

Impact of Job Characteristics on Individual Innovation: Insights from the Health Sector in Bahrain

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ABSTRACT : The goal of this research is to understand the impact of job characteristics (diversity of skills, job duties identity, job tasks importance, autonomy and feedback) on individual innovation at the Ministry of Health in the Kingdom of Bahrain. Three hundred and seventy employees were surveyed through a simple random sample method. The analysis is based on the outcomes of the questionnaire survey that was given out to a representative sample of the employees of the Ministry of health in the Kingdom of Bahrain. The researchers hypothesized that there is a positive significant impact for the job characteristics (diversity of skills, job duties identity, job tasks importance, autonomy and feedback), on individual innovation at the Ministry of Health in the Kingdom of Bahrain. The findings revealed that there was a positive significant impact for the job characteristics (diversity of skills, job duties identity, job tasks importance, autonomy and feedback) on individual's innovation at the Ministry of Health in the Kingdom of Bahrain. Moreover, the results indicated that there were no significant differences relating to the impact of job characteristics with the dimensions in question on individual innovation at the ministry in question due to the demographic (gender, qualification and position), while there were differences due to the demographic (age and years of experience).

KEYWORDS: Job Characteristics, Diversity of Skills, Job Duties Identity, Job Tasks Importance, Autonomy, Feedback, Individual Innovation, Kingdom of Bahrain.

I. INTRODUCTION

Job characteristics are among the important factors that can affect the performance of the employee, especially as they determine, the level of compatibility with regard to his experience, skills and job tasks, as they predict largely the level of his success and his work (Lee, Wang, 2018). Job characteristics involve five dimensions, which are diversity of skills, job duties identity, job tasks importance, autonomy and feedback (Hermanto, et al., 2018). These characteristics are rooted in the job itself, as it contains components that lead to a full understanding of the job, a sense of responsibility for the results of the work, and a sense of concern for the impact of the work, which increases the participation and employees and increases their motivation and job satisfaction (Adiarani, 2019). In the information age, which is characterized by the rapid growth of knowledge, innovation is the key to survival and maintaining the competitive advantage of organizations, especially in light of the successive changes in their economic, social, technological, cultural, political, competitive and other environments (Zhan et al., 2020). In addition, if an organization wants to survive in a competitive market, it must hire innovative employees, as innovation will enhance their motivation to acquire new knowledge and skills necessary to achieve organizational goals (Ahmed, 2020).

The rest of this paper is planned as follows: Literature framework is presented in section (2). Section (3) represents the methodology. Statistical analysis are shown in section (4), while recommendations are in section (5).

II. LITERATURE FRAMEWORK

Job Characteristics : The concept of job characteristics indicates to the job design, which increases the level of diversity of skills and responsibilities, the importance of job tasks, independence, control and feedback. It leads to reducing the employees' feeling of boredom and stress, and increasing the ability to innovate (Evelyne et al., 2018) Job characteristics are very important because of the following: They help facilitate the work of employees, which gives a positive impact on the organization, as the more fully employees understand the characteristics of their jobs, the more they learn better ways to accomplish their work tasks, which leads to maximizing their skills (Senen et al., 2020).

- Job characteristics are the basis for the quality of employee's productivity and the basis for performance designed to play an important role in the success of the organization, especially in conditions of increased competition (Firtria, 2019).
 - When employees view the basic elements of their job characteristics positively, they feel that their jobs are very attractive and that they work in a stable work environment. This feeling gives them an incentive to create better performance (Valdez & Daguplo, 2018).
The different dimensions of job characteristics are:
 - **Diversity of skills** :It indicates to a set of skills required to complete a specific job that leads to desired individual and job outcomes. The importance of this dimension is due to its being considered the main catalyst for enhancing the internal motivation of the individual, which contributes significantly to increasing his efficiency and improving his performance at work (Johari et al., 2018).
 - **Job duties identity** : It is the rate at which a job task must be completed by executing a certain part of the work, from start to finish until reaching the final product that can be seen. The importance of this dimension is that it has a positive impact on the productivity and overall performance of the employee (Evelyne et al., 2018).
 - **Job tasks importance** : It is the rate of impact of job tasks and their vital role in work and livelihood on others, whether within the organization or in the external environment. The importance of this dimension is due to the individual's understanding that the results of his work have a significant influence on the well-being of others, so his dedication to work increases; he exerts more effort, and his job performance level increases (Babirye, 2019).
 - **Autonomy** : The rate provides a great deal of freedom and independence for the employee in scheduling work and in defining its procedures. The importance of this dimension is due to allowing employees to manage their work without pressure or instructions from others, which increases their sense of responsibility for the results of their work and leads to motivating them and improving their job performance (Johari et al., 2018).
 - **Feedback** : It indicates to the comments that employees receive about how they are doing their work, and whether there has been an improvement or deterioration in their job performance. The importance of this dimension is that it provides clear information to employees about the usefulness and quality of their work outputs, which gives them the opportunity to improve their job performance if necessary (Evelyne et al., 2018).
- Innovation** : It represents new and improved ways of doing things and new ideas that the employee presents with regard to the job tasks he performs (Allil et al., 2021).

Innovation is important because of the following:

- In light of rapid technological developments and the increase in global competition that requires organizations to continuously innovate and grow, innovation has taken on a top priority for the growth of organizations and a basic characteristic that employees must possess to achieve competitive advantage (Yoo et al., 2018).
- The importance of innovation is reflected in the fact that it reflects the function of the employee's personal characteristics and the characteristics of the context in which he works, as well as the interaction between these characteristics, on the basis of which the nature of the individual innovation and the quality of innovation production are determined (Kim, 2019).
- Relationship between job characteristics and innovation. The components of job characteristics that are diversity of skills, job duties identity, job tasks importance, autonomy and feedback, are important factors to stimulate individual innovation among employees in solving work problems and developing and implementing new ideas through a sense of achievement and responsibility in the individual (Allil et al., 2021).

III. METHODOLOGY

Paper problem: Based on various studies that confirmed the importance of job characteristics and its positive impact on the individual innovation, researchers wanted to identify the impact of job characteristics (diversity of skills, job duties identity, job tasks importance, autonomy and feedback) on individual innovation at the

Ministry of Health in the Kingdom of Bahrain. The problem of research could therefore be expressed in the following question:

“What is the impact of job characteristics (diversity of skills, job duties identity, job tasks importance, autonomy and feedback) on individual innovation at the Ministry of Health in the Kingdom of Bahrain?”

The main question results in the following sub-questions:

- What is the reality of the job characteristics at the Ministry of Health in the Kingdom of Bahrain?
- What is the reality of the individual innovation at the Ministry of Health in the Kingdom of Bahrain?
- What is the reality of the impact of the job characteristics on the individual innovation at the Ministry of Health in the Kingdom of Bahrain?

Research hypotheses

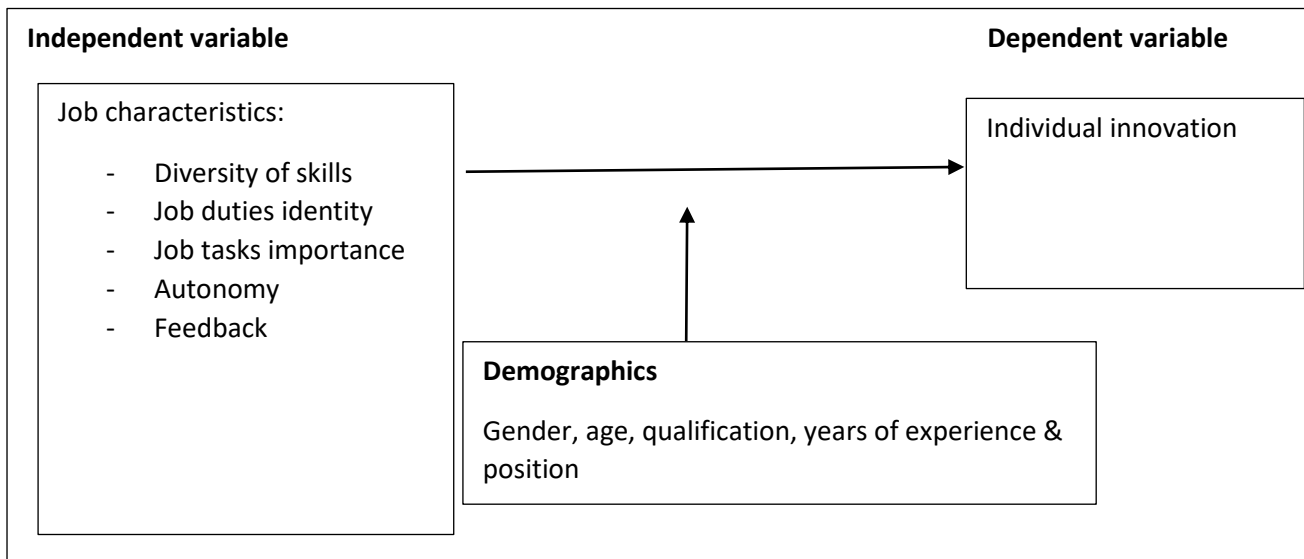
Hypothesis 1:

H1: There is a positive significant impact for job characteristics (diversity of skills, job duties identity, job tasks importance, autonomy and feedback), on individual innovation at the Ministry of Health in the Kingdom of Bahrain.

Hypothesis 2:

H1: There are positive significant differences relating to the impact of job characteristics (diversity of skills, job duties identity, job tasks importance, autonomy and feedback), on individual innovation at the Ministry of Health in the Kingdom of Bahrain due to the demographics (gender, age, qualification, years of experience and position).

3.3 Research framework



IV. ANALYSIS OF ANSWERS TO THE QUESTIONNAIRE VARIABLES

Table 1 Analysis of research community answers to the questionnaire variable (Job characteristics, dimension of diversity of skills)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
1	My job offers me a lot of variety.	3.71	1.04	1	Agree
2	My job requires me to use many skills.	3.63	1.03	2	Agree
3	I see that many aspects of my work are simple and repeated periodically	3.59	1.00	3	Agree
	Grand average	3.65			Agree

According to table (1), we found that the general average of the variable ((Job characteristics, dimension of diversity of skills), reached (3.65), which indicates that the opinions of the research sample were high of this dimension.

Table 2 Analysis of the research community answers to the questionnaire variable (Job characteristics, dimension of job duties identity)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
1	I consider my job a comprehensive job.	3.76	1.19	2	Agree
2	My job gives me the opportunity to completely finish all the parts of the work that I start.	3.92	1.06	1	Agree
3	I see that the job I do require the participation of other colleagues so that it can be completed from start to finish.	3.61	1.23	3	Agree
	General Average	3.76			Agree

According to table (2), we found that the general average of the variable (Job characteristics, dimension of job duties identity) reached (3.76), which indicates that the opinions of the research sample were high of this dimension.

Table 3 Analysis of the research community answers to the questionnaire variable (Job characteristics, the dimension of job tasks importance)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
1	I consider my work to meet the needs of the ministry's dealers.	2.98	1.49	2	Neutral
2	My work quality directly affects the ministry's dealers.	3.08	1.52	1	Neutral
3	In general, I believe that my work is very important.	2.92	1.54	3	Neutral
	General Average	3.00			Neutral

According to table (3), we found that the general average of the variable (Job characteristics, the dimension of job tasks importance) reached (3.00), which indicates that the opinions of the research sample were moderate of this dimension.

Table 4 Analysis of the research community answers to the questionnaire variable (Job characteristics, dimension of autonomy)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
1	I have complete freedom to decide how to structure my work.	3.35	1.00	3	Neutral
2	I can plan and organize my work independently.	3.38	1.24	2	Neutral
3	My job give me the opportunity to use my own initiative or judgment in carrying out the job.	3.49	0.96	1	Neutral
	General average	3.41			Neutral

According to table (4), we found that the general average of the variable (Job characteristics, dimension of autonomy) reached (3.41), which indicates that the opinions of the research sample were moderate of this dimension.

Table 5 Analysis of the research community answers to the questionnaire variable (Job characteristics, dimension of feedback)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
1	The evaluation of the ministry's auditors for the services related to my job duties shows the quality of my work.	3.13	1.20	3	Neutral
2	I believe that it is easy for me to check how well I work through the tasks I perform.	3.90	1.00	1	Agree
3	My job provides me with a great deal of feedback on the actual quality of my work.	3.75	1.17	2	Agree
	General average	3.59			Neutral

According to table (5), we found that the general average of the variable (Job characteristics, dimension of feedback) reached (3.59), which indicates that the opinions of the research sample were high of this dimension.

Table 6 Analysis of the research community answers to the questionnaire variable (Individual innovation)

Sr.	Statement	Mean	Standard Deviation	Ranking	Mean Interpretation
1	I suggest new ways to achieve my job goals.	4.06	1.07	9	Agree
2	I put forward modern and practical ideas to improve performance.	4.13	0.89	7	Agree
3	I look for new technologies, processes or ideas regarding the services providing by the ministry.	4.13	0.94	6	Agree
4	I suggest new ways to enhance the quality of services.	4.28	0.80	1	Strongly Agree
5	I consider myself a good source of innovative ideas.	4.06	0.97	8	Agree
6	I am not afraid to take risks in order to come up with an innovative idea.	3.81	1.11	11	Agree
7	I promote new ideas to other in the ministry to gain their support.	3.78	1.16	13	Agree
8	When I get the chance, I show my creativity in the job I do.	4.21	0.96	2	Strongly Agree
9	I set appropriate time plans to implement new ideas.	3.96	0.85	10	Agree
10	I often have new and innovative ideas.	3.81	1.19	12	Agree
11	I am able to come up with innovative solutions for	4.19	0.82	3	Agree

	problems that arise in the course of work.				
12	I often have a new approach to dealing with problems.	4.16	0.82	5	Agree
13	I suggest new ways to do my job.	4.16	0.82	5	Agree
	General average	4.06			Neutral

According to table (6), we found that the general average of the variable (Individual innovation) reached (4.06), which indicates that the opinions of the research sample were high of this dimension.

V. TESTING RESEARCH HYPOTHESES

To make sure that the main hypothesis (1) is correct “There is a positive significant impact for job characteristics (diversity of skills, job duties identity, job tasks importance autonomy and feedback) on individual innovation at the Ministry of Health in the Kingdom of Bahrain”, multiple linear regression analysis were used where the results showed the following:

Table 7 Linear regression analysis for cognitive transformation dimensions on the green practices of human resources management

Variable source	Sum of squares	Freedom degrees	Average of squares	R	R ²	Adjusted R ²	F Value	Significance
Regression	65.172	5	13.034	0.804	0.646	0.641	111.840	0.00
Residual	35.663	306	117					
Total	100.834	176						

According to the results presented above in table (7), the main hypothesis (1) is accepted. In addition results of the main hypothesis (2), “There are positive significant differences relating to the impact of job characteristics (diversity of skills, job duties identity, job tasks importance, autonomy and feedback) on individual innovation at the Ministry of Health in the Kingdom of Bahrain due to the demographics (gender, age, qualification, years of experience and position). They showed that were no statistically significant differences at the level of (0.05) relating to the demographics (gender, age and years of experience) while there were differences due to the demographics (age and years of experience).

VI. CONCLUDING COMMENTS

- Job characteristics affect the individual innovation of the Ministry of Health in the Kingdom of Bahrain largely.
- Many employees at the Ministry in question believe that the impact of the diversity of skills on individual innovation is because their jobs provide them with a lot of diversity. This creates a sense of efficiency and that they are able to perform many tasks in different ways.
- Most of the ministry’s employees in question refer to the impact of job duties identity on individual innovation because their jobs allow them to complete work parts completely, which makes them feel in control of their job activities.
- Some employees at the ministry in question believe that the impact of the importance of job tasks on individual innovation is because the quality of their work has a direct impact on the welfare of those dealing with ministry.
- Many employees in the ministry in question believe that the impact of autonomy on individual innovation is due to their believing that their jobs provide them with opportunities to use personal initiative or their own judgment in the implementation of the work, which encourages them to develop new ideas in their work.
- Most of the employees in the ministry in question believe that the impact of feedback on the individual innovation is due to their believing that it is easy to verify the quality of their work due to receiving clear information from their direct supervisors, which improve their performance.

According to the conclusions formulated, the following recommendations were suggested:

- The necessity to focus on increasing giving subordinates the opportunity to reformulate their jobs and to suggest ways to perform those tasks that that they see as repetitive, as this strategy creates an incentive for them to do them.
- Enhancing the practice of job expansion to allow employees to perform more job tasks, and this serves as a motivational drive to increase their commitment and their sense of responsibility for achievement.

- Organizing periodic meetings that bring together all the administrative levels in the ministry in question and highlighting their contributions to achieving the goals of the ministry through their jobs, will increase their motivation to make more effort to sense the importance of the work they are doing.
- Giving subordinates, more freedom of action in determining the ways to carry out their duties and working methods and highlighting the confidence of officials in their subordinates to enhance their sense of self-work and push them to sharpen their innovation potential.
- Develop a mechanism that allows all those dealing with the ministry in question to assess the level of quality of services they have obtained, which will enable officials to judge the quality of work of their subordinates. In addition, it will provide subordinates with objective indicator of the results of their work and allow them to improve in various aspects of their work.

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