validity since the square roots of

their respective AVEs are greater than their corresponding squared correlations with the other constructs.

4.6 Structural Model and Hypothesis testing

To test the model's goodness of fit, six measures were used: the chi square, the normed chi-squared test (X^2/dof), the comparative fit index (CFI), the root mean square error of approximation (RMSEA), the Tucker Lewis index (TLI), and the incremental fit index (IFI) (Table 4.6).

Table 4-6 Model Fitness Indices

Model Fit index	The acceptable value	Actual value	Conclusion
Chi square (CMID)	p-value >0.001 (Hair, Rich & Rich, 2018)	1910; p=0.00	Rejected
Norm Chi-squared test X^2/Df	≤ 5 (Hair, Rich and Rich, 2018)	2.236; p=0.00	Acceptable
CFI	≥ 0.70	0.830	Acceptable
RMSEA	≤ 0.080 (Awang, 2012)	0.052	Acceptable
TLI	Near to 1 is acceptable	0.825	Acceptable
IFI	Near to 1 is acceptable	0.836	Acceptable

In Table 4.6, most of the model fit statistics indicate an acceptable fit for the model's GOC, TIM, and KSB with the actual data ($\chi^2/\text{df} = 2.230$, $p < 0.05$; CFI = 0.834; RMSEA = 0.052; TLI = 0.825; IFI = 0.836). However, the Chi-squared test (CMID) rejected the model; since the chi-squared test is sensitive to sample size (Hair et al., 2018), the study focused on the other fit indices to validate the model.

According to the CFI, RMSEA, TLI, and IFI, evidently the model relating GCO and TIM with KSB and OCB fits the dataset statistically.

Table 4.7 shows the results of the path analysis presented in the structural model depicted in Figure 4.2. The direct relationship between GCO and OCB was statistically insignificant ($\beta=0.433$; $p=0.057$), and thus H1 was rejected. Additionally, the direct relationship between TIM and OCB ($\beta=-0.124$; $p=0.063$) was not significant, rejecting H2. However, the relationships between OCB and KSB ($\beta=0.061$; $p<0.05$), GCO and KSB ($\beta=0.139$; $p<0.05$), and TIM and KSB ($\beta=0.115$; $p<0.05$) were positive and statistically significant, leading to acceptance of Hypotheses H3, H4, and H5.

Table 40-7 Standardised Regression weights

Paths			Estimate	S.E.	C.R.	P-value
OCB	<---	TIM	-0.124	0.036	-1.856	0.063
OCB	<---	GCO	0.433	0.101	1.904	0.057
KSB	<---	GCO	0.139	0.064	2.106	0.035
KSB	<---	TIM	0.115	0.064	2.106	0.035
OCB_A	<---	OCB	0.438			NS
OCB_CS	<---	OCB	0.756	0.221	6.632	***
OCB_C	<---	OCB	0.661	0.161	6.474	***
OCB_S	<---	OCB	-0.568	0.193	-6.109	***
OCB_CV	<---	OCB	0.577	0.192	5.961	***
GCO_F	<---	GCO	1.548			NS
GCO_M	<---	GCO	0.032	0.039	0.794	0.427
KSB	<---	OCB	0.061	0.064	2.106	0.035
GCO13_F	<---	GCO_F	0.717			NS
GCO12_F	<---	GCO_F	0.671	0.087	13.25	***
GCO14_F	<---	GCO_F	0.553	0.082	10.96	***
GCO11_F	<---	GCO_F	0.749	0.063	14.70	***
GCO10_F	<---	GCO_F	0.665	0.087	13.13	***
GCO7_F	<---	GCO_F	0.591	0.075	11.7	***
GCO23_F	<---	GCO_F	0.467	0.088	9.284	***
GCO9_F	<---	GCO_F	0.469	0.093	9.315	***
GCO16_F	<---	GCO_F	0.593	0.078	11.74	***
OCB2_S	<---	OCB_S	0.730			NS

OCB4_S	<---	OCB_S	0.688	0.08	12.51	***
OCB3_S	<---	OCB_S	0.633	0.08	11.65	***
OCB5_S	<---	OCB_S	0.652	0.08	11.96	***
OCB1_S	<---	OCB_S	0.543	0.07	10.15	***
OCB12_C	<---	OCB_C	0.677			NS
OCB11_C	<---	OCB_C	0.742	0.07	13.94	***
OCB13_C	<---	OCB_C	0.750	0.08	14.07	***
OCB14_C	<---	OCB_C	0.845	0.08	15.45	***
OCB15_C	<---	OCB_C	0.776	0.08	14.47	***
OCB6_A	<---	OCB_A	0.778			NS
OCB8_A	<---	OCB_A	0.664	0.07	14.55	***
OCB7_A	<---	OCB_A	0.868	0.05	20.00	***
OCB9_A	<---	OCB_A	0.876	0.04	20.20	***
OCB10_A	<---	OCB_A	0.777	0.06	17.52	***
GCO5_M	<---	GCO_M	0.636			NS
GCO2_M	<---	GCO_M	0.585	0.10	8.98	***
GCO8_M	<---	GCO_M	0.637	0.11	9.422	***
GCO1_M	<---	GCO_M	0.491	0.10	7.942	***
GCO6_M	<---	GCO_M	0.505	0.09	8.116	***
GCO4_M	<---	GCO_M	0.360	0.08	6.147	***
OCB22_CS	<---	OCB_CS	0.694			NS
OCB23_CS	<---	OCB_CS	0.658	0.07	11.71	***
OCB21_CS	<---	OCB_CS	0.679	0.06	11.99	***

		CS		9	4	
OCB20_CS	<---	OCB_CS	0.492	0.07	9.085	***
OCB24_CS	<---	OCB_CS	0.642	0.06	11.47	***
OCB18_CV	<---	OCB_CV	0.705			
OCB17_CV	<---	OCB_CV	0.704	0.09	10.64	***
OCB19_CV	<---	OCB_CV	0.641	0.07	10.28	***
KSB2	<---	KSB	0.573	1	6	NS
KSB3	<---	KSB	0.508	0.12	6.456	***
KSB4	<---	KSB	0.547	0.12	6.622	***
KSB1	<---	KSB	0.488	0.13	6.334	***
TIM3	<---	TIM	0.595			
TIM4	<---	TIM	0.586	0.15	6.384	***
TIM1	<---	TIM	0.567	0.16	6.417	***
GCO18_F	<---	GCO_F	0.483	0.07	9.59	***
				4		

* p<0.05; ** p<0.01; *** p<0.001; NS: Non-Significant

Note: KSB = Knowledge sharing behaviour; GCO_F = Gendered communication_ Feminine; GCO_M = Gendered communication_ Masculine; OCB_S = Organisational citizenship behaviour_ Sportsmanship; OCB_C = Organisational citizenship behaviour_ Courtesy; OCB_A = Organisational citizenship behaviour_ Altruism; OCB_CV = Organisational citizenship behaviour_ Civic virtue; OCB_C = Organisational citizenship behaviour_ Conscientiousness; TIM = Trust in management

4.7 Mediation Analysis

The mediation effect of OCB on KSB was analysed by a bootstrapping approach for 2,000 samples computed at a 90% confidence level (Hair et al., 2018). Tables

4.8 and 4.9, respectively, report the analysis results with respect to the mediation effect of OCB on the relationship between GCO and KSB, as well as the relationship between TIM and KSB.

Table 4-8 Mediating effect of OCB on the relationship between GCO and KSB

	Direct	Indirect effect	Full effect	Result
Estimate	0.139	0.027	0.165	Partial mediation
P-value	0.002 (Sig)	0.008 (Sig)	0.005 (Sig)	

Sig = p-value < 0.05; Not Sig = p-value > 0.05

Table 4-9 Mediating effect of OCB on the relationship between TIM and KSB

	Direct	Indirect effect	Full effect	Result
Estimate	0.115	0.008	0.108	No mediation
P-value	0.005 (Sig)	0.105 (Not Sig)	0.007 (Sig)	

Sig = p-value < 0.05; Not Sig = p-value > 0.05

As reported in Table 4.8, the association between GCO and KSB is partially mediated by OCB, while the direct effect of GCO on KSB is significant (Hair et al., 2013). Thus, H6 was accepted. However, no mediation by OCB was found on the relationship between TIM and KSB (Table 4.9) since its indirect effect was not significant. Therefore, hypothesis H7 was rejected.

4.8 Multi Group Analysis

An MGA was performed to examine the moderating role of gender in the association between OCB and KSB. The MGA assesses the whole model of GCO, TIM, KSB, and OCB across different type of samples (male vs. female) and compares the structural associations across these samples using the pairwise

parameter comparison technique. The values of the critical ratios for difference between male and female indicate the moderating effect of gender.

The acceptance or rejection of the hypothesis regarding the moderating effect of gender on the association between OCB and KSB is tested based on the result of the null hypothesis.

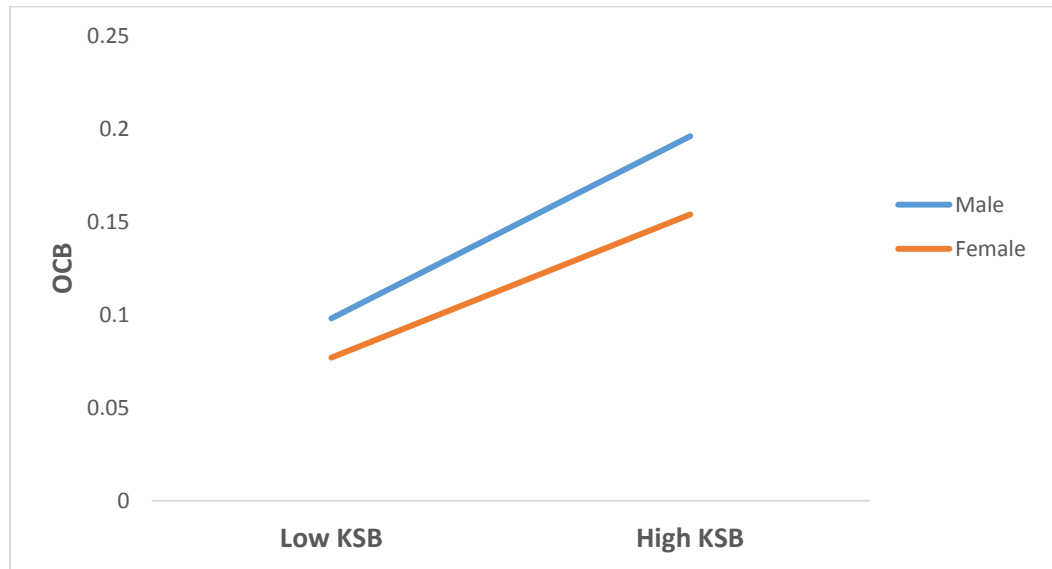
Null hypothesis > H80: Gender does not moderate the effect of OCB on KSB amongst the health practitioners in the UAE.

If the critical ratio for difference is between the threshold values of -1.96 and 1.96 (Hair et al., 2013), the null hypothesis is accepted, meaning that there is no moderating effect. The null hypothesis is rejected if the critical ratio for difference is not in the range -1.96 to 1.96 , implying the existence of a moderating effect.

Table 4-10 Moderating effect of gender on the relationship between OCB and KSB

Path	Male (<i>n</i> =286)	Female (<i>n</i> =171)	Path Significance			Critical Ratio for Difference	Conclusion
	Estimate (CR)	Estimate (CR)	Δx^2	df	$\Delta x^2/df$		
H8 OCB → KSB	0.098 (2.579; <i>p</i> <.05)	0.077 (2.579; <i>p</i> <.05)	1786.5 49	1953	0.915	- 0.414	Not Supported

Figure 4.3: Moderating effect of gender on OCB-KSB relationship



The moderating effect of gender on the relationship between OCB and KSB is presented in Table 4.10. The regression weights of OCB on KSB for both the male and female groups are statistically significant, as revealed by the estimates on the male and female groups on the path between OCB and KSB. Although Figure 4.2 suggests that the male health practitioners seem to highly moderate the relationship between OCB and KSB, the critical ratio for difference between the male and female groups confirms that these differences are not significant. For the null hypothesis relating to gender, the critical ratio for difference is -0.414 , which falls within the threshold range of -1.96 to 1.96 (Hair et al., 2013). Therefore, a moderating effect of gender on the path between male and female was not found, thereby rejecting H8.

4.9 Chapter Summary

In this chapter, the survey data (n=457) were analysed using the SEM approach, comprising the EFA and CFA measurement models, as well as the structural model of GCO, TIM, OCB, and KSB, which revealed a statistically reliable and valid model. Moreover, the mediating effects of GCO and TIM on the relationship between OCB and KSB were scrutinised, while MGA was performed to test the moderating effect of gender on the relationship between OCB and KSB. The analyses were facilitated by the software tools, IBM SPSS, v.26 and AMOS, v.26. A summary of the hypothesis testing is presented in Table 4.11.

Table 4-11 Summary of hypothesis testing

Hypothesis number	Hypothesis statement	Conclusion
H1	Gendered communication is positively related to organisational citizenship behaviour	Rejected
H2	Trust in management is positively related to organisational citizenship behaviour	Rejected
H3	Organisational citizenship behaviour positively influences knowledge sharing behaviour	Accepted
H4	Gendered communication is positively related to knowledge sharing behaviour	Accepted
H5	Trust in Management is positively related to knowledge sharing behaviour	Accepted
H6	Organisational citizenship behaviour mediates the relationship between gendered communication and knowledge sharing behaviour	Accepted
H7	Organisational citizenship behaviour mediates the relationship between trust in Management and knowledge sharing behaviour	Rejected
H8	Gender moderates the effect of organisational citizenship behaviour on knowledge sharing behaviour	Rejected

CHAPTER 5: DISCUSSION

5.1 Introduction

This chapter discusses the results presented in Chapter 4, Data Analysis and Results, from the perspective of the research objectives, research hypotheses, and the extant literature. The results of the tests of the eight hypotheses are compared and critiqued relative to previous research. The chapter concludes with a summary.

5.2 Gendered Communication and Organizational Citizenship Behaviour

First the study was to investigate the influence of GCO on OCB among the health practitioners in the UAE. Based on the existing literature on GCO and OCB, a hypothesis was proposed that GCO had a positive impact on the OCB amongst the health practitioners in UAE hospitals.

The GCO constructs were developed by incorporating the two first-order dimensions of GCO_M and GCO_F (Weinberg, Trevino & Cleveland, 2019), while the OCB was measured using five first-order dimensions: sportsmanship (OCB_S), altruism (OCB_A), courtesy (OCB_C), civic virtue (OCB_CV), and conscientiousness (OCB_CS) (Podsakoff et al., 1990; Byrne, 2010). The squared multiple correlation (SMC) of the second-order constructs, GCO and OCB, revealed a significant variation in their respective first-order constructs, distinct from the other constructs (Table 4.2), implying the validity of the second-order constructs.

The path analysis showed that the direct relationship between GCO and OCB was statistically insignificant ($\beta=0.433$; $p=0.057$), thus rejecting H1. The path between GCO and OCB was found to be statistically significant and positive ($\beta=0.425$; $p<0.05$) for males, whereas it was insignificant for females ($\beta=0.309$; $p>0.05$). However, the critical ratio for difference for the two measures lay between -1.96 to 1.96 (Hair et al., 2013), indicating that the two measures for males and females were not significantly different. Therefore, it was concluded that GCO had no statistically significant effect on OCB.

This finding is inconsistent with the results obtained Kappagoda and Kulathunga, (2013) and Nafei, Khanfar & Kaifi, (2012), who found a positive relationship between GCO and OCBs. However, recent studies investigating GCO and OCB remain limited; moreover, the contexts of the above studies were different in terms of industry, country, and cultural aspects; thus, the current finding represents a new theoretical insight into the absence of a significant link between GCO and OCB across health practitioners in UAE hospitals. Al Dari, Jabeen, and Papastathopoulos (2018) demonstrated that the interactive role of leaders within the UAE directly informed the GCO, organisational citizenship leadership, and, subsequently, knowledge sharing elements. Enterprise social network systems are among the key drivers of knowledge sharing ideals (Aboelmaged, 2018). Further, the positive relationship between GCO and OCB resonates with knowledge sharing habits, which are inherently linked with motivational drivers.

Subsequently, employee performance is influenced by the knowledge sharing elements that are encouraged indirectly in an organisation.

This finding suggests that the style of communication used by the two genders does not significantly affect OCB. In other words, the gender difference does not significantly affect the OCBs of the health practitioners in the UAE hospitals when they communicate within the workplace. Haad (2016) demonstrated the specific factors of OCBs that are independent of GCO within an institution. Notably, OCBs are leader dependent; hence, no significant interference due to GCO may be evident. Possible reasons may lie in the education and professional requirements of health practitioners related to healthcare service. This is further supported by the finding that gender plays no moderating role in the relationship between OCB and leadership in healthcare organisations. Therefore, the differences in communication style between male and female health practitioners are not expected to critically enhance their organisational citizenship attributes and behaviours.

5.3 Trust in Management and Organizational Citizenship Behaviour

Second, this study focused on investigating the influence of TIM on the OCB amongst the health practitioners in the UAE. The results revealed that the second hypothesis (H2), that TIM had a positive relationship with the OCB, was rejected ($\beta=-0.124$; $p=0.063$). The finding is consistent with those of a few studies (Wong, Wong & Ngo, 2012; Organ, 1997; Thomsen, Karsten & Oort 2016). For example,

Wong, Wong & Ngo, (2012) found that the positive effect of trust in an organisation on its OCB became insignificant when POS strongly impacted the OCB, and concluded that the POS, but not the trust in the organisation, exerted a direct effect on the OCB. Furthermore, Organ (1997) found no relationship between employee commitment and OCB. Indarti, Fernandes & Hakim, (2017) argued that OCB was closely related to organisational commitment.

In contrast, the current finding is inconsistent with the results of other studies that found a significant and positive effect of management trust on OCB (Coxen, Van der Vaart & Stander, 2016; Miller, & Karakowsky, 2010). The contexts of these studies, however, differed from the current one involving physicians and health practitioners in UAE hospitals. Therefore, due to cross-cultural differences in citizenship behaviour, future studies should focus on the health sector in the UAE.

Consequently, this study concludes that there is no evidence that the two constructs of TIM and OCB are mutually related. TIM is not necessarily required to develop the OCB attributes amongst the health practitioners in UAE hospitals; such aspects as participation in decision making and responsibilities already engender commitment by the physicians and other employees to the hospitals' workplace (Thomsen, Karsten & Oort, 2016), which results in their citizenship behaviour (Indarti, Fernandes & Hakim 2017). The existence of OCB attributes

amongst the health practitioners in UAE hospitals is confirmed in the next section.

5.4 Organizational Citizenship Behaviour and Knowledge Sharing Behaviour

The next objective of the study was to examine the effect of OCB on KSB. The third hypothesis (H3) was framed as ‘OCB positively influences KSB’. The empirical result is that the relationship between OCB and KSB ($\beta=0.061$; $p<0.05$) is statistically significant and positive, thus allowing acceptance of H3. This result is consistent with those obtained by Al-Zu’bi, (2011), Han et al. (2019), and Willis-Shattuck et al., 2008), who empirically confirmed the effect of OCB on KSB.

The study further found that the most important dimensions contributing to the OCB-KSB relation were courtesy (OCB_C) ($\beta=0.661$; $p<0.05$), civic virtue (OCB_CV) ($\beta=0.577$; $p<0.05$), and conscientiousness (OCB_CS) ($\beta=0.756$; $p<0.05$). However, a study by Al-Zu’bi (2011) found the critical dimensions of OCB to be sportsmanship, conscientiousness, and altruism, whereas Dehghani et al.’s (2015) results revealed five significant dimensions of OCB: altruism, conscientiousness, sportsmanship, courtesy, and civic virtue.

The current finding is that OCB is voluntary, and that the health practitioners in the UAE hospitals who generally show good organisational citizenship are expected to demonstrate KSBs. Courtesy, civic virtue, and conscientiousness are the main building blocks of the OCB at the hospitals in the UAE, with a direct

effect on the KSB. Knowledge is vital to developing the hospitals' workplace through new research findings, ideas, and suggestions. Courtesy refers to how individuals behave towards one another, and encourages knowledge creation and dissemination, cooperation, and harmony (Lin & Hsiao, 2014; Lin, 2007b) among workers in the hospital sector. The most vital characteristic of courtesy is how an individual creates a fair and harmonious environment for information and knowledge (Tharp, 2018). Conscientiousness includes making suggestions or proposals to support decision-making and problem resolution (Ullah et al., 2016), while civil virtues are behaviours that protect hospitals' values and benefits.

5.5 Gendered Communication and Knowledge Sharing Behaviour

Hypothesis 4 (H4), that GCO has a positive relationship with KSB, was accepted ($\beta=0.139$; $p<0.05$), indicating a direct positive association between the GCO and KSB constructs. This finding provides a new insight into the effect of GCO on KSB as only a few studies have investigated this phenomenon (e.g. Miller & Karakowsky, 2010; Sheerin, Hughes & Garavan, 2020). However, the finding is inconsistent with that of the above studies, which is that gender dynamics-related communication can be an impediment to knowledge sharing.

The literature pertaining to gender and communication in the UAE and its hospitals also contradicts the view that GCO has a positive impact on KSB among health practitioners. Gender is a sensitive issue in the Islam-dominated country (Hoffman & Sergio, 2020). Gender separation is a common issue that is founded on the social-cultural norms of the UAE's Islamic religious beliefs, which hold

that female nurses cannot work closely with their male counterparts; these beliefs constitute a barrier in the health sector. Besides, Hoffman & Sergio, (2020) noted that females were not always allowed to be outside the house at night, thus limiting female nurses' ability to work night shifts. Nurses on night shift are therefore considered to be cultural outcasts, according to Islamic beliefs and culture. On the other hand, in some cases, male health practitioners in the UAE view their female counterparts as their subordinates, regardless of their professional rank or seniority (Hoffman & Sergio, 2020). Male health practitioners believe that females should always be subordinate to them; this gender-based alienation affects the service delivery in the UAE health sector. Ahmad & Daghfous, (2010); Al Dari, Jabeen, & Papastathopoulos, (2018); Gharama, Khalifa, & Al-Shibami, (2020) denoted, a female health practitioner in the UAE system is unlikely to communicate freely to a male counterpart because she is viewed as a subordinate, thus adversely affecting knowledge sharing in the UAE health sector.

Nevertheless, the finding provides a different insight into communication involving gender and KSB in the context of the hospital practitioners. The significant positive impact of GCO on the KSB suggests that the UAE hospitals' health practitioners have been successful in eliminating the impediments to effective communication across the gender divide and respecting their communication cultural norms. This proposition was recently confirmed by the UAE's recent government initiatives that seek to enhance gender equality across

all sectors of the country (Government of Abu Dhabi.2008). According to The World Economic Forum (2020), UAE is now ranked as a leading country in respect of gender equality in the Middle East.

5.6 Trust in Management and Knowledge Sharing Behaviour

The effect of TIM on KSB was tested through Hypothesis 5 (H5): TIM has a positive relationship with KSB. The result was that the relationship between TIM and KSB was statistically positive and significant ($\beta=0.115$; $p<0.05$), thus suggesting acceptance of H5. This finding is consistent with previous studies' (Ding, Choi & Aoyama, 2018; Connelly & Zweig, 2015) results that TIM significantly enhances KSB. These studies argued that knowledge hiding, or the withholding of knowledge by employees, could be mitigated using TIM as a catalyst for cooperation amongst employees (Dirks, 1999), enabling effective KSB practices.

This finding is further corroborated by social capital theory, which posits that human interactions rely on trust. Social capital resides in interactive exchanges at both the individual and community levels to support productive activities. Social capital theory highlights the principle that trust is helpful (Pei-Lee & Sun, 2012). It relates to TIM as it describes the role of effective structural relations in KSBs. Trust is essential in management since it builds the employer-employee associations that influence personal relationships and corporations, and assists in knowledge sharing it is particularly important in the UAE's health sector, which is critically related to human beings. Consequently, TIM supports the exchange of

knowledge and facilitates collective interactions for mutual benefits; it promotes the acquisition and sharing of knowledge within organisations (Zheng, Zhang & Li, 2012). Accordingly, this discussion leads to the conclusion that the TIM across the UAE's hospital sector improves information/knowledge distribution as collaborating managers and employees can interact and learn from one another.

5.7 Mediating effect of OCB on GCO and KSB

Having tested the effect of GCO on KSB, OCB was tested as a mediator in the relationship between GCO and KSB, which led to Hypothesis 6 (H6): OCB mediates the relationship between GCO and KSB. The result was that there was a significant mediation effect (indirect effect) of OCB on the relationship between GCO and KSB ($\beta=0.027$; $p<0.05$). Since the direct effect of OCB on KSB was statistically significant ($\beta=0.139$; $p<0.05$), the results indicated that the OCB-KSB relationship was partially mediated by GCO, resulting in a full effect coefficient of 0.165 ($p<0.05$).

The literature supports the finding that GCO can enhance both OCB (Kappagoda, and Kulathunga, 2013; Muthén, & Asparouhov, (2012); Nafei, Khanfar & Kaifi, 2012), and KSB (Miller & Karakowsky, 2010; Sheerin et al., 2020). In the current study, however, no significant effect of GCO on OCB was observed, leading to the conclusion that the GCO amongst the health practitioners did not significantly affect the OCB within the hospitals. However, the mediating role of OCB in the GCO-KSB relationship suggests that GCO can partially improve KSB by promoting OCB.

Moreover, the positive effect of GCO on KSB was found to be due to the fact that both male and female physicians and health practitioners respected gender, and therefore their styles of communication in the hospitals promoted OCB attributes, which, in turn, improved knowledge sharing. The mediating effect of GCO on the relationship between OCB and KSB confirmed the above notion. Thus, it may be concluded that the partial mediation by OCB is required to enhance the positive influence of GCO on both OCB and KSB.

5.8 Mediation effect of OCB on TIM and KSB

The mediating effect of OCB on the relationship between TIM and KSB was tested through Hypothesis 7 (H7): OCB mediates the relationship between TIM and KSB. The results showed that the effect (indirect effect) was statistically insignificant ($\beta=0.008$; $p>0.05$).

Although the effect TIM on KSB was statistically significant, it was not mediated by OCB. The literature, however, supports the view that TIM can significantly improve both OCB (Ababneh & Hackett, 2019; Coxen, Van der Vaart, & Stander, 2016) and KSB (Ding, Choi & Aoyama, 2018; Connelly & Zweig, 2015). In addition, the effect of TIM on OCB was insignificant ($\beta=-0.124$; $p=0.063$), which implied that TIM was not necessarily required to develop the OCBs among the health practitioners in the UAE hospitals. The mediation test result suggests that the data set does not support a partial mediating effect by OCB on the TIM-KSB relationship, notwithstanding its significant direct effect on KSB.

5.9 Moderating effect of gender on OCB and KSB

Finally, the study focused on testing the moderating role of gender on the relationship between OCB and KSB, which was conducted through an MGA. The test related to Hypothesis 8 (H8), which was that gender moderated the effect of OCB on KSB. The path analysis between OCB on KSB for both the male ($\beta=0.098$; $p<0.05$) and the female groups ($\beta=0.077$; $p<0.05$) was found to be statistically significant. However, the results showed that gender had no moderation role in the relationship between OCB and KSB as the critical ratio for difference between the male and female groups (-0.414) was not significant. This latter result suggests that there is no significant difference between male and female health practitioners in improving the OCB attributes and sharing of knowledge within the hospitals.

A few studies have indirectly suggested the likelihood of contradictory results regarding the role of gender in OCB and KSB. For example, Lathalavanya & Thenmozhi (2011) found that gender did not affect OCBs. In contrast, Mohammad et al. (2016) examined the demographic determinants of OCB in a hospital setting and concluded that gender and profession were related to employees' OCB, suggesting that individual differences could influence OCB amongst employees. Therefore, there may be a sequential effect, such as knowledge sharing, because some studies have shown that encouraging OCB can positively impact KSB (Al-Zu'bi, 2011; Han et al., 2019). Moreover, Lin (2008) studied the role of gender in the modelling of OCBs and found several factors in

the relationships with other variables that varied between males and females. However, Lin's study did not consider how such an OCB model behaved in terms of the KSB of the males and females.

Accordingly, the current finding about the absence of a moderation effect due to gender on OCB and GCO is considered a new research finding; it contributes to the existing literature on gender, OCB, and KSB as very few studies have investigated the effect. Therefore, further studies are required to test the above phenomenon in the context of hospitals in other countries to fill the gap.

5.10 Chapter Summary

This chapter discussed and expanded on the results found in Chapter 4, Data Analysis and Results. All eight hypotheses were discussed, considering the background and objective of the study (Chapter 1), the literature review in Chapter 2, as well as the results presented in Chapter 4. Accordingly, the results relating to the direct relationships between GCO, TIM, OCB, and KSB, and the mediating effect of GCO and TIM, as well as the moderating role of gender were discussed with reference to previous studies. The chapter further demonstrated the gaps in the existing literature and resulting theoretical implications, as well as the practical implications for the health practitioners in the UAE's hospital sector, which are discussed in next chapter. In the next chapter, an overview of the whole study, the theoretical and practical implications, the research limitations, and the suggestions for future research studies are dealt with.

CHAPTER 6: CONCLUSION, IMPLICATIONS, LIMITATIONS, AND FUTURE RESEARCH DIRECTIONS

6.1 Introduction

This chapter presents the theoretical implications for academics and the practical implications for the managers and policy makers within the UAE's health sector. The chapter concludes with a discussion of the limitations of the study and future directions for research in the domain of KSB, GCO, trust, and organisational citizenship.

6.2 Theoretical Implications

This study makes several significant contributions to the existing literature. Specifically, the study fills an existing knowledge gap regarding the associations between GCO, TIM, OCB, and knowledge sharing in the health sector. Previous studies have considered KSB in several sectors and countries (Mohammad et al., 2016), while a limited few have been conducted in healthcare in general; the few studies in the UAE healthcare sector have focused on healthcare practitioners and the determinants of effective KSB (Ryu, Ho & Han, 2003). Thus, the study fills the gaps in the existing literature with respect to the relationship between GCO, TIM, and OCB, all of which can motivate healthcare practitioners and enhance their KSB. It is therefore expected to be among the first studies to incorporate all the above variables in a single study in the context of the health industries in the Middle East. Accordingly, the following theoretical implications contribute to the extant literature in respect KSB:

One of the key contributions of the study to the discipline is the finding that GCO does not affect the OCB in the UAE healthcare industry, owing to the fact that the people in the country have great reverence for gender issues. However, it affects knowledge sharing directly, and indirectly through OCB. Previous studies have shown mixed results on the impacts of both GCO and TIM on OCB; nonetheless, in the context of UAE health practitioners, these were insignificant. Kappagoda (2013) and Nafei et al., (2012) all found a positive relationship between GCO and OCBs, whereas the current study found no such significant relationship. However, the contexts of the previous studies above were different in terms of industry, country, and cultural aspects; therefore, the current study's finding constitutes a new theoretical insight into the absence of a significant link between GCO and OCBs among the health practitioners in the UAE's hospitals. The theoretical implication is that gender differences do not significantly affect the OCBs of the health practitioners in UAE hospitals in their workplace communication.

Similarly, the finding about the insignificant association between TIM and OCBs is inconsistent with previous studies' results (Ababneh & Hackett, 2019; Coxen et al., 2016). The inconsistency lies in the different contexts of these studies, as they did not involve health practitioners in UAE hospitals. Consequently, future studies with a focus on the health sector of the UAE are required since citizenship behaviour is sensitive to cross-cultural differences. The theoretical implication is that TIM is not necessarily required to amplify the OCB attributes of the health practitioners in UAE hospitals.

The significant relationship between OCB and KSB is consistent with the results of previous studies (Al-Zu'bi, 2011; Han et al., 2019). Additionally, the current study finds that the most significant dimensions in the contribution of OCB to its relationship with KSB are courtesy, civic virtue, and conscientiousness.

The direct significant association between GCO and KSB offers a new insight into the impact of GCO on KSB, as only a few studies have investigated this relationship (Miller & Karakowsky, 2010; Sheerin et al., 2020). Furthermore, these studies argued that gender dynamics-related communication was an impediment to knowledge sharing, which contradicts the result in the present study. The present finding offers a different insight into GCO and KSB: the UAE hospitals' health practitioners are effective in communicating across the gender divide and respect their communication culture, thus overcoming impediments to effective communication between the genders.

Moreover, the partial mediating effect of OCB on the relationship between GCO and KSB is another new finding of the current study that contributes to the existing literature with regard to OCB, GCO, and KSB. The result relating to the mediation effect of GCO on the relationship between OCB and KSB confirms the notion that both male and female health practitioners respect their gender differences and their styles of communication at the hospitals, which promotes OCB and leads to improved KSB. The applicable theories in the study are the SET, the TRA, and the SDT. Specifically, based on the SET, the study contends

that GCO and TIM can lead to OCB in the form of exchanging tasks, activities, and knowledge. Thus, the relationship between KSB and OCB is expected to be affected by GCO and TIM. However, the current study finds that only GCO partially enhances the relationship between OCB and KSB.

6.3 Practical Implications

Given the importance of knowledge sharing in today's competitive business world, this study provides a broader understanding of the different factors in KSBs. It offers various practical implications for hospital managers and health care practitioners regarding enhancing the KSB in the healthcare sector. This study contributes to management decisions in different ways. First, the organisations should ensure the implementation of a supportive management system with a significant impact on KSB. Second, this study suggests that the HR policy makers should create a work environment that is characterised by trust and openness. Third, before launching any knowledge sharing initiatives, the hospitals should develop and nurture cultural norms, practices, and processes that build trust, collective cooperation, and positive social interactions among their health care practitioners.

It is suggested that the hospital managers within the UAE hospital sector strongly consider the significant and positive relationship between OCB and KSB, which was first revealed by the current study. Particularly, the hospital managers need to co-operate in shaping a corporate culture that promotes OCBs among the health practitioners in the hospitals. Such a culture can be developed and implemented

through the dimensions of courtesy, conscientiousness, and civic virtue, all of which can significantly enhance OCB (Weixu, Choi, Aoyama 2018). Employees who work within an effective OCB culture are more likely to practice KSB, which sequentially enhances their performance and encourages them to effectively explore and share their knowledge, experience, and abilities.

The UAE health sector has comparatively poor knowledge sharing compared to the western world (Lekhawipat Wei & Lin, 2018). The knowledge-sharing situation in the UAE health sector is affected by the religious and cultural beliefs upheld in the country. Evidently, the male health practitioners in the health sector are not very open to their female counterparts and, therefore, hinder knowledge sharing in the task force. The poor GCO is adversely affected by the religious beliefs that tend to side-line women in some activities. The unwillingness of the male and female practitioners in the UAE to mingle freely hinders the mobilisation and assimilation of knowledge among the employees of the UAE health sector (Khaleej Times, 2017). Most public sectors in the UAE, including the health sector, have a bureaucratic belief in knowledge sharing, which is that management is responsible for good KSB. The phenomenon makes it difficult for an employee or a department to share knowledge with another employee or department without some form of compulsion. Therefore, it is recommended to the UAE health sector to rigorously focus on policies, strategies, and practices to effectively improve the GCO amongst the health practitioners. This suggestion is

informed by the finding from the analysis that the GCO can directly improve the KSB among the health practitioners, and indirectly enhance it through OCB.

Empirical results from previous studies reveal knowledge hiding or the withholding of knowledge by employees (Connelly & Zweig, 2015), as well as social scientists' belief that trust acts as a catalyst for cooperation among members of an organisation (Dirks, 1999). Both public and private hospitals expect to strengthen organisational knowledge assets through a transfer and/or a sharing of employees' knowledge to accumulate collective organisational knowledge. For instance, most of the UAE's public, semi-government, and private hospitals have made large investments to develop and implement a knowledge management system to promote the knowledge sharing and transfer process.

However, certain knowledge is embedded in individuals' brain (tacit knowledge), and is acquired from long-term learning and experience (Connelly & Zweig, 2015). Ghani, et al., (2017) believe that some knowledge, such as personal experience and sharing its progress, may need to request their intention. In reality, organisations have been faced with a situation in which many of the members have not wished to exchange their knowledge with their managers and peers (Casimir, Lee & Loon, 2012); previous studies reveal this knowledge hiding or withholding phenomenon in employees (Connelly & Zweig, 2015). Hence, the significant and positive effect of TIM on the KSB within the UAE's

hospitals leads to the conclusion that the UAE's health sector should focus on improving TIM in the short run as well long run, as it can eradicate the knowledge hiding or withholding phenomenon among the health practitioners. Furthermore, the long-term trust between the management and their health practitioners will facilitate the sharing of tacit knowledge.

Another practical implication of the study's findings is that the health practitioners in the UAE hospitals must critically emphasise driving GCO effectively towards OCB and KSB. Although the literature indicates that the UAE's hospitals can pose a few obstacles (e.g. norms, traditions, culture, and Islamic beliefs) regarding gender and communication, the current study finds that the KSB in these institutions is positively affected by GCO, and further strengthened by elements of the OCBs, such as courtesy, civic virtue, and conscientiousness. Therefore, the hospital management can enhance the positive effect of the GCO on the KSB through OCB by encouraging gender equality, while enabling both male and female physicians and health practitioners to respect the gender, culture, organisational changes, and styles of communication at the hospitals, which, in turn, will improve OCB attributes and KSBs within the hospitals.

6.4 Limitations and Future Research Direction

This study has a few limitations. First, the sample size of the study was limited to 457 healthcare practitioners (n=457) working in two large government public hospitals and two private hospitals in the UAE, although the UAE hospital sector

has over 8,460 physicians. Hence, it is recommended to future researchers to extend the model of GCO, TIM, OCB, and KSB by incorporating possible factors, such as employee commitment and employee spirituality, in examining OCB and KSBs.

Furthermore, future research is required to test the study's theoretical model of GCO, TIM, OCB, and KSB in the contexts of hospital sectors in other regions, such as the western world. This is because the current study focuses on the UAE region, and results may be different in different social contexts. Moreover, the model should be tested in the context of other industries as the current results relate to the healthcare industry in the UAE.

Factors in KSBs may vary from one social context to another. A comprehensive review of KSBs in a mixed methods study design may be fruitful in understanding the complex interrelationships among diverse factors in different scenarios, both qualitatively and quantitatively.

6.5 Conclusion

Applying the TRA, SET, and SDT, this study offers insights into the relationships between GCO and TIM, on the one hand, and KSB, on the other. Additionally, the study facilitates an understanding of the mediating effect of OCB and the moderating role of gender on KSB. The findings demonstrate that GCO and TIM directly enhance KSB amongst the UAE's health practitioners. However, GCO and TIM were found to have no direct impact on OCB, which, in turn,

demonstrated a partial mediation effect on the association between GCO and KSB. Additionally, gender played no moderating effect on the association between OCB and KSB, notwithstanding the fact that that the healthcare practitioners could be motivated to share knowledge based on their GCO type. This research is unique as all the above-mentioned variables are combined for the first time within a UAE and GCO context.

REFERENCES

- Ababneh, K. I., & Hackett, R. D. (2019). The direct and indirect impacts of job characteristics on faculty organizational citizenship behaviour in the United Arab Emirates (UAE). *Higher Education*, 77(1), 19-36.
- Aslan, M., & Yildirim, A. (2017). Personality and Job Satisfaction among Nurses: The Mediating Effect of Contextual Performance. *International Journal of Caring Sciences*, 10(1).
- Ahmed, N. O. A. (2016). Impact of human resource management practices on organizational citizenship behaviour : An empirical investigation from banking sector of Sudan. *International Review of Management and Marketing*, 6(4).
- Aboelmaged, M. G. (2018). Knowledge sharing through enterprise social network (ESN) systems: motivational drivers and their impact on employees' productivity. *Journal of Knowledge Management*. 22(2), 362-383
- Agrawal, R. K. (2017), "Do ethical climates impact trust in management? A study in Indian context", [*International Journal of Organizational Analysis*](#), 25(5), 804-824.
- Ahmad, & Zafar (2018). Impact of psychological contract fulfillment on organizational citizenship behaviour : Mediating role of perceived organizational support. *International Journal of Contemporary Hospitality Management*, 30(2), 1001-1015

- Ahmad, N., & Daghfous, A. (2010). Knowledge sharing through inter-organizational knowledge networks: Challenges and opportunities in the United Arab Emirates. *European Business Review*, 22(2), 153-174.
- Ajzen, I. (1967). The theory of planned behaviour . *Organizational Behaviour and Human Decision Processes*, 50, 179–211.
- Aktharsha, U. S., Ali, S. D., & Anisa, H. (2012). Knowledge sharing behaviour in hospitals. *Journal of Contemporary Management Research*, 6(2), 33-51.
Retrieved from <https://search-proquest-com.ezproxy.hct.ac.ae/docview/1833912641?accountid=1215>
- Akturan, A., & Şevik, N. (2016). The effect of corporation reputation on organizational citizenship behaviour. *International Journal of Commerce and Finance*, 2(1), 113-123.
- Al Dari, T., Jabeen, F., & Papastathopoulos, A. (2018). Examining the role of leadership inspiration, rewards and its relationship with contribution to knowledge sharing: Evidence from the UAE. *Journal of Workplace Learning*.
- Allen, T. D. (2006). Rewarding Good Citizens: The Relationship between Citizenship Behaviour , Gender, and Organizational Rewards 1. *Journal of Applied Social Psychology*, 36(1), 120-143.
- Al-Kurdi, O. F., El-Haddadeh, R., & Eldabi, T. (2020). The role of organisational climate in managing knowledge sharing among academics in

- higher education. *International Journal of Information Management*, 50, 217-227.
- Ahn, Y. J., Hyun, S. S., & Kim, I. (2016). City residents' perception of MICE city brand orientation and their brand citizenship behaviour : A case study of Busan, South Korea. *Asia Pacific Journal of Tourism Research*, 21(3), 328-353.
- Altuntas, S., & Baykal, U. (2010). Relationship between nurses' organizational trust levels and their organizational citizenship behaviours. *Journal of Nursing Scholarship*, 42(2), 186-194.
- Al-Zu'bi, H. A. (2011). Organizational citizenship behaviour and impacts on knowledge sharing: An empirical study. *International business research*, 4(3), 221-227.
- Anca M. (2008), Knowledge dynamics. *Revista Informatics Econ.* 17(1):117–121.
- Andrews, M. C., Kacmar, K. M., & Kacmar, C. (2015). The interactive effects of behavioural integrity and procedural justice on employee job tension. *Journal of Business Ethics*, 126(3), 371-379.
- Ansari, A. Jedidi, K. and Dube L (2002). *Heterogeneous factor analysis models: A Bayesian approach*. *Psychometrika*. 67, pp. 49–78.
- Arbuckle, J. L. (2009). Amos (Version 18.0). *Crawfordville, FL: Amos Development Corporation*.

- Abdulrahman, M., Qayed, K. I., AlHammadi, H. H., Julfar, A., Griffiths, J. L., & Carrick, F. R. (2015). Challenges facing medical residents' satisfaction in the Middle East: A report from United Arab Emirates. *Teaching and learning in medicine*, 27(4), 387-394.
- Assaf, A. G., Tsionas, M., & Oh, H. (2018). The time has come: Toward Bayesian SEM estimation in tourism research. *Tourism Management*, 64, 98-109.
- Al Hussain, A. Z. (2011). *Barriers to knowledge management in Saudi Arabia*. The George Washington University.
- Al Shamsi, O., & Ajmal, M. (2018). Critical factors for knowledge sharing in technology-intensive organizations: evidence from UAE service sector. *Journal of Knowledge Management*. Ref spelling edited
- Al Shehhi, N., Aziz, F., Al Hosani, F., Aden, B., & Blair, I. (2016). Human brucellosis in the Emirate of Abu Dhabi, United Arab Emirates, 2010–2015. *BMC infectious diseases*, 16(1), 1-8.
- Awang, Z. H. (2012) A Handbook on SEM: Structural Equation Modeling, 4th ed., Malaysia: University Teknologi MARA Kelantan.
- Al- Alawi, A. I., Al- Marzooqi, N. Y., & Mohammed, Y. F. (2007). Organizational culture and knowledge sharing: critical success factors. *Journal of knowledge management*.
- Al-Neyadi, H. S., Abdallah, S., & Malik, M. (2018). Measuring patient's satisfaction of healthcare services in the UAE hospitals: Using

SERVQUAL. *International Journal of Healthcare Management*, 11(2), 96-105.

Bass, B. M. (1999). Two decades of research and development in transformational leadership. *European journal of work and organizational psychology*, 8(1), 9-32.

Bashir, S. (2012). Perceived organizational support and the cross- cultural adjustment of expatriates in the UAE. *Education, Business and Society: Contemporary Middle Eastern Issues*.

Becton, J. B., Carr, J. C., Mossholder, K. W., & Walker, H. J. (2017). Differential effects of task performance, organizational citizenship behaviour , and job complexity on voluntary turnover. *Journal of Business and Psychology*, 32(4), 495-508

Bergeron, D., Ostroff, C., Schroeder, T., Block, C (2014). The dual effects of organizational citizenship behaviour : relationships between the research productivity and career outcome in Academe. Article in human performance 27(2): 99-128, Dol:10.1080/08959285.2014.882925. Routledge publishing. Available at <http://www.tandfonline.com/loi/hhup20>

Bloodgood, J. M. (2019), "Knowledge acquisition and firm competitiveness: the role of complements and knowledge source", *[Journal of Knowledge Management](#)*, 23(1), 46-66.

- Bock, G. W., & Kim, Y.-G. (2002). breaking the myths of rewards: an exploratory study of attitudes about knowledge sharing. *Information Resources Management Journal*, 14, 14–21.
- Boer, N. I., Berends, H., & Van Baalen, P. (2011). Relational models for knowledge sharing behaviour. *European management journal*, 29(2), 85-97.
- Bolino, M. C., Hsiung, H. H., Harvey, J., & LePine, J. A. (2015). “Well, I’m tired of tryin’!” Organizational citizenship behaviour and citizenship fatigue. *Journal of Applied Psychology*, 100(1), 56.
- Buttner, E. H., & Lowe, K. B. (2015). Racial awareness: effects on justice perceptions and trust in management in the USA. *Equality, Diversity and Inclusion: An International Journal*.
- Brown, T. A. (2015), *Confirmatory Factor Analysis for Applied Research*, 2nd Edition, New York: Guilford press
- Bryman, A., and Bell, E. (2015). *Business research methods*, 4th Ed., New York Oxford University Press Inc.
- Byrne, B. M. (2010), *structural equation modelling with AMOS: Basic concepts, Applications, and programming*, 2nd Ed., London: Routledge
- Cheung, C. M., Lee, M. K., & Lee, Z. W. (2013). Understanding the continuance intention of knowledge sharing in online communities of practice through the post- knowledge- sharing evaluation processes. *Journal of the American Society for Information Science and Technology*, 64(7), 1357-1374.

- Carpenter, N. C., Berry, C. M., & Houston, L. (2014). A meta- analytic comparison of self- reported and other- reported organizational citizenship behaviour . *Journal of Organizational Behaviour* , 35(4), 547-574.
- Carter, M. Z., Mossholder, K. W., Feild, H. S., & Armenakis, A. A. (2014). Transformational leadership, interactional justice, and organizational citizenship behaviour : The effects of racial and gender dissimilarity between supervisors and subordinates. *Group & Organization Management*, 39(6), 691-719.
- Casimir, G., Lee, K., & Loon, M. (2012). Knowledge sharing: influences of trust, commitment and cost. *Journal of Knowledge Management*, 16(5), 740-753(14).
- Child, D. (2006). *The essentials of factor analysis*. A&C Black.
- Chang, C., Huang, H., Chiang, C., Hsu, C., & Chang, C. (2012). Social capital and knowledge sharing: Effects on patient safety. *Journal of Advanced Nursing*, 68(8), 1793.
- Connelly, C. E., & Zweig, D. (2015). How perpetrators and targets construe knowledge hiding in organisations. *European Journal of Work and Organizational Psychology* 24 (3), 479 489.
- Coxen, L., Van der Vaart, L., & Stander, M. W. (2016). Authentic leadership and organisational citizenship behaviour in the public health care sector: The role of workplace trust. *SA Journal of Industrial Psychology*, 42(1), 1-13.

- Creswell, J. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 3rd ed., California: Sage.
- Cummings, J. N. (2004) Work groups, structural diversity, and knowledge sharing in a global organization. *Management science* 50(3), 352-364.
- Dehghani, M. R., Hayat, A. A., Kojuri, J., & Esmi, K. (2015). Role of organizational citizenship behaviour in promoting knowledge sharing. *Journal of Health Management & Informatics*, 2(4), 126.
- Dekas, K. H., Bauer, T. N., Welle B., Kurkoski, J (2013). Organizational citizenship behaviour version 2.0: a review and qualitative investigation of OCBs for knowledge workers at Google and beyond. *Article in academy of management executives* 27(3):219-237. doi:10.5465/amp.2011.0097.
- Denscombe, M. (2009). *Ground rules for social research: Guidelines for good practice*. McGraw-Hill Education (UK).
- Derue, D. S., Nahrgang, J. D., Wellman, N. E. D., & Humphrey, S. E. (2011). Trait and behavioural theories of leadership: An integration and meta-analytic test of their relative validity. *Personnel Psychology*, 64(1), 7-52.
- Ding, W., Choi, E., & Aoyama, A. (2018). Relationships between Interpersonal Trust and Knowledge Sharing in Workplace: The Mediation Role of Prosocial Motives. *International Business Research*, 11(8), 163-170.
- Deluga, R. J. (1994). Supervisor trust building, leader-member exchange and organizational citizenship behaviour. *Journal of occupational and Organizational Psychology*, 67(4), 315-326.

- Dirks, K. T. (1999). The effects of interpersonal trust on workgroup performance. *Journal of applied psychology* 84 (3), 445
- Eagly, A. H., & Crowley, M. (1986). Gender and helping behaviour : A meta-analytic review of the social psychological literature. *Psychological bulletin*, 100(3), 283.
- Efferin, S., Frisko, D., & Hartanto, M. (2016). Management control system, leadership and gender ideology: A study of an Indonesian construction company. *Journal of Accounting in Emerging Economies*, 6(4), 314-339.
- Ehrhart, M. G. (2004). Leadership and procedural justice climate as antecedents of unit level organizational citizenship behaviour . *Personnel Psychology*, 57, 61-94.
- El Amouri, S. (2010). The leadership style of nurse leader managers in United Arab Emirates (UAE) hospitals that facilitates culturally competent care (Doctoral dissertation, University of Southern Queensland).
- Erogluer, K. (2011). The relationship between organizational communication and the aspects of job satisfaction: A theoretical study. *Ege Akademik Bakış Dergisi*, 11(1), 121-136.
- Estiri, M., Amiri, N. S., Khajeheian, D., & Rayej, H. (2018). Leader-member exchange and organizational citizenship behaviour in hospitality industry: A study on effect of gender. *Eurasian Business Review*, 8(3), 267-284.

- Easterby-Smith, M., Lyles, M. A., & Tsang, E. W. (2008). Inter-organizational knowledge transfer: Current themes and future prospects. *Journal of management studies*, 45(4), 677-690.
- Elamin, A. M., & Tlaiss, H. A. (2015). Exploring the relationship between organizational citizenship behaviour and organizational justice in the Islamic Saudi Arabian context. *Employee Relations*.
- Farrell, S. K., & Finkelstein, L. M. (2007). Organizational citizenship behaviour and gender: Expectations and attributions for performance. *North American Journal of Psychology*, 9(1).
- Fattah, F. A. M. A., Osmangani, A., Rahman, A. M., Rahman, M. S., Daud, N. M (2016) knowledge sharing behaviours among non-academic staff of higher learning institutions. *Library review* 65(1/2):65-83. Routledge publishers.
- Foot, D. A., & Li-Ping Tang, T. (2008). Job satisfaction and organizational citizenship behaviour (OCB) does team commitment make a difference in self-directed teams? *Management Decision*, 46(6), 933-947
- Fornell, C., and Larcker, D.F. (1981). Evaluating structural equation models with unobservable and measurement error *Journal of Marketing Research*, 34 (2), pp. 161-188.
- Gillani, S. M. F., Iqbal, S., Akram, S., & Rasheed, M. (2018). Specific antecedents of employees' knowledge sharing behaviour. *VINE Journal of Information and Knowledge Management Systems*.

- Gadot, E. V (2007). Redrawing the boundaries of OCB? An empirical examination of compulsory extra-role behaviour in the workplace. *Journal of business and psychology* 21(3):377-405. doi:10.1007/s10869-006-9034-5. Springer science and business media.
- Gelfand, M. J., Aycan, Z., Erez, M., & Leung, K. (2017). Cross-cultural industrial organizational psychology and organizational behaviour : A hundred-year journey. *Journal of Applied Psychology*, 102(3), 514-529.
- George, H. (1961). *Social Behaviour : Its Elementary Forms*. New York: Harcourt Brace Jovanovich.
- Ghani, M. A., Rahi, S., Yasin, N. M., & Alnaser, F. M. (2017). Adoption of internet banking: extending the role of technology acceptance model (TAM) with e-customer service and customer satisfaction. *World Applied Sciences Journal*, 35(9), 1918-1929.
- Gharama, A. N. A., Khalifa, G. S., & Al-Shibami, A. H. (2020). UAE police administrative employee innovative behaviour : The integration of knowledge sharing and leadership. *International Journal of Psychosocial Rehabilitation*, 24(3), 1930-1948.
- Gold, A.H., Malhotra, A. and Segars, A.H. (2001) 'Knowledge management: an organizational capabilities perspective', *Journal of Management Information Systems*, Vol. 18, No. 1, pp.185–214.
- Government of Abu Dhabi. (2008). The Abu Dhabi Economic Vision 2030.

- Grant, R.M. (1996) 'Toward a knowledge-based theory of the firm', *Strategic Management Journal*, Vol. 17, No. S2, pp.109–122.
- Haad (2016), Health Statistics 2015, Available from:
<https://www.haad.ae/HAAD/LinkClick.aspx?fileticket=-IF2Jo3NrPE%3d&tabid=1516>, (Accessed on 12 January 2016)
- Haad (2016), Health Statistics 2015, Available from:
<https://www.haad.ae/HAAD/LinkClick.aspx?fileticket=-IF2Jo3NrPE%3d&tabid=1516>, (Accessed on 12 January 2016)
- Hussein, A. T., Singh, S. K., & Farouq, S. (2016). Knowledge Sharing, Firm Innovation Capability, Competitive Advantage and Financial Performance: A conceptual Study.
- Hair, J. F., Hult, G. T. M., Ringle, C., and Sarstedt, M. (2013). A Primer on Partial Least Squares Structural Equation Modeling, London: Sage
- Hair Jr, J. F. (2006). Next-generation prediction metrics for composite-based PLS-SEM. *Industrial Management & Data Systems*.
- Hair, J, Rich, L. L., & Rich, J., (2018). The influence of organizational culture on how we define and pursue goals. *Journal of organizational effectiveness: People and Performance*.
- Han, S.-H., [Yoon, D.-Y.](#), [Suh, B.](#), [Li, B.](#) and [Chae, C.](#) (2019), "Organizational support on knowledge sharing: a moderated mediation model of job characteristics and organizational citizenship behaviour ", *[Journal of Knowledge Management](#)*, Vol. 23 No. 4, pp. 687-704

- Hannawi, S., & Salmi, I. A. (2014). Health workforce in the United Arab Emirates: analytic point of view. *The International journal of health planning and management*, 29(4), 332-341.
- He, J., Zhang, H., & Morrison, A. M. (2019). The impacts of corporate social responsibility on organization citizenship behaviour and task performance in hospitality. *International Journal of Contemporary Hospitality Management*.
- Heilman, M. E., & Chen, J. J. (2005). Same behaviour, different consequences: Reactions to men's and women's altruistic citizenship behaviour. *Journal of Applied Psychology*-90(3), 431-441.
- Hoffman, E. P., & Sergio, R. P. (2020). Understanding the effects of toxic leadership on expatriates' readiness for innovation: an Uzbekistan case. *Journal of Eastern European and Central Asian Research (JEECAR)*, 7(1), 26-38.
- Heisig, P., Suraj, O. A., Kianto, A., Kemboi, C., Perez Arrau, G., & Fathi Easa, N. (2016). Knowledge management and business performance: global experts' views on future research needs. *Journal of Knowledge Management*, 20(6), 1169-1198.
- Ho, C. T. (2009). The relationship between knowledge management enablers and performance. *Industrial Management & Data Systems*, 109(1), 98-117.
- Hox, J., Moerbeek, M., Kluytmans, A., & Van De Schoot, R. (2014). Analyzing indirect effects in cluster randomized trials. The effect of estimation

method, number of groups and group sizes on accuracy and power. *Frontiers in psychology*, 5, 78.

Ibragimova, B. (2006) Propensity for Knowledge Sharing: An Organizational Justice Perspective, Doctoral dissertation, University of North Texas, USA [online]<http://search.proquest.com.adezproxy.adu.ac.ae/docview/305292863/abstract/18B7B09F5A1E41D2PQ/3?accountid=26149> (accessed 25 October 2014).

Islam, T., Khan, M. M., & Bukhari, F. H. (2016). The role of organizational learning culture and psychological empowerment in reducing turnover intention and enhancing citizenship behaviour . *The learning organization*.

Ibrahim, S., & Heng, L. H. (2015). The roles of learning in stimulating knowledge sharing at SMEs. *Procedia-Social and Behaviour al Sciences*, 172, 230-237.

ICLG (2018), Data Protection 2018 – UAE, Available from: <https://iclg.com/practice-areas/data-protection-laws-and-regulations/uae>, (Accessed on 1st February 2020).

Indarti, S., Fernandes, A. A. R., & Hakim, W. (2017). The effect of OCB in relationship between personality, organizational commitment and job satisfaction on performance. *Journal of Management Development*.

Ipe, M. (2003). Knowledge sharing in organizations: A conceptual framework. *Human Resource Development Review*, 2, 337–359.

- Jabeen, F., Friesen, H. L., & Ghoudi, K. (2018). Quality of work life of Emirati women and its influence on job satisfaction and turnover intention. *Journal of Organizational Change Management*.
- Jena, L. K., & Pradhan, S. (2018). Workplace spirituality and employee commitment: The role of emotional intelligence and organisational citizenship behaviour in Indian organisations. *Journal of Enterprise Information Management*.
- Jacks, T., Palvia, P., Schilhavy, R., & Wang, L. (2011). A framework for the impact of IT on organizational performance. *Business Process Management Journal.as*
- Johnson, R. M., & Babu, R. I. I. (2020). Time and cost overruns in the UAE construction industry: a critical analysis. *International Journal of Construction Management*, 20(5), 402-411.
- Jordan, P. J., & Troth, A. C. (2020). Common method bias in applied settings: The dilemma of researching in organizations. *Australian Journal of Management*, 45(1), 3-14.
- Kaplan, D., & Depaoli, S. (2012). *Bayesian structural equation modeling*. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (p. 650–673). The Guilford Press.
- Kark, R., & Waismel-Manor, R. (2005). Organizational citizenship behaviour: What's gender got to do with it? *Organization*, 12(6), 889-917.

- Khaleej Times (2017), (What's holding Arab women back from achieving equality?, Available from: <https://www.khaleejtimes.com/editorials-columns/whats-holding-arab-women-back-from-achieving-equality>, (Accessed on 2nd December 2019).
- Kharouf, H., & Lund, D. J. (2018). An Empirical Examination of Organisational Trust Recovery: Influences and Implications. *European Management Review*.
- Kim, H. (2014). Transformational leadership, organizational clan culture, organizational affective commitment, and organizational citizenship behaviour: A case of South Korea's public sector. *Public Organization Review*, 14(3), 397-417.
- Kappagoda, U. W. M. R., & Kulathunga, S. (2013). The Impact of Five Factor Model of Personality on Organizational Citizenship Behaviour of Non-Manual Employees in the Banking Sector in Sri Lanka. *Available at SSRN 2223077*.
- Khan, M. U. H. (2012). Stability and Sustainability of UAE Macro-Economy. *Defence Journal*, 16(3), 1H.
- Kogut, B. and Zander, U. (1992) 'Knowledge of the firm, combinative capabilities, and the replication of technology', *Organization Science*, Vol. 3, No. 3, pp.383–397 [online] <http://doi.org/10.1287/orsc.3.3.383> (accessed 4 January 2015).

- Koornneef, E., Robben, P., & Blair, I. (2017). Progress and outcomes of health systems reform in the United Arab Emirates: a systematic review. *BMC health services research*, 17(1), 1-13.
- Koornneef, E. J., Robben, P. B., Al Seiari, M. B., & Al Siksek, Z. (2012). Health system reform in the emirate of Abu Dhabi, United Arab Emirates. *Health policy*, 108(2-3), 115-121.
- Lam, C. F., Liang, J., Ashford, S. J., & Lee, C. (2015). Job insecurity and organizational citizenship behaviour : Exploring curvilinear and moderated relationships. *Journal of Applied Psychology*, 100(2), 499.
- Lathalavanya, B., & Thenmozhi, R. (2011). Organizational citizenship behaviour evaluating organizational efficiency and success through knowledge sharing. *Journal of Contemporary Management Research*, 5(1), 24-29. Retrieved from <http://adu-lib-database.idm.oclc.org/login?url=https://www-proquest-com.adu-lib-database.idm.oclc.org/docview/1833912812?accountid=26149>.
- Lee, S. I., Khang, Y. H., & Lee, M. S. (2004). Women's attitudes toward mode of delivery in South Korea—a society with high cesarean section rates. *Birth*, 31(2), 108-116.
- Lekhawipat, W., Wei, Y. H., & Lin, C. (2018). How internal attributions affect knowledge sharing behaviour . *Journal of Knowledge Management*, 22(4), 867-886.

- Lev, S., & Koslowsky, M. (2012). Teacher Gender as a Moderator of the On-the-Job Embeddedness–OCB Relationship 1. *Journal of Applied Social Psychology*, 42(1), 81-99.
- Lewis, S. (2015). Qualitative inquiry and research design: Choosing among five approaches. *Health promotion practice*, 16(4), 473-475.
- Lievens, F., & Anseel, F. (2004). Confirmatory factor analysis and invariance of an organizational citizenship behaviour measure across samples in a Dutch-speaking context. *Journal of Occupational and Organizational Psychology*, 77(3), 299-306.
- Lim, S. H., Han, S. S., & Joo, Y. S. (2018). Effects of nurses' emotional intelligence on their organizational citizenship behaviour, with mediating effects of leader trust and value congruence. *Japan Journal of Nursing Science*.
- Lin, C. P. (2008). Examination of gender differences in modeling OCBs and their antecedents in business organizations in Taiwan. *Journal of Business and Psychology*, 22(3), 261-273.
- Lin, C.P. (2007a), "To share or not to share: modeling knowledge sharing using exchange ideology as a moderator", *Personnel Review*, Vol. 36 No. 3, pp. 457-75.
- Lin, H. F., & Lee, G. G. (2004). Perceptions of senior managers toward knowledge-sharing behaviour. *Management decision*, 42(1), 108-125.

- Lin, H.F. (2007b), “Effects of extrinsic and intrinsic motivation on employee knowledge sharing intention”, *Journal of Information Science*, Vol. 33 No. 2, pp. 135-49.
- Lin, R. S. J., & Hsiao, J. K. (2014). The relationships between transformational leadership, knowledge sharing, trust and organizational citizenship behaviour . *International Journal of Innovation, Management and Technology*, 5(3), 171.
- Li-Ying, J., Paunova, M., & Egerod, I. (2016). Knowledge sharing behaviour and intensive care nurse innovation: the moderating role of control of care quality. *Journal of Nursing Management*, 24(7), 943-953.
- Loney, T., Aw, T.-C., Handysides, D. G., Ali, R., Blair, I., Grivna, M., El-Obaid, Y. (2013). An analysis of the health status of the United Arab Emirates: the “Big 4” public health issues. *Global Health Action*, 6, 10.3402/gha.v6i0.20100. <http://doi.org/10.3402/gha.v6i0.20100>
- Lovric, M. (2014), *International encyclopaedia of statistical science*, Berlin, Springer
- Marcus, B. & Schuler, H. (2004). Antecedents of counterproductive behaviour at work:A general perspective. *Journal of Applied Psychology*, 89(4), 647-660. doi: 10.1037/0021-9010.89.4.647.
- Mohammad, J., Quoquab, F., Makhbul, Z. M., & Ramayah, T. (2016). Bridging the gap between justice and citizenship behaviour in Asian culture. *Cross Cultural & Strategic Management*.

- Mayer, R.C. & Davis, J.H. 1999. The effect of the performance appraisal system on trust for management: A field quasi-experiment. *Journal of Applied Psychology*, 84, 123-136.
- Mayer, R.C. & Gavin, M.B. (2005). Trust in management and performance: Who minds the shop while employees watch the boss? *Academy of Management Journal*, 48, 874-888.
- Miller, D. L., & Karakowsky, L. (2010). Gender influences as an impediment to knowledge sharing: When men and women fail to seek peer feedback. *The Journal of psychology*, 139(2), 101-118.
- Mura, M., Lettieri, E., Radaelli, G., & Spiller, N. (2016). Behavioural operations in healthcare: a knowledge sharing perspective. *International Journal of Operations & Production Management*, 36(10), 1222-1246.
- Murphy, G., Athanasou, J., & King, N. (2002). Job satisfaction and organizational citizenship behaviour: A study of Australian human-service professionals. *Journal of Managerial Psychology*, 17(4), 287-297
- Muthuraman, S., & Al-Haziati, M. (2017). Examining the Factors of Organizational Citizenship Behaviour with reference to Corporate Sectors in Sultanate of Oman. *International Review of Management and Marketing*, 7(1).
- Murugesan, R., Natarajan, T (2011) knowledge sharing and organizational citizenship behaviour . Article in knowledge and process management 18(4) 126-134. John Wiley publishers.

- Muthén, B., & Asparouhov, T. (2012). Bayesian structural equation modeling: a more flexible representation of substantive theory. *Psychological methods*, 17(3), 313.
- Nafei, W. A., Khanfar, N. M., & Kaifi, B. A. (2012). Leadership styles and organizational learning an empirical study on Saudi banks in Al-Taif Governorate Kingdom of Saudi Arabia. *Journal of Management and Strategy*, 3(1), 2.
- Noudoostbeni, A., Kaur, K., & Jenatabadi, H. S. (2018). A Comparison of Structural Equation Modeling Approaches with DeLone & McLean's Model: A Case Study of Radio-Frequency Identification User Satisfaction in Malaysian University Libraries. *Sustainability*, 10(7), 2532.
- Nowak, P., Holmes, G., & Murrow, J. (2010). A model for reducing health care employee turnover. *Journal of hospital marketing & public relations*, 20(1), 14-25.
- Nuaimi, M. A., & Jabeen, F. (2020). A study of factors influencing knowledge transfer in organisations in the United Arab Emirates. *International Journal of Knowledge Management Studies*, 11(2), 170-189.
- Nunnally J.C. and Bernstein I. H. (1994), *Psychometric Theory*. McGraw-Hill: New York
- Oliveira, P. E., Temido, M. G., Henriques, C., and Vichi, M. (2013). *Recent Developments in Modeling and Applications in Statistics*, London: Springer.

- Ong, M. H. A., & Puteh, F. (2017). Quantitative data analysis: Choosing between SPSS, PLS, and AMOS in social science research. *International Interdisciplinary Journal of Scientific Research*, 3(1), 14-25.
- Organ, D. W. (1988). Issues in organization and management series. Organizational citizenship behaviour: The good soldier syndrome. Lexington, MA, England: Lexington Books/D. C. Heath and Com.
- Organ, D. W. (1997). Organizational citizenship behaviour: It's construct clean-up time. *Human Performance*, 10(2), 85-97. doi: 10.1207/s15327043hup1002_2.
- Organ, D. W. (2018). Organizational citizenship behaviour : Recent trends and developments. *Annual Review of Organizational Psychology and Organizational Behaviour* , 80, 295-306.
- Organ, D. W., & Ryan, K. (1995). A meta-analytic review of attitudinal and dispositional predictors of organizational citizenship behaviour . *Personnel Psychology*, 48, 775-802.
- Pei-Lee, T., & Sun, H. (2012). Knowledge sharing, job attitudes and organisational citizenship behaviour. *Industrial Management & Data Systems*, 112(1), 64-82. doi:http://dx.doi.org.adu-lib-database.idm.oclc.org/10.1108/02635571211193644.
- Podsakoff, N. P., Whiting, S. W., Podsakoff, P. M., & Blume, B. D. (2009). Individual- and organizational-level consequences of organizational

- citizenship behaviours: A metaanalysis. *Journal of Applied Psychology*, 94(1), 122-141. doi: 10.1037/a0013079
- Podsakoff, P. M., Ahearne, M., & MacKenzie, S. B. (1997). Organizational citizenship behaviour and the quantity and quality of work group performance. *Journal of applied psychology*, 82(2), 262.
- Pingping & Huang, (2019). *Association among Distributed Leadership, Organizational Justice, Organizational Commitment, and Organizational Citizenship Behaviour between Presidents and Teachers in Private Colleges—Shandong China as Research Population*. Diss. Dhurakij Pundit University, 2019.
- Pangil, F. & Aktar, A., (2018). Mediating role of organizational commitment in the relationship between human resource management practices and employee engagement: does black box stage exist? *International Journal of Sociology and Social Policy*.
- Rahman, M. S., Osmangani, A. M., Daud, N. M., & AbdelFattah, F. A. M. (2016). Knowledge sharing behaviours among non-academic staff of higher learning institutions: Attitude, subjective norms and behavioural intention embedded model. *Library Review*, 65(1/2), 65-83.
- Ramasamy, M., & Thamaraiselvan, N. (2011). Knowledge sharing and organizational citizenship behaviour. *Knowledge and Process Management*, 18(4), 278-284.

- Razmerita, L., Kirchner, K., & Nielsen, P. (2016). What factors influence knowledge sharing in organizations? A social dilemma perspective of social media communication. *Journal of knowledge Management*.
- Renzl, B. (2008). Trust in management and knowledge sharing: the mediating effects of fear and knowledge documentation. *Omega*, 36, 206-220
- Rowland-Jones, R. (2012). The EFQM concepts of excellence approach to management development within the UAE healthcare industry utilizing action modalities. *Human Resource Development International*, 15(4), 501-514.
- Rusly, F. H., Corner, J. L., & Sun, P. (2012). Positioning change readiness in knowledge management research. *Journal of Knowledge Management*.
- Rumanti, A. A., Samadhi, T. A., Wiratmadja, I. I., & Sunaryo, I. (2018, April). A systematic literature review on knowledge sharing for innovation: Empirical study approach. In *2018 5th International Conference on Industrial Engineering and Applications (ICIEA)* (pp. 504-509). IEEE.
- Ruggles, R. (1998). The state of the notion: knowledge management in practice. *California management review*, 40(3), 80-89.
- Ruiz-Palomino, P., & Martínez-Cañas, R. (2014). Ethical culture, ethical intent, and organizational citizenship behaviour : The moderating and mediating role of person–organization fit. *Journal of business ethics*, 120(1), 95-108
- Ryan, R. M. Connell, J. P., and Deci, E. L., (1989). Self-determination in a work organization. *Journal of applied psychology*, 74(4), 580.

- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68.
- Ryu, S., Ho, S. H., & Han, I. (2003). Knowledge sharing behaviour of physicians in hospitals. *Expert Systems with applications*, 25(1), 113-122.
- Saunders, M., Lewis, P. and Thornhill, A. (2016), *Research Methods for Business Students*, 7th ed, Harlow: Prentice Hall.
- Saunders, L, Berkeley, S., Bender, W. N., & Gregg Peaster, L., (2009). Implementation of response to intervention: A snapshot of progress. *Journal of Learning Disabilities*, 42(1), 85-95.
- Sekaran, U. (2005). *Research methods for business: A skill-building approach* (4th ed). NY: John Wiley & Sons.
- Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: A meta-analysis of past research with recommendations for modifications and future research. *Journal of consumer research*, 15(3), 325-343.
- Suliman, A., & Al Kathairi, M. (2013). Organizational justice, commitment and performance in developing countries. *Employee Relations*.
- Shafiee Nahrkhalaji, S., Khorasani, M., & Rashidi Ashjerdi, M. (2013). Gendered Communication in Iranian University Classrooms: The Relationship between Politeness and Silence in Persian Culture. *International Journal of Society, Culture & Language*, 1(1), 118-130.

- Shanker, M. (2018). Organizational citizenship behaviour in relation to employees' intention to stay in Indian organizations. *Business Process Management Journal*, 24(6), 1355-1366.
- Sheerin, C., Hughes, C., & Garavan, T. (2020). Gendered practices and tacit knowledge sharing in organizations: a structuration perspective. *Human Resource Development International*, 1-27.
- Skaik, H. A., & Othman, R. (2014). Determinants of knowledge sharing behaviour among academics in United Arab Emirates. *International Journal of Knowledge and Systems Science (IJKSS)*, 5(3), 54-70.
- Sulistyo, H. (2017). Improving Organizational Citizenship Behaviour (OCB) Through Islamic Work Ethics and Knowledge Sharing. *International Journal of Organizational Innovation (Online)*, 10(2), 173-187.
- Sheppard, B. H., Hartwick, J., & Warshaw, P. R. (1988). The theory of reasoned action: a meta-analysis of past research with recommendations for modifications and future research. *Journal of Consumer Research*, 15(3), 325-343.
- Shin, Y., Sung, S. Y., Choi, J. N., & Kim, M. S. (2015). Top management ethical leadership and firm performance: Mediating role of ethical and procedural justice climate. *Journal of Business Ethics*, 129(1), 43-57.
- Singh, P. K. (2018). Knowledge strategy, sharing behaviour and performance: Reviewing a knowledge-oriented approach. *Management Research Review*, 41(3), 395-411.

- Song, Z., Rose, S., Safran, D. G., Landon, B. E., Day, M. P., & Chernew, M. E. (2014). Changes in health care spending and quality 4 years into global payment. *New England Journal of Medicine*, 371(18), 1704-1714.
- Stylidis, D. (2012). *Tourism and community life: Building a conceptual framework* (Doctoral dissertation, University of Surrey (United Kingdom)).
- Takeuchi, K. (2020). The tests for multivariate normality. In *Contributions on Theory of Mathematical Statistics*, Springer, Tokyo.
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics* (Vol. 5, pp. 481-498). Boston, MA: Pearson.
- Todd, S. Y., & Kent, A. (2006). Direct and Indirect Effects of Task Characteristics on Organizational Citizenship Behaviour . *North American Journal of Psychology*, 8(2).
- Takeuchi, R., Bolino, M. C., & Lin, C. C. (2015). Too many motives? The interactive effects of multiple motives on organizational citizenship behaviour . *Journal of Applied Psychology*, 100(4), 1239.
- Tashakkori, A., & Teddlie, C. (2003). The past and future of mixed methods research: From data triangulation to mixed model designs. *Handbook of mixed methods in social and behavioural research*, 671-701.
- Teh, P. L., & Sun, H. (2012). Knowledge sharing, job attitudes and organisational citizenship behaviour. *Industrial Management & Data Systems*, 112(1), 64-82.

- Tharp, D. T., Seay, M. C., Carswell, A. T., & MacDonald, M. (2020). Big Five personality traits, dispositional affect, and financial satisfaction among older adults. *Personality and Individual Differences*, 166, 110211.
- Tharp, R. (2018). Teaching transformed: Achieving excellence, fairness, inclusion, and harmony. Routledge.
- Tenenboim-Weinblatt, K., & Baden, C. (2021). Gendered communication styles in the news: An algorithmic comparative study of conflict coverage. *Communication research*, 48(2), 233-256.
- The World Economic Forum (2020), Global Gender Gap report, http://www3.weforum.org/docs/WEF_GGGR_2020.pdf
- Thomsen, M., Karsten, S., & Oort, F. J. (2016). Distance in schools: the influence of psychological and structural distance from management on teachers' trust in management, organisational commitment, and organisational citizenship behaviour. *School Effectiveness and School Improvement*, 27(4), 594-612.
- Ullah, I., Akhtar, K. M., Shahzadi, I., Farooq, M., & Yasmin, R. (2016). Encouraging knowledge sharing behaviour through team innovation climate, altruistic intention and organizational culture. *Knowledge Management & E-Learning*, 8(4), 628.
- Umar, T., Egbu, C., Ofori, G., Honnurvali, M. S., Saidani, M., Shibani, A., & Goh, K. (2020, March). UAE's commitment towards UN Sustainable Development Goals. In *Proceedings of the Institution of Civil Engineers-*

Engineering Sustainability (Vol. 173, No. 7, pp. 325-343). Thomas Telford Ltd.

- Urbach, N., and Ahlemann, F. (2010). Structural equation modeling in information systems research using Partial Least Square. *Journal of Information Technology Theory and Application* 11(2), 5-40.
- Van De Schoot, R., Winter, S. D., Ryan, O., Zondervan-Zwijnenburg, M., & Depaoli, S. (2017). A systematic review of Bayesian articles in psychology: The last 25 years. *Psychological Methods*, 22(2), 217.
- Van Knippenberg, D., Van Prooijen, J. W., & Sleebos, E. (2015). Beyond social exchange: Collectivism's moderating role in the relationship between perceived organizational support and organizational citizenship behaviour. *European Journal of Work and Organizational Psychology*, 24(1), 152-160.
- Van Scotter, J. R., Motowidlo, S. J., & Cross, T. C. (2000). Effects of task performance and contextual performance on systemic rewards. *Journal of Applied Psychology*, 85(4), 526-535. doi: 10.1037//0021-9010.85.
- Veronique L. (2010), Integrated knowledge translation for globally oriented public health practitioners and scientists: framing together sustainable transferontier knowledge translation vision. *J Multidisciplinary Health care*. 3:33–47.

- Wang, H. K., Yen, Y. F., & Tseng, J. F. (2015). Knowledge sharing in knowledge workers: The roles of social exchange theory and the theory of planned behaviour . *Innovation*, 17(4), 450-465.
- Weinberg, F. J., Trevino, L. J., & Cleveland, A. S. (2019, January). The effect of gendered communication styles on career outcomes. In *Academy of Management Proceedings* (Vol. 2013, No. 1, p. 16500). Academy of Management.
- Weixu, D., Choi, E. Aoyama, A. (2018). Relationships between interpersonal trust and knowledge sharing in workplace: the meditational role of prosocial motives. *Article in international business research* 11(8): 163Canada center of science and education.
- Winarsih, S., & Riyanto, S. (2019). The Effect of Organizational Culture, Organizational Justice, and Organizational Commitment on Organizational Citizenship Behaviour (OCB).
- Werner, J. M. (1994). Dimensions that make a difference: Examining the impact of in-role and extrarole behaviours on supervisory ratings. *Journal of Applied Psychology*, 79,(1)
- Whiting, S. W., Podsakoff, N. P., Podsakoff, M. P., Blume, B. D (2009). Individual and organizational level consequences of organizational citizenship behaviours: a meta-analysis. *Journal of applied psychology* 94(1)122-141. doi:10.1037/a0013079. American psychological association.

- Wilkins, H. C. (2005). A structural model of satisfaction and brand attitude in hotels. Unpublished PhD thesis, Griffith University.
- Wong, K. Y., Tan, L. P., Lee, C. S., & Wong, W. P. (2015). Knowledge management performance measurement: measures, approaches, trends and future directions. *Information Development*, 31(3), 239-257.
- Wong, Y. T., Wong, C. S., & Ngo, H. Y. (2012). The effects of trust in organisation and perceived organisational support on organisational citizenship behaviour: a test of three competing models. *The International Journal of Human Resource Management*, 23(2), 278-293.
- Willis-Shattuck, M., Bidwell, P., Thomas, S., Wyness, L., Blaauw, D., & Ditlopo, P. (2008). Motivation and retention of health workers in developing countries: a systematic review. *BMC health services research*, 8(1), 1-8.
- Yin, R. K. (2003). Designing case studies. *Qualitative Research Methods*, 359-386.
- Yi, J. (2009). A measure of knowledge sharing behaviour : scale development and validation. *Knowledge Management Research & Practice*, 7(1), 65-81.
- Yasir, M., & Majid, A. (2017). Impact of knowledge management enablers on knowledge sharing: Is trust a missing link in SMEs of emerging economies? *World Journal of Entrepreneurship, Management and Sustainable Development*, 13(1), 16-33. Retrieved from <http://adu-lib->

[database.idm.oclc.org/login?url=https://www-proquest-com.adu-lib-database.idm.oclc.org/docview/1874621681?accountid=26149](https://www-proquest-com.adu-lib-database.idm.oclc.org/login?url=https://www-proquest-com.adu-lib-database.idm.oclc.org/docview/1874621681?accountid=26149).

- Yeo, R. K., Svensson, G., Ahmad, N., & Daghfous, A. (2010). Knowledge sharing through inter- organizational knowledge networks. *European Business Review*.
- Younies, H., Barhem, B., & Younis, M. Z. (2008). Ranking of priorities in employees' reward and recognition schemes: from the perspective of UAE health care employees. *The International journal of health planning and management*, 23(4), 357-371.
- Zhang J, Faerman S, Cresswell A. (2006), The effect of organizational/technological factors and the nature of knowledge on knowledge sharing. The 39th Hawaii International Conference on System Sciences
- Zheng, W., Zhang, M., & Li, H. (2012). Performance appraisal process and organizational citizenship behaviour. *Journal of Managerial Psychology*, 27(7), 732-75

Appendix I: Questionnaire

A Study of the Influence of Gendered Communication and Trust in Management on Knowledge-Sharing Behaviour among Health Practitioners in the UAE: The Mediating Role of Organizational Citizenship Behaviour

دراسة عن تأثير التواصل بين الجنسين والثقة في الإدارة على سلوك تبادل المعرفة بين الممارسين الصحيين في الإمارات: الدور الوسيط لسلوك المواطنة التنظيمية

Dear Respondents,

aims to examine the influence of gendered communication and trust in management on knowledge-sharing behaviour , and the mediating role of organizational citizenship behaviour , among healthcare practitioners in the United Arab Emirates. It will also examine the moderating role of gender on both knowledge-sharing behaviour and organizational citizenship behaviour . A questionnaire will be administered in selected public and private hospitals in two cities in the United Arab Emirates, Abu Dhabi and Dubai. All selected hospitals will have received the Sheikh Khalifa Excellence Award or Dubai Government Excellence Programme. The survey will require not more than 5-7 minutes of your time. Your responses will be kept strictly confidential and will be used for academic purposes only. Your co-operation is highly appreciated and a valuable contribution towards the success of this research project. Thank you very much for taking the time to complete the survey.

اعزائي المحترمين،

تهدف الدراسة إلى اختبار مدى تأثير التواصل بين الجنسين والثقة في الإدارة على سلوك تبادل المعرفة ، والدور الوسيط لسلوك المواطنة التنظيمية ، بين ممارسي الرعاية الصحية في دولة الإمارات العربية المتحدة. وسيدرس أيضًا الدور المعتدل للجنس في كل من سلوك تبادل المعرفة وسلوك المواطنة التنظيمية. سيتم إدارة الاستبيان في مستشفيات عامة وخاصة في مدن مختارة في دولة الإمارات العربية المتحدة وهما أبوظبي ودبي. المستشفيات المختارة هي فقط الحاصلة على جائزة الشيخ خليفة للتميز أو برنامج دبي للتميز الحكومي. لن يتطلب الاستبيان أكثر من 5-7 دقائق من وقتك وسيتم الاحتفاظ بردودك في سرية تامة و استخدامها للأغراض الأكاديمية فقط. إن تعاونك يحظى بتقدير كبير ومساهمة قيمة في نجاح هذا المشروع البحثي. شكرًا جزيلاً على الوقت الذي أمضيته في إكمال الاستبيان.

Part 1: Demographics

A) Age:

- ☐ 25 – 35
☐ 36 – 45
☐ 46 – 55
☐ 56 – Above

B) Gender:

☐ الجزء الأول: البيانات

الديموغرافية

- ☐
العمر: ☐
٤٥ – ٣٦ ☐
٥٥ – ٤٦ ☐
٥٦ – وأكبر ☐

☐ Female ☐ Male C) Education: ☐ PhD D) Sector ☐ Government Hospital ☐ Private Hospital ☐ Semi-Government Hospital E) Firm size: ☐ Small (<50) ☐ Medium (<250) ☐ Large (>500) F) Years of Work Experience: ☐ Below 5 years ☐ 5 – 10 years ☐ 11 – 20 years ☐ 20 years & Above G) Which of the following best describes your designation in your Hospital? ☐ General Practitioner ☐ Surgeon Physician ☐ Consultant Physician ☐ Specialist Physician ☐ Junior Physician ☐ Other _____ _____	☐ الجنس: أنثى ذكر التعليم: دكتوراه القطاع: مستشفى حكومي مستشفى خاص مستشفى شبه حكومي حجم المؤسسة: صغير (<50) وسط (<250) كبير (>500) سنوات الخبرة: أقل من 5 سنوات 5 – 10 سنوات 11 – 20 سنوات 20 سنة أو أكثر أي مما يلي يصف أفضل وصف لمسمك الوظيفي في المستشفى؟ طبيب عام طبيب جراح طبيب إستشاري طبيب متخصص طبيب مبتدي أخري
--	---

--	--

1. Knowledge Sharing Behaviour - تبادل المعرفة السلوكي.

1Q. please, tick the following statements, referring to your opinion about knowledge

sharing behaviour

س ١. يرجى وضع علامة على العبارات التالية، مشيراً إلى رأيك حول تبادل المعرفة السلوكي.

SN o	Questions الأسئلة	Strongly Disagree أعارض بشدة	Disagree أعارض	Somewhat Disagree أعارض إلى حد ما	Neutral محايد	Somewhat Agree أوافق إلى حد ما	Agree موافق	Strongly agree موافق بشدة
A	I share knowledge actively on formal occasions أشارك المعرفة بنشاط في المناسبات الرسمية							
B	I use my company's information system or database to store knowledge أستخدم نظام معلومات أو قاعدة بيانات شركتي لتخزين المعرفة							
C	I share knowledge through written communication أشارك المعرفة من خلال التواصل المكتوب							
D	My co-workers share knowledge actively							

	on informal occasions يتشارك زملائي في المعرفة بنشاط في المناسبات غير الرسمية							
--	--	--	--	--	--	--	--	--

2. GENDERED COMMUNICATION بين الجنسين

2. Q. Please tick to what extent the below items can measure Gendered Communication at your company.

س٢. يرجى وضع علامة على مدى قدرة البنود التالية على قياس الاتصال بناءً على نوع الجنس؟

SNo	Questions الأسئلة	Strongly Disagree أعارض بشدة	Disagree أعارض	Some what Disagree أعارض إلى حد ما	Neutral محايد	Some what Agree أوافق إلى حد ما	Agree موافق	Strongly agree موافق بشدة
A	When I communicate with others at work, I tend to assert and defend my own thoughts and beliefs عندما أتواصل مع الآخرين في العمل ، أميل إلى التأكيد والدفاع عن أفكاري ومعتقداتي الخاصة							
B	I often use communication as a way to draw attention to myself and my ideas at work غالبًا ما أستخدم التواصل كوسيلة للفت الانتباه إلى نفسي وأفكاري في العمل							
C	I often communicate in a way that expresses empathy or sympathy toward others at work							

	أتواصل غالبًا بطريقة تعبر عن التعاطف أو التعاطف مع الآخرين في العمل							
D	I tend to communicate in a direct and assertive way at work أميل إلى التواصل بطريقة مباشرة وحازمة في العمل							
E.	I often use communication as a way to establish and enhance my own status at work غالبًا ما أستخدم التواصل كوسيلة لتأسيس وتعزيز حالتي في العمل							
F.	When I communicate with others at work, I often find myself interrupting them to gain command of the conversation دما أتواصل مع الآخرين في العمل ، غالبًا ما أجد نفسى أقاطعهم للتحكم في المحادثة							
G	I employ a collaborative communication style at work أنا أستخدم أسلوب التواصل التعاوني في العمل							
H	I often use communication as a way to assert my authority at work							

	كثيرا ما أستخدم التواصل كوسيلة لتأكيد سلطتي في العمل							
I.	When I communicate with others at work, I tend to be sensitive to their needs عندما أتواصل مع الآخرين في العمل ، أميل إلى مراعاة احتياجاتهم							
J.	When I communicate with others at work, I strive to establish equality between all participants عندما أتواصل مع الآخرين في العمل ، أسعى لتحقيق المساواة بين جميع المشاركين							
K.	When I communicate with others at work, I tend to be understanding of their perspectives عندما أتواصل مع الآخرين في العمل ، أميل إلى فهم وجهات نظرهم							
L.	I tend to communicate in a compassionate way at work أميل إلى التواصل بطريقة عاطفية في العمل							
M.	I tend to communicate my							

	support for others at work أميل إلى توصيل دعمي للآخرين في العمل							
N	I tend to communicate in a responsive way at work (e.g., by smiling, or by nodding) أميل إلى التواصل بطريقة تجاوبية في العمل (على سبيل المثال ، من خلال الابتسام أو الإيماء بالإيماء)							
O	When I communicate with others at work, I tend to dominate the conversation ندما أتواصل مع الآخرين في العمل ، أميل إلى السيطرة على المحادثة							
P.	During communications with others at work, I often invite them to participate and encourage them to elaborate on their thoughts أثناء التواصل مع الآخرين في العمل ، كثيراً ما أدعوهم للمشاركة وتشجيعهم على توضيح أفكارهم							

Q	When I communicate with others at work, I tend to avoid disclosing personal information that might suggest weakness or vulnerability عندما أتواصل مع الآخرين في العمل ، أميل إلى تجنب الكشف عن المعلومات الشخصية التي قد تشير إلى الضعف أو الضعف							
R	I use communication as a primary way to establish and maintain relationships at work أستخدم التواصل كوسيلة أساسية لإقامة العلاقات في العمل والمحافظة عليها							
S	My communication style at work tends to be somewhat dominant, forceful, or aggressive يميل أسلوب التواصل لدي في العمل إلى أن يكون مهيمًا أو قويًا أو عدوانيًا إلى حد ما							
T	When I communicate with others at work, I tend to use a more concrete style in							

	which I provide details, disclose personal information, and use concrete reasoning عندما أتواصل مع الآخرين في العمل ، فإنني أميل إلى استخدام أسلوب أكثر تحديداً حيث أقوم بتقديم التفاصيل والكشف عن المعلومات الشخصية واستخدام التفكير الملموس							
U	When I communicate with others at work, I tend to use a more abstract style, speaking in general terms that are removed from concrete experiences عندما أتواصل مع الآخرين في العمل ، فإنني أميل إلى استخدام أسلوب أكثر تجريدياً ، حيث أتحدث بعبارات عامة يتم إزالتها من تجارب ملموسة							
V	I tend to communicate in an instrumental way at work, that is, as a means to accomplish goals أميل إلى التواصل بطريقة مفيدة في العمل ، أي كوسيلة لتحقيق الأهداف							
W	I regard communication at							

	work as a way to build rapport (harmonious connections) with others أعتبر التواصل في العمل وسيلة لبناء علاقة (روابط متناغمة) مع الآخرين							
--	---	--	--	--	--	--	--	--

3. TRUST IN MANAGEMENT

3.Q. Please tick to what extent the below items can measure your Trust in

Management at your company toward Knowledge Sharing Behavior?

س٣. يرجى وضع علامة على أي مدى يمكن للعناصر التالية قياس دافعك في نقل المعرفة السلوكي الثقة

في الإدارة ؟

S.No	Questions الأسئلة	Strongly Disagree أعارض بشدة	Disagree أعارض	Some what Disagree أعارض إلى حد ما	Neutral محايد	Some what Agree أوافق إلى حد ما	Agree موافق	Strongly agree موافق بشدة
A	If I had my way, I wouldn't let top management have any influence over issue that are important to me إذا كان لي طريقي ، فلن أترك للإدارة العليا أي تأثير على القضية التي تهمني							
B	I would be willing to let top management have complete control over my future in the company سأكون على استعداد للسماح للإدارة العليا بالسيطرة الكاملة على مستقبلي في الشركة							
C	I really wish I had a good way to keep an eye on top management أتمنى حقاً أن يكون لدي طريقة جيدة لمراقبة الإدارة العليا							

D	I would be comfortable giving top management a task or problem which was critical to me, even if I could not monitor their actions سأكون مرتاحًا لإعطاء الإدارة العليا مهمة أو مشكلة كانت حرجية بالنسبة لي ، حتى لو لم أتمكن من مراقبة تصرفاتهم							
---	---	--	--	--	--	--	--	--

MEDIATOR وسيط

4. ORGANIZATIONAL CITIZENSHIP BEHAVIOR سلوك المواطنة التنظيمية

5. Q. Please tick to what extent the below items can measure employee

Organizational Citizenship Behavior at your company toward knowledge sharing

Behavior?

س. ٥. ي تحديد إلى أي مدى يمكن للعناصر أدناه قياس سلوك المواطنة التنظيمية لدى مؤسستك تجاه سلوك مشاركة المعرفة ؟

S.No	Questions الأسئلة	Strongly Disagree أعار ض بشدة	Disagree أعار ض	Some what Disagree أعار ض إلى حد ما	Neutral محايد	Some what Agree أوافق إلى حد ما	Agree موافق	Strongly agree موافق بشدة
------	----------------------	----------------------------------	--------------------	--	------------------	------------------------------------	----------------	------------------------------

A.	I am the classic "squeaky wheel" that always needs greasing (R) أنا "عجلة صارمة" كلاسيكية تحتاج دائماً إلى التشحيم							
B.	I consume a lot of time complaining about trivial matters (R) ستهلك الكثير من الوقت في الشكوى من الأمور البسيطة							
C.	I tend to make "Mountains out of molehills" (R) أنا أميل إلى جعل "الجبال من التلال"							
D.	I always focus on what is wrong, rather than the positive side (R) أركز دائماً على الخطأ ، بدلاً من الجانب الإيجابي							
E.	I always find fault with what the organization is doing (R) أجد دائماً خطأ فيما تفعله المنظمة							
F.	I help others who have heavy workloads أساعد الآخرين الذين لديهم أعباء عمل ثقيلة							
G.	I am always ready to lend a helping							

	hand to those around me أنا مستعد دائماً لتقديم يد العون لمن حولي							
H.	I help others who have been absent أساعد الآخرين الذين غابوا							
I.	I am willing to help others who have work-related problems أنا على استعداد لمساعدة الآخرين الذين لديهم مشاكل متعلقة بالعمل							
J.	I help orient new people even though it is not required أساعد في توجيه أشخاص جدد رغم أنه غير مطلوب							
K.	I try to avoid creating problems for co-workers أحاول تجنب خلق مشاكل لزملاء العمل							
L.	I consider the impact of my actions on co- workers أنا أخذ بعين الاعتبار تأثير أفعالي على زملائي في العمل							
M.	I do not abuse the rights of others أنا لا أستغل حقوق							

	الآخرين							
N.	I take steps to try to prevent problems with other workers أأخذ خطوات لمحاولة تجنب المشاكل مع العمال الآخرين							
O.	I am mindful of how my behaviour affects other people's jobs أنا على دراية بكيفية تأثير سلوكي على وظائف الآخرين							
P.	I keep myself abreast of changes in the organization أظل على اطلاع دائم بالتغيرات في المنظمة							
Q.	I attend meetings that are not mandatory but are considered important أحضر اجتماعات ليست إلزامية ولكنها تعتبر مهمة							
R.	I attend functions that are not required but help the company image أحضر الوظائف غير المطلوبة ولكن ساعدت صورة الشركة							
S.	I read and keep up							

	with organization announcements, memos and so on أقرأ وأواكب إعلانات المنظمة والمذكرات وما إلى ذلك							
T.	I am one of the most conscientious employees أنا واحد من أكثر الموظفين المنجزين وفقا لما يمليه الضمير							
U.	I believe in giving an honest day's work for an honest day's pay أنا أؤمن بإعطاء يوم عمل صادق مقابل أجر ليوم صادق							
V.	My attendance at work is above the norm حضورى في العمل هو أعلى من المعتاد							
W.	I do not take extra breaks أنا لا تأخذ فترات راحة إضافية							
X.	I obey company rules and regulations even when no one is watching أطيع قواعد الشركة ولوائحها حتى عندما لا أحد يراقب							

Appendix II-A: Missing data and Multivariate Outliers

A. Missing values presented

Univariate Statistics

	N	Mean	Std. Deviation	Missing		No. of Extremes ^a	
				Count	Percent	Low	High
KSB1	516	3.3643	1.31275	0	.0	0	0
KSB2	516	3.3295	1.05572	0	.0	32	0
KSB3	516	3.6415	.90379	0	.0	16	0
KSB4	516	3.5233	.88649	0	.0	12	0
GCO1	444	3.2432	1.00757	72	14.0	0	0
GCO2	444	3.3604	.99700	72	14.0	19	0
GCO3	444	3.8063	.96595	72	14.0	14	0
GCO4	444	3.7252	.89200	72	14.0	16	0
GCO5	444	3.5338	.97195	72	14.0	13	0
GCO6	444	2.2297	.85859	72	14.0	0	1
GCO7	444	3.9910	.66170	72	14.0	.	.
GCO8	444	2.8986	1.05860	72	14.0	0	0
GCO9	444	3.9505	.79347	72	14.0	.	.
GCO10	444	4.1284	.68799	72	14.0	10	0
GCO11	444	4.2140	.57932	72	14.0	5	0
GCO12	444	4.1059	.73301	72	14.0	17	0
GCO13	444	4.2320	.61049	72	14.0	6	0
GCO14	444	4.2523	.69137	72	14.0	10	0
GCO15	444	2.5315	.94613	72	14.0	0	12
GCO16	444	4.0901	.68587	72	14.0	.	.
GCO17	444	3.8108	.89406	72	14.0	4	0
GCO18	444	4.1081	.65630	72	14.0	.	.

GCO1 9	444	2.0698	.91740	72	14.0	0	40
GCO2 0	444	3.0248	1.01538	72	14.0	0	0
GCO2 1	444	3.0450	.97265	72	14.0	0	0
GCO2 2	444	3.6171	.82690	72	14.0	9	0
GCO2 3	444	4.0766	.77982	72	14.0	20	0
TIM1	431	3.0766	.99355	85	16.5	0	0
TIM2	431	2.2900	.93851	85	16.5	0	2
TIM3	431	3.1044	.92799	85	16.5	18	0
TIM4	431	3.1671	.93755	85	16.5	20	0
OCB1	417	2.3981	.85754	99	19.2	0	6
OCB2	417	1.9281	.86302	99	19.2	0	27
OCB3	417	2.0432	.90833	99	19.2	0	0
OCB4	417	2.0408	.92288	99	19.2	0	35
OCB5	417	2.1990	.97132	99	19.2	0	10
OCB6	413	4.1259	.58179	103	20.0	.	.
OCB7	413	4.3438	.56855	103	20.0	0	0
OCB8	413	3.9298	.74221	103	20.0	.	.
OCB9	413	4.1864	.57590	103	20.0	6	0
OCB1 0	413	4.0145	.75349	103	20.0	16	0
OCB1 1	409	4.3203	.71236	107	20.7	9	0
OCB1 2	409	4.1809	.64286	107	20.7	6	0
OCB1 3	409	4.4694	.61411	107	20.7	4	0
OCB1 4	409	4.3545	.58493	107	20.7	1	0
OCB1 5	409	4.2983	.59328	107	20.7	1	0
OCB1 6	400	3.7075	.76052	116	22.5	4	0
OCB1 7	400	3.6875	.84060	116	22.5	7	0

OCB1 8	400	3.6675	.87111	116	22.5	7	0
OCB1 9	400	4.0325	.72647	116	22.5	.	.
OCB2 0	400	3.7600	.79308	116	22.5	4	0
OCB2 1	400	4.2850	.72463	116	22.5	10	0
OCB2 2	400	4.0425	.84111	116	22.5	21	0
OCB2 3	400	4.1125	.75583	116	22.5	15	0
OCB2 4	400	4.3600	.64532	116	22.5	6	0

a. Number of cases outside the range ($Q1 - 1.5 \cdot IQR$, $Q3 + 1.5 \cdot IQR$).

APPENDIX II-B. Replacing missing value by using series mean value

Result Variables

	Result Variable	N of Replaced Missing Values	Case Number of Non-Missing Values		N of Valid Cases	Creating Function
			First	Last		
1	GCO1_1	72	1	516	516	SMEAN(GCO1)
2	GCO2_1	72	1	516	516	SMEAN(GCO2)
3	GCO3_1	72	1	516	516	SMEAN(GCO3)
4	GCO4_1	72	1	516	516	SMEAN(GCO4)
5	GCO5_1	72	1	516	516	SMEAN(GCO5)
6	GCO6_1	72	1	516	516	SMEAN(GCO6)
7	GCO7_1	72	1	516	516	SMEAN(GCO7)
8	GCO8_1	72	1	516	516	SMEAN(GCO8)
9	GCO9_1	72	1	516	516	SMEAN(GCO9)
10	GCO10_1	72	1	516	516	SMEAN(GCO10)
11	GCO11_1	72	1	516	516	SMEAN(GCO11)
12	GCO12_1	72	1	516	516	SMEAN(GCO12)
13	GCO13_1	72	1	516	516	SMEAN(GCO13)
14	GCO14_1	72	1	516	516	SMEAN(GCO14)
15	GCO15_1	72	1	516	516	SMEAN(GCO15)
16	GCO16_1	72	1	516	516	SMEAN(GCO16)
17	GCO17_1	72	1	516	516	SMEAN(GCO17)
18	GCO18_1	72	1	516	516	SMEAN(GCO18)
19	GCO19_1	72	1	516	516	SMEAN(GCO19)
20	GCO20_1	72	1	516	516	SMEAN(GCO20)
21	GCO21_1	72	1	516	516	SMEAN(GCO21)

22	GCO22_1	72	1	516	516	SMEAN(GCO22)
23	GCO23_1	72	1	516	516	SMEAN(GCO23)
24	TIM1_1	85	1	516	516	SMEAN(TIM1)
25	TIM2_1	85	1	516	516	SMEAN(TIM2)
26	TIM3_1	85	1	516	516	SMEAN(TIM3)
27	TIM4_1	85	1	516	516	SMEAN(TIM4)
28	OCB1_1	99	1	516	516	SMEAN(OCB1)
29	OCB2_1	99	1	516	516	SMEAN(OCB2)
30	OCB3_1	99	1	516	516	SMEAN(OCB3)
31	OCB4_1	99	1	516	516	SMEAN(OCB4)
32	OCB5_1	99	1	516	516	SMEAN(OCB5)
33	OCB6_1	103	1	516	516	SMEAN(OCB6)
34	OCB7_1	103	1	516	516	SMEAN(OCB7)
35	OCB8_1	103	1	516	516	SMEAN(OCB8)
36	OCB9_1	103	1	516	516	SMEAN(OCB9)
37	OCB10_1	103	1	516	516	SMEAN(OCB10)
38	OCB11_1	107	1	516	516	SMEAN(OCB11)
39	OCB12_1	107	1	516	516	SMEAN(OCB12)
40	OCB13_1	107	1	516	516	SMEAN(OCB13)
41	OCB14_1	107	1	516	516	SMEAN(OCB14)
42	OCB15_1	107	1	516	516	SMEAN(OCB15)
43	OCB16_1	116	1	516	516	SMEAN(OCB16)
44	OCB17_1	116	1	516	516	SMEAN(OCB17)
45	OCB18_1	116	1	516	516	SMEAN(OCB18)
46	OCB19_1	116	1	516	516	SMEAN(OCB19)
47	OCB20_1	116	1	516	516	SMEAN(OCB20)
48	OCB21_1	116	1	516	516	SMEAN(OCB21)
49	OCB22_1	116	1	516	516	SMEAN(OCB22)

50	OCB23_ 1	116	1	516	516	SMEAN(OCB23)
51	OCB24_ 1	116	1	516	516	SMEAN(OCB24)

Appendix II-C: Outlier analysis

Mahalanobis Value	Probability value	Mahalanobis Value	Probability value
191.48789	0.0000000	111.4904	0.0000100
225.8753	0.0000000	125.7648	0.0000000
167.48162	0.0000000	116.2261	0.0000000
159.83637	0.0000000	137.3181	0.0000000
159.54936	0.0000000	114.6745	0.0000000
158.83758	0.0000000	119.7825	0.0000000
148.48888	0.0000000	120.1922	0.0000000
143.28715	0.0000000	123.2201	0.0000000
143.10933	0.0000000	114.1157	0.0000000
137.68795	0.0000000	124.5319	0.0000000
137.16933	0.0000000	126.9609	0.0000000
126.13301	0.0000001	114.9111	0.0000000
125.52828	0.0000001	104.7615	0.0000400
124.72954	0.0000002	116.6781	0.0000000
124.16084	0.0000002	117.1113	0.0000000
121.8647	0.0000004	103.4497	0.0000600
120.97369	0.0000005	105.8425	0.0000300

120.50944	0.0000006	116.3956	0.0000000
119.56635	0.0000007	122.0364	0.0000000
118.352	0.0000010	99.9483	0.0001400
118.01008	0.0000011	119.1159	0.0000000
117.25299	0.0000014	97.1138	0.0002900
117.18427	0.0000014	115.6517	0.0000000
115.67436	0.0000022	118.1502	0.0000000
114.80953	0.0000028	105.9066	0.0000300
114.35436	0.0000032	110.0484	0.0000100
112.89318	0.0000048	103.5418	0.0000600
112.14272	0.0000059	112.2223	0.0000100
110.2354	0.0000099	108.9987	0.0000100
109.6548	0.0000116	115.8267	0.0000000
109.37488	0.0000125	103.6178	0.0000600
109.01676	0.0000138	100.0614	0.0001400
107.81913	0.0000190	105.9763	0.0000300
107.03932	0.0000233	103.7468	0.0000600
107.03927	0.0000233	101.8737	0.0000900
107.01152	0.0000235	103.5794	0.0000600

106.7163	0.0000254	110.3889	0.0000100
106.42081	0.0000275	103.3615	0.0000600
104.04324	0.0000512	97.2010	0.0002800
103.90266	0.0000530	102.7920	0.0000700
103.10322	0.0000652	88.1709	0.0022900
102.80928	0.0000703	98.3768	0.0002100
102.75415	0.0000713	100.9482	0.0001100
102.17571	0.0000826	93.2390	0.0007300
101.67407	0.0000938	90.2487	0.0014400
101.4645	0.0000989	100.4960	0.0001300
100.92526	0.0001133	85.9324	0.0037000
99.7056	0.0001537	100.7585	0.0001200
99.05524	0.0001806	98.3749	0.0002100
98.9285	0.0001864	94.1735	0.0005900
98.09209	0.0002289	104.5324	0.0000500
96.25202	0.0003578	92.0824	0.0009500
94.66627	0.0005220	105.2727	0.0000400
94.12169	0.0005935	97.5182	0.0002600
93.2324	0.0007306	99.6942	0.0001500

92.96511	0.0007774	85.5723	0.0040000
92.23583	0.0009199	89.8121	0.0015900
92.20936	0.0009255	76.3334	0.0243700
91.98869	0.0009736	95.4563	0.0004300
119.3560	0.0000000	98.5664	0.0002000
130.2874	0.0000000	102.3275	0.0000800
119.9676	0.0000000		
124.8904	0.0000000		
122.0709	0.0000000		

Appendix III: Multivariate Normality Test

Descriptive Statistics									
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
GCO1_M	457	1	5	3.25	.878	-.359	.114	-.349	.228
GCO2_M	457	1	5	3.38	.875	-.659	.114	.131	.228
GCO3_F	457	1	5	3.85	.816	-.929	.114	1.498	.228
GCO4_M	457	1	5	3.75	.726	-1.197	.114	2.620	.228
GCO5_M	457	1	5	3.56	.831	-.621	.114	.246	.228
GCO6_M	457	1	5	2.24	.762	.685	.114	.722	.228
GCO7_F	457	2	5	4.00	.526	-.351	.114	2.052	.228
GCO8_M	457	1	5	2.92	.928	.055	.114	-.570	.228
GCO9_F	457	1	5	3.98	.651	-.769	.114	2.107	.228
GCO10_F	457	2	5	4.15	.555	-.301	.114	1.195	.228
GCO11_F	457	2	5	4.22	.440	.432	.114	1.600	.228
GCO12_F	457	1	5	4.10	.607	-1.015	.114	4.064	.228
GCO13_F	457	2	5	4.24	.492	-.074	.114	1.568	.228
GCO14_F	457	1	5	4.25	.572	-.888	.114	3.692	.228
GCO15_M	457	1	5	2.82	.955	.459	.114	-.620	.228

GCO16_F	457	2	5	4.10	.543	-.349	.114	1.792	.228
GCO17_M	457	1	5	3.79	.795	-.634	.114	.604	.228
GCO18_F	457	2	5	4.11	.520	-.357	.114	2.352	.228
GCO19_M	457	1	5	2.09	.809	.986	.114	1.571	.228
GCO20_F	457	1	5	3.01	.887	-.177	.114	-.262	.228
GCO21_M	457	1	5	3.06	.855	-.019	.114	-.163	.228
GCO22_M	457	1	5	3.63	.688	-.871	.114	1.271	.228
GCO23_F	457	2	5	4.09	.616	-.784	.114	2.244	.228
TIM2	457	1	5	2.55	.846	.339	.114	.014	.228
TIM1	457	1	5	3.10	.827	-.081	.114	-.481	.228
TIM3	457	1	5	3.13	.765	-.093	.114	.352	.228
TIM4	457	1	5	3.20	.757	-.321	.114	.315	.228
OCB1_S	457	1	5	2.40	.699	.679	.114	1.297	.228
OCB2_S	457	1	4	1.91	.687	.892	.114	1.664	.228
OCB3_S	457	1	5	2.02	.742	.651	.114	.843	.228
OCB4_S	457	1	5	2.00	.729	.927	.114	1.891	.228
OCB5_S	457	1	5	2.16	.757	.657	.114	.860	.228
OCB6_A	457	1	5	3.87	.709	-1.262	.114	2.896	.228
OCB7_A	457	1	5	4.08	.756	-1.490	.114	3.136	.228
OCB8_A	457	1	5	3.67	.856	-1.227	.114	1.705	.228
OCB9_A	457	1	5	4.01	.629	-1.657	.114	5.417	.228
OCB10_A	457	1	5	3.80	.853	-1.175	.114	1.693	.228
OCB11_C	457	2	5	4.24	.558	-.895	.114	2.932	.228
OCB13_C	457	2	5	4.30	.597	-1.119	.114	2.575	.228
OCB12_C	457	2	5	4.11	.564	-.717	.114	2.392	.228

OCB14_ C	457	1	5	4.23	.573	-1.049	.114	3.718	.228
OCB15_ C	457	1	5	4.18	.598	-.966	.114	3.051	.228
OCB16_ CV	457	1	5	3.70	.625	-.820	.114	2.619	.228
OCB17_ CV	457	1	5	3.74	.650	-.824	.114	1.929	.228
OCB18_ CV	457	1	5	3.70	.679	-.658	.114	1.328	.228
OCB19_ CV	457	2	5	4.03	.547	-.915	.114	3.831	.228
OCB20_ CS	457	1	5	3.74	.636	-.276	.114	1.117	.228
OCB21_ CS	457	2	5	4.30	.570	-.802	.114	1.991	.228
OCB22_ CS	457	2	5	4.05	.675	-.654	.114	1.047	.228
OCB23_ CS	457	2	5	4.13	.602	-.669	.114	1.800	.228
OCB24_ CS	457	2	5	4.34	.549	-.830	.114	2.087	.228
KSB1	457	1	5	3.65	.948	-.621	.114	-.326	.228
KSB2	457	1	5	3.39	.935	-.396	.114	-.615	.228
KSB3	457	1	5	3.66	.839	-.901	.114	.780	.228
KSB4	457	1	5	3.53	.832	-.670	.114	.332	.228
Valid N (listwise)	457								

Appendix IV: Common method bias: Harman's one factor method

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.816	16.030	16.030	8.816	16.030	16.030
2	4.309	7.834	23.864			
3	3.720	6.764	30.628			
4	2.314	4.207	34.835			
5	1.942	3.532	38.367			
6	1.835	3.336	41.703			
7	1.586	2.884	44.587			
8	1.540	2.801	47.388			
9	1.409	2.562	49.950			
10	1.257	2.285	52.234			
11	1.228	2.233	54.467			
12	1.112	2.022	56.489			
13	1.063	1.932	58.421			
14	1.013	1.841	60.262			
15	.993	1.805	62.067			
16	.936	1.703	63.770			
17	.916	1.665	65.435			
18	.895	1.627	67.062			
19	.866	1.575	68.638			
20	.838	1.524	70.162			
21	.829	1.506	71.668			
22	.788	1.432	73.100			
23	.769	1.399	74.499			
24	.731	1.329	75.828			
25	.711	1.292	77.120			
26	.679	1.235	78.354			
27	.671	1.220	79.574			
28	.637	1.157	80.732			
29	.613	1.115	81.847			
30	.595	1.082	82.928			

31	.574	1.044	83.973			
32	.559	1.017	84.990			
33	.548	.997	85.986			
34	.523	.950	86.936			
35	.490	.891	87.828			
36	.469	.854	88.681			
37	.461	.838	89.519			
38	.433	.787	90.306			
39	.429	.780	91.086			
40	.414	.752	91.838			
41	.401	.728	92.567			
42	.391	.711	93.278			
43	.377	.686	93.964			
44	.364	.662	94.626			
45	.334	.608	95.233			
46	.329	.599	95.832			
47	.314	.571	96.403			
48	.302	.550	96.953			
49	.286	.520	97.473			
50	.274	.497	97.970			
51	.262	.476	98.446			
52	.254	.461	98.906			
53	.224	.407	99.314			
54	.205	.372	99.686			
55	.173	.314	100.000			
Extraction Method: Principal Component Analysis.						

Appendix V: Total variance explained by the EFA

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.277	17.994	17.994	8.277	17.994	17.994	4.471	9.720	9.720
2	4.043	8.789	26.783	4.043	8.789	26.783	3.763	8.180	17.899
3	3.410	7.413	34.196	3.410	7.413	34.196	3.206	6.968	24.868
4	2.193	4.768	38.965	2.193	4.768	38.965	3.124	6.792	31.660
5	1.841	4.002	42.967	1.841	4.002	42.967	2.480	5.391	37.051
6	1.718	3.734	46.701	1.718	3.734	46.701	2.475	5.379	42.430
7	1.471	3.199	49.899	1.471	3.199	49.899	2.298	4.995	47.426
8	1.431	3.111	53.010	1.431	3.111	53.010	2.008	4.365	51.791
9	1.326	2.882	55.892	1.326	2.882	55.892	1.887	4.101	55.892
10	1.074	2.335	58.227						
11	1.049	2.280	60.507						
12	.909	1.976	62.483						
13	.893	1.940	64.423						
14	.865	1.881	66.305						
15	.823	1.790	68.095						

1 6	.786	1.709	69.803						
1 7	.773	1.681	71.484						
1 8	.739	1.606	73.090						
1 9	.717	1.558	74.648						
2 0	.698	1.518	76.166						
2 1	.665	1.445	77.611						
2 2	.647	1.406	79.017						
2 3	.637	1.384	80.402						
2 4	.614	1.334	81.736						
2 5	.586	1.275	83.011						
2 6	.546	1.186	84.197						
2 7	.530	1.153	85.350						
2 8	.515	1.119	86.468						
2 9	.490	1.066	87.535						
3 0	.467	1.014	88.549						
3 1	.457	.994	89.543						
3 2	.438	.952	90.495						
3 3	.422	.917	91.412						

3 4	.408	.887	92.299						
3 5	.390	.848	93.147						
3 6	.355	.772	93.919						
3 7	.352	.765	94.684						
3 8	.332	.721	95.406						
3 9	.324	.704	96.110						
4 0	.314	.683	96.793						
4 1	.289	.629	97.421						
4 2	.282	.612	98.033						
4 3	.270	.587	98.620						
4 4	.245	.532	99.153						
4 5	.214	.465	99.617						
4 6	.176	.383	100.000						
Extraction Method: Principal Component Analysis									

Appendix VI: Squared Multiple Correlations

	Estimate
OCB	.204
KSB	.041

	Estimate
OCB_CV	.333
OCB_CS	.572
GCO_M	.001
OCB_A	.192
OCB_C	.438
OCB_S	.323
GCO_F	2.397
GCO18_F	.233
TIM1	.322
TIM4	.343
TIM3	.354
KSB1	.238
KSB4	.299
KSB3	.259
KSB2	.328
OCB19_CV	.410
OCB17_CV	.496
OCB18_CV	.497
OCB24_CS	.412
OCB20_CS	.242
OCB21_CS	.461
OCB23_CS	.434
OCB22_CS	.482
GCO4_M	.129
GCO6_M	.255
GCO1_M	.241
GCO8_M	.406
GCO2_M	.342
GCO5_M	.405
OCB10_A	.603
OCB9_A	.768
OCB7_A	.753
OCB8_A	.441
OCB6_A	.606

	Estimate
OCB15_C	.602
OCB14_C	.713
OCB13_C	.562
OCB11_C	.550
OCB12_C	.458
OCB1_S	.295
OCB5_S	.425
OCB3_S	.400
OCB4_S	.474
OCB2_S	.533
GCO16_F	.352
GCO9_F	.220
GCO23_F	.218
GCO7_F	.349
GCO10_F	.442
GCO11_F	.560
GCO14_F	.306
GCO12_F	.450
GCO13_F	.515