

# Effect of Cultural Intelligence (CI) on Patient Care Services in Private Hospitals at Muscat Governorate

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## ABSTRACT

The increasing need for medical care has led to demand for private medical institutions which offer more personalized care. Most of the patients have grown to prefer private medical attention as compared to public medical care due to the better services offered. Nurses interact with patients on a daily basis who are from different cultural backgrounds which makes it essential for them to understand various cultures to be able to interact and effectively serve all the patients visiting the hospital. Private hospitals in Oman receive patients from diverse cultural backgrounds. In this research, an attempt was made to find out the level of Cultural intelligence in various dimensions and to examine the effect of nurses' cultural intelligence (CI) on patient care services in private hospitals at Muscat governorate. Hence, nurses from Muscat governorate private hospitals were the study's respondents. The data was analysed using the Quartile method, Chi-square, and multiple regression analysis. This research found that the nurses have high level of cultural intelligence in cognitive and meta-cognitive dimensions. On the other hand, majority of the respondents had low level of behavioural dimension of cultural intelligence. And there is no significant relationship between demographic details and the level of cultural intelligence. Furthermore, the findings demonstrated a significant relation between nurse's cultural intelligence in various dimensions and patient care services.

**Keywords:** Behavioral dimension, Cognitive dimension, Metacognitive dimension, Motivational dimension.

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## I. INTRODUCTION

Cultural intelligence is the skill and ability to work and relate effectively in places and situations which are culturally diverse (Steyn and Solomon, 2017). Dimensions of cultural intelligence comprises of cognitive, metacognitive, behavioral, and motivational (Charoensukmongkol and Pandey, 2020). Having cultural intelligence helps in acquiring in depth understanding of the practices, beliefs, and values of other cultures (Gabel-Shemueli, 2019). At work, cultural intelligence helps a person understand each other which cultivates their relationship leading to better results. People are able to demonstrate better trust, tolerate as well as understanding of people from different cultural backgrounds. Oman is one of the most effective countries at dealing with both the good and poor timing of the financial instability situation, because with its multiculturalism. A good example is the opacity of many cultural backgrounds in the workplace (AlRaisi *et al.*, 2019).

The health sector in Oman is one of most significant sectors as it plays an important role in ensuring the wellbeing of its community members by providing adequate care. Hospitals in Oman provide quality health care services. Muscat Governorate has the most advanced as well as the largest hospitals in the country such as Sultan Qaboos University Hospital and Royal Hospital of Oman. According to the National Centre for Statistics & Information (NCSI)

2020, The below Table I, provide the details of total number of government and private Sectors hospitals and health units distributed by governorates and number of beds in Oman.

TABLE I: TOTAL NUMBER OF GOVERNMENT AND PRIVATE SECTORS HOSPITALS AND HEALTH UNITS DISTRIBUTED BY GOVERNORATES AND NUMBER OF BEDS IN OMAN

Governorates	Private Sector			Government Sector	
	Health Clinics	Hospitals	Hospitals	Hospitals	
				Units	Beds
Muscat	420	615	17	2694	11
Dhofar	64	85	3	683	9
Musandam	10	0	0	158	3
Al Buraymi	24	0	0	150	2
AD Dakhliyah	65	56	1	556	7
Al Bathinah North	132	134	2	461	5
Al Bathinah South	45	122	3	298	5
ASH Sharqiyah South	35	0	0	398	4
ASH Sharqiyah North	25	0	0	367	6
ADH Dhahirah	82	42	1	272	2
Al Wusta	45	0	0	77	3
Total	947	1054	27	6114	57

Nurses are regarded as an extremely important part of the hospital staff because they directly deal with the pain and recovery of patients (Porkodi and Haque, 2012). They interact with patients on a daily basis who are from different cultural backgrounds which makes it essential for them to understand various cultures to be able to interact and effectively serve all the patients visiting the hospital.

## II. PROBLEM STATEMENT

Due to an increase in diseases and a growing population, the hospital industry in the Sultanate of Oman has grown tremendously. The increasing need for medical care has led to demand for private medical institutions which offer more personalized care. Brant *et al.* (2021) reports that private hospitals in Oman have prioritized patient care. As such, it is essential to ensuring the comfort of patients and ensuring they have a good environment during their recovery. Most of the patients have grown to prefer private medical attention as compared to public medical care due to the better services offered. The nurses are responsible for taking care on the patients in the hospitals (AIUbaidi *et al.*, 2020). According to the Australian Industry and Skills Committee (2020), nurses play an important role in all health sectors because they provide essential pre-hospital and out-of-hospital care. Services can be provided in both emergency and non-emergency situations, and nurses in hospitals play important roles in terms of injury/illness prevention and determining patients' health because they are highly trained to provide healthcare directly to patients.

Patients from various cultural backgrounds are treated in Oman's private hospitals. The nurses have struggled to understand the cultural background of different patients, which makes it difficult for them to help them in the best way possible (Barzykowski *et al.*, 2019). This is because patients from different cultures behave differently and also have a different perception on various issues making it difficult for nurses without knowledge about their culture to serve them appropriately. Nursing employees have interacted with patients despite their cultural differences with the patients which has been a challenge in understanding one another (AIUbaidi *et al.*, 2020). This led to necessity of studying the effect of nurse's cultural intelligence on the patient care services in the private hospitals at Muscat Governorate.

## III. OBJECTIVES

1. To examine the relationship between nurse's demographic factors (gender, age group, educational level, experience, department) and the level of cultural intelligence in private Hospitals at Muscat Governorate.
2. To evaluate the effect of nurse's cultural intelligence (cognitive dimension, metacognitive dimension, motivational dimension, and behavioral dimension) on the patient care services in private hospitals at Muscat Governorate.

## IV. REVIEW OF LITERATURE

People from various regions have different cultural practices which shape their values and ethics. Through studying different cultures, people are able to demonstrate better trust, tolerate as well as understanding of people from different cultural backgrounds (Göl, and Erkin, 2019). According to Charoensukmongkol and Pandey, 2020) cultural intelligence is also known as cultural quotient in business. It is a theory in organizational and management psychology stating that the ability of a person to understand cultural behavior is key to understanding the people from different cultural backgrounds.

Cultural norms are the shared, integrated beliefs, sanctioned and practices associated with a certain cultural group. The shared norms offer guidelines for daily living and attribute to the well-being of the group. Cultural norms conciliate the relationship between health and ethnicity, marriage rules, environmental exposure, and lifestyle choices (Al Sabei *et al.*, 2021). Cultural norms act as the standard guide through which various cultures use in their daily activities (Rahimaghaee and Mozdbar, 2017). Understanding the diversification of different cultures is core in the health sector since nurses have the knowledge pertaining cultural intelligence. Understanding the various cultural backgrounds of patients within the health sector boost the relationship between staff and patients (Sohal *et al.*, 2021). The approach and interaction of patients and staff is key since patients require nurses who fully understand their cultural settings to help in creating a conducive environment within the health sector (Afsar *et al.*, 2019). Behavioral cultural intelligence is the ability to exhibit proper nonverbal and verbal actions when you are interacting with people coming from different cultural background. Patients prefer nurses who can blend and communicate in their language and not knowing the entire languages but understanding a few phrases to keep the conversations going to make the patients feel comfortable and at ease in the hospital it promotes cultural diversity (Maestri, 2021). Having an intrinsic interest in diverse cultures motivates individuals towards learning the differences and similarities which exist among cultures. Motivated individuals put a lot of effort in understanding various cultures and are persistence which makes them end up performing better as compared to unmotivated individuals (Charoensukmongkol and Pandey, 2020).

Gender affects the behavior and the way of thinking of individuals. Females tend to be more sensitive in general as compared to males. The attitude and behaviors of people depend on their upbringing as well as cultural backgrounds (Williams, 2017). Another reason to expect women to exceed men on Cultural intelligence is their superior verbal intelligence and fluency in both their native language and other languages. Comprehension diverse cultures may benefit from a greater understanding of foreign languages. As a result, women may have higher Cultural intelligence in that regard (Ziada *et al.*, 2021). Likewise, age plays a major role in cultural intelligence. Older people understand the norms, practices and behaviors of people from different communities more compared to young people (Jiang and Gollan, 2018). Moreover, the age of a person determines their view on issues as well as what they see as important. Younger people tend to be energetic and less understanding as compared to older people who are calmer and more understanding (Steyn and Solomon, 2017). Similarly, education and cultural intelligence are interdependent and inseparable parameters. All the educational patterns are guided by the cultural patterns in the society. People who are more educated tend to understand the challenges that people in different professionals go through as compared to the lesser educated individuals (Caputo *et al.*, 2019). Also, the more educated people are able to identify when the services offered to them are low quality.

The majority of past study has been conducted on the cultural intelligence or cultural competence of nurses. These prior studies did not examine the effect of cultural

intelligence on patient care services across all four dimensions. Furthermore, the studies have not examined the association between demographical characteristics and

cultural intelligence aspects among nurses. As a result, this study concentrated on this research gap in the context of Oman.

TABLE II: SUMMARY OF THE LITERATURE REVIEW

Authors	Focus Area	Highlights of the Study
Göl, and Erkin, (2019)	The purpose of the study was to determine whether cultural sensitivity and cultural intelligence are related.	The research highlighted that higher level of cultural intelligence increases intercultural sensitivity.
Charoensukmongkol and Pandey (2020)	The purpose of this research is to investigate the impact of cross-cultural salespeople's cultural intelligence (CQ) on the quality of cross-cultural sales presentations (CSSP).	The findings support sales-eficacy partially mediates the relationship between Cultural intelligence quotients and CSSP.
Al Sabei <i>et al.</i> , (2021)	The impact of the work environment, inter-professional teamwork, and staffing levels on adverse patient events was investigated in this study, as well as the predictive factors of nurses' opinions of the work environment in the Sultanate of Oman.	According to this study, nurses employed in a pleasant environment with good cooperation reported fewer adverse events, patient verbal abuse, and patient falls.
Rahimaghaee and Mozdbar (2017)	Studying the relationship between cultural intelligence and professional competence was the purpose of this study.	Nurses' professional competence is positively correlated with cultural intelligence. Additionally, the metacognitive dimension displayed the most predictive power for professional competency.
Sohal <i>et al.</i> , (2021)	In the study, lean is investigated in the healthcare sector of a developing country, specifically Oman.	The authors discovered that Oman's healthcare sector is good in terms of value understanding, and customer groupings.
Afsar <i>et al.</i> , (2019)	The association between cultural intelligence and voice behavior was examined in this study.	This study provides a new perspective on the relationship between cultural intelligence and speech behavior.
Ziada <i>et al.</i> , (2021)	In this study, cross-cultural and gender disparities in CI were investigated.	Findings revealed an intriguing pattern of gender and country cultural relationships.
Jiang and Gollan, (2018)	The research examined at cultural intelligence (CQ) as a predictor of vocal conduct.	The effects of CQ on employee voice were confirmed by these data.
Caputo <i>et al.</i> , (2019)	The impact of cultural intelligence on the relationship between cultural values and individual preferences for a certain negotiation style is investigated in this study.	The research emphasized the impact of cultural values and intellect on negotiation techniques.

V. CONCEPTUAL FRAMEWORK

Fig. 2 represents the conceptual framework of this research study. H1, H2, H3, H4 are the hypothesis of this conceptual model. Demographic factor considered as controlled variable in this study.

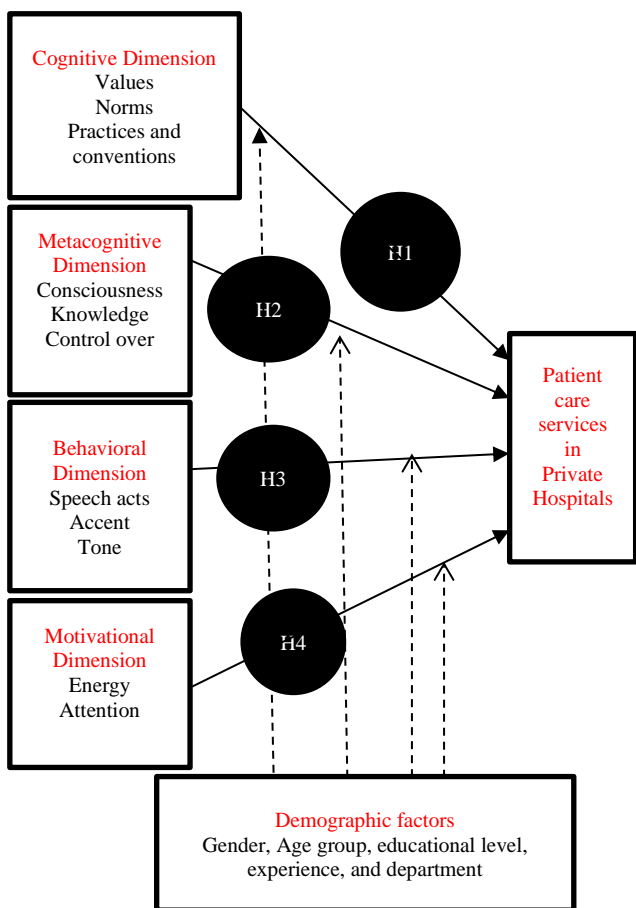


Fig. 2. Conceptual Framework.

VI. HYPOTHESIS OF THE STUDY

To measure the impact on patient care services, the research hypothesis was developed based on the four dimensions of cultural intelligence. The hypothesis are as follows:

- H01: There is no significant relation between cognitive dimension of cultural intelligence and the patient care service.
- H02: There is no significant relation between metacognitive dimension of cultural intelligence and the patient care service.
- H03: There is no significant relation between motivational dimension of cultural intelligence and the patient care service.
- H04: There is no significant relation between behavioural dimension of cultural intelligence and the patient care service.

VII. RESEARCH METHODOLOGY

The study employed a descriptive research design. It describes the characteristics of cultural intelligence's (CI) impact on patient care services in a private hospital in the Muscat governorate. A questionnaire was utilized as a data collection tool. The researchers developed a questionnaire with 30 statements with Likert's five (5) point scale for respondents to give their opinions on the subject. The questionnaire is divided into two sections, one of which comprises demographic information. The second section covers statements related to four dimensions of Cultural intelligence and patient care services. The researchers embraced the cultural intelligence scale developed by (Ang and Van Dyne, 2006) and considering the nature of nurses' job, the statements were modified, and few statements were

added according to the need of the study. The cultural intelligence dimension comprises of metacognitive CI, cognitive CI, motivational CI, and behavioral CI. Each dimension in the questionnaire consists of 5 statements. Finally, the questionnaire end with 10 questions about patient care services.

In this investigation, the researchers used a non-probability snowball sampling technique. Nurses from Muscat governorate private hospitals are the study's target respondents. According to health sector statistics (2020), Oman has a total of 84 hospitals, with 10 private hospitals in Muscat Governorate. According to figures from the NCSI health sector (2020), there are 3960 nurses employed in the private sector. Only 2.88 percent (114) of the 3960 total nurses are Omani nurses, with 97.12 percent (Expatriate:3846) coming from various cultural backgrounds. After consulting experts and using sample size formula, the researchers decided on a sample size of "150" nurses in private hospitals. Six surveys were found to be missing after the data was collected. As a result, 144 samples were chosen for final analysis. The gathered data was analyzed using the SPSS V26 statistical software. To examine the strength and value of the data, various methods were utilized, including the quartile method, Chi square, means score, and multiple regression analysis.

VIII. ANALYSIS OF DATA

The reliability of the statements used in the questionnaire concerning the dimensions of cultural intelligence and patient care services is calculated and presented in the Table III below.

TABLE III: RELIABILITY STATISTICS

Constructs	No. of Items	No. of respondents	Reliability Statistics (Cronbach's Alpha)
Cognitive Dimension	5	144	0.948
Meta-Cognitive Dimension	5	144	0.901
Motivation Dimension	5	144	0.850
Behavior Dimension	5	144	0.863
Patient Care Services	10	144	0.942
Overall	30	144	0.955

Source: Primary Data.

The overall reliability score was (0.955), indicating that the construct is highly reliable.

The Table IV below highlights the demographic detail of the respondents; the variables taken for the study are Gender, Age, Education level, Experience in Oman, Ward detail and Department.

*Gender:* 60.4% are female respondents and 39.6 % are male respondents, it means that most of the nursing respondents are female communal.

*Age:* 15.3% of the respondents are below 25 years. Were 36.8% of the respondents are between 26 to 35 years. In addition, the age group from 36 to 45 years represents 24.3%. Remaining 16% of the respondents are from 46 to 55 years and only 7.6% of the respondents are above 55 years. It means the majority of nursing respondents are from 26 to 35 years.

*Educational level:* majority of nurse respondents are

holding bachelor level by 38.9% of the study and 29.2% hold master level the remains 31.9% have other degrees.

*Experience in Oman:* 20.1% of nurse respondents have less than one year of experience in Oman, whereas 31.3% are with 1 to 5 years of experience. Hence 27.1% are having experience from 6 to 10 years and the rest 21.5% of the respondents with more than 10 years of experience.

*Ward details:* majority of the respondents are working in the inpatient ward which are around 54.2% whereas, 45.8% are working in the outpatient ward.

*Department:* 14.6% of the respondents are working in the ICU department, 18.8% in General department, 11.1% in Dermatology, 11.8% in Cardiology, 16.7% in Pediatrics, 10.4% in Psychiatry, 16.7% working in other departments.

The level of Cultural intelligence in four dimensions (metacognitive CI, cognitive CI, motivational CI, and behavioral CI) among nurses in Muscat Governorate private hospitals was calculated and reported in Tables V and VI.

TABLE IV: DEMOGRAPHIC PROFILE OF RESPONDENTS

Particulars	Variable	Frequency	Percentage
Gender	Female	87	60.4
	Male	57	39.6
	Total	144	100.0
Age	Below 25	22	15.3
	26 to 35	53	36.8
	36 to 45	35	24.3
	46 to 55	23	16.0
	Above 56	11	7.6
	Total	144	100.0
Educational level	Bachelor level	56	38.9
	Master level	42	29.2
	Others	46	31.9
	Total	144	100.0
Experience in Oman	Less than 1 year	29	20.1
	1 to 5	45	31.3
	6 to 10	39	27.1
	Above 10 years	31	21.5
	Total	144	100.0
Ward details	Inpatient ward	78	54.2
	Outpatient ward	66	45.8
	Total	144	100.0
Department	ICU	21	14.6
	General medicine	27	18.8
	Dermatology	16	11.1
	Cardiology	17	11.8
	Pediatrics	24	16.7
	Psychiatry	15	10.4
	Others	24	16.7
	Total	144	100.0

Source: Primary Data

TABLE V: LEVEL OF CULTURAL INTELLIGENCE

Dimensions	Level	Frequency	Percentage
Cognitive	Low	39	27.1
	Medium	45	31.3
	High	60	41.7
	Total	144	100.0
Meta-Cognitive	Low	38	26.4
	Medium	46	31.9
	High	60	41.7
	Total	144	100.0
Motivation	Low	50	34.7
	Medium	38	26.4
	High	56	38.9
	Total	144	100.0
Behavioural	Low	58	40.3
	Medium	29	20.1
	High	57	39.6
	Total	144	100.0
Overall cultural	Low	41	28.5
	Medium	55	38.2
	High	48	33.3
	Total	144	100.0

Source: Computed Data.



TABLE VI: LEVEL OF CULTURAL INTELLIGENCE WITH DEMOGRAPHIC FACTORS

Variables	Level			Total	
	Low	Medium	High		
Gender	Female	30 20.8%	28 19.4%	29 20.1%	87 60.4%
	Male	11 7.6%	27 18.8%	19 13.2%	57 39.6%
	Total	41 28.5%	55 38.2%	48 33.3%	144 100%
Age	Below 25	4 2.8%	9 6.3%	9 6.3%	22 15.3%
	26 to 35	21 14.6%	20 13.9%	12 8.3%	53 36.8%
	36 to 45	11 7.6%	15 10.4%	9 6.3%	35 24.3%
	46 to 55	3 2.1%	9 6.3%	11 7.6%	23 16.0%
	Above 56	2 1.4%	2 1.4%	7 4.9%	11 7.6%
	Total	41 28.5%	55 38.2%	48 33.3%	144 100%
Educational level	Bachelor level	17 11.8%	22 15.3%	17 11.8%	56 38.9%
	Master level	13 9.0%	16 11.1%	13 9.0%	42 29.2%
	Others	11 7.6%	17 11.8%	18 12.5%	46 31.9%
	Total	41 28.5%	55 38.2%	48 33.3%	144 100%
Experience in Oman	Less than 1 year	11 7.6%	7 4.9%	11 7.6%	29 20.1%
	1 to 5	14 9.7%	20 13.9%	11 7.6%	45 31.3%
	6 to 10	10 6.9%	16 11.1%	13 9.0%	39 27.1%
	Above 10 years	6 4.2%	12 8.3%	13 9.0%	31 21.5%
	Total	41 28.5%	55 38.2%	48 33.3%	144 100%
Ward details	Inpatient ward	23 16.0%	32 22.2%	23 16.0%	78 54.2%
	Outpatient ward	18 12.5%	23 16.0%	25 17.4%	66 45.8%
	Total	41 28.5%	55 38.2%	48 33.3%	144 100%
Department	ICU	3 2.1%	10 6.9%	8 5.6%	21 14.6%
	General medicine	9 6.3%	10 6.9%	8 5.6%	27 18.8%
	Dermatology	4 2.8%	7 4.9%	5 3.5%	16 11.1%
	Cardiology	5 3.5%	7 4.9%	5 3.5%	17 11.8%
	Pediatrics	8 5.6%	5 3.5%	11 7.6%	24 16.7%
	Psychiatry	5 3.5%	7 4.9%	3 2.1%	15 10.4%
	Others	7 4.9%	9 6.3%	8 5.6%	24 16.7%
	Total	41 28.5%	55 38.2%	48 33.3%	144 100%

Source: Computed Data.

**Cognitive:** Nurses who are the respondents of this research having high level of cultural intelligence in the cognitive dimension which is around 41.7% and 31.25% of nurses having medium level of cognitive dimension, the remaining 27.08% are having low level of cognitive dimension.

**Meta-Cognitive:** 41.67% of the respondents having high level of cultural intelligence in the meta-cognitive dimension. In addition, 31.94% having medium level of meta-cognitive. On the other hand, the rest 26.39% of the respondents having low level of cultural intelligence in the meta-cognitive dimension.

**Motivation:** The high level of motivational cultural dimension of nurse respondents by 38.89%, Medium level by 26.39%, Low level by 34.72%.

**Behavioural:** 40.28% of the respondents are having low level of cultural intelligence in the behavioral dimension, 39.58% are having high level, and 20.14% are having medium level of cultural intelligence in the behavioral dimension. The reason could be the nurses might feel difficult to speak the different languages of patients from diversified culture.

**Overall cultural intelligence level:** The majority of the respondents are having medium level of cultural intelligence in all the dimensions which is 38.19%. On the other hand, 33.33% respondents are having high level and 28.47% only having low level of cultural intelligence in all the dimensions.

From the below Table VI, **Gender:** 20.8% of female respondents and 7.6% of the male respondents show up the low level of cultural intelligence. On the other hand, 20.1% of female respondents and 13.2% male respondents view the level of cultural intelligence are having high level. In addition, 19.4% of female respondents and 18.8% of male respondents are the highest percentage of the research respondent show up the level of cultural intelligence is having medium level.

**Age:** Majority of respondents represents the level of age group and the level of cultural intelligence is having low level, by 14.6% of the respondent between 26 to 35 age group. In addition, only 1.4% of the age group above 55 years view the cultural intelligence is having both low and medium level.

**Educational level:** majority of respondents the level of educational and the level of cultural intelligence are having medium level by 15.3% of the respondents holding bachelor level. On the other hand, only 7.6% of the respondents holding other level view the cultural intelligence having low level.

**Experience in Oman:** majority of nurses with 1 to 5 years experiences in the hospital having medium level, by 13.9% of the cultural intelligence, 6.9% of the respondents with 6 to 10 years. In addition, only 4.2% of the respondents with above 10 years having low level.

**Ward details:** 22.2% of the respondents are having medium level of inpatient ward. On the other hand, 12.5% of the respondents having low level of outpatient ward.

**Department:** most research nursing respondents view the level of cultural intelligence to be high, by 7.6% of the respondent works in the pediatrics department, 6.9% in General department, 3.5% in Dermatology, 4.9% in Cardiology, 16.7% in Pediatrics, 10.4% in Psychiatry. In addition, only 2.1% works in ICU and Psychiatry having low and high level.

Furthermore, the hypothesis was tested using the Pearson Chi-square test in order to investigate the association between the demographic variables of the respondents and their level of cultural intelligence. The results of the hypothesis test were presented in Table VII. The study's hypothesis is as follows:

H0: There is no significant relation between demographic factors (gender, age group, educational level, experience, department) and the level of the cultural intelligence in private hospitals at Muscat Governorate.

From Table VII, the result displays that the p values (0.088, 0.075, 0.875, 0.421, 0.556, 0.842) which are more than 0.05

( $p > 0.05$ ), and the chi-square (4.868, 14.261, 1.216, 6.019, 1.174, 7.233a) respectively, suggest that there is no significant relationship between demographic variables and the level of cultural intelligence, hence the null hypothesis is accepted. It means there is no significant relation between the demographic variables of the respondents and the level of cultural intelligence.

TABLE VII: TESTING OF HYPOTHESIS (CHI-SQUARE)

Demographic Variable	Value	d.f	P Value	Significance at 5%
Gender	4.868	2	0.088	Not significant
Age	14.261	8	0.075	Not significant
Educational level	1.216	4	0.875	Not significant
Experience in Oman	6.019	6	0.421	Not significant
Ward details	1.174	2	0.556	Not significant
Department	7.233	12	0.842	Not significant

Source: Computed Data.

Furthermore, the effect of nurses' cultural intelligence (metacognitive CI, cognitive CI, motivational CI, and behavioural CI) on patient care services in private hospitals in Muscat Governorate was assessed using multiple regression analysis.

TABLE VIII: TESTING OF HYPOTHESIS (MULTIPLE REGRESSION)

Dimension	Unstandardised coefficients		Standardised coefficients	t	Sig
	B	Std. Error	beta		
Constant	3.517	0.406		8.667	0.000
X1	0.377	0.062	0.009	2.105	P<0.001**
X2	0.451	0.053	0.086	4.969	
X3	0.391	0.066	0.121	1.372	
X4	0.262	0.067	0.081	5.928	

a. Dependent Variable: Patient Care Services a Note: \*\*sig. at 1% level  
Source: Computed Data.  
Multiple R value: 0.980.  
R square value: 0.906.  
F value: 85.508.  
P value: <0.001\*\*.

The coefficient value of 0.980(98%) suggests that the link between patient care services and the four independent variables is fairly strong and positive in the Cognitive dimension, Meta Cognitive dimension, Motivation dimension, and Behavioural dimension of the cultural intelligence. Thus, the value of R square is 0.906, explains approximately 90.6 percent of the variation in patient care services, and the R square value is significant at the 1% level.

The Multiple regression equation is:

$$Y=C +f(X1+X2+X3+X4)$$

where

Yi = Patient care services;

X1 = Cognitive Dimension of Cultural Intelligence;

X2 = Meta Cognitive Dimension of Cultural Intelligence;

X3 = Motivation Dimension of Cultural Intelligence;

X4 = Behavioural Dimension of Cultural Intelligence.

From Table VIII, the results indicate that the variable X1 representing the cognitive dimension of cultural intelligence and the p value is  $p < 0.001^{**}$ , which is significant at 1% level, indicating that there is a relation between patient care services and the cognitive dimension of cultural intelligence. As well as X2 demonstrating the meta cognitive dimension of cultural intelligence and the p value is  $p < 0.001^{**}$ , which is significant

at 1% level, denoting that there is a relation between patient care services and the meta cognitive dimension of cultural intelligence. Also, the item X3 representing the motivation dimension of cultural intelligence and the p value is  $p < 0.001^{**}$ , which is significant at 1% level, revealing that there is a relation between patient care services and the motivation dimension of cultural intelligence. The variable X4 signifying the behavioural dimension of cultural intelligence and the p value is  $p < 0.001^{**}$ , which is significant at 1% level, representing that there is a relation between patient care services and the behavioural dimension of cultural intelligence. Hence, for all the null hypothesis rejected and the alternative hypothesis accepted for all the four independent variables. It infers from this multiple regression analysis, that the four dimensions (Cognitive Dimension (X1), Meta Cognitive Dimension (X2), Motivation Dimension (X3), and Behaviour Dimension (X4)) of cultural intelligence are significantly related with the good patient care services.

### IX. CONCLUSION AND IMPLICATIONS

It is imperative for every pioneering healthcare organization to invest in the development of nurses' skills and competencies. Cultural intelligence is considered an invaluable capability for nurses because they encounter patients from different cultures. The impact of cultural intelligence on nursing is a vast topic that has been researched in various ways, with only a few academics looking into different aspects of cultural intelligence. Many studies have been done on nurses' cultural competency and cultural intelligence (AlBusaidi *et al.*, 2019; Afsar *et al.*, 2019; Rahimaghaee *et al.*, 2017; AlUbaidi *et al.*, 2020). Only a few studies (Fata *et al.*, 2017; Göl, & Erkin, 2019; and Rahimaghaee *et al.*, 2017) looked at the impact of cultural intelligence solely. The impact of cultural intelligence on job satisfaction and organizational commitment among nurses was explored by Fata *et al.*, (2017). Göl and Erkin (2019) studied the cultural intelligence and sensitivity of nurses. Rahimaghaee *et al.* (2017) also looked into the link between cultural intelligence and nursing cultural competency. None of the research, however, looked into how a nurse's cultural intelligence influenced patient care. Henceforth, the purpose of this study was to analyse the four dimensions of cultural intelligence and the effect of cultural intelligence (CI) on patient care services in private hospitals in Muscat, Oman. The level of cultural intelligence was measured in all four dimensions in this comprehensive study. The research was carried out at private hospitals and focuses on nurses as they are the most important party in the healthcare industry as their day-to-day employment requires them to interact with a wide range of patients.

As the questionnaire includes statements to test how these dimensions are impacting nursing personnel in their patient care services in the private sector, the study's findings revealed that nurses show a high level of cultural intelligence in both cognitive and meta-cognitive dimensions. On the other hand, the majority of respondents had a low level of cultural intelligences in behavioral dimension. In terms of overall cultural intelligence level, 38.19% of respondents had

a medium degree of cultural intelligence across all categories. Furthermore, there is no statistically significant association between demographic characteristics (Gender, Age Group, Educational Level, Experience, Ward Details, Department) and cultural intelligence. Finally, as a result, this study conducted multiple regression analyses to examine the effect of nurse's cultural intelligence in all four dimensions on patient care services. The findings demonstrated a significant association between nurse cultural intelligence and patient care services.

Understanding the effect of nurse's cultural intelligence enhances good patient care services. With a better relationship between nurses and patients, the care services will be better managed, allowing both parties to be satisfied. This research will help to health sector administrators for improving some aspects which will improve the efficiency of patient care services and also to motivate the nurses to improve their services to their patients.

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