

Knowledge Sharing and Employee Development in Oil and Gas Companies in the United Arab Emirates

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Abstract. It is a fact nowadays that knowledge is the number one resource of organizations, and having that knowledge managed and shared effectively gives the organization the competitive advantage over other organizations. Many oil and gas organizations believe that having a good system and environment for knowledge sharing will have a positive effect on the learning curves of both the individual and the organization. In this study the researchers test the relationship between knowledge sharing and employee development and address the key knowledge-sharing factors that might have a positive relationship with employee effectiveness and subsequently their development. An empirical study was carried out to investigate this relationship in two oil and gas companies in the United Arab Emirates (UAE). One hundred and fifty questionnaires were distributed in both companies. The questionnaire consisted of 46 items addressing four factors of knowledge sharing: *Organizational culture*, *Individual Communications skills*, *Procedural justice*, and *Supervision and feedback*. The dependent variable is *employee development*. Of the responses received, 124 were valid to use. The analysis was undertaken using the statistical package of social science software (SPSS) and the results showed a positive relationship between the global variables (knowledge sharing and employee development), but surprisingly one knowledge-sharing factor – Individual Communications skills - showed no significant relationship with employee development. At the end of the paper the researchers address the limitations of the study and make some recommendations to organizations on how to improve knowledge sharing which should lead to employee development and accordingly give the organization a better competitive advantage. Finally the researchers suggest some directions for future research.

Keywords: Knowledge sharing · Employee development · Petroleum industry

1 Introduction

Knowledge lies at the heart of today's economy and is one of the main competitive advantage factors for any organization [7]. The importance of the knowledge-sharing concept in elevating the organization's performance is well known and applied by the big oil and gas companies such as British Petroleum, Exxon Mobile and Chevron [11]. It is applied because those organizations need to survive in the face of today's hard competitive environment [7]. The employees of any organisation are the main drivers of the cycle

of the knowledge-sharing process and their effectiveness and willingness to cooperate is important to achieve the organization's goals and better performance [16]. Employee development and its related programs and methods are still a main target of any organisation [28] due to the resulting positive impact when applied and managed in a professional way [20]. A study by author [38] was conducted to investigate the relationship between employee work performance and their cooperation with others. The study concluded that such employees who showed an ability and interest to participate in knowledge-sharing activities gain better experience and add knowledge which increases their performance and accordingly affects their overall development in a positive way. So the employee development programs along with knowledge-sharing factors and techniques are proved to play a role in both employee and organisation performance and have become an important goal in the organization's strategy [12]. In general, the objective of organizations is to have a competitive set of unique services to be able to stand in today's economy. Knowledge management systems in oil and gas organizations have been used for two decades in different contexts and from different perspectives [11]. One application of the knowledge management system is knowledge sharing in which the individual should be identifying, acquiring, applying, creating, developing, preserving and measuring the knowledge of the organisation [41]. The process of sharing knowledge is considered the main way to create new knowledge between people [14]. The effect of such knowledge shared in an organisation has long been a concern within the academic area [6]. Employee development on the other hand has long attracted the interest of social science scholars and many studies such as studies by authors [16, 20, 37] have investigated in depth the importance and usage of different employee development approaches to enhance the organisation's and the employee's performance.

A deep look into the literature of knowledge sharing and its related factors on one side and employee development methods and approaches on the other side can conclude the existence of a positive relationship between them. Accordingly organizations that fail to provide different means for knowledge sharing will be affected. That affect in turn will reach the employee level, which will ultimately affect the overall organisation performance [42]. This study investigates the direct relationship between knowledge sharing and its factors with employee development in oil and gas organizations in the United Arab Emirates (UAE). The petroleum industry is the context of this study. UAE has the fourth-largest oil reserve in the world and the world's seventeenth-largest reserve of gas. Thirty per cent of the country's GDP comes from the petroleum sector [43]. This study is considered important for both the organizations as practitioners and for academic personnel. The study offers some recommendations that organisation and employees should ensure in order to increase performance. The study of the direct relationship between knowledge sharing and employee development had not been covered explicitly in previous research particularly in the UAE. Furthermore, this study is one of only a few that has investigated this relationship by focusing mainly on the employees of two major oil and gas companies in the UAE. The study consists of a literature review about knowledge sharing in general followed by a review of the factors reported in the literature that affect knowledge sharing. The literature of employee development related to knowledge sharing is also addressed. The methodology used is discussed, followed by findings and analysis. The study concludes with recommendations, limitations and suggestions for further research.

2 Literature

Due to the nature of the study, the researchers split the literature review into two main parts. The first concentrates on knowledge sharing, how it is developed, and its main features. In addition it gives details about previous studies which addressed the factors that affect sharing knowledge. The researchers chose four factors that directly affect sharing of knowledge based on previous studies. The second part addresses some studies on employee development and how that is related to knowledge sharing and knowledge-sharing factors.

2.1 Knowledge Sharing

Knowledge by nature is either *tacit* or *explicit* [11]. Tacit knowledge is the ‘know-how’ knowledge which comes through the experience of each individual [26]. The explicit form of knowledge is the hard copy type of knowledge and it can be transferred and stored and so shared easily with others [46]. Tacit knowledge is hard to handle and stored and in fact is hard to identify, but on the other hand it plays an important role in problem solving and time saving [44], and, if managed and shared effectively, can significantly enhance employee performance [34]. One of the more effective ways of creating new knowledge is encouraging a knowledge-sharing process among people [44, 34]. It is one of the main systems in the knowledge management concept which directly affects the organisation and the employee [44]. Knowledge sharing within an organisation had been looked as a contribution of an individual to the collective pool of corporate knowledge [26]. Knowledge sharing has long been recognized as an important research topic [45]. Knowledge sharing –also called knowledge *diffusion* - can be implemented successfully depending on the level of knowledge between knowledge seekers and owners [41]. Implementation of such a system in any organisation will require the understanding of the concept and the barriers involved [8] and then motivate the employees in the organisation to share the knowledge [46]. There is no unique definition for knowledge sharing, but it can be defined as an approach in identifying, acquiring, applying, creating, developing, preserving and measuring the knowledge of the organisation [14]. Many aspects need to be known when addressing the knowledge-sharing concept such as the factors influencing knowledge sharing which can be summarized as Organisational culture [19], Individual Communications skills [3], Procedural justice [2], and Supervision and feedback [37]. The fact that tacit knowledge is based on personal experience makes it a main part that could be connecting knowledge sharing and employee development where employees can enhance their work performance and accordingly increase the chance for better development when they cooperate and share knowledge with other colleagues [38]. The four factors mentioned above have a direct influence on knowledge sharing and it has also been proved that they directly improve organisation performance and employee development [16]. Based on this, we set out our main hypothesis:

H1: There is a positive relationship between knowledge sharing and employee development.

2.1.1 Organizational Culture

Understanding the definition of organisational culture is important if we are to understand its relationship to knowledge sharing. Although there is no unique definition for organisational culture, for the purposes of our study, the definition by author [30] seems to be suitable, he define organisational culture as the knowledgeable members of a group and their willingness to share knowledge. It actually gives the employees day-to-day guidance on how to communicate with each other [1]. Organisational culture could be considered as a key enabler for sharing knowledge [5, 19]; in a way that the associated norms and practices that come with organisational culture elevate the team's work style which in turn affects them positively and encourages knowledge sharing [8]. The importance of organisational culture on knowledge sharing is that when such a system is adopted in an organisation on a daily basis, then the employees will not feel as if they are being forced to share knowledge; instead they consider it as a part of their daily tasks [24]. Furthermore the organisational culture affects - both directly and indirectly - the individual in the organisation and accordingly helps them to develop their skills and so improve their performance [13]. Therefore:

H2: There is a positive relationship between organizational culture as a knowledge-sharing factor and employee development.

2.1.2 Procedural Justice

The idea of social justice has long been a subject of interest for social psychologists because of its effect and importance [33]. As a theory, procedural justice "suggests that the perceived fairness of distributed outcomes should be determined by the procedures of distribution of outcomes to workers" [39]. This is the feeling of the individual that the decision-making process and outcome are fair; which means that subsequent behavior and attitude of employees will be affected by justice. It is a fact that people's ability and willingness to cooperate with other people is affected by justice [32]. One form of that cooperation is the people's ability and willingness to share knowledge.

Procedural justice has an influence on and plays a key role in knowledge sharing of personnel; which in turn affects the knowledge at organizational and senior management level [35]. An example of that is when an organization undergoes a change that needs employees' commitment, which can be elevated and increased with the presence of procedural justice [23]. In general, having a fair process of decision making and other management roles will ensure trust between employees and the organization which should accordingly encourage personnel to share knowledge and communicate more effectively [2]. The role of procedural justice not only influences the cooperation and commitment of employees but also affects their performance in many ways; one such way is the employee performance appraisal [31]. The performance appraisal involves tools used by organizations in many activities such as raising employee's performance [10]. So procedural justice has a direct effect on employee development, and managers should take it into consideration when taking the decision to promote employees and apply a fair employment law. Failing to do so could affect the employee's behavior and accordingly may force them to quit [36]; accordingly:

H3: there is a positive relationship between procedural justice as a knowledge-sharing factor and employee development.

2.1.3 Individual Communication Skills

In order for knowledge sharing to take place, employees should be equipped with certain skills in order to effectively use and share knowledge [22]. Such skills are like the ability to share and the motivation to give knowledge [3]. In addition, some experience will also be needed which help to accelerate the sharing will process because, when there are senior personnel who are experts on some fields of knowledge, they tend to train and share their knowledge with junior individuals [9]. The above-mentioned skills prove the positive relationship with knowledge sharing, and on the other hand, having good communication skills directly affects the employee's performance. Many organizations used such skills to evaluate employees' overall development and identify weaknesses in order to find ways of improvement to elevate employee excellence. This will eventually lead to customer satisfaction and so achieve the organization's goals [37]. In addition to the individual skills there should be an effective fit between the organisation culture, the environment, and the employee's skills and characteristics; such a relationship will lead to more commitment and accordingly more effective knowledge sharing [15]. Furthermore, it is considered very important for an individual to be equipped with new technology methods that are available nowadays [18]. Technological skills such as using emails, instant messaging software, sharing sites and other smart applications are now considered the very basics for employees to have; those methods could help make the sharing of knowledge more effective and give the organisation an advantage against their competitors [11]. In general, the new technology methods gained by employees are directly affecting their ability to share knowledge and their chance to raise performance [40]. Organizations need to give more attention to the new communication tools used to share knowledge to raise the performance of both the organisation and employees [11]. Based on this,

H4: There is a positive relationship between individual communication skills as a knowledge-sharing factor and employee development.

2.1.4 Supervision and Feedback

Knowledge sharing by its very nature is a relation between seekers and receivers of knowledge [14]. In many organizations, such sharing of knowledge should be associated with good supervision feedback; that feedback should be in the form of a close relationship between the supervisor and subordinates [4]. The professional relationship between employees and their supervisors is important to improving the employee's level of understanding using (for example) a report review which should include a feedback about the employee's work [25]. That kind of feedback would enhance the learning and knowledge of employees which raises their performance [17]; [21], this forms the basis of the next hypothesis.

H5: There is a positive relationship between supervision and feedback as a knowledge-sharing factor and employee development.

2.2 Employee Development

Employee development in its normal form can be defined as assisting employees to learn more in order to perform better but such a view needs to be looked at and added

to it in order to understand “the wide range of conditions within which employee development programs exist in organizations” [16]. There are many employee development methods that are proven good and used by organisation to improve employee performance and organisational outcomes and which at the same time are directly related to the concept of knowledge sharing such as “off-the-job and on-the-job training programs, educational programs and seminars, job rotations, and mentoring programs” [16]. Many studies have been conducted in the area of employees’ development and its effect on employee and organisation performance. For example at employee level; author [20] study the influence of different learning experience and job performance which shows positive relationship. The organisation should help employees by providing different learning chances to make them perform more and, accordingly, that would lead to better performance. One of such major learning chances is the knowledge and learning that employees get because of their cooperation and communication with other employees [37]. This proves the relationship between the knowledge sharing and employee development.

2.3 Conceptual Framework

Figure 1 demonstrates the hypotheses relationship between independent and dependent variables.

3 Research Methodology

The method used in this study is a quantitative approach through the administering of a questionnaire which has been proved suitable for such research, as this method generates accurate and reliable data using a different range of samples and many proved tests to check the significance of the relations. This section explains the methods and procedures that researchers use with the instrument, the variable, and measures applied.

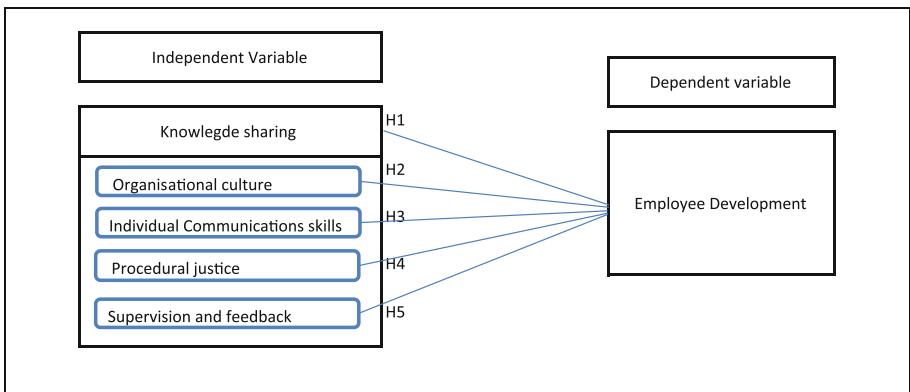


Fig. 1. Conceptual framework

3.1 Samples and Procedures

The context of the study as mentioned above is the petroleum industry in the UAE. The study was conducted in two major oil organizations in the UAE; one in Dubai and the other in Abu Dhabi. Self-administered questionnaires were distributed (online and hard copy) in order to investigate and explain the addressed hypotheses and check the significance of the relationship between the dependent and independent variables as per the proposed conceptual framework above. One hundred and fifty employees from both organizations were selected; all holding full-time contracts and the majority of whom are engineers from different levels of management. Out of 150 questionnaires 132 responses come back, and out of those 124 questionnaires were valid to be used in the analysis with a response percentage of 93 %. Each questionnaire (online and hard copy) had, attached, an introduction explaining what the questionnaire is about and what the purpose of the study.

3.2 Study Instruments

A questionnaire survey consisting of 46 questions was distributed by hand and online link through emails and smart phones. The survey was divided into three sections: the *demographic* section which contained nine items; the *knowledge-sharing* section divided into four factors with 19 questions; and the *employee development* section containing 26 questions. A pilot study with 25 responses was tested at the start of the study to make sure that the factors were loaded well and that items were consistent. After acquiring the results of the pilot test, the researchers had the confidence to start the actual work.

3.3 Variables and Measures

The study contains three main variables:

Demographic Variable: it consists of nine areas: gender, age, marital status, nationality, education, organization type, job status, number of years in organization and number of years on current job. The researchers used a scale ranging from two (e.g. gender) to six (e.g. education level). The scale is developed by [29].

Knowledge-Sharing Variable: knowledge sharing is a multidimensional variable consisting of four factors, comprising a total of 24 questions. Those factors are organisational culture (five questions), individual communication skills (five questions), procedural justice (six questions) and supervision and feedback (five questions). The 5-point Likert format is used in this study. The respondents were asked to choose from the following responses: 1 for “strongly agree”, 2 for “agree”, 3 for “Neutral”, 4 for “disagree” and 5 for “strongly disagree”.

Employee Development: employee development is the one-dimensional variable and used the same scale used for the knowledge-sharing variable.

4.1 Descriptive Statistic

In this section, the analyzed data are looked at in an abstract way from a descriptive statistics point of view, the aim of which is to illustrate the vital structures and main features of the data in the study. Table 1 below depicts the results of demographic data analysis.

As shown in Table 1 above, the demographic findings and career variables were presented in a simply summarized format for the study sample. In the study, the number of male participants was higher than female participants, representing a 60.5 % to 39.5 % dominant-male to female ratio. Furthermore, the majority of the participants fell in the middle age group of (25–35) years representing 55.6 % of the total sample. The number of married respondents outnumbered the unmarried respondents with a ratio of 70.2 % to 29.8 %. In terms of nationality of respondents, UAE nationals represented 36.3 % of the respondents, while Non-UAE nationals were greater, comprising 62.9 % of the sample. The majority of the study sample showed a high level of education, with respondents holding graduate and postgraduate degrees. The respondents with Bachelors and High Diploma degrees collectively represented more than the half of the study sample –48.4 % and 32.3 %, respectively. In addition, the study sample was comprised of governmental, semi-governmental and private sectors, with a noticeable difference between them, at 23.4 %, 36.3 %, and 40.3 %, respectively. The respondents varied in their career level, seen as being with equal numbers at entry level and first level, representing 26.6 % each, and collectively representing more than half of the study sample. On the other hand, employees at the middle level of their career represented 46.8 % of the study sample. The sample data show that the majority of employees had work experience that ranged between two and seven years with their current employers at their current position, accounting for 60.5 % and 62.1 % respectively. However, this varied among other respondents, showing the least who had more than 15 and 20 years of experience in the same organization and worked at same position, with one responded (0.8 %) to each respectively.

4.2 Reliability Test

This part of the study examines the reliability of the administered research survey questionnaire. Following the study by author [29], the minimum acceptable value for reliability is 0.6. Table 2 below indicates the summary of reliability test.

From Table 2 above, the studies overall Cronbach's alpha value was 0.826; knowledge sharing was found to be 0 which is considered highly reliable, while employee development is 0. None of the items were excluded during the reliability texts.

4.3 Factor Analysis

In this section, the data were assessed dimensionally in order to ensure that proper loading of the studied items under the factors. According to author [29] a value of 0.50 or above is set as the item's acceptance criteria in order to have a meaningful factors

Table 2. Reliability test

Variable	Cranach’s alpha	# of items	# of items after deleting
Global: knowledge sharing	0.826	20	18
Global factor: organisational culture	0.819	5	5
Global factor: individual communications skills	0.831	5	4
Global factor: procedural justice	0.808	5	5
Global factor: supervision and feedback	0.813	5	4
Global: employee development	0.831	26	18
Overall	0.888	46	36

arrangement by improving scale reliability and excluding weakly loaded items from the subsequent analysis. Table 3 below summarizes the factor analysis results.

At the very beginning of the factor analysis, not all of the knowledge-sharing factor items were found to satisfy the abovementioned criteria. Each of the four factors had some poorly loaded items (with values less than 0.50). Thus, they were removed and the items were recomputed, yielding the current one presented in Table 2 above, only retaining the one with a value of 0.5 and above (shown in Table 3). Most of the items in the study showed proper loading. Hence, the analysis is considered done when the current items will be properly loaded under each factor. Table 3 below explains and provides the numerical data of factor items that are loaded.

Table 3. Factor loading for knowledge sharing

Rotated component matrix				
	Component			
	1	2	3	4
Item-1 organizational culture	0.81			
Item-2 organizational culture	0.655			
Item-3 organizational culture	0.606			
Item-4 organizational culture	0.837			
Item-1 supervision and feedback		0.764		
Item-2 supervision and feedback		0.793		
Item-3 supervision and feedback		0.742		
Item-1 procedural justice			0.587	
Item-4 procedural justice			0.526	
Item-5 procedural justice			0.76	
Item-6 procedural justice			0.591	
Item-4 individual communications skills				0.717
Item-5 individual communications skills				0.789

4.4 Correlation Test

In this section, the data are assessed and tested in order to investigate the relationship and its significance among the variables of the study. Table 4 below summarizes the correlation test results.

Table 4. Correlation test results

		Correlations					
		Organizational Culture	Individual Communications Skills	Procedural Justice and Trust	Supervision and Feedback	Knowledge Sharing Global	Employee Development Global
Organizational Culture	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	51					
Individual Communications Skills	Pearson Correlation	.179	1				
	Sig. (2-tailed)	.209					
	N	51	51				
Procedural Justice and Trust	Pearson Correlation	.692**	.141	1			
	Sig. (2-tailed)	.000	.324				
	N	51	51	52			
Supervision and Feedback	Pearson Correlation	.412**	.053	.613**	1		
	Sig. (2-tailed)	.003	.714	.000			
	N	51	51	52	52		
Knowledge Sharing Global	Pearson Correlation	.759**	.337*	.878**	.763**	1	
	Sig. (2-tailed)	.000	.017	.000	.000		
	N	50	50	50	50	50	
Employee Development Global	Pearson Correlation	.381**	.130	.555**	.570**	.586**	1
	Sig. (2-tailed)	.006	.368	.000	.000	.000	
	N	50	50	51	51	50	51

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

In the table above, the correlation test, it is clearly shown that there is a positive relationship between knowledge sharing comprising its four studied factors and employee development. Furthermore, this relationship is found significant among the majority of the factors. All the factors of knowledge sharing are positively related to each other. This relationship is significant between the organizational culture factor and the procedural justice and trust factor, and the supervision and feedback factor, with the Pearson

correlation values of 0.692 and 0.412, respectively. Likewise, they have significance values of 0.000 and 0.003, respectively, significant at the 0.01 level. Meanwhile, the procedural justice and trust factor and supervision and feedback factor are significant with the Pearson correlation value of 0.613 and significance value of 0.000, significant at the 0.01 level. Moreover, it appears that these factors have a significant relationship with the global factor. Knowledge sharing as a global variable shares a positively significant relationship with its inclusive factors, namely the organizational culture, individual communication skills, procedural justice and trust, and supervision and feedback as well as the global variable of employee development, with the values of Pearson correlation being 0.759, 0.337 0.878, 0.763 and 0.586, respectively.

In addition, they all shared the significance value of 0.000 for all relationships, significant at the 0.01 level, except for the individual communication skill factor which has a significance value of 0.017 and is significant at the 0.05 level. Furthermore, these factors show a positive relationship with employee development. However, it is only significant with the organisational culture factor and the procedural justice and trust factor, and supervision and feedback factor with the Pearson correlation values of 0.381, 0.555 and 0.570, respectively; likewise, they have significance values of 0.006, 0.000 and 0.000, respectively, significant at the 0.01 level. As seen from the above, most of the variables were significant at the 0.01 level, which means that there is a probability that 99 % of the variables will have the same relationship if the study is conducted again. Finally, and as expected from the literature review, the results succeeded in showing a positive significant relationship between the main factors of knowledge sharing and extended this relationship to the employee development, with some limitations, although still supporting hypotheses H1, H2, H3 and H5.

4.5 Discussion of Main Findings

In this section, the data results are discussed and commented on to confirm the findings and finalize the decisions on the proposed hypotheses. The results of the correlation and regression tests are mainly used to assess the relationships among the research hypotheses variables and factors. H1: There is a positive relationship between knowledge sharing and employee development. Examining this hypothesis's validity, correlation results were looked at, where the R-value is 0.586 and is significant (Sig. Level = 0.000). This refers to statistical evidence on the existence of a relationship between the knowledge-sharing practice by employees in an organisation and the level of employee development created in this organisation. Regression test was used to further assess this relationship, and the results are shown in Table 5.

From the above table, it is clearly seen that the R-value is 0.586, R-square value is 0.343, adjusted R-square value is 0.330, and F-value is 25.103 with high significance (0.000). Also, it is noted that the beta weight of the knowledge-sharing variable is 0.586, and the t-value is 5.01, which is significant (Sig. Level = 0.000). These results imply that employee development is significantly related to knowledge sharing, and it could be concluded that hypothesis 1 (H1) is upheld this conclusion is consistent with previous studies stating that knowledge sharing has a direct effect on the organisation and the employee development [47].

Table 5. Regression test between knowledge sharing and employee development

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.586 ^a	.343	.330	9.104

a. Predictors: (Constant), Knowledge Sharing Global Factor

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2080.711	1	2080.711	25.103	.000 ^b
	Residual	3978.569	48	82.887		
	Total	6059.280	49			

a. Dependent Variable: Employee Development Global Factor
b. Predictors: (Constant), Knowledge Sharing Global Factor

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.947	9.503		1.468	.149
	Knowledge Sharing Global Factor	.637	.127	.586	5.010	.000

a. Dependent Variable: Employee Development Global Factor

H2: There is a positive relationship between organizational culture as a knowledge-sharing factor and employee development. To test the validity of this hypothesis, correlation results were looked at, where the R-value is 0.381 and is significant (Sig. Level = 0.006). This refers to a relationship between knowledge-sharing culture practiced in an organization and the level of employee development created in this organization. A regression test was used to further assess this relationship, and the results are shown in Table 6. From the above, it is clearly seen that the R-value is 0.381, R-square value is 0.145, adjusted R-square value is 0.127, and F-value is 8.132 with high significance (0.006). Also, it is noted that the beta weight of the knowledge-sharing variable is 0.381, and the t-value is 2.852, which is significant (Sig. Level = 0.006). These results imply that employee development is significantly related to positive organisational culture in terms of knowledge-sharing practice, and it could be concluded that hypothesis 2 (H2) is established. This finding confirms previous studies in the field [47]; that organisational culture as a knowledge-sharing factor improves employee development, and that organisational culture has a direct effect on the employees and their development [13]. H3: There is a positive relationship between procedural justice as a knowledge-sharing factor and employee development.

To test the validity of this hypothesis, correlation results were looked at, where the R-value is 0.555 and is significant (Sig. Level = 0.000). This refers to a relationship between procedural justice as a knowledge-sharing factor in an organisation and the level of employee development created in this organisation. A regression test was used to further assess this relationship, and the results are shown in Table 7.

Table 6. Regression test

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.381 ^a	.145	.127	10.390	

a. Predictors: (Constant), Organizational Culture Factor

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	877.796	1	877.796	8.132	.006 ^b
	Residual	5181.484	48	107.948		
	Total	6059.280	49			

a. Dependent Variable: Employee Development Global Factor
b. Predictors: (Constant), Organizational Culture Factor

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	39.897	7.586		5.259	.000
	Organizational Culture Factor	1.698	.595	.381	2.852	.006

a. Dependent Variable: Employee Development Global Factor

Table 7. Regression test between procedural justice as knowledge sharing factor and employee development

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.555 ^a	.308	.294	9.254

a. Predictors: (Constant), Procedural justice and trust Factor

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1866.508	1	1866.508	21.795	.000 ^b
	Residual	4196.237	49	85.637		
	Total	6062.745	50			

a. Dependent Variable: Employee Development Global Factor
b. Predictors: (Constant), Procedural justice and trust Factor

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	34.554	5.844		5.913	.000
	Procedural justice and trust Factor	1.733	.371	.555	4.669	.000

a. Dependent Variable: Employee Development Global Factor

From the above, it is clearly seen that the R-value is 0.555, R-square value is 0.308, adjusted R-square value is 0.294, and F-value is 21.795 with high significance (0.000). Also, it is noted that the beta weight of the knowledge-sharing variable is 0.555, and the t-value of is 4.669, which is significant (Sig. Level = 0.000). These results imply that employee development is significantly related to procedural justice and trust of the knowledge-sharing practice in an organisation, and it could be concluded that hypothesis 3 (H3) is established. This finding confirms those of previous studies in the field [47]; that procedural justice as a knowledge-sharing factor improves employee development, and procedural justice plays an important role in influencing the cooperation and commitment of employees and their performance in many ways [31].

H4: There is a positive relationship between individual communication skills as a knowledge-sharing factor and employee development.

Examining this hypothesis's validity, correlation results were looked at, where the R-value is 0.130 and is not significant (Sig. Level = 0.368), which means that individual communication skills supports the knowledge-sharing practice but does not affect the level of employee development in the organisation. From here it could be concluded that hypothesis 4 (H4) is not established. Unexpectedly, this did not comply with previous studies that stated that gaining good technological capability in communication tools and techniques [40] and gaining more modern ones [11] will affect employees directly in their ability to share knowledge and in their development. The reason for the change might be the recent advances in communication technology that have removed all barriers to knowledge sharing, thus affecting employees' development. H5: There is a positive relationship between supervision and feedback as a knowledge-sharing factor and employee development.

To test the validity of this hypothesis, correlation results were looked at, where the R-value is 0.57 and is significant (Sig. Level = 0.000). This refers to a relationship between supervision and feedback as a knowledge-sharing factor in an organisation and the level of employee development created in this organisation. A regression test was used to further assess this relationship, and the results are shown in Table 8.

From the above table, it is clearly seen that the R-value is 0.57, R-square value is 0.325, adjusted R-square value is 0.311, and F-value is 23.58 with high significance (0.000). Also, it is noted that the beta weight of the knowledge-sharing variable is 0.57, and the t-value is 4.856, which is significant (Sig. Level = 0.000). These results imply that employee development is significantly related to supervision and feedback of the knowledge-sharing practice in an organisation, and it could be concluded that hypothesis 5 (H5) is established. This finding confirms previous studies in the field [47]; that supervision and feedback as a knowledge-sharing factor improves employee development, and supervision and feedback enhances employees' knowledge [34] which in turn leads to their development [17, 21].

Table 8. Regression test between supervision and feedback as knowledge factor sharing and employee development

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.570 ^a	.325	.311	9.140

a. Predictors: (Constant), Supervision and Feedback Factor

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1969.676	1	1969.676	23.580	.000 ^b
	Residual	4093.069	49	83.532		
	Total	6062.745	50			

a. Dependent Variable: Employee Development Global Factor
 b. Predictors: (Constant), Supervision and Feedback Factor

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	36.929	5.151		7.169	.000
	Supervision and Feedback Factor	2.263	.466	.570	4.856	.000

a. Dependent Variable: Employee Development Global Factor

5 Conclusion

This study investigated the relationship between knowledge-sharing practice and the employees’ development in organizations. The results of the study were generally consistent with previous research, and confirm past studies. It depicted the correlation between knowledge sharing, and factors like organisational culture and procedural justice and trust, supervision and feedback, individual communication skills, and employee development measurement. All the factors showed positive relationships with employee development; they were also highly significant except for the factor “individual communication skills”, which opposed previous findings. Some recommendations are listed below along with future research suggestions.

5.1 Recommendations

According to the findings from this study and aligned with the literature review, the researchers have a list of recommendations for the organizations and employees to

follow in order to enhance the effectiveness of both to gain competitive advantage for the organisation and development for the employee: The researchers recommend introducing a new idea for sharing knowledge called the “organisational expert map” in which each organisation assigns one or more experienced personnel in each field inside the organisation, ensuring that they are accessible to employees to share knowledge, each according to his or her specialization. The organisation needs to evaluate the role of justice and evaluate the employees according to their performance, so it is recommended to include their cooperation and willingness to share knowledge in their performance appraisals. The organisation should ensure that the feedback environment is a common practice between supervisors and subordinates and it is recommended to conduct a bi-weekly meeting between both to check employees’ progress. After this, the supervisor should communicate his feedback first to the employees and then to upper managers to either appreciate the good work or recommend more development programs such as training.

5.2 Limitations and Future Research Suggestion

There are always limitations in research in the academic area, and this study is no exception. In this study we have two main limitations; first the number of factors studied for knowledge sharing was limited to four because adding more factors would require significantly more time and effort. The second limitation was the number of respondents (124) and although this was suitable for this study, more respondents are always recommended. From the above limitations, the researchers have some suggestions for future studies on the same subject; one suggestion is to add more factors that affect knowledge sharing which are not addressed in this study, such as a reward system and information technology. To assist future researchers in this, the authors of this study have introduced those factors along with their questions. The second suggestion could be to review the factor that has no significant value - “individual communication skills” - and add more items, in addition to having more respondents for the questionnaire so that further analysis will either validate this study’s findings or find positive relations between that factor and employee development. Finally to address the factor of communication skills, it could be helpful to look broadly in the organizational communication [27] as a contributor to that factor which may lead to better understanding.

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